REFERRAL OF A PROJECT FOR A DECISION ON THE NEED FOR ASSESSMENT UNDER THE *ENVIRONMENT EFFECTS ACT 1978*

REFERRAL FORM

The *Environment Effects Act 1978* provides that where proposed works may have a significant effect on the environment, either a proponent or a decision-maker may refer these works (or project) to the Minister for Planning for advice as to whether an Environment Effects Statement (EES) is required.

This Referral Form is designed to assist in the provision of relevant information in accordance with the *Ministerial Guidelines for assessment of environmental effects under the Environment Effects Act 1978* (Eighth Edition, 2023). Where a decision-maker is referring a project, they should complete a Referral Form to the best of their ability, recognising that further information may need to be obtained from the proponent.

It will generally be useful for a proponent to discuss the preparation of a Referral with the Impact Assessment Unit (IAU) at the Department of Transport and Planning (DTP) before submitting the Referral.

If a proponent believes that effective measures to address environmental risks are available, sufficient information could be provided in the Referral to substantiate this view. In contrast, if a proponent considers that further detailed environmental studies will be needed as part of project investigations, a more general description of potential effects and possible mitigation measures in the Referral may suffice.

In completing a Referral Form, the following should occur:

- Mark relevant boxes by changing the font colour of the 'cross' to black and provide additional information and explanation where requested.
- As a minimum, a brief response should be provided for each item in the Referral Form, with a more detailed response provided where the item is of particular relevance. Cross-references to sections or pages in supporting documents should also be provided. Information need only be provided once in the Referral Form, although relevant cross-referencing should be included.
- Responses should honestly reflect the potential for adverse environmental effects. A Referral will only be accepted for processing once IAU is satisfied that it has been completed appropriately.
- Potentially significant effects should be described in sufficient detail for a reasonable conclusion to be drawn on whether the project could pose a significant risk to environmental assets. Responses should include:
    - a brief description of potential changes or risks to environmental assets resulting from the project;
    - available information on the likelihood and significance of such changes;
    - the sources and accuracy of this information, and associated uncertainties.
- Any attachments, maps and supporting reports should be provided in a secure folder with the Referral Form.
- A USB copy of all documents will be needed, especially if the size of electronic documents may cause email difficulties. **Individual documents should not exceed 10MB as they will be published on the Department's website.**

- A completed form would normally be between 15 and 30 pages in length. Responses should not be constrained by the size of the text boxes provided. Text boxes should be extended to allow for an appropriate level of detail.
- The form should be completed in MS Word and not handwritten.

The party referring a project should submit a covering letter to the Minister for Planning together with a completed Referral Form, attaching supporting reports and other information that may be relevant. This should be sent to:

Postal address

Minister for Planning
PO Box 500
EAST MELBOURNE VIC 8002

Couriers

Minister for Planning
Level 16, 8 Nicholson Street
EAST MELBOURNE VIC 3002

In addition to the submission of the hardcopy to the Minister, separate submission of an electronic copy of the Referral via email to ees.referrals@delwp.vic.gov.au is required. This will assist the timely processing of a referral.

PART 1 PROPONENT DETAILS, PROJECT DESCRIPTION & LOCATION

1. Information on proponent and person making Referral

Name of Proponent:	Great Eastern Offshore Wind Farm Project Co Pty Ltd as trustee for the Great Eastern Offshore Wind Farm Asset Trust
Authorised person for proponent: **Position:** **Postal address:** **Email address:** **Phone number:** **Facsimile number:** **Authorised person for proponent:**	Penny Pickett Head of Australia, Corio Generation Level 50, 120 Collins St, Melbourne 3000 penny.pickett@coriogeneration.com + 61 427 455 138 n/a Penny Pickett
Person who prepared Referral: **Position:** **Organisation:** **Postal address:** **Email address:** **Phone number:** **Facsimile number:**	Jenny Luk Partner Environmental Resources Management Australia Pty Ltd Level 8, 501 Swanston Street, Melbourne, Victoria, 3000 jenny.luk@erm.com 03 9696 8011 03 9696 8022
Available industry & environmental expertise: (areas of 'in-house' expertise & consultancy firms engaged for project)	Corio Generation Great Eastern Offshore Wind is being developed by Corio Generation (**Corio**). Corio is wholly owned by Macquarie Group, through Macquarie Asset Management (Macquarie). Macquarie and Corio have considerable international experience in developing offshore wind projects and a strong track record in the UK, Ireland, Taiwan and South Korea. Macquarie is a global financial services group operating in 34 markets across asset management, retail and business banking, wealth management, leasing and asset financing, market access, commodity trading, renewables development, specialist advisory, capital raising and principal investment. For two decades Macquarie has worked in close partnerships with stakeholders in the public and private sectors to support the energy transition and advance solutions to climate challenges. Through our operating groups, we have extensive expertise and experience in scaling energy transition solutions and supporting clients on their decarbonisation journeys. Macquarie has been investing in offshore wind projects for a decade. Since 2013, Macquarie has invested in a total of 14 offshore wind projects that are now operational, with combined project capacity of 4.9GW across markets in Asia Pacific, the UK and Europe.

	In April 2022, Corio was launched as a specialist offshore wind business by Macquarie Asset Management. Corio operates on a standalone basis, however, retains the expertise and resources of Macquarie. Corio have an offshore wind project pipeline of over 30 GW globally. Corio applies a long-term partnership approach to the creation and management of projects, underpinned by access to long-term capital. Working in both established and emerging markets, with floating and traditional fixed-bottom technologies, Corio's projects support local economies while meeting the energy needs of communities and corporate off takers sustainably, reliably, safely, and responsibly. Corio has experience taking projects through their full development cycle. We are currently developing projects in key offshore wind markets around the world, such as the United Kingdom, Ireland, Taiwan, South Korea, Vietnam, Brazil and the Phillipines. Corio's experience includes, in particular: • The United Kingdom, where Corio has invested in a large number of existing offshore wind projects. Most recently, Corio and its development partner, Total, were awarded a lease for development of a 1.5 GW project off the coast of England and a 2 GW project in Scotland. • Taiwan, where Corio is a pioneer in offshore wind. The Corio team (previously under Macquarie) has completed Taiwan's first commercial scale offshore wind project, Formosa 1 (128MW) and also Formosa 2 (376MW), which are both operational. Corio is now developing the Formosa 3 portfolio with ~2GW of capacity that is in advanced development. • South Korea, where Corio has been developing projects since 2017. In partnership with Total, Corio is developing an approximately 2.3 GW portfolio of offshore wind projects. Corio was voted Offshore Developer of the Year at the 2023 Wind Investment Awards. Corio will bring its international and local experience in offshore wind to deliver projects which positively contribute to the supply of renewable energy in Australia. Importantly, as a developer with a long-term commitment to construct and operate its projects, Corio will place our stakeholders at the forefront of its development process. <u>Environmental Resources Management Australia Pty Ltd (**ERM**)</u> ERM is a leading provider of environmental, health and safety, risk, and social consulting services. ERM delivers innovative solutions for their clients, helping them manage their challenges and better understand their impacts on the world around them and how to best avoid, minimise and mitigate impacts so projects are developed in an environmental and socially responsible manner. ERM has

	over 8000 employees working across 40 offices globally, including over 600 in Australia. ERM has a long standing and proven history of successful delivery in Australia and globally of major infrastructure projects, including across the renewable energy and offshore oil and gas sectors. ERM has delivered over 1500 renewable energy projects across 100 countries since 2010, including offshore wind in Europe and the Asia Pacific regions. ERM's experience relevant to offshore wind includes environmental due diligence and feasibility studies, site selection, environmental and social impact assessments, and environmental scoping, environmental approvals and permitting, environmental compliance and auditing, and marine and terrestrial studies.

2. Project – brief outline

Project title: Great Eastern Offshore Wind (**GEOW**) ("the **Project**")

Project location: (describe location with AMG coordinates and attach A4/A3 map(s) showing project site or investigation area, as well as its regional and local context)

Project Location

The Project comprises both onshore and offshore components and is situated in the Gippsland region in south-east Victoria. Onshore, the Project Boundary generally extends from the VicGrid Coordinated Connection Point area in the Giffard region to the coastline, within the Wellington Shire Council local government area. Offshore, the Project Boundary extends across coastal waters (three nautical miles from the Victorian coast), the territorial sea (12 nautical miles from the coast) and the contiguous zone (24 nautical miles from the coast).

The referral area pursuant to the *Environment Effects Act 1978* (**EE Act**) includes onshore areas and coastal state waters contained within the Project Boundary only (refer **Figure 1** and **Figure 2** in **Attachment 1**). The precise landfall and marine siting locations (for the export cable corridor) have not been determined at this stage and are subject to further investigation.

The Australian Magnetic Grid (**AMG**) coordinates for the whole Project area are provided in **Attachment 2**.

Short project description (few sentences)**:**

The overall Project Area comprises the investigation areas described below, shown conceptually in **Figure 1** of **Attachment 1**:

- Offshore Wind Farm (**OWF**) Site (667 km^2), located in Commonwealth waters, where the offshore turbines, substations and inter-array cabling will be located.
- Offshore Cable Envelope (148 km^2), located within Commonwealth waters.
- Nearshore Cable Envelope (20 km^2), located within Victorian state waters.
- Onshore Transmission Envelope (31 km^2), located inland, where onshore export cables will be installed between the landfall Transition Joint Bay (**TJB**) and VicGrid's Coordinated Connection Point.

Within each cable envelope there will be a defined cable corridor.

For the purpose of this EES referral, the term 'referral area' refers only to those investigation areas located within Victoria, i.e., the Nearshore Cable Envelope (also referred to as the 'offshore referral area') and the Onshore Transmission Envelope (also referred to as the 'onshore referral area').

The Project will be developed with a nameplate capacity of approximately 2,500 MW and up to 172 turbines, subject to final project design and grid capacity. Each turbine is envisaged to be installed on fixed-bottom offshore foundations. The Project may be developed in stages to align with the development of the industry and its supporting infrastructure (as discussed below in Section 6 – Project Implementation).

The baseline electrical configuration envisaged for the Project is to be high voltage alternating current (**HVAC**), which will utilise inter array cables connected to offshore substations that will transform the voltage. Export cables from the offshore substations will export electricity to shore, connecting at the cable TJB at landfall. From the cable TJB, onshore export cables will carry the electricity to the grid via a connecting substation located at or close to the VicGrid Coordinated Connection Point. A Project concept design visualisation is presented below (Figure 1) where the Project's onshore substation equipment is assumed to be located within VicGrid's Coordinated Connection Point.

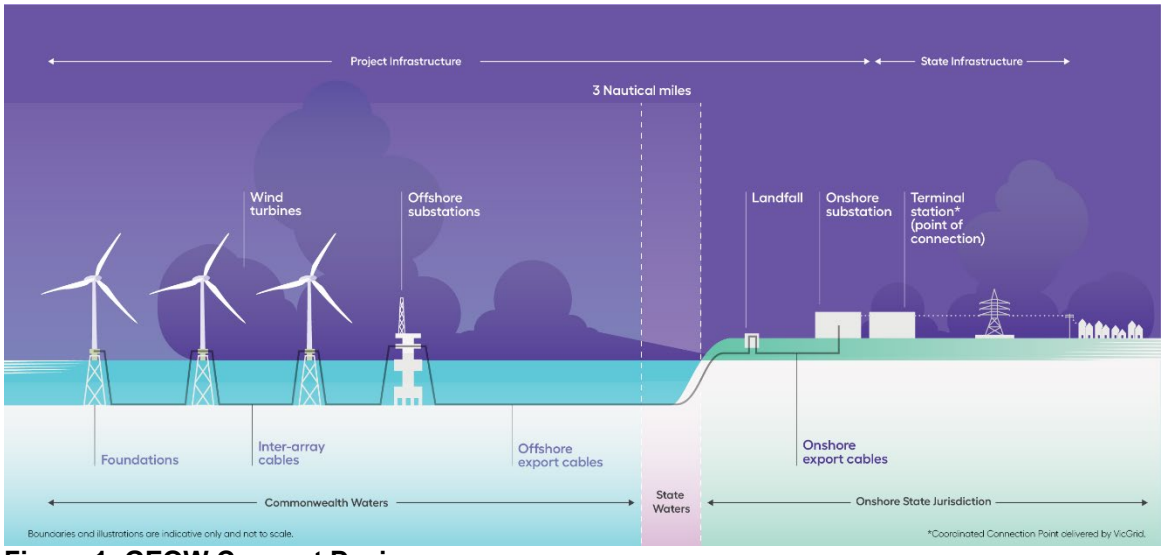

Figure 1: GEOW Concept Design

The proposed Onshore Transmission Envelope is located within the potential offshore wind energy connection area and connection hub area released by VicGrid in March 2024. Corio's base case will involve connecting into VicGrid's Coordinated Connection Point.

Depending on the final operations and maintenance strategy, a manned operation centre will be located near the operations and maintenance (**O&M**) port and/or in the onshore VicGrid Coordinated Connection Point (substation).

The Project design will be further developed in parallel with the results of environmental and technical feasibility studies, and stakeholder consultation, and will be confirmed during the pre-construction phase of the Project.

3. Project description

Aim/objectives of the project (what is its purpose / intended to achieve?):

The Project aims to achieve the following specific outcomes:

- Renewable Electricity Supply – Supply of approximately 9,000-gigawatt hour (**GWh**) of renewable and carbon-free electricity per year, representing a step-change contribution to renewable energy and carbon emission reductions required to achieve Victoria's renewable energy and carbon reduction targets.
- Generation Profile – With a significantly more consistent and reliable generation profile as compared to onshore renewable generation (wind and solar), offshore wind energy will look to create a viable alternative to baseload coal fired generation sources and assist in the transition from baseload non-renewable generation in Victoria (GWEC 2024, Global Offshore Wind Report 2024).
- Regional Investment – Supporting up to 1,700 direct jobs during peak construction and 340 jobs in the Gippsland region during the 30+-year life of the Project during operations.
- Offshore Wind Supply Chain – Contribution to the development of the offshore wind supply chain capability and sector in Victoria.

Background/rationale of project (describe the context / basis for the proposal, eg. for siting):

In October 2021, Australia introduced its Long-Term Emissions Reduction Plan, to deliver net zero emissions by 2050. The transition of Australia to more renewable energy sources is necessary to lower carbon emissions and contribute to the international effort to reduce the effects of climate change. The Project seeks to diversify and increase renewable energy supply to Victoria and to the National Electricity Market (**NEM**), and to make a significant contribution to Australia meeting net zero emissions by 2050 and Victoria meeting net zero emissions by 2045.

At the state level, the Victorian Government has set the Victorian Renewable Energy Target (**VRET**) to 65 per cent by 2030 and 95% by 2035, target intended to deliver investment and employment in Victoria, while ensuring a sustainable economy for current and future generations. The Victorian Government has legislated targets of 2 GW of offshore generation by 2032, 4 GW by 2035 and 9 GW by 2040. In October 2022, the Victorian Government released the Offshore Wind Implementation Statement 1, in March 2023 released Offshore Wind Implementation Statement 2, and in December 2023 released Offshore Wind Implementation Statement 3 outlining the government's plans for the establishment of an offshore wind industry, which includes:

- Transmission – VicGrid will be leading a coordinated approach to transmission to ensure projects have access to the grid.
- Ports – The proposed Victorian Renewable Energy Terminal at the Port of Hastings is the preferred port to support offshore wind construction, subject to necessary community and industry consultation, and environment and planning approvals.
- Offshore Wind Energy Victoria – a dedicated government body has been established to develop the sector.
- Local industry – A significant focus will be placed on boosting the capability of local industry.
- Legislation and regulation – The state will work with the Commonwealth to deliver streamlined regulation and legislation.

On 25 November 2021, the Australian Parliament passed the Offshore Electricity Infrastructure Act 2021 (**OEI Act**), providing a new regulatory framework and licensing regime for the development of offshore renewable energy projects in Australian Commonwealth waters. The OEI Act commenced on 02 June 2022.

On 19 December 2022, the Minister for Climate Change and Energy, the Honourable Chris Bowen MP, declared an area in the Bass Strait, off the coast of Gippsland in Victoria, as Australia's first offshore wind zone. The Declared Area (OEI-01-2022) covers approximately 15,000 square kilometres and is given effect by the Offshore Electricity Infrastructure Declaration in 2022. The Minister issued an invitation for parties with demonstrated experience in offshore wind development and construction to apply for feasibility licences within the declared area. Corio submitted a Feasibility Licence application for the GEOW Project on 27 April 2023. Corio's Feasibility License (FL-010) under the OEI Act was granted on 15 July 2024.

In early 2020, Macquarie (prior to establishing its subsidiaries, Corio and the GEOW Project) commenced offshore wind pre-feasibility and site identification studies in Australia. In the early stages of these studies, the waters surrounding the state of Victoria were identified as having the right conditions for offshore wind, including high wind speeds, water depths suitable for fixed-bottom offshore foundations, and a demand for renewable electricity driven by the Victorian Government's VRET and the Federal Government's ambitious net-zero target by 2050.

The work included a market assessment to understand the high-level constraints and potential for renewable energy and offshore wind in Victoria and Australia more broadly. This included an assessment of the political and regulatory landscape that is planned to support the development of offshore renewable energy.

The study also involved assessing several key constraints and drivers that are critical to the sustainable development of offshore wind. These range from techno-economic drivers such as water depth, wind speed, metocean conditions, grid connection points and port availability, to environmental and social constraints such as the presence of protected areas, protected species, commercial fishing interests, visual and seascape impacts, and shipping traffic. Once viewed in-combination, the areas of seabed with the greatest potential for development were then selected.

In 2021, further evaluation was undertaken to understand the key environmental and social issues associated with the potential development of a preferred shortlist of sites.

The current Project location was selected for the following key reasons:
1. Consistent and strong winds, with a mean wind speed at 150 metres (**m**) altitude of approximately 9.26 metres per second (**m/s**) based on Global Wind Atlas wind data.
2. An area of seabed with water depths of less than 70 m across most of the site, suitable for the development of fixed bottom turbines and large enough to accommodate a 2,500 MW (nameplate capacity) offshore wind project.
3. Avoidance of Australian Marine Parks or State Marine Parks and sensitive marine environments.
4. Avoidance of the main shipping routes and areas of high intensity fishing.
5. An opportunity to connect into a coordinated, VicGrid lead connection point. According to Implementation Statement 3, VicGrid will be providing access to offshore wind generators so they can connect to the infrastructure without experiencing material network curtailment up to the existing transmission network.
6. Existing transport and port infrastructure nearby (e.g., Port of Hastings, Port of Melbourne, Port of Geelong, Barry Beach Marine Terminal / Port Anthony) to service supply chain and support operational activities.

Main components of the project (nature, siting & approx. dimensions; attach A4/A3 plan(s) of site layout if available):

OWF Site (Commonwealth waters) – see **Figure 1** in **Attachment 1**.

Offshore Turbines

It is proposed that up to 172 offshore turbines, with a maximum blade tip height of 375 m, will be installed in the OWF Site, depending upon turbine technology and capacity. At this stage, it is too early to specify which turbine technology will be used, as the ultimate choice of turbine will depend upon how technology evolves in the next few years, which manufacturer offers the most commercially and technically viable option, suitability of the technology for site specific conditions, capacity of available port services and construction support vessels and various environmental and social impact considerations.

Wind class helps in determining which turbine model will perform as the turbines are designed for optimal performance and reliability based on a specific class of wind and the kind of weather which it needs to endure in its lifetime. Across most turbine original equipment manufacturers (**OEM**), it is anticipated that class "International Electrotechnical Commission (IEC) Class I" turbines should be sufficient as they are designed for a wind regime in line with predicted offshore conditions. While turbine performance must be based on the specific wind regime at the site, we

anticipate that Class I turbines will be available at procurement and be suitable for the site conditions found at GEOW.

Turbine spacing depends upon the turbine size and site-specific conditions. The layout of the OWF will be subject to further detailed design and will depend upon factors such as seabed conditions, wind conditions, energy generating efficiencies, and conditions of environmental approvals.

Offshore Turbine Foundations

Generally, there are two groups of foundations for offshore wind: floating and fixed bottom. The selection of the type of foundation to be used in a project depends on the water depth at the selected site, with sites less than 70 m below Mean Sea Level (**MSL**) typically being able to use fixed-bottom foundations, and floating foundations most likely to be required beyond that depth. The water depths at the proposed site are less than 70 m MSL, so the use of fixed bottom foundations is envisaged. This is considered the most economical and cost-efficient solution for offshore wind projects at present.

There are several types of fixed bottom foundations, including monopile, suction bucket, tripod, jacket and gravity-based structures. Several factors affect the final selection of the foundation type including water depth and its variability across the site, seabed and metocean conditions and supply chain considerations. Detailed analysis and evaluation of the optimal solution for the Project will be undertaken following site investigation surveys and technical assessment of foundation concepts.

Structures placed on or in the seabed are exposed to a phenomenon called scour due to the natural acceleration of water around an obstacle and the consequent movement of seabed material due to those currents and wave actions. If required, scour protection will be considered when designing offshore turbine foundations.

Inter-Array Cables

The inter-array cables will be arranged in radial, branched and/or looped configuration to connect the offshore turbines and transmit the energy generated to the offshore substations. The array cables are likely to operate at a nominal Alternating Current (**AC**) voltage range of between 66 kilovolts (**kV**) and 132 kV. Although 66 kV voltage is the current market practice, 132 kV array cables may present some upside potential depending on the progression of the cable and turbine industry. 132 kV presents the potential of reducing electrical losses, fewer cables and/or reduced cross sections required for the same capacity ratings.

The size of the cables will vary depending on the number of turbines it is connecting. The maximum conductor section or Cross-Sectional Area (**CSA**) is expected to be 630 to 1200 millimetres squared (**mm^2**) but will ultimately be defined by the overall electrical system design and the design of the conductor itself.

Cables will be buried 0.5 to 5 m below stable seabed, with burial depth subject to geotechnical conditions and other offshore activities in the area such as fishing. Where burial is not possible, the cables will be surface laid with cable protection installed; for example, rock placement, rock filled gabion bags or concrete mattresses. Burial depth will be assessed through a Cable Burial Risk Assessment.

Offshore Substation

The offshore substation serves as an interconnection point for the turbine strings. The functional capabilities of the offshore substation are housed in a ‘topside’ structure, elevated above the sea on a custom foundation. Offshore substations house other key electrical and auxiliary equipment, typically including switchgear, transformers, control systems, reactors, cranes, back-up power systems, a helipad, and amenities for operations & maintenance (**O&M**) teams.

The substation’s primary function is to receive electricity from the inter-array cables and increase its voltage level using transformers from the inter-array cable voltage level to the export cable voltage level. This increase in voltage reduces electrical losses during transmission and minimises the number of circuits required to transport power to the onshore substation. The offshore substation also facilitates redundancy with the inter-array system, by providing a point

where separate circuits can be interconnected with normally open contactors.

The requirement for and number of offshore substations to be installed will be determined later in the development of the Project and will depend on, amongst other factors, the final number of turbines and their capacity rating, the voltage used in the array cabling system and the specific site conditions. Increasing the export voltage can increase the capacity of each HVAC circuit and substation. However, current assumptions for the Project are that up to eight substations are likely to be required depending on the size of the substation selected.

The offshore substation(s) will transform the array voltage (anticipated to range from 66 kV to 132 kV) to a higher voltage (anticipated to range from 220 kV to 500 kV for an HVAC setup) for transmission to shore using export cables.

Each of the offshore substations will comprise a platform with one or more decks/platforms, with a foundation installed on the seabed. For smaller sized offshore substations, the same foundations for the substations and turbines will most likely be used for ease of supply chain and manufacturing logistics. For larger substations, bespoke jacket foundations (likely to have approximately 3-6 legs) or monopile foundations will be used.

Offshore Cable Envelope (Commonwealth waters) and Nearshore Cable Envelope (state waters)

Offshore Export Cables

Within the Offshore and Nearshore Cable Envelope, high voltage cables are used to transfer electricity from the offshore substation to a landfall site, following a pre-defined cable corridor which is designed to be as short as possible whilst minimising its impact on the surrounding environment and other marine users. The cable corridor will consist of a cable system that is expected to consist of up to eight HVAC cable circuits with an operational voltage level of 220 kV to 500 kV. Each cable will contain three power cores and fibre optics for communications. The cable corridor is expected to be up to 2km wide. Within the Offshore and Nearshore Cable envelope, there will be approximately 1.6 km width of disturbance corridor which will likely be occupied by the final cable system, including buffer for construction activities.

Similar to inter array cables, offshore export cables are typically buried about 0.5 to 5 m below the seabed. In the Nearshore Cable Envelope area, as export cables approach landfall, the cables could be installed deeper as they approach and enter the horizontal directional drilling ducts. Cable burial risk assessments will be conducted prior to installation to determine the appropriate burial depth. Where burial is not feasible, rock placement, rock filled gabion bags or concrete mattresses will be placed over exposed or shallow areas of cable to increase protection.
Export cables are typically installed within a designated corridor and are separated from each other to allow for repairs, if required. The cable separation may change along the cable corridor due to constraints along the route, the need for additional manoeuvrability during installation, and the use of different burial methods which can also affect the separation. This aspect is to be further considered during the design phase when cable sizing studies are expected to be carried out. Where parallel export cable routes are highly constrained or considered to be exposed to higher risk levels from fishing or shipping activities, they may be routed differently to achieve the lowest impact and lowest risk of future damage.

Onshore Transmission Envelope

Key components of the Onshore Transmission Envelope include:

- Shore crossing location
- Cable Transition Joint Bay
- Onshore export cables
- Onshore substation (it is assumed the Project's onshore substation equipment will be located within VicGrid's Coordinated Connection Point as discussed further below). VicGrid is responsible for land acquisition, planning and approval for the full Coordinated Connection Point footprint.

Co-location of transmission infrastructure with other offshore wind projects will be considered and adopted where practicable.

Shore Crossing

Trenchless construction methods will be employed for export cable shore crossings. At this stage horizontal directional drilling (**HDD**) is the preferred method. In a circumstance where HDD is not feasible, other trenchless methods will be investigated, such as direct pipe, micro tunnelling and other possible hybrid solutions that will allow for minimum disturbance. Each of these options would be assessed based on their technical feasibility.

Several shore crossing locations are currently under consideration. In cliff related coastal settings, HDD is proposed to create the cable shore crossing conduits. HDD may also be undertaken beneath areas of sensitive coastal habitats or morphology, where direct surface disturbance to the intertidal area is specifically required to be avoided.

Cable Transition Joint Bay (**TJB**)

The offshore export cable will transition from the shore crossing to an onshore export cable at a custom-built cable TJB. This typically comprises an underground bay with service access that will be constructed near the shore crossing, generally within 500 m off the coastline. The TJB is proposed to consist of approximately a 25,000 m^2 compound for construction, and approximately 1,000 m^2 of which is likely to be permanent footprint.

Onshore Export Cables

Onshore export cables will be constructed to connect from the cable TJB to the VicGrid's Coordinated Connection Point. As required by VicGrid (Offshore Wind Implementation Statement 1), only an underground solution will be used to connect to the Project's onshore substation.

The onshore export cables would be installed to a depth of approximately 1 to 2 m and have a maximum voltage of between 220 kV and 500 kV. Up to eight underground circuits are expected for the Project, with each cable to have a cross-sectional area of up to 4,000 mm^2. The final number and size of each export cable circuit will be determined by detailed engineering study work.

Each underground cable circuit will have three individual power cables (one per phase) associated fibre optic communication and control. All the cables will be installed in trenches in a flat or trefoil arrangement, most likely within a conduit/duct, surrounded by thermally stable backfill and covered by soil.

To avoid major obstacles, such as crossing pipelines, cables and/or waterways, short HDD or other suitable crossing techniques may be required along the route.

The power cables will be delivered to site on cable drums, each drum will store approximately 500 to 1,000 m of cable. Cable joint bays will be required along the cable route to join individual sections of cable together. These joint bays will be installed underground, within the onshore transmission envelope, with a manhole access cover at the surface to enable cable testing during operation. Additional temporary construction areas such as construction compounds, access road(s) and topsoil removal/ stockpiles will be required to facilitate access to the cable route corridor from public roads, facilitate equipment laydown, vehicle parking and turning, etc.

The 2 km wide Onshore Transmission Envelope will have cable route corridor easement of approximately 40 m with an extra 20 m on either side for access and spoil storage during construction and for any remedial works (disturbance corridor of approximately 80 m). The easement will consist of permanent cable easement, concrete enclosed joint bays, concrete enclosed link pits, concrete enclosed fibre pits, temporary haul road along the full length of the route, temporary construction areas to store spoil storage during construction/ remedial works. Additional access routes from the haul road to the main road networks and a larger, main construction compound maybe required outside the 80 m easement but within the Onshore Transmission Envelope.

VicGrid's Coordinated Connection Point (substation)

Onshore export cables will be connected to VicGrid's Coordinated Connection Point (substation) which is likely to contain 500 kV or 330 kV switchgear including circuit breakers and control room(s). VicGrid is likely to provide space within this substation compound for Project specific transformers and National Electricity Rules (NER) compliance equipment such as Static Synchronous Compensator (STATCOM), reactors, Battery Energy Storage Systems, harmonic filters and/or synchronous condensers. VicGrid is responsible for land acquisition, planning and approval for the full Coordinated Connection Point footprint.

The specific location and design of VicGrid's Coordinated Connection Point (substation) the onshore substation(s) as well as the design of all its the equipment, will be led by VicGrid but Corio will be involved and will determine the equipment required to support the Project through subsequent engineering design studies. Corio will be providing the transformers in VicGrid's Coordination Connection Point.

If Corio was required to provide its own separate substation compound for the project, similar Project specific equipment detailed above (e.g. transformers, Static Synchronous Compensator (STATCOM), reactors, Battery Energy Storage Systems, harmonic filters and/or synchronous condensers) would be included and delivered by the Project.

Ancillary components of the project (eg. upgraded access roads, new high-pressure gas pipeline; off-site resource processing):

Ancillary components may be required to support the feasibility studies, construction and operational phases of the Project.

The likely offshore ancillary components include:

- Meteorological and oceanographic monitoring devices in Commonwealth and/or state waters (e.g., floating LiDAR, wave buoys, seabed-based profilers) preliminary geophysical and geotechnical investigations during early Project investigations (note, these activities are the focus of a separate referral);
- Navigational aids in Commonwealth and/or state waters; and
- Safety zones (navigation buoys) may be established around offshore turbines and offshore substations in Commonwealth waters in accordance with the OEI Act, though this will be confirmed with the Offshore Infrastructure Regulator (**OIR**).

These offshore ancillary works do not form part of this referral. Any approvals required to support these works would be secured under other permits/referrals.

Onshore ancillary components associated with the Project, and which form part of this referral, include construction, operation and maintenance facilities and related works, comprising:

- Temporary construction laydown areas and site and personnel facilities.
- Site offices and storage facilities.
- Operations base.

Existing road infrastructure is generally expected to be suitable to support both construction and operations, however, some upgrade works may be required to enable heavy loads to be delivered to onshore substations. Temporary site access roads and laydown areas will need to be established at the main construction areas. These will be located within the Onshore Transmission Envelope. The Project will seek to create minimal disruptions to the local roads network and traffic.

Potential utilities services relocations and/or upgrades may be required to accommodate the new onshore cable route. The requirement for any such works will be determined in consultation with the relevant utility providers.

Key construction activities:

Construction is anticipated to take approximately three to four years. The preliminary schedule for the Project identifies construction as occurring between 2028 and 2032. A summary of the key construction activities planned offshore and onshore is provided below.

OWF Site (Commonwealth waters)

Key construction activities planned to occur include:

- Survey and site clearance.
- Installation of ancillary components, including navigational aids.
- Preparation of the seabed (including the depositing of materials/re-location and placement of materials). Within the Offshore and Nearshore Cable envelope, there will be approximately 1.6 km width of disturbance corridor which will likely be occupied by the final cable system, including buffer for construction activities.
- Transport of turbines, offshore substation topsides and foundations to marshalling site.
- Installation of offshore foundations.
- Installation of turbine components and offshore substation substructures on foundations.
- Installation of scour protection, as required.
- Pre-trenching and simultaneous lay and burial of the inter-array cables using a cable plough or trenching equipment including the use of a remotely operated vehicle (**ROV**).
- Laying of export cable and cable protection, as required.
- Testing and commissioning of the wind farm in stages.

Offshore turbines

The turbines are comprised of a tower, nacelle, hub and blades, each of which are fabricated separately either in house by OEMs themselves or by specialist subcontractors.

Once the key components have been manufactured, they may be pre-assembled at a marshalling harbour to varying degrees of completion. Pre-assembly aims to minimise the number of offshore lifts and working time, such as by assembling the tower before load-out on the installation vessel.

Foundations

Installation techniques vary depending on foundation type. These are described below for bottom-fixed concepts.

- Monopiles

  The monopile is normally driven into the seabed using a large pile driving hammer suspended from the crane of a jack-up vessel or floating ‘dynamically positioned vessel’. Once the monopile is installed, a transition piece structure which connects the monopile to the tower is lifted and installed onto the monopile. The two structures are connected either by a bolted flange connection or by a grouted annulus joint. As an alternative to the use of a large pile driving hammer, several innovative pile installation methods, such as hydro hammers and vibration-based piling, are currently being trialled in the industry.

- Pin-Piled Jacke

  Pin-piles are typically installed in the seabed at each offshore turbine location prior to the jacket arriving. This installation process is known as ‘pre-piling’ and it involves using a pile driving hammer. Although, other piling techniques such as hydro hammers and vibration-based piling, are currently being trialled in the industry. Alternatively, but less commonly, piles can be installed after jacket installation via pile sleeves (post-pilling). ROVs are used to guide the foundations in place and monitor the grouting process. Jacket foundations for offshore wind turbines are typically three or four-legged structures and the final jacket geometry depends on site-specific conditions and supply chain requirements.

- Suction Bucket Jacket

  Installation of suction bucket jackets is completed by lowering the structure on to the seabed, before pumping water out from the buckets at the feet of the jacket. Once the water from the buckets has been pumped out, the pressure differential between the inside of the bucket and the external water pressure secures the foundation to the seabed. ROVs are used to monitor the pumping process to analyse any potential anomalies in the installation process that may compromise the security of the foundation’s fastening and position. Once enough water has been pumped from within the buckets to guarantee a suitable installation depth, valves are shut, hoses are removed, and the pumping process ceases.

- Gravity Base Structure

Gravity based structures (**GBS**) are typically fabricated at a quayside fabrication facility (e.g. a port) and manoeuvred at the quayside along the ground using rollers or other systems, and floated out to site and sunk into position prior to ballasting. Prior to sinking/ballasting the GBS, the seabed needs to be levelled, this typically involves ground preparation requiring a gravel or rock bed/pad to be built up. The immersion technique of installing the foundations generates minimal noise, and foundations can be fully decommissioned with minimal lasting effect on the seabed or surrounding ecology. Site preparation is a critical element of the overall construction and installation of GBS.

- Weighted / Gravity Based Jackets

There are also some design concepts of weighted / gravity-based jackets (weighted bucket jackets) available however these are less commonly used.

Inter-Array Cables

Cable installation activities will be preceded with a cable route survey and clearance of any debris (e.g. boulders or small surface debris that could propose a challenge to cable installation).

Burial of the cables will provide protection to the cables where seabed characteristics allow. Cables are typically buried approximately 0.5 to 5.0 m below the seabed to ensure marine traffic such as fishing vessels or ship anchors do not damage the cable. Cable burial assessments are conducted prior to installation to determine the appropriate burial depth.

The method of cable burial is highly dependent on the nature and composition of the seabed. Pre-trenching, simultaneous lay and burial using a cable plough or post lay burial utilising a subsea trencher, plough or ROV are all well-established methods in the offshore renewables industry. In some cases, a combination of burial techniques may be required based on local seabed conditions.

At locations where it is not possible to bury cables (e.g., where the substrate or cable/pipeline crossings result in the cable being laid near to or on the seabed surface, or where cables enter the turbine or offshore substation platform) additional protection may be required, such as concrete mattressing, rock placement, grout bags, etc.

Crossings with other infrastructure (e.g. Basslink HVDC interconnector and Tasmanian Gas Pipeline) may be required. The design and methodology of these crossings will be confirmed in agreement with the asset owner. An example of a type of crossing is that a berm of rock will be placed over the existing asset for protection, known as a pre-lay berm, or separation layer. Project cables will then be laid across this, at an angle close to 90 degrees and then be covered by a second post lay berm to ensure that the inter array cable remains protected and in place.

Offshore Substations

The foundation structure is normally transported to site by barge and listed into place. In the case of a monopile, often the foundation installation vessel can be used, with installation following the same method used as a monopile foundation. For a jacket foundation normally a larger, specialist heavy-lift vessel will be required, typically pin piles will have been installed in advanced though they might also be installed after the jacket is lifted into place (post piling).

For the topside module, it is normally loaded onto a barge (by either heavy-lift crane, Self-Propelled Modular Transporters (**SPMTs**), or through a “skidding” procedure) and towed to the offshore site where it will be installed onto the foundation using a specialist heavy-lift vessel.

Offshore Cable Envelope (Commonwealth waters)

Key construction activities planned to occur include:

- Preparation of the seabed (including some limited levelling as necessary), within a disturbance corridor of up to 1.6 km in width for the final cable system, including buffer for construction activities.
- Installation of the offshore export cable using a cable plough or trenching Remote Operated Vehicle (**ROV**).
- Laying of cable protection (concrete mattressing, rock placement, grout bags, rock filled gabion bags etc.), as required.
- Cable bridge to support crossings of existing cables or pipelines offshore.
- Crossings with other infrastructure (e.g. Basslink HVDC interconnector and Tasmanian Gas Pipeline) may be required.

Nearshore Cable Envelope (state waters)

Key construction activities proposed in Victorian coastal waters within the Nearshore Cable Envelope include:

- Preparation of the seabed (including some limited levelling as necessary), within a disturbance corridor of up to 1.6 km in width for the final cable system, including buffer for construction activities.
- Installation of the offshore export cable using a cable plough or trenching **ROV**.
- Laying of cable protection (concrete mattressing, rock placement, grout bags, rock filled gabion bags, etc.), as required.
- Vessel movements – cable lay vessels.
- Within the cable breakout section, horizontal directional drilling and cable pull activities.

Offshore Export Cable

Export cable installation activities will be similar to the inter-array cable installation activities described above. Cables will either be buried (where the substrate is suitable) or cable protection used where the cable is laid on the seabed surface. Additional cable protection may be required depending on the burial depth and metocean conditions.

In shallow waters close to shore, the shore crossing will be achieved using an HDD spread (if HDD is selected as the shore crossing construction method).

In the Nearshore Cable Envelope area, as export cables approach landfall, the cables could be installed deeper as they approach and enter the HDD ducts (if HDD is selected as the shore crossing construction method).

If trenching is required through the intertidal zone, a backhoe dredger mounted on a shallow draft barge and small onshore excavator may be used. Specialised elevated marinised excavators may also be used where site conditions are suitable. Hopper barges would be used to dewater and transport any material to a suitable relocation site.

Crossings with other infrastructure (e.g. Basslink HVDC interconnector and Tasmanian Gas Pipeline) may be required. The design and methodology of these crossings will be confirmed in agreement with the asset owner. An example of a type of crossing is that a berm of rock will be placed over the existing asset for protection, known as a pre-lay berm, or separation layer. Project cables will then be laid across this, at an angle close to 90 degrees and then be covered by a second post lay berm to ensure that the export cable remains protected and in place.

Installation Vessels

The type of installation vessels used varies per component being installed.

For offshore turbine and foundation installation, a jack-up vessel is normally utilised. These vessels provide a stable platform for the installation of foundations and turbine components via legs which lift the vessel above sea level. Operation of jack-up vessels are mainly constrained by the height of the legs, generally only suitable for water depths less than 50 m. For areas with greater water depths, a dynamic positioning system vessel, that automatically maintains position via propellors, and thrusters is considered best practice. For this Project, the use of a jack-up vessel and/or a dynamic positioning system vessel will be decided once the site conditions and supply chain constraints have been fully assessed.

For the offshore substation, installation is generally performed by heavy lift barges (also used in the oil and gas industry). These vessels are not equipped for prolonged installation periods, so substations are assembled onshore prior to installation. Though it is also possible to either use multiple smaller substations that would reduce the size of vessel needed to perform the lift, or to split the substation topside in 2 or more parts, again reducing the size of the vessel needed to perform the lift, (e.g. WTG or foundation installation vessels could be used).

For cable installation, specialised cable laying vessels are typically used. These vessels are also suited to activities outside of offshore wind as they can be used to lay other cable types such as electricity interconnectors and submarine communication cables. Accordingly, these vessels are in high demand and as such supply is constrained.

Onshore Transmission Envelope

Key construction activities planned to occur include:

- Establishment of onshore construction sites (offices, laydown areas, etc).
- Delivery of equipment.
- Road upgrades and creation of site access and laydown areas (clearing and levelling).
- Clearing and levelling along selected cable routes.
- Clearing, levelling and construction of foundations for the onshore substation within VicGrid's Coordinated Connection Point.
- Excavation and preparation of the shore crossing site and cable TJB.
- Excavation and preparation of the cable trenches and joint bays, within a disturbance corridor of up to 80 m width.
- Installation of underground cables and cable termination compounds.
- Installation of Project's electrical equipment within VicGrid's Coordinated Connection Point (substation).
- Electrical connection of cables and final system commissioning.
- Removal of construction facilities and site tidy up.

Key operational activities:

The operational design life of the offshore wind farm is a minimum of 30 years, with the option to extend within the 40-year duration of a commercial licence under the OEI Act.

This phase will include operation and management of the Project, and periodic inspection and maintenance activities. Remote operational monitoring and environmental monitoring programs are also expected to be undertaken.

Periodic inspection and maintenance activities may include:

- Turbine inspections, testing and maintenance.
- Foundation inspections, testing and maintenance.
- Cable route inspections, testing and maintenance.
- Substation inspections, testing and maintenance.
- Vessel and vehicle access associated with the above activities.
- On and offshore technical (e.g. geophysical and geotechnical, ROV/Camera/Drone) surveys, Environmental surveys.

The specific methods and frequency of inspection and maintenance activities will be in accordance with the OEI Act and are subject to detailed engineering design and the development of an inspection and maintenance program, such a programme will be based on OEM operation and maintenance manuals and industry best practice.

Key decommissioning activities (if applicable):

Requirements for decommissioning will be established through the approvals phase for the Project and the development of a Commercial Licence Decommissioning Management Plan. This Management Plan will address how infrastructure is to be removed in accordance with the OEI Act and regulations.

It is anticipated that decommissioning will include:
- Removal of infrastructure as required.
- Reinstatement/rehabilitation activities.
- Mitigation and monitoring.

Is the project an element or stage in a larger project?

☒ No ☒ Yes If yes, please describe: the overall project strategy for delivery of all stages and components; the concept design for the overall project; and the intended scheduling of the design and development of project stages).

Is the project related to any other past, current or mooted proposals in the region?

☒ No ☒ Yes If yes, please identify related proposals.

What is the estimated capital expenditure for development of the project?

The Project has an estimated capital investment value of approximately $10 billion for an approximately 2.5 GW project (nameplate capacity).

4. Project alternatives

Brief description of key alternatives considered to date (eg. locational, scale or design alternatives. If relevant, attach A4/A3 plans):

In Corio's development of the Project, the following alternatives have been considered:

- No Action

  Development of renewable energy is required to meet the Victorian government's net zero targets by 2045. A portfolio of energy supply, of which offshore wind will comprise a key part, is the optimal approach to meet Australia's emissions reduction targets. Whilst other renewable energy technologies are in development across Australia, offshore wind is able to be constructed at a larger scale.

- Alternative locations

  The Project considered other potential locations around Australia for development of offshore wind farms during a comprehensive site identification and feasibility study completed in 2020 and 2021. The site identification study considered key factors such as offshore wind resource, market potential, grid and interconnection opportunities, environmental risks and technical risks to identify suitable sites for offshore wind development.

  Potential sites off the coast of Victoria and elsewhere in Australia were considered, and the current Project location was selected as one of the preferred based on the factors listed in Section 3. The area was later included within Declared Area OEI-01-2022. Corio submitted a Feasibility Licence application for the GEOW Project in April 2023 and was awarded a Feasibility License (FL-010) under the OEI Act on 15 July 2024.

- Alternative grid connection point

  In a case where the VicGrid Coordinated Connection Point does not proceed, Corio will investigate alternative grid connection options such as Loy Yang Power Station or Hazelwood Terminal Station. This referral does not consider the above listed alternative connection options, and those alternatives are outside the scope of this referral.

Brief description of key alternatives to be further investigated (if known)**:**

High-voltage Direct Current (**HVDC**) Electrical Concept

HVDC systems are used where HVAC systems are incapable of, or highly inefficient in bulk carrying power over long distances. HVAC systems are the better option for close to shore projects, and HVDC becomes more economically feasible for larger projects located further from the existing transmission grid.

HVDC systems will be further investigated depending on the transmission distance. However, currently, HVAC transmission technology is preferred for the following reasons:

- Given that VicGrid is providing a shared HVAC connection hub near the coast for offshore wind developers to connect into, the Project's transmission length is expected to be more suitable to HVAC transmission technology.
- Compared to HVDC, HVAC transmission options have lower land-take requirements, shorter equipment lead times and lower competition for equipment & resources.
- HVAC systems are easier to extend or modify and lend themselves well to phased/staged development. These factors will have more desirable project costs and project execution times compared to HVDC.
- HVAC systems, whilst still in increasing demand, have a wider supplier base (including suppliers in Asia) and larger manufacturing capacity.

5. Proposed exclusions

Statement of reasons for the proposed exclusion of any ancillary activities or further project stages from the scope of the project for assessment:

Ports and Harbours

The Victorian Government's *Navigating our Port Futures: The Victorian Commercial Ports Strategy* (July 2022) establishes a clear vision for the commercial ports sector across Victoria and outlines key reforms and next steps required to support and navigate Victoria's ports future. The strategy identifies the need to be responsive to market demands and a focus on:

- Supporting capacity growth at the Port of Melbourne
- Port of Hastings multi-use facility
- Station Pier and the future of Victoria's cruise shipping
- Geelong channel optimisation.

Currently, each of the following ports will be assessed for feasibility as both a construction and O&M base for the Project:
1. Port of Hastings
2. Barry Beach Marine Terminal / Port Anthony (Corner Inlet)
3. Port of Geelong
4. Port of Melbourne.

It is anticipated that any port expansion works or upgrades would be undertaken by the Port Operator to service multiple developments or offshore wind projects and not related specifically to the Project. No upgrades to ports or channels are proposed by Corio within the scope of this Project.

Surveys

Marine environmental baseline, wind measurement, metocean, preliminary geophysical and geotechnical surveys sit outside the scope of this referral and will be subject to separate permits / referrals as required. On 17 July 2024, Corio referred a proposal to undertake Preliminary Geophysical and Geotechnical Investigations (EPBC 2024/09890) to the Department of Climate Change, Energy, Environment and Water (**DCCEEW**) under the *Environmental Protection and*

Biodiversity Conservation Act 1999 (**EPBC Act**). The investigations are required to gather data to determine the feasibility of the Project and inform its design, including location of infrastructure such as wind turbine generators and offshore substations etc. Since referring the proposal in July 2024, Corio has completed further cable route studies, refined the survey area in Commonwealth waters and defined two potential nearshore cable corridors within state waters. Corio subsequently submitted a Request to vary the Proposed Action under section 156A of the EPBC Act in December 2024.

6. Project implementation

Implementing organisation (ultimately responsible for project, ie. not contractor)**:**

Great Eastern Offshore Wind Farm Project Co Pty Ltd as trustee of the Great Eastern Offshore Wind Farm Asset Trust.

Implementation timeframe:

An indicative timeframe for implement of the Project is outlined below. The exact delivery program will need to be developed as technical studies and impact assessments are completed as well as ongoing investigations into commercial viability and technical feasibility.

Timeframe	Activity description
2021 (complete)	Site selection
2022 (complete)	Feasibility phase
2023-2025 (underway)	Environmental surveys (2 years)
2024-2026/2027	Impact assessment (2-3years)
2026-2027	Regulator determination and project approval
2022-2028	Engineering design
2027-2030	Manufacturing
2028-2032	Construction
2032-2062	Operation

Proposed staging (if applicable):

Construction scenarios for the offshore wind farm are still under consideration. There is the potential for the offshore wind farm to be delivered in multiple phases to ensure successful delivery of the full 2.5 GW nameplate capacity. In this staged construction scenario, two phases of transmission construction would need to be carried out to match the staging of construction of the offshore wind farm. The current assumption is that the transmission infrastructure for offshore and onshore will connect into the same VicGrid connection hub across phases of the project and therefore follow the same route within the referral area for the Project.

The construction scenario will be refined as the Project progresses to align with the development of the offshore wind industry in Victoria, including consideration of the capacity of supporting infrastructure such as ports, supply chain, transmission and grid.

7. Description of proposed site or area of investigation

Has a preferred site for the project been selected?

☐ No ☒ Yes If no, please describe area for investigation.
If yes, please describe the preferred site in the next items (if practicable).

General description of preferred site, (including aspects such as topography/landform, soil types/degradation, drainage/ waterways, native/exotic vegetation cover, physical features, built structures, road frontages; attach ground-level photographs of site, as well as A4/A3 aerial/satellite image(s) and/or map(s) of site & surrounds, showing project footprint):

The proposed Project Boundary spans state land, state (coastal) waters (three nautical miles (**nm**) from the Victorian coast), as well as Commonwealth waters. Refer to **Figure 1** in **Attachment 1**.

The referral area under the EE Act itself only affects the Nearshore Cable Envelope and the Onshore Transmission Envelope . Refer to **Figure 2 in Attachment 1.**

Commonwealth waters are not subject to the EE Act, however for context, project parameters within this area are discussed within this referral. Matters relating to Commonwealth waters will be formally referred under the EPBC Act.

The Project Boundary comprises four key components which are:

- **Onshore Transmission Envelope** (terrestrial environments)

- Located within the Wellington Shire Council, the onshore envelope extends inland from Giffard region to the coast covering McGaurans Beach and Woodside Beach. The onshore area is dominated by agricultural land, urban areas containing road corridors, waterways, and various other natural and built assets.
- Topography within the Onshore Transmission Envelope ranges between 2.06 – 39.18 m Australia Height Datum (**AHD**)
- The McLoughlins Beach – Seaspray Coastal Reserve, a protected park, is mapped partially (9.65 ha) within the onshore envelope along the south-eastern coastal boundary. Refer to **Figure 3** in **Attachment 1**.
- The area includes established native vegetation with threatened species and ecological communities.
- Jack Smith Lake State Game Reserve, a listed nationally important wetland, intersects with the referral area at its northern end. With the implementation of trenchless construction techniques such as HDD beneath coastal values to reduce impacts, these wetlands are not expected to be directly impacted by Project activities.
- The Corner Inlet Ramsar site and Wilsons Promontory National Park are located near the referral area, but do not intersect with it. They are located 20 km and 33 km from the referral area respectively.

- **Nearshore Cable Envelope** (marine environments in state waters).

- Located within state waters between Woodside Beach and the township of Giffard.
- Water depths in the Nearshore Cable Envelope range from zero metres at the shoreline, to approximately -19 m Australia Height Datum (**AHD**) at the State Coastal Waters limit (approximately 5.6 km from the coast).
- Ninety Mile Beach National Park is located 4 km north-east of the Nearshore Cable Envelope at the shoreline boundary.

1. **Offshore Cable Envelope** (marine environments in Commonwealth waters)

- Located within Commonwealth waters between the limit of Victorian coastal waters and the OWF Site (approximately 25 km offshore).
- Water depths range from approximately -39 m AHD at the western side of the OWF Site and -55 m AHD at the eastern side of the OWF Site.
- The seabed is relatively flat and featureless, predominantly composed of soft sediments with occasional areas of exposed rock.

2. **Offshore Wind Farm Site** (marine environments in Commonwealth waters)

- Located in the Bass Strait, to the east of Wilsons Promontory, the OWF Site is approximately 25 – 45 km offshore, south of Port Albert and east of the Wilsons Promontory.
- Water depths in the OWF Site range from approximately -39 m to -69 m AHD. The shallowest water depths in the OWF Site are inshore closer to Corner Inlet and deepest are offshore. The majority of the OWF Site is composed of relatively flat sea floor gently sloping to deeper water in the south-easterly direction. The sea floor gradient remains relatively consistent throughout the OWF Site and there are no apparent significant bathymetric features.
- Wind – the Global Wind Atlas indicates that the annual mean wind speed at 150 m altitude (indicative of turbine hub height) is between approximately 9.1 m/s and 9.4 m/s.

Monthly statistics from the nearest Bureau of Meteorology (**BOM**) weather station near East Sale airport, approximately 60 km from the GEOW Project site, indicate that the prevailing wind direction at 0900 Australian Eastern Standard Time (**EST**) are generally from the west or northwest year-round. Winds at 1500 EST are generally from the east or south-east during the summer months and from the west during winter.

- Waves – wave data obtained from the Gippsland Lakes Ocean Access Long Term Monitoring and Management Plan, from a buoy at Lakes Entrance, recorded the following annual average wave conditions in between 1998 to1999:
  - Highest Significant Wave Height: 3.27 m.
  - Mean significant wave height: 1.00 m.
  - Mean peak wave period: 7.3 seconds.

Site area (if known):

The total referral area for the project's Victorian components is approximately 5,100 ha, comprising:

- 3,100 ha onshore
- 2,000 ha offshore in state waters

Route length (for onshore linear infrastructure).

The Onshore Transmission Envelope will provide for the development of a cable corridor 80 m wide (including a 40 m construction footprint and 20 m buffer either side), over a cable route length of approximately 7-9 km between the shore crossing location at McGaurans Beach and the VicGrid Coordinated Connection Point (depending on the final route and end point location). Its location will be informed by both design and operational constraints, the findings of on-ground ecological surveys and the final location of the VicGrid Coordinated Connection Point.

Current land use and development:

Within the referral area, the preferred site comprises the following land uses and development:

- The referral area traverses rural residential land, agricultural land, various local, regional and state reserves, road corridors, and Crown Land. Refer to **Figure 8** in **Attachment 1**.
- The referral area incorporates the township of Giffard and the McLoughlins Beach – Seaspray Coastal Reserve.

Description of local setting (eg. adjoining land uses, road access, infrastructure, proximity to residences & urban centres):

The proposed site is located approximately 180 km south-east of the Melbourne Central Business District. Regional urban centres located within the referral area include Giffard in the Wellington Local Government Area (**LGA**).

No VicRoads Declared Roads traverse the referral area. Local roads include Giffard Road and Giffard West Road.

The referral area surrounds (but excludes) the Darriman H29 Bushland Reserve. Most of the coastline itself is designated as wildlife reserve or coastal reserve land. This includes the Jack Smith Lake Wildlife Reserve and McLoughlins Beach – Seaspray Coastal Reserve.

Beyond the referral area, large areas of marine and coastal park are located to the south-west, including Wilsons Promontory.

Planning context (eg. strategic planning, zoning & overlays, management plans):

The referral area is subject to the Wellington Planning Scheme under the *Planning and Environment Act 1987*.

State Planning Policy Framework

Key clauses relevant to the Project include but are not limited to:

- Clause 11 Settlement, including Clauses 11.03-4 Coastal Settlement.
- Clause 12 Environmental and Landscape values, including Clause 12.01-1 Protection of Biodiversity, Clause 12.01-2 Native Vegetation Management and Clause 12.02 - Coastal Values and its subclauses.
- Clause 13 Environmental Risks and Amenity including Clauses 13.01-2 Coastal Inundation and Erosion, 13.02 Bushfire and 13.07-1 Land Use Compatibility.
- Clause 14 Natural Resource Management, including Clause 14.01-1 Protection of Agricultural land.
- Clause 15 Built Environment and Heritage, including Clause 15.03 Heritage.
- Clause 17 Economic Development, including Clause 17.04-22 Coastal and Maritime Tourism and Recreation.
- Clause 18 Transport, including Clause 18.03 Ports.
- Clause 19 Infrastructure, including Clause 19.01-Energy.

Local Planning Policy Framework

Key clauses of the Wellington Planning Scheme relevant to the Project include but are not limited to:

- Clause 21.12 Coastal Areas Strategic Framework.
- Clause 21.13 Environmental and Landscape Values.
- Clause 21.15 Natural Resource Management.
- Clause 21.16 Built Environment and Heritage.
- Clause 22.01 Special Water Supply Catchment Policy.
- Clause 22.02 Rural Policy.
- Clause 22.07 Coal Buffer Policy.
- Clause 22.08 Ninety Mile Beach Policy.

Zones and overlays

Refer to **Figure 4** in **Attachment 1** (Planning Zones) and **Figure 5** in **Attachment 1** (Planning Overlays).

The referral area is affected by the following planning controls:

- Zones
    - Farming Zone – to protect and promote agricultural use of land while supporting sustainable land management.
    - Transport Zone 3 – Significant Municipal Road – to provide for an integrated and sustainable transport system.
    - Public Conservation and Resource Zone – to protect and conserve the natural environment and natural processes for their historic, scientific, landscape, habitat or cultural values.
- Overlays
    - Environmental Significance Overlay (ESO1, ESO2) – to ensure that development is compatible with identified environmental values.
    - Bushfire Management Overlay – to ensure that the development of land prioritises the protection of human life and strengthens community resilience to bushfire.
    - Specific Controls Overlay (SCO2) – land use and develop control for the existing Basslink.

Particular Provisions

Pending the final design for the Project, permits may be required to facilitate the Project under the following particular provisions:

- Clause 52.02 Easements, restrictions, and reserves.
- Clause 52.02 Signs.

- Clause 52.06 Car Parking.
- Clause 52.17 Native Vegetation.
- Clause 52.29 Land adjacent to the Principal Road Network.

Local government area(s):

- Wellington Shire Council

Refer **Figure 1** in **Attachment 1** (Project Overview).

8. Existing environment

Overview of key environmental assets/sensitivities in project area and vicinity
(cf. general description of project site/study area under section 7)**:**

Desktop reviews including the Preliminary Marine Assessment Report (ERM, 2024a) (**Attachment 3**), Preliminary Terrestrial Ecology Assessment Report (ERM, 2024b) (**Attachment 4**), Preliminary Visual Appraisal (**Attachment 5**), and Preliminary Heritage Constraints Assessment (ERM, 2024c) (**Attachment 6**) have been undertaken to understand environmental assets and sensitivities within the referral area. An overview of the key environmental values is provided below.

Offshore environment

The referral area includes marine subtidal and intertidal environs (to Highest Astronomical Tide (**HAT**)) in Victorian coastal waters. Coastal communities of Port Albert, Robertsons Beach, Manns Beach, McLoughlins Beach, Woodside Beach, Giffard, Seaspray, are all located inshore to the north of the OWF Site. Wilsons Promontory National Park is located to the west of the OWF Site.

A high-level summary of key values within and relevant to the offshore referral area is provided below with further details in the Preliminary Marine Assessment Report (ERM, 2024a) (**Attachment 3**).

<u>Marine and Coastal Protected Areas</u>

No Australian Marine Parks (**AMPs**) overlap the offshore referral area, the nearest AMP is the Beagle Marine Park is located approximately 12 km south of the OWF Site and 43 km south of the Offshore Cable Envelope.

No state marine or coastal parks overlap the offshore referral area. There are 13 state parks in the vicinity, the closest being the Jack Smith Lake Wildlife Reserve, which lies 20 m inland from the Nearshore Cable Envelope at the shoreline boundary and Ninety Mile Beach Marine National Park, located approximately 4 km to the north-east of the Nearshore Cable Envelope at the shoreline boundary. Refer to **Figure 3** in **Attachment 1**.

<u>Benthic (seabed) habitats and ecological communities</u>

The seabed in the offshore referral area predominantly comprises mixed sediments (sand, gravel, silt) with no visible biota, although several tracts of seagrass and algae extend from approximately Woodside Beach towards Corner Inlet and Wilson's Promontory. Nearshore waters in the north-western part of the Nearshore Cable Envelope include discrete occurrences of the marine biotopes, 'Grey mounded colonies with seabed erect sponges (Ninety Mile Beach E)' and 'Thallose Red Algae with Abundant Feather Stars (Ninety Mile Beach A)'.

<u>Flora, fauna and native vegetation</u>

Native vegetation – No defined Ecological Vegetation Classes (**EVCs**) occur within the offshore portion of the referral area. EVCs noted as occurring onshore in coastal areas inshore (of the offshore referral area) include Coastal Saltmarsh, Coastal Dune Scrub/Coastal Dune Grassland Mosaic, and Estuarine Wetland.

Areas of seagrass and algae in nearshore waters include indigenous species that are considered native vegetation. This is based on the definition of native vegetation provided in the *Guidelines for the removal, destruction or lopping of native vegetation* (DELWP 2017), the advice of the *Assessor's handbook: Applications to remove, destroy or lop native vegetation* (DELWP 2018), and the Victoria Planning Provisions describing native vegetation as *'plants that are indigenous to Victoria, including trees, shrubs, herbs and grasses'.* Any seagrass removal would be treated as the removal of a patch of native vegetation as per these policies and guidelines.

Most of the Nearshore Cable Envelope is classified in Seamap Australia as having no visible biota, although several tracts of seagrass and algae extend from approximately Woodside Beach towards Corner Inlet and Wilson's Promontory.

Threatened flora – No EPBC Act or *Flora and Fauna Guarantee Act 1988* (**FFG Act**) listed flora species occur in the offshore referral area.

Threatened fauna – Desktop review identified the potential occurrence of:

- 47 Threatened species and 56 Migratory species as potentially occurring within the offshore cable envelopes (excluding terrestrial and freshwater species not considered relevant to the offshore environment). Of these, 34 species are listed as both Threatened and Migratory, 13 as Threatened but not Migratory and 20 as Migratory but not Threatened.
- 39 Threatened species and 39 Migratory species as potentially occurring within the OWF Site. Of these, 29 species are listed as both Threatened and Migratory, 10 as Threatened but not Migratory and 10 as Migratory but not Threatened.

Migratory species of fauna (i.e. species listed as Migratory under the EPBC Act but not listed as Threatened under either the EPBC Act or FFG Act) are identified as potentially occurring within the offshore referral area. These species encompass birds (seabirds, shorebirds and migratory land birds), marine mammals, marine turtles and fish, as summarised in Table 1.

Table 1 Summary of offshore threatened species groups and ecological communities

Attribute	EPBC/FFG listing	Number	Reference
Avifauna	EPBC only	29	Preliminary Marine Assessment Report (ERM, 2024a) (Attachment 3 sections 4.6.5.1 and 4.7.3.1)
	FFG only	10	
	EPBC & FFG	30	
Marine mammals	EPBC only	5	(Attachment 3 sections 4.6.5.2 and 4.7.3.2)
	FFG only	0	
	EPBC & FFG	3	
Marine turtles	EPBC only	2	(Attachment 3 sections 4.6.5.4 and 4.7.3.4)
	FFG only	0	
	EPBC & FFG	1	
Pinniped	EPBC only	1	(Attachment 3 sections 4.6.5.3 and 4.7.3.3)
	FFG only	1	
	EPBC & FFG	1	
Fish, sharks and rays	EPBC only	4	(Attachment 3 sections 4.6.5.5 and 4.7.3.5)
	FFG only	3	
	EPBC & FFG	3	
Threatened Ecological Communities	EPBC	0	Attachment 3 section 4.6.4

Onshore environment

The onshore portion of the referral area is located within the West Gippsland Catchment Management Area (**CMA**), and within the South East Coastal Plain (**SCP01**) Subregion within the Gippsland Plain Interim Biographic Regionalisation of Australia (**IBRA**) bioregion.

The largest and highest quality native vegetation remnants within the region are represented in Holey Plains State Park, Stradbroke Flora and Fauna Reserve, Jack Smith Lake Wildlife Reserve, Giffard (Rifle Range) Flora Reserve, McLoughlins Beach - Seaspray Coastal Reserve, Mullungdung State Forest and a range of smaller reserves. These areas support a continuous cover of native vegetation and lifeforms characteristic of the mosaic of EVCs modelled to occur in the referral area. In addition, they also contain large trees, which are likely to provide essential habitat for a range of faunal species.

Outside these areas, moderate to high quality remnant communities are also present in smaller reserves, private land, linear roadside verges and streamside reserves. These smaller areas are predicated to support moderate to high quality vegetation.

Agricultural land, while largely cleared, also provides low to moderate habitat and landscape connectivity value in the referral area through scattered trees in paddocks and small patches of native canopy trees and remnant understory.

Flora, fauna and native vegetation

Significant ecological values are present within the onshore environment including native vegetation, threatened ecological species and communities and aquatic values. A high-level summary is provided below with further details in the Preliminary Terrestrial Ecology Assessment Report (ERM, 2024b) (**Attachment 4**).

Native vegetation – Eight (8) EVCs are modelled to occur within the onshore section of the referral area, across a total of 193.18 ha (affecting approximately 6.2 %), indicating that most of the area has been historically cleared with only isolated pockets of native vegetation remaining inland and in a narrow band along the coast. The most dominant EVCs include EVC 698 Lowland Forest/Heathy Woodland Mosaic (101.55 ha) and EVC 16 Lowland Forest (59.58 ha) both with a conservation status of Vulnerable. Endangered EVCs account for less than 0.04 % of the referral area, represented solely by 1.09 ha of EVC 53 Swamp Scrub.

Threatened flora – Twenty-three (23) plant species of conservation significance are either known to occur or have at least moderate likelihood of occurring within a 10 km of the referral area. This includes:

- 5 species with only an EPBC listing.
- 3 species with both FFG and EPBC listing.
- 18 species with only an FFG listing.

Threatened fauna – Sixty-one (61) fauna species of conservation significance that either have existing records from or have the potential to occur within a 10 km of the referral area. Of these, 21 species are considered migratory under the EPBC Act.

- 29 Species with only an EPBC listing.
- 21 Species with both FFG and EPBC listing.
- 32 Species with only an FFG listing.

Threatened ecological communities (TECs) – Two (2) nationally threatened (EPBC listed) ecological communities have been identified as potentially occurring within the onshore referral area:

- *Natural Damp Grassland of the Victorian Coastal Plains* – Critically Endangered.
- *Subtropical and Temperate Coastal Saltmarsh* – Vulnerable.

Only one (1) EVC is modelled as likely to occur within 10 km of the referral area that is associated with the presence of an ecological community listed under the FFG Act:

- Coastal Moonah (*Melaleuca lanceolata subsp. lanceolata*) Woodland Community.

Aquatic Values -

Nationally Significant Wetlands: Jack Smith Lake State Game Reserve is located south-west of the referral area, with 2.16 ha of the wetland occurring within the referral area. This wetland is recognised as nationally important wetland in Victoria, and listed in the 3rd Edition of *'A Directory of Important Wetlands of Australia'* (2001).

State Significant Wetlands: According to the DEECA Current Wetlands dataset, the naturally occurring wetlands that have been mapped within the referral area include:

- Jack Smith Lake (91056), and
- Three unnamed wetlands (91136, 91142, 91767).

With the implementation of measures such as horizontal directional drilling beneath coastal values to reduce impacts, these wetlands are not expected to be directly impacted by Project activities.

Waterways: No major waterways are present within the referral area. Several unnamed minor natural drainage channels are present throughout the referral area:

- One runs west to east through the site and drains into the ocean through estuarine wetlands in McLoughlins Beach – Seaspray Coastal Reserve.
- A second unnamed creek also runs west to east through the site and passes through the Darriman H29 Bushland Reserve and the Giffard Plantation before draining to the ocean through estuarine wetlands in McLoughlins Beach-Seaspray Coastal Reserve.

Groundwater Dependent Ecosystems (**GDEs**) within the referral area were identified from the Bureau of Meteorology's (**BoM**) Groundwater Dependent Ecosystem Atlas (**GDE Atlas**). The GDE Atlas does not confirm individual entities of GDEs, however, does confirm the potential extent of terrestrial GDEs through the potential for native vegetation within the area to be reliant on the subsurface presence of groundwater.

Within the onshore section of the referral area, the following terrestrial GDE occurrence is currently predicted to occur:

- High potential terrestrial GDE occurrence – 24.94 ha.
- Moderate potential terrestrial GDE occurrence – 87.46 ha.
- Low potential terrestrial GDE occurrence – 41.66 ha.

Five ecosystem types within 10 km of the referral area that are mapped as GDEs have been identified:

- Estuarine Wetland
- Lowland Forest
- Lowland Forest/Heathy Woodland Mosaic
- Riparian Scrub, and
- Swamp Scrub.

Further assessment will be required to inform the location and construction of onshore project components and to determine GDEs that may potentially have relevance to the Project.

Heritage

A desktop review of the underwater, historic, and cultural values relevant to the Project Boundary with a 1 km buffer has been completed (see **Attachment 6**). Findings on the cultural and historic heritage identified by the desktop assessment are summarised below.

Cultural Heritage (First Nations)

The Gunaikurnai Land and Waters Aboriginal Corporation (**GLaWAC**) is the Registered Aboriginal Party (**RAP**) of the entirety of the referral area. The site is traversed by various areas of cultural heritage sensitivity, particularly within along existing waterways, coastline, and registered sites. Refer to **Figure 6** in **Attachment 1**.

There are 17 Victorian Aboriginal Heritage Register (**VAHR**) sites recorded within the Onshore Transmission Envelope. Site types include Artefact Scatters, Shell Middens, Low Density Artefact Distributions (**LDAD**), Scarred (Culturally Modified) Trees, Aboriginal Ancestral Remains (burials), and Object Collection sites. Mapping and further description of these sites are provided in Section 4.2.1.4, Figure 5-1 and Figure 5-2 of **Attachment 6 Preliminary Heritage Constraints Assessment.**

It is also acknowledged that Sea Country Values relevant to the referral will be present and as such, require engagement with the GLaWAC to understand, identify and protect these values.

This will be addressed as part of the Underwater Cultural Heritage Assessment and potential Cultural Values Recording preparation.

Historic Heritage

There are no recorded heritage values within the referral area. The closest recorded heritage values include:

- A non-statutory heritage item 'Jack Smith Lake State Game Reserve' located within the 1 km buffer of the referral area.
- A listed shipwreck, *SS GLENELG* (1900) located within Commonwealth waters, approximately 7.4 km east of the referral area.

No Victorian Heritage Register (**VHR**) listings or Local Planning Scheme Heritage Overlays (**HO**) are located within the referral area.

Refer to **Figure 7** in **Attachment 1**.

Visual and Landscape Values

In relation to visual and landscape values and sensitivities, the Wilsons Promontory National Park, Nooramunga Marine and Coastal Park, Gippsland Lakes, Ninety Mile Beach, and the Corner Inlet Ramsar site hold state and regional landscape significance. Although these regions sit outside the referral area, they are valued by the local community for its many natural landscape features and undeveloped character.

- *Wilsons Promontory National Park* – visually significant for its almost entirely undeveloped character and the near wilderness experience it offers.
- *Nooramunga Marine and Coastal Park* – valued by the community for panoramic out-views of Wilsons Promontory, particularly from Snake Island.
- *Ninety Mile Beach* – visually significant as the longest stretch of uninterrupted beach in Australia and for its intact indigenous coastal vegetation and scenic ocean views.
- *Corner Inlet Ramsar site* – valued by the community as a bird habitat of international importance, and for its plant life and historically significant relics of Aboriginal occupation.

9. Land availability and control

Is the proposal on, or partly on, Crown land?

☐ No ☒ Yes If yes, please provide details.

Current land tenure (provide plan, if practicable):

Approximately 9.64 ha (or 0.3 per cent) of the onshore portion of the referral area is located on Crown land (see **Figure 8** in **Attachment 1**) attributed to the McLoughlins Beach – Seaspray Coastal Reserve along the Gippsland coastline.

The seabed of Victorian waters constitutes Crown land and covers 2,000 ha within the proposed referral area. Onshore, the Project will avoid areas of Crown land through further design development informed by site investigations and consultation.

Intended land tenure (tenure over or access to project land):

Project land requirements will be secured via negotiation of easements or lease/license agreements applied to private freehold land where these areas cannot be avoided. Lease/license agreements, easements and/or land transfers will be required with relevant state bodies to enable access to or tenure of affected government land, including Crown land and for both onshore and offshore areas.

All affected landowners and land managers will be appropriately engaged to facilitate discussions regarding land access in construction and potential longer team lease/licence agreements, purchase, or land transfers for ongoing operations. Engagement with the relevant landowner has commenced and negotiations are currently being progressed (refer to Section 20 of this form).

Other interests in affected land (eg. easements, native title claims):

Gunaikurnai Land and Waters Aboriginal Corporation (**GLaWAC**) hold native title rights (VCD2010/001) for over 60.5 ha of the onshore portion of the referral area (refer to **Figure 6** in **Attachment 1**). In addition, Indigenous Land Use Agreements (**ILUA**) have previously been established within the referral area between Traditional Owners and proponents for activities where Traditional Owner settlements have been reached (VI2010/003 and VI2013/008).

Where appropriate, the Project may seek to enter into an ILUA, or other agreement under the *Traditional Owner Settlement Act 2010* following further engagement with the GLaWAC. The Project will continue to develop its Traditional Owner engagement strategy and monitor native title claims in the referral area.

The referral area contains various utilities easements and transport corridors and there would be opportunity to collocate Project infrastructure within these areas. This is subject to further Project investigations, design development and engagement with relevant stakeholders.

10. Required approvals

State and Commonwealth approvals required for project components (if known):

Commonwealth

- Referral under the *Environment Protection and Biodiversity Conservation Act 1999* (**EPBC Act**) – The Project was referred in December 2024 for a decision as to whether it is a 'controlled action' for potential significant impacts to Matters of National Environmental Significant (**MNES**). The area being referred includes all works within the Project Boundary.
- Components of the Project in Commonwealth waters will require the licences under the Offshore Electricity Infrastructure Act 2021 (**OEI Act**) including the Feasibility Licence

(and associated Management Plan, if required), Commercial Licence (and associated Management Plan), and Transmission and Infrastructure Licence Application.
- On 17 July 2024, Corio referred a proposal to undertake Preliminary Geophysical and Geotechnical Investigations (EPBC 2024/09890). Since referring the proposal in July 2024, Corio subsequently submitted a Request to vary the Proposed Action under section 156A of the EPBC Act in December 2024.

State

- Planning approval in the form of a Planning Permit(s) or a Planning Scheme Amendment(s) for use and development of land pursuant to the *Planning and Environment Act 1987* (Vic) (**PE Act**).
- Consent under the *Marine and Coastal Act 2018* (Vic) (**MACA**) where works are required on marine and coastal Crown land.
- Approval of Cultural Heritage Management Plan(s) (**CHMP**) pursuant to the *Aboriginal Heritage Act 2006* (Vic) (**AH Act**) for onshore works.

Onshore:
- Licence pursuant to the *Crown (Land Reserves) Act 1978* (Vic) in the event works are required on Crown land.
- Permit or consent under the *Heritage Act 2017* (Vic) for management of impacts to historic heritage, where required.
- Leases and licences pursuant to the *Land Act 1958* (Vic).
- Local laws permit pursuant to *Local Government Act 1989* (Vic).
- Consent pursuant to the *Road Management Act 2004* (Vic) for works within a road reserve.
- Consent pursuant to the *Electricity Safety Act 1998* (Vic).
- Development licence pursuant to the *Environment Protection Act 2017* (Vic) for disturbance / removal of contaminated material and soil, where required.
- Permit pursuant to the FFG Act (Vic) for taking of wildlife and removal of flora species.
- Authorisation pursuant to the *Wildlife Act 1975* (Vic) for incidental taking of wildlife.
- Consent pursuant to the *National Parks Act 1975* (Vic).
- Consents pursuant to the *Country Fire Authority Act 1958* (Vic).
- Permit pursuant to the *Water Act 1989* (Vic) for works affecting waterways.
- Licence pursuant to the *Catchment and Land Protection Act 1994* (Vic) for removal of soil that is likely to contain any part of noxious weed.
- Compliance with *Native Title Act 1993* (Cth) and Future Act Assessment procedure in addition to the *Traditional Owner Settlement Act 2010* (Vic).
- Compliance with *Airports (Protection of Airspace) Regulations 1996* (Cth).

Offshore:
- Consent pursuant to the *National Parks Act 1975* (Vic).
- Permit pursuant to the *Water Act 1989* (Vic) for works affecting waterways.
- Permit pursuant to the *Environment Protection (Sea Dumping) Act 1981* (Cth) (Sea Dumping Act) for placement of any rock or similar for seabed preparation activities in Australian Waters.
- Compliance with *Fisheries Act 1995* (Vic).
- Compliance with *Navigation Act 2012* (Cth) and *Marine Safety Act 2010* (Vic).
- Compliance with *Airports (Protection of Airspace) Regulations 1996*.
- Compliance with *Underwater Cultural Heritage Act 2018* (Cth).

Have any applications for approval been lodged?

☐ No ☒ Yes If yes, please provide details.

On 19 December 2022, the Minister for Climate Change and Energy, the Honourable Chris Bowen MP, declared an area in the Bass Strait, off the coast of Gippsland in Victoria, as Australia's first offshore wind zone. The Declared Area (OEI-01-2022) covers approximately 15,000 square kilometres and is given effect by the Offshore Electricity Infrastructure Declaration in 2022. The Minister issued an invitation for parties with demonstrated experience in offshore wind development and construction to apply for feasibility licences within the declared area. Corio

submitted a Feasibility Licence application for the GEOW Project on 27 April 2023. Corio's Feasibility License (FL-010) under the OEI Act was granted on 15 July 2024.

Regulatory agency consultation (agencies with whom the proposal has been discussed):

Corio has commenced formal engagement at a national and state level, including with:

- Victorian Department of Transport and Planning.
- Department of Energy, Environment and Climate Action
- Offshore Wind Energy Victoria.
- Commonwealth Department of Climate Change, Energy, the Environment and Water
- National Offshore Petroleum Titles Administrator.
- National Offshore Petroleum Safety and Environmental Management Authority.
- Offshore Infrastructure Regulator.
- Offshore Infrastructure Registrar.
- Minister for Climate Action, Energy and Resources, and State Electricity Commission, The Hon. Lily D'Ambrosio.

A full list of consultation carried out to date is summarised in Section 20 of this form.

Other agencies consulted: N/A

PART 2 POTENTIAL ENVIRONMENTAL EFFECTS

11. Potentially significant environmental effects

Overview of potentially significant environmental effects (identify key potential effects and comment on their significance and likelihood, as well as key uncertainties):

The following section summarises the potential environmental effects that may arise from the Project and describes how these effects will be avoided and / or mitigated based on the desktop assessments. Further assessments, including field work will be completed to support the detailed siting and design of Project infrastructure and subsequent impact assessment to support the anticipated Project approvals processes. The discussion in this section is focused on the Project's potential effects on environmental values within Victoria (i.e., onshore and in Victorian coastal waters), noting that there is a greater potential for impacts in the Commonwealth Marine Area associated with the OWF Site. The discussion also considers that potential impacts will be assessed and managed through the following processes:

- Comprehensive environmental impact assessment via an anticipated EIS under the EPBC Act
- Approval of a CHMP for protection and management of Aboriginal cultural heritage
- Consent under MACA, for works on marine and coastal Crown land
- Planning approval for use and development of land and for native vegetation removal
- Other secondary consents to be identified and confirmed as the Project progresses, such as permissions under the FFG Act

Significant impacts within Victoria are not expected. The potential impacts arising from activities within Victoria are largely limited to the construction of the transmission infrastructure and cable installation phase and are, therefore, expected to be temporary and localised in nature.
The onshore transmission envelope is less than 10 km in length from the shoreline crossing point at McGaurans Beach to the VicGrid Coordinated Connection Point near Giffard and is mostly located in a farming zone largely cleared of natural environmental values.

The more significant impacts associated with the project relate to construction and operation of the OWF Site, which is 18 km from the limit of coastal waters. While the geographic extent of impacts from these activities in Commonwealth waters could extend to Victorian values, the magnitude of impacts is not expected to be significant given the distance. These effects will also be the subject of a detailed EPBC assessment process, which will generate appropriate mitigation measures and conditions of approval to further reduce impacts to an acceptable level.

Key Offshore Environmental Effects

The results of the Preliminary Marine Assessment (ERM, 2024a) (**Attachment 3**) are summarised below:

- No FFG Act or EPBC Act listed TECs are known to occur within offshore areas in both state and Commonwealth waters.
- The potential effects of seabed and shoreline disturbance were assessed and were considered unlikely to be significant with standard construction environmental management measures in place (assuming trenchless construction for the shore crossing method). Benthic (seabed) habitats and communities in state waters are predominantly soft sediment (sands, gravels, silts) with no visible biota. Disturbance of these areas will not result in significant ecological impacts. Seagrass meadows and algae are present in some nearshore areas. Benthic habitat surveys will be undertaken to identify the location and extent of such habitats in relation to the proposed export cable route, to inform selection of the final cable route and cable installation techniques to avoid and minimise impacts to any significant areas of seagrass or algae.
- No effects to internationally important wetlands (Ramsar wetlands) or nationally important wetlands are expected to occur with construction environmental management measures in place. No designated wetlands are directly affected by the referral area (the closest Ramsar wetland, Gippsland Lakes Ramsar site, is located 10 km north-east of the Nearshore Cable Envelope).

- Potential electro-magnetic field (**EMF**) effects from operating cables were assessed and expected to be minor in nature and highly localised, and unlikely to result in significant environmental effects. EMF effects have the potential to result in localised behavioural effects to cartilaginous fishes (elasmobranchs, e.g., sharks, rays, skates). Shark species relevant to state waters and the referral area include the FFG Act-listed White Shark, for which a Breeding (nursery) Biologically Important Area (**BIA**), as defined by DCCEEW, occurs. Previous assessments have identified that EMF effects from the existing Basslink cable in the Gippsland region (which has a higher voltage than the proposed export cable) have had a negligible impact on marine ecology (Sherwood et al. 2016); and Hutchison et al. (2018) studied the effects of a HVDC cable on elasmobranchs and concluded that there was no evidence of the cable acting as a barrier to their movement.
- Physical presence of infrastructure in the OWF Site may have potential for social or economic effects to commercial and recreational activities, such as tourism, boating and fishing. However, it is noted that the declared area was informed by appropriate engagement and consultation. Corio commenced early engagement in 2021 with community and industry stakeholder groups and remains committed to ongoing engagement as the project progresses to identify matters of importance to relevant groups, develop mitigation measures to address impacts, and to inform a social impact assessment for the Project. Based on engagement outcomes to date, Corio expects to be able to appropriately mitigate impacts to stakeholders, including commercial fisheries. Appropriate assessment and engagement will be conducted to inform the development of a suitable solution to mitigate both temporary construction impacts and long-term operational impacts.
- Underwater noise produced by foundation installation, other construction / decommissioning activities and vessel thrusters has the potential for impacts to marine fauna ranging from behavioural effects through to auditory impairment or injury where animals are exposed at close range or for extended periods of time. These effects are unlikely to lead to a long-term loss of habitat or decrease in the size of populations with the implementation of mitigation measures (including observation zones, soft-start procedures and shutdown procedures for high-intensity noise sources). Injury and impairment of listed threatened marine mammal species in state waters arising from activities in the OWF Site (including foundation installation and vessel dynamic positioning operations), is considered unlikely given the location, which is more than 18 km from the closest state waters. It is expected that potential impacts on populations (including threatened whale species listed under the FFG Act in Victoria) can be mitigated through measures identified and adopted as part of the EPBC assessment process.
- Turbines present a collision risk for birds in the OWF Site and may also cause potential disturbance/displacement, including potential barrier effects to migratory species. Given the OWF Site is more than 18 km from the closest state waters, habitats in state jurisdiction will not be affected. It is expected that potential impacts on populations (including seabirds, shorebirds and migratory land birds listed under the FFG Act in Victoria) arising from activities in Commonwealth waters will be assessed and mitigated through the EPBC assessment process.

Key Onshore Environmental Effects

The results of the Preliminary Terrestrial Assessment (ERM, 2024b) (**Attachment 4**) are summarised below:

- Given the historical land use and associated disturbance, onshore, most of the referral area is unlikely to support native vegetation. Where native vegetation is present, it likely occurs in discreet, isolated fragments surrounded by cleared land, in narrow road reserves, and along drainage channels, and can generally be avoided. The most significant area of native vegetation is likely to be along the coast. Mitigation measures including physical avoidance and adopting construction techniques such as HDD will limit any potential impacts to a negligible amount. Additionally, only one Endangered EVC—approximately 1 ha of EVC 53 Swamp Scrub—has been modelled to occur in the referral area, and aerial imagery suggests this patch is no longer present.
- The desktop assessment has identified the potential for threatened species and communities to be present within the referral area. However, it is considered unlikely that a significant proportion of remaining habitat or population would be affected the final construction envelope. Once detailed assessments have been undertaken, Project infrastructure will be aligned to ensure that areas containing threatened species or habitats will be avoided and potential impacts minimised.

- The two nearest Ramsar wetland sites—Gippsland Lakes and Corner Inlet—are approximately 9 km and 20 km from the boundary of the referral area respectively. Given the likely minimal disturbance footprint of the Project and the implementation of suitable mitigation measures it is unlikely that construction or operation activities will impact these wetlands.
- The desktop assessment has identified the potential for FFG listed threatened species and communities to be present within the referral area. However, significant impacts on FFG listed threatened species are considered unlikely. Detailed assessments will be undertaken to ensure areas containing threatened species or habitats will be avoided and minimised.

Terrestrial and marine heritage results of the Preliminary Heritage Constraints Assessment Report (ERM, 2024c) (**Attachment 6**) are summarised below:

- There are no recorded heritage values, VHR listings nor Heritage Overlays located within the referral area.
- Ground disturbance associated with onshore infrastructure installation has the potential to directly or indirectly impact areas of cultural heritage sensitivity or archaeological resources. The Project will seek to avoid known cultural heritage places and undisturbed areas to minimise potential impacts to Aboriginal and historic cultural heritage. These assessments will be undertaken with specialist technical advice and in consultation with the Registered Aboriginal Party and other relevant stakeholders. Additionally, the anticipated CHMP(s) for the Project will provide specific management and mitigation measures and procedures to be implemented during construction.
- It is acknowledged that Sea Country Values relevant to the referral area are expected and the Project will require engagement with the GLaWAC to understand, identify and protect these values. This will be addressed as part of the Underwater Cultural Heritage Assessment planned for the Project.

Significance and likelihood of potential effects

Other potential effects, particularly in relation to land stability and erosion, landscape values, social and economic values and land use displacement, will be mitigated through further detailed assessment. Similarly, the significance and likelihood of potential effects will be determined during the detailed environmental impact assessment, following the collation of baseline environmental surveys and the identification of preferred export cable routes. At the time of referral, the likelihood of effects being significant has been assessed as either ‘unlikely’ against the *Ministerial guidelines for assessment of environmental effects under the Environment Effects Act 1978* (Department of Transport and Planning, 2023).

12. Native vegetation, flora and fauna

Native vegetation

Is any native vegetation likely to be cleared or otherwise affected by the project?

☐ NYD ☐ No ☒ Yes If yes, answer the following questions and attach details.

Native vegetation clearing would be required to facilitate the construction of the onshore Project infrastructure including the underground export cable, shore crossing and substation. Field assessment of native vegetation is yet to occur, however, based on preliminary ecology assessments undertaken to date, the extent of native vegetation clearance is expected to be well below 10 ha.

The onshore transmission envelope is less than 10 km in length from the shoreline crossing point at McGaurans Beach to the VicGrid Coordinated Connection Point near Giffard and is mostly located in a farming zone largely cleared of natural environmental values. The small amounts of remnant native vegetation are easily avoidable through cable routing and construction environmental management measures.

The avoidance and minimisation of native vegetation clearing will be a key consideration in the location of the onshore export cable corridor and the selection of a preferred route for the transmission line and construction methodology. Preference will be given to routes that avoid native vegetation areas and those containing threatened ecological species and communities. Apart from physical avoidance, the Project will also adopt construction techniques, such as HDD, to further minimise potential effects.

What investigation of native vegetation in the project area has been done? (briefly describe)

A desktop review has been undertaken in the Preliminary Terrestrial Ecology Assessment Report (ERM, 2024b) (**Attachment 4**) to understand environmental assets and sensitivities within the Onshore Transmission Envelope, including native vegetation (with consideration of a 40 m construction footprint and 20 m buffer either side).

Desktop investigations were intended to broadly characterize the likely vegetation communities within the referral area to inform the likelihood assessment for threatened flora, fauna, and ecological communities. Detailed native vegetation mapping and Vegetation Quality Assessments (VQA) will commence in 2025 as the Project progresses and once a preferred corridor and construction envelope is selected.

What is the maximum area of native vegetation that may need to be cleared?

☒ NYD Estimated area …….(hectares)

The extent of native vegetation clearance is not yet known but expected to be well below 10 ha. Based on an 80 m disturbance corridor, the maximum disturbance (based on a conservative 10 km onshore cable length) would be 80 ha. Only 6.2% of the onshore section of the referral area (193.18 ha) is classed as native vegetation (see following section), providing opportunities to avoid and minimise impacts to native vegetation within the onshore transmission envelope through routing and construction methods. Detailed vegetation mapping to inform an accurate calculation of native vegetation impacts is intended to commence in 2025, once a preferred onshore export cable corridor is selected.

Given the historical land use and associated disturbance, onshore, most of the referral area is unlikely to support native vegetation. Where native vegetation is present, it likely occurs in discreet, isolated fragments surrounded by cleared land, in narrow road reserves, and along drainage channels, and can generally be avoided. Mitigation measures including physical avoidance and adopting construction techniques such as HDD will limit any potential impacts to a negligible amount.

How much of this clearing would be authorised under a Forest Management Plan or Fire Protection Plan?

☒ N/A …… approx. percent (if applicable)

Which Ecological Vegetation Classes may be affected? (if not authorised as above)

☒ NYD ☒ Preliminary/detailed assessment completed. If assessed, please list.

A preliminary assessment of EVCs has been completed in the Preliminary Terrestrial Ecology Assessment Report (ERM, 2024b) (**Attachment 4**).

DEECA mapping of remnant native vegetation and EVC distribution suggests eight EVCs, across a total of 193.18 ha, are modelled to occur within the referral area. This accounts for approximately 6.2% of the total referral area onshore, indicating that most of the area has been historically cleared with only isolated pockets of native vegetation remaining inland and in a narrow band along the coast.

Endangered EVCs account for less than 0.04% of the referral area onshore, represented solely by 1.09 ha of EVC 53 Swamp Scrub. Remnant vegetation in the referral area is likely to be dominated by EVC 698 Lowland Forest/Heathy Woodland Mosaic (101.55 ha) and EVC 16 Lowland Forest (59.58 ha) both with a conservation status of Vulnerable.

EVC 1 and Coastal Dune Scrub/Coastal Dune Grassland Mosaic and EVC 10 Estuarine Wetland are both likely to be present in narrow bands along the coast. These patches likely to be the most contiguous across the referral area and therefore most prone to impacts from the construction of the transmission corridor.

Table 2 Ecological Vegetation Classes (EVCs) potentially present within the Onshore Transmission Envelope

EVC	BCS*	Total Area (ha)
EVC 1 Coastal Dune Scrub/Coastal Dune Grassland Mosaic	Depleted	5.93
EVC 10 Estuarine Wetland	Least Concern	10.73
EVC 16 Lowland Forest	Vulnerable	59.58
EVC 53 Swamp Scrub	Endangered	1.09
EVC 191 Riparian Scrub	Vulnerable	14.30
EVC 698 Lowland Forest/Heathy Woodland Mosaic	Vulnerable	101.55
Total		193.18

*BCS = Biodiversity Conservation Status.

Have potential vegetation offsets been identified as yet?

☒ NYD ☒ Yes If yes, please briefly describe.

The construction of the Project will potentially require the removal of surface vegetation including TECs, EVCs, threatened flora and fauna habitat and large and scattered trees. Unavoidable losses of TECs and EPBC listed flora and/or fauna will be arranged through Commonwealth offsetting as required under the EPBC Act. The removal of EVCs and large trees will be managed through an offsetting arrangement in accordance with the *Guidelines for the removal, destruction or lopping of native vegetation* (DELWP 2017). Offsets for the loss of any FFG Act species and or communities will be addressed through EVC offsets.

Following detailed assessments of vegetation impacts, an offset strategy will be prepared to address both Commonwealth requirements and state offset policy objectives.

Other information/comments? (eg. accuracy of information)

The Onshore Transmission Envelope includes a 40 m construction footprint and 20 m buffer either side and assumes connection to the VicGrid Coordinated Connection Point.

NYD = not yet determined

What investigations of flora and fauna in the project area have been done?
(provide overview here and attach details of method and results of any surveys for the project & describe their accuracy)

Desktop reviews including Preliminary Marine Assessment Report (ERM, 2024a) (**Attachment 3**) and Preliminary Terrestrial Ecology Assessment Report (ERM, 2024b) (**Attachment 4**) have been undertaken to characterise the environmental values and sensitivities within the referral area and inform the assessment of potential impacts for threatened flora, fauna and ecological communities. Onshore field surveys will commence in 2025 to ground truth the desktop results. Corio commenced its marine baseline survey program for marine mammals, seabirds, benthic ecology and fish in February 2023.

Have any threatened or migratory species or listed communities been recorded from the local area?

☒ NYD ☒ No ☒ Yes If yes, please:

- List species/communities recorded in recent surveys and/or past observations.
- Indicate which of these have been recorded from the project site or nearby.

Offshore environments – fauna
A summary of threatened species potentially occurring in the marine environments are tabled below. No listed communities have been recorded. Refer to the Preliminary Marine Assessment Report (ERM, 2024a) (**Attachment 3**) for full lists of species.

Table 3 Threatened species potentially occurring in the area

Common Name	Scientific Name	State FFG Act status
Birds		
Shy Albatross	*Thalassarche cauta*	Endangered
Grey-headed Albatross	*Thalassarche chrysostoma*	Endangered
Southern Royal Albatross	*Diomedea epomophora*	Critically Endangered
Wandering Albatross	*Diomedea exulans*	Critically Endangered
Sooty Albatross	*Phoebetria fusca*	Critically Endangered
Buller's Albatross	*Thalassarche bulleri*	Endangered
Indian Yellow-nosed Albatross	*Thalassarche carteri*	Endangered
Southern Giant-Petrel	*Macronectes giganteus*	Endangered
Northern Giant Petrel	*Macronectes halli*	Endangered
White-faced Storm-Petrel	*Pelagodroma marina*	Endangered
Little Tern	*Sternula albifrons*	Critically Endangered
Australian Fairy Tern	*Sternula nereis nereis*	Critically Endangered
Australian Gull-billed Tern	*Gelochelidon macrotarsa*	Endangered
White-faced Storm-Petrel	*Pelagodroma marina*	Endangered
Caspian Tern	*Hydroprogne caspia*	Vulnerable
Black-browed Albatross	*Thalassarche melanophris*	Vulnerable
Curlew Sandpiper	*Calidris ferruginea*	Critically Endangered
Far Eastern Curlew	*Numenius madagascariensis*	Critically Endangered
Red Knot	*Calidris canutus*	Vulnerable
Australian Painted Snipe	*Rostratula australis*	Critically Endangered
Greater Sand Plover	*Charadrius leschenaultii*	Vulnerable
Common Sandpiper	*Actitis hypoleucos*	Vulnerable
Little Egret	*Egretta garzetta*	Endangered
Plumed Egret	*Ardea intermedia plumifera*	Critically Endangered
Hooded Plover	*Thinornis cucullatus*	Vulnerable
Lesser Sand Plover	*Charadrius mongolus*	Endangered
Ruddy Turnstone	*Arenaria interpres*	Endangered
Whimbrel	*Numenius phaeopus*	Endangered
Grey Goshawk	*Accipiter novaehollandiae*	Endangered
Bar-tailed Godwit	*Limosa lapponica*	Vulnerable

Pacific Golden Plover	*Pluvialis fulva*	Vulnerable
Common Greenshank	*Tringa nebularia*	Endangered
Marsh Sandpiper	*Tringa stagnatilis*	Endangered
Sharp-tailed Sandpiper	*Calidris acuminata*	Vulnerable
Latham's Snipe	*Gallinago hardwickii*	Vulnerable
Australasian Shoveler	*Spatula rhynchotis*	Vulnerable
Musk Duck	*Biziura lobate*	Vulnerable
Osprey		
White-bellied Sea-Eagle	*Haliaeetus leucogaster*	Endangered
Orange-bellied Parrot	*Neophema chrysogaster*	Critically Endangered
Swift Parrot	*Lathamus discolor*	Critically Endangered
White-throated Needletail	*Hirundapus caudacutus*	Vulnerable
Mammals		
Blue Whale	*Balaenoptera musculus*	Endangered
Southern Right Whale	*Eubalaena australis*	Endangered
Humpback Whale	*Megaptera novaeangliae*	Critically Endangered
Reptile		
Leatherback Turtle	*Dermochelys coriacea*	Critically Endangered
Pinniped		
Long-nosed Fur Seal	*Arctocephalus forsteri*	Vulnerable
Fish		
Australian Grayling	*Prototroctes maraena*	Endangered
Blue Warehou	*Seriolella brama*	N/A – Conservation Dependent
White Shark	*Carcharodon carcharias*	Endangered
Southern Bluefin Tuna	*Thunnus maccoyii*	N/A – Conservation Dependent

Onshore environments

Threatened or migratory species or listed communities have been identified in the Preliminary Terrestrial Ecology Assessment Report (ERM, 2024b) (**Attachment 4**) with potential to occur within the referral area. A summary of the collective numbers only of these species and communities are provided in the table below. Refer to **Attachment 4** for full lists of species and their Commonwealth (EPBC Act) and/or State (FFG Act) listings.

Table 4 Summary of threatened Terrestrial species and Communities

Attribute	EPBC/FFG	Number	Reference
Threatened Flora Species	EPBC only	2	Preliminary Terrestrial Ecology Assessment Report (ERM, 2024b) (Attachment 4 section 3.3)
	FFG only	15	
	EPBC & FFG	3	
Threatened Fauna Species	EPBC only	19	Preliminary Terrestrial Ecology Assessment Report (ERM, 2024b) (Attachment 4 section 3.4)
	FFG only	11	
	EPBC & FFG	19	
Threatened Migratory Species	EPBC only	19	Preliminary Terrestrial Ecology Assessment Report (ERM, 2024b) (Attachment 4 section 3.4.1)
	EPBC & FFG	11	
Threatened Communities	EPBC only	2	Preliminary Terrestrial Ecology Assessment Report (ERM, 2024b) (Attachment 4 section 3.5)
	FFG only	1	

If known, what threatening processes affecting these species or communities may be exacerbated by the project? (eg. loss or fragmentation of habitats) Please describe briefly.

Offshore environments

Potential direct effects to marine ecosystems in the referral area relate to construction and installation activities. Therefore, they are not expected to be extensive or long-term and the functioning and integrity of the marine ecosystem would not be impacted.

The potential direct effects to marine habitats, ecological communities and species in state waters include the following impact pathways, although none are predicted to result in a significant impact:

- Seabed disturbance from cable installation activities – potential for cable installation activities to disturb areas of seagrass or algae in nearshore waters.
- EMF effects from operational export cables –potential for EMF effects to cause localised changes in the behaviour of EMF sensitive species such as sharks.
- Underwater noise and vibration from vessels and cable installation activities –potential for localised behavioural disturbance to marine fauna, such as marine mammals, seabirds and shorebirds, turtles and fish.
- Fauna strike risk due to increased vessel movements – potential for marine fauna mortality or injury as a result of vessel movements.
- Artificial lighting effects – potential for artificial lighting on vessels to result in localised changes to the behaviour and movements of fauna (e.g., birds, fishes).
- Introduction of marine pests due to construction activities and increased vessel movements – potential for unplanned introduction of marine pests by Project vessels.
- Input of pollutants from routine vessel discharges – potential for localised changes to water quality as a result of permitted vessel discharges in state waters (e.g. bilge water, grey water).
- Input of petroleum hydrocarbons and related products – potential for unplanned spills to occur during construction and operation as a result of vessel collisions, grounding, or refuelling incidents, which could subsequently affect protected marine parks and reserves, Ramsar wetlands and threatened species.

The following potential impact pathways to species and communities in state waters resulting from Project components and activities in Commonwealth waters were considered:

- Underwater noise and vibrations from foundation installation, vessels and other construction noise – potential for behavioural disturbance and auditory impairment to marine fauna, such as marine mammals, turtles and fishes.
- Physical presence of operating wind turbines – potential for seabirds, shorebirds and migratory land birds to collide with operating turbines in the OWF Site.
- Artificial lighting effects – potential for artificial lighting on vessels or turbines and substations to result in localised changes to the behaviour and movements of fauna (e.g., birds, fishes).
- Introduction of marine pests due to construction activities and increased vessel movements in Commonwealth waters – potential or changes to marine ecology in Victorian jurisdiction in the event that marine pests are introduced by Project vessels.
- Input of petroleum hydrocarbons and related products into the Victorian marine environment – potential for unplanned spills to occur in Commonwealth waters during construction as a result of vessel collisions or refuelling incidents, which could affect marine waters and species in the Victorian jurisdiction and affect protected marine parks and reserves, Ramsar wetlands and threatened species.

Onshore environments

Potential threatening processes affecting these species or communities that may be exacerbated by the Project include:

- Clearing and levelling of sites, excavations and general construction activities result in direct loss of habitat and/species, fragmentation of habitats and communities.
- Maintenance activities during operations (e.g. access track vegetation clearance) result in accidental and direct loss of habitat and/species.
- Night lighting, noise and vibration associated with construction and operational activities result in disturbance to fauna habitat and/or direct loss of fauna species.

Potential sources of indirect impacts to listed Threatened Species and TECs include:

- Accidental spills, erosion and sedimentation, and dust pollution due to construction activities, and affecting both water and/or soil environments may cause a decline in water quality and quality of soils, resulting in the long-term decline or loss over time of species numbers and native vegetation area.
- Vehicular movements during construction and operations introduces and/or spreads weeds, pest species or pathogens, may result in long-term decline or loss over time of species numbers and native vegetation area.

Potential impacts will be avoided and minimised where possible through design. Where effects on threatened species and communities cannot be avoided, best practice environmental management measures in both construction and operations would be detailed in the Project's environmental management plans. Specific mitigation measures may be developed to address any residual effects.

Are any threatened or migratory species, other species of conservation significance or listed communities potentially affected by the project?

☒ NYD ☒ No ☒ Yes If yes, please:

- List these species/communities:
- Indicate which species or communities could be subject to a major or extensive impact (including the loss of a genetically important population of a species listed or nominated for listing) Comment on likelihood of effects and associated uncertainties, if practicable.

The species listed in **Table 3** and **Table 4** will potentially be affected by the Project. Further site investigations and detailed assessments will be conducted to confirm which species have been recorded within the referral area or nearby.

Is mitigation of potential effects on indigenous flora and fauna proposed?

☒ NYD ☒ No ☒ Yes If yes, please briefly describe.

The Project is committed to best practice environmental management in design, construction and operation. The referral area allows the Project the flexibility to adopt the principles of avoid, mitigate, and offset to minimise the potential of adverse environmental effects (refer to Section 18 of this form for details). Where effects on indigenous flora and fauna cannot be avoided, best practice environmental management measures in both construction and operations would be detailed in the Project's management plans. Specific mitigation measures may be developed to address any residual effects.

Mitigation measures and controls applicable offshore may include:

- Benthic habitat surveys to inform cable route selection and avoid sensitive habitats and ecological communities, where possible.
- Application of *Environment Protection and Biodiversity Conservation Regulations 2000* (**EPBC Regulations**), Part 8, Division 8.1 for vessel speeds and approach distances for marine mammals.
- Vessel waste and discharges will be managed in accordance with Australian and international maritime legislation (e.g., Marine Orders, International Convention for the Prevention of Pollution from Ships [MARPOL]).
- Limit lighting on vessels during construction, maintenance and decommissioning to that required for safe operations.
- Specific lighting mitigation measures for shoreline crossing activities located near sensitive populations.
- Compliance with *Biosecurity Act 2015* (Cth) requirements, Australian ballast water management requirements and national biofouling management guidance.
- Implementation of management plans.

Additional mitigation measures and controls applicable specifically to managing indirect effects in Victorian jurisdiction from Project components in Commonwealth waters, include:

- Marine fauna surveys and seabird and shorebird surveys will be undertaken to characterise the species that utilise or transit through the OWF Site and surrounding waters at different times of year and inform marine fauna and avifauna management programs.
- Collision risk modelling will be undertaken to inform assessment of impact for seabird species and inform monitoring plans.
- Underwater noise modelling will be undertaken to inform assessment of impact for marine mammals, fish and turtles
- Underwater noise management procedures for foundation installation will be in line with EPBC Policy Statement 2.1 (or the equivalent future DCCEEW guidelines, currently in preparation) including:
    - Observation and shutdown zones.

    - Soft-start procedures.
    - Shutdown procedures.
    - Night time / low visibility procedures.
- Subject to the outcomes of marine fauna surveys and detailed underwater noise impact assessment, the Project will also consider additional noise monitoring and mitigation where practicable, for example:
    - Passive Acoustic Monitoring (**PAM**).
    - Engineering solutions.
    - Adaptive management procedures for sensitive species and life stages.

The Project will engage suitably qualified specialists to survey and map areas of potential and known onshore habitat to inform design development, and avoidance and mitigation measures.

Avoidance measures that may be implemented for the onshore transmission route may include establishing no-go zones and associated buffer zones to avoid known significant ecological values to the greatest extent possible.

Mitigation measures and controls may include:
- Implement temporary or permanent fencing during construction to reinforce no-go zones to prevent inappropriate foot or vehicular traffic and unintended impacts.
- Employing trenchless construction methods such as HDD beneath areas of sensitive habitats, beach landings, and when crossing waterways.
- Develop program to avoid sensitive periods (e.g., fauna breeding or migration).
- Implementing Project specific weed, pest, and fauna controls and management plans during construction and operations phases. Implement water, dust, light spill and noise management measures to address potential impacts to flora and fauna.
- Implementation of management plans.

Specific mitigation measures will be identified as part of the detailed EPBC assessment process.

Other information/comments? (eg. accuracy of information)

The preliminary desktop assessments describe the potential environmental effects of disturbing the land within the referral area. These documents were used to inform a self-assessment against the EES referral criteria and to identify potential environmental risks. Following release of further details on the VicGrid Coordinated Connection Point, further design development will occur on a preferred export cable corridor (onshore and offshore) to enable further technical studies to be completed. The areas of disturbance will be significantly reduced from the currently proposed referral area once the cable route is selected.

13. Water environments

Will the project require significant volumes of fresh water (eg. > 1 Gl/yr)?

☐ NYD ☒ No ☐ Yes If yes, indicate approximate volume and likely source.

The Project will not require significant volumes of fresh water.

Will the project discharge waste water or runoff to water environments?

☐ NYD ☒ No ☐ Yes If yes, specify types of discharges and which environments.

Offshore and nearshore environments

During construction, operations and decommissioning, small-scale and routine discharges from Project vessels may occur, which have the potential to result in highly localised changes to water quality and will not result in any significant effects.

Specifically, wastewater and other waste products on Project vessels will be managed in accordance with Australian and international maritime legislation (e.g., AMSA Marine Orders, MARPOL). Discharges from vessels that are permitted in state waters under certain conditions and standards include the following:

- Oily water (i.e., machinery space bilge water) – All Project vessels will only discharge water via equipment that ensures an oil content less than 15 ppm and while proceeding en route, in accordance with MARPOL Annex I.
- Sewage – In accordance with MARPOL Annex IV, comminuted and disinfected sewage will be discharged via an approved sewage system and greater than or equal to 3 nautical miles from the nearest land (i.e., outside state waters). Sewage that is not comminuted or disinfected will be discharged greater than or equal to 12 nautical miles from the nearest land (also outside state waters).

Alternatively, wastewater discharges may be retained on board vessels for discharge to port reception facilities.

In accordance with MARPOL Annex V, garbage will be retained on board vessels for appropriate disposal onshore. Comminuted or ground food waste will also be retained onboard or will be disposed greater than or equal to 3 nautical miles from the nearest land (i.e., outside state waters). Food waste that is not comminuted or ground will also be retained onboard or will be disposed while the vessel is enroute and greater than 12 nautical miles from the nearest land (i.e., outside Territorial waters).

When within port limits, Project vessels will also comply with port authority requirements.

Onshore environments

During construction in the onshore areas there may be some activities that will result in collected runoff requiring discharge (e.g., trenching and excavations, water spraying for dust mitigation). These potential effects will be limited to the construction period and are therefore not expected to be long-term. It is also expected that any effects will be able to be suitably managed with standard construction measures, which would likely include collection and treatment prior to discharge.

Stormwater runoff from disturbed areas during Project construction will be managed using standard practices for erosion and sediment control on construction sites. Environmental management plans prepared for the Project and implemented during construction and operations will include specific measures to minimise erosion and sedimentation.

Are any waterways, wetlands, estuaries or marine environments likely to be affected?

☐ NYD ☐ No ☒ Yes If yes, specify which water environments, answer the following questions and attach any relevant details.

Offshore and nearshore environments

The referral area includes the marine environment in state waters, as summarised in Section 8 of this form and described in detail in the Preliminary Marine Assessment Report (ERM, 2024a) (**Attachment 3**).

Further design development is required to identify the preferred export cable route and to determine the potential environmental effects. However, potential effects during construction and operation are expected to be limited (refer to **Section 11** of this form).

Onshore environments

Jack Smith Lake State Game Reserve is located south-west of the referral area, with 2.14 ha of the wetland occurring within the referral area. This wetland is recognised as nationally important wetland in Victoria, and listed in the 3rd Edition of *'A Directory of Important Wetlands of Australia'* (2001).

According to the DEECA Current Wetlands dataset, the naturally occurring wetlands that have been mapped within the referral area include:
- Jack Smith Lake (91056), and
- Three unnamed wetlands (91136, 91142, 91767).

With the implementation of measures such as horizontal directional drilling beneath coastal values to reduce impacts, these wetlands are not expected to be directly impacted by Project activities

No major waterways are present within the referral area. Several unnamed minor natural drainage channels are present throughout the referral area:
- One runs west to east through the site and drains into the ocean through estuarine wetlands in McLoughlins Beach – Seaspray Coastal Reserve.
- A second unnamed creek also runs west to east through the site and passes through the Darriman H29 Bushland Reserve and the Giffard Plantation before draining to the ocean through estuarine wetlands in McLoughlins Beach-Seaspray Coastal Reserve.

The Project aims to reduce overall impact, by locating as much of the terrestrial footprint as possible within existing cleared land and avoiding the crossing of wetlands and waterways wherever possible. Further studies will be undertaken to identify and assess the specific water environments potentially affected by the preferred Project alignment.

Any potential effects will be limited to the construction period and are therefore not expected to be long-term. Avoidance of wetlands and waterways will be undertaken where possible, effects are expected to be unlikely, and any effects will be able to be suitably managed with standard construction measures.

Some of these water environments could also be affected by potential impacts to GDEs. Within the referral area, the following terrestrial GDE occurrence is currently predicted to occur:
- High potential terrestrial GDE occurrence – 24.94 ha.
- Moderate potential terrestrial GDE occurrence – 87.46 ha.
- Low potential terrestrial GDE occurrence – 41.66 ha.

Five ecosystem types within 10 km of the referral area that are mapped as GDEs have been identified:
- Estuarine Wetland
- Lowland Forest
- Lowland Forest/Heathy Woodland Mosaic
- Riparian Scrub, and
- Swamp Scrub.

Further assessment will be required once details regarding the location and nature of construction activities are available to determine GDEs that may potentially have relevance to the Project.

Are any of these water environments likely to support threatened or migratory species?

☒ NYD ☒ No ☒ Yes If yes, specify which water environments.

Water environments in the referral area are likely to support threatened or migratory species, as outlined below. The potential impact to these species will be determined as the Project develops and preferred export cable corridor identified.

Marine environments - Offshore Habitats, Communities and Species

Most of the coastal portion of the referral area within the Nearshore Cable Envelope contains soft sediments and no visible biota (Preliminary Marine Assessment Report (ERM, 2024a) - **Attachment 3**). The westernmost shoreline boundary of the referral area, close to McLoughlins Beach, contains areas mapped by DEECA as sparse patches of seagrass and macroalgae. This overlap represents a small portion of the distribution of primary producer communities – patches of algae and seagrass exist along the coastline, extending away from the referral area to Wilsons Promontory. Additionally, significant, and uninterrupted swathes of seagrass and algae are found throughout Corner Inlet, which lies outside the referral area. The patchy nature of primary producer habitats in the referral area supports benthic invertebrate communities, which likely includes crustaceans (crabs and shrimp), molluscs (octopus, sea slugs, bivalves), and echinoderms (urchins, sea stars, sea cucumbers).

The Nearshore Cable Envelope also supports the following EPBC Act or FFG Act-listed Threatened and Migratory species (FFG Act-listed Threatened species are tabled previously in **Section 12** of this form):

Birds:
56 bird species listed as Threatened and/or Migratory under the EPBC Act (25 Threatened and Migratory, 12 Threatened but not Migratory, 19 Migratory but not Threatened) and 32 FFG Act-listed Threatened bird species (many of which are the same as those listed under the EPBC Act).

The Bass Strait region is reported to provide important foraging habitat for Short-tailed Shearwater (*Adrenna tenuirostris*) which overlap both Nearshore Cable Envelope and Offshore Cable Envelope. Seal Island, Notch Island, Rag Island and Cliffy Island (located in state waters between approximately 12 km and 14 km west of the OWF Site) are identified as rookeries for the EPBC Act-listed Migratory species, Short-tailed Shearwater (*Ardenna tenuirostris*) and Crested Tern (*Thalasseus bergii*). These two species are not listed as Threatened under the FFG Act.

Migratory land birds, including Critically Endangered Swift Parrots may also overlap with the referral area, though they are expected to be very infrequent.

Cetaceans:
EPBC Act and FFG Act-listed cetacean species include Endangered Blue Whale and Southern Right Whale, and also Humpback whale. The Bass Strait region provides foraging habitat for Pygmy Blue Whales and supports the migration of Southern Right Whales and Humpback Whales.

Pinnipeds:
The referral area (within state waters) supports Australian Fur Seal (*Arctocephalus pusillus*) and the FFG Act listed Long-nosed Fur Seal (*Arctocephalus forsteri*).

Turtles:
Bass Strait is a significant feeding ground for Leatherback Turtles.

Fish:
The referral area (within state waters) provides nursery habitat for Endangered White Shark (*Carcharodon carcharias*), and the broader Bass Strait region provides important foraging areas.

Waterways - Onshore Terrestrial and Coastal Habitat

No major waterways are present onshore within the referral area. Several unnamed minor natural drainage channels are present throughout the referral area. One runs west to east through the site and drains into the ocean through estuarine wetlands in McLoughlins Beach – Seaspray Coastal Reserve. A second unnamed creek also runs west to east through the site and passes

through the Darriman H29 Bushland Reserve and the Giffard Plantation before draining to the ocean through estuarine wetlands in McLoughlins Beach-Seaspray Coastal Reserve. Riparian vegetation is fragmented but is modelled as riparian scrub and a lowland forest/heathy woodland mosaic.
Waterways may provide habitat for species of flora that prefer riparian habitat, habitat that provides frequent surface and groundwater exchanges or periodic, infrequent or frequent inundation. Detailed assessment of species habitat and potential impacts within these areas will be completed as part of the Project development process.

Wetlands and surrounding waterways throughout the Onshore Transmission Envelope also provide habitat for a range of ichthyofauna (freshwater fish) including threatened species such as Dwarf Galaxias (*Galaxiella pusilla*) and Australian Grayling (*Prototroctes maraena*).

State listed (and nationally listed) threatened species and ecological communities identified in searches of the PMST and Victorian databases and likelihood of occurrence are described in Appendix B and C of the Preliminary Terrestrial Ecology Assessment Report (ERM, 2024b) **(Attachment 4)**.

Are any potentially affected wetlands listed under the Ramsar Convention or in 'A Directory of Important Wetlands in Australia'?

☐ NYD ☒ No ☐ Yes If yes, please specify.

No direct or indirect impacts to Ramsar Wetlands are expected to occur, and there are no Ramsar Wetlands located within the referral area.

The nearest Ramsar Wetlands include:

- Corner Inlet Ramsar site, located 20 km south-west of the referral area.
- Gippsland Lakes Ramsar site, located 10 km north-east of the referral area at its closest point.

Neither of these sites are expected to be impacted by the Project.

Could the project affect streamflows?

☐ NYD ☒ No ☐ Yes If yes, briefly describe implications for streamflows.

During construction there may be some activities that will result in impacts to streamflows (e.g., trenching and excavations). These potential effects will be limited to the construction period and are therefore not expected to be long-term or significant. It is also expected that any effects will be able to be suitably managed with standard construction measures.

Could regional groundwater resources be affected by the project?

☒ NYD ☐ No ☐ Yes If yes, describe in what way.

Through Visualising Victoria's Groundwater, regional groundwater resources are not expected to be impacted by the Project. Further assessments will be required to confirm locations of existing groundwater resources, identify their potential beneficial uses and to develop design measures to avoid any such resources.

Potential impacts to groundwater generally would likely be due to excavation activities for construction, including HDD and installation of underground cables at the shore crossing. There is potential for HDD to encounter groundwater during construction and operation. Any potential impacts to encountered groundwater would be localised and temporary only and would be appropriately managed through standard mitigation measures and procedures as outlined below:

- Undertake geological and hydrological surveys (including boreholes and groundwater studies) to understand the groundwater conditions, groundwater levels and identify sensitive areas.
- Micro-siting of project infrastructure to avoid sensitive groundwater (if any).
- Schedule construction to avoid drilling activities during periods when groundwater levels are high.
- Use environmentally-friendly drilling fluids (such as bentonite, which is known to be non-toxic and inert).
- Implement a drilling fluid management plan to monitor and control fluid pressures to prevent inadvertent returns and minimise the risk of groundwater contamination.

- Use containment systems to prevent drilling activities from contaminating groundwater.
- Implement real-time monitoring systems of groundwater quality to detect any contamination during construction and operation.
- Develop a contingency plan for inadvertent releases of drilling fluid, including containment and clean-up procedures. Potential containment measures for any surfacing groundwater or drilling fluid include the use of sandbags, pumps and frac tanks.

Could environmental values (beneficial uses) of water environments be affected?

☒ NYD ☐ No ☐ Yes If yes, identify waterways/water bodies and beneficial uses (as recognised by State Environment Protection Policies)

The previous State Environment Protection Policies have been replaced by the Environment Reference Standard (**ERS**) under the *Environment Protection Act 2017*.

The potential impacts on environmental values (beneficial uses) of water environments, as defined in the ERS, have not yet been determined. General threatening processes to water values have the potential to be exacerbated through associated construction and operation activities, including activities that may result in increases of sedimentation and erosion runoff and/or potential uncontrolled releases of hazardous materials and chemicals.

Potentially relevant environmental values to be considered include:

- ERS Table 5.1: Environmental values of waters
  - Water dependent ecosystems and species
  - Water-based recreation
  - Traditional Owner cultural values
  - Navigation and shipping
- ERS Table 5.3: Environmental values that apply to the groundwater segments
  - Water dependent ecosystems and species
  - Water-based recreation (primary contact recreation)
  - Traditional Owner cultural values
- ERS Table 5.5: Environmental values of inland waters (including aquatic reserves, streams, and rivers [central foothills and coastal plains], and wetlands),
  - Water dependent ecosystems that are largely unmodified
  - Water dependent ecosystems that are slightly or moderately modified
  - Water based recreation (primary contact)
  - Water based recreation (secondary contact)
  - Water based recreated (aesthetic enjoyment)
  - Traditional Owners cultural values
- ERS Table 5.6: Environmental values of marine and estuarine waters (including aquatic reserves, estuaries, open coast)
  - Water dependent ecosystems that are largely unmodified
  - Human consumption of aquatic foods
  - Aquaculture
  - Water-based recreation (primary contact)
  - Water-based recreation (secondary contact)
  - Water based recreation (aesthetic enjoyment)
  - Traditional Owner cultural values
  - Navigation and shipping

The Project may identify additional environmental values requiring further assessment following confirmation of the preferred export cable route.

Could aquatic, estuarine or marine ecosystems be affected by the project?

☒ NYD ☐ No ☐ Yes If yes, describe in what way.

The *Ministerial guidelines for assessment of environmental effects* define the relevant components of ecological systems as including:

- natural or semi-natural ecological communities.
- populations or habitat of indigenous species of flora or fauna of conservation significance
- ecosystem processes supporting biodiversity, ecological productivity and environmental quality.

Potential direct effects to marine ecosystems in the referral area relate to construction and installation activities. Therefore, they are not expected to be extensive or long term and the functioning and integrity of the marine ecosystem would not be impacted. The potential direct effects to marine habitats, ecological communities and species include the following impact pathways, although none are predicted to result in a significant impact:

- Seabed disturbance from cable installation activities – potential for cable installation activities to clear or disturb areas of seagrass or algae in nearshore waters.
- EMF effects from operational export cables – potential for EMF effects to cause localised changes in the behaviour of sensitive species such as sharks.
- Underwater noise and vibration from vessels and cable installation activities – potential for underwater noise to result in localised behavioural disturbance in marine fauna, such as marine mammals, turtles and fishes.
- Fauna strike risk due to increased vessel movements – potential for marine fauna mortality or injury as a result of vessel movements.
- Artificial lighting effects – potential for artificial lighting on vessels to result in temporary, localised changes to the behaviour and movements of fauna (e.g. birds, fishes).
- Unplanned introduction of marine pests due to construction activities and increased vessel movements – potential or changes to marine ecology in Victorian jurisdiction in the event that marine pests are introduced by Project vessels.
- Input of pollutants to the marine environment from routine vessel discharges – potential for localised changes to water quality as a result of permitted vessel discharges in state waters (e.g. bilge water, grey water).
- Input of petroleum hydrocarbons and related products into the marine environment – potential for unplanned spills to occur during construction as a result of vessel collisions, grounding, or refuelling incidents, which could subsequently affect protected marine parks and reserves, Ramsar wetlands and threatened species.

In addition, indirect effects to marine ecosystems in Victorian jurisdiction resulting from Project components in Commonwealth waters, include:

- Underwater noise and vibrations from foundation installation, vessels, and other construction noise – potential for behavioural disturbance and auditory impairment to marine fauna, such as marine mammals, turtles and fishes.
- Artificial lighting effects – potential for artificial lighting on vessels or turbines and substations to result in localised changes to the behaviour and movements of fauna (e.g. birds, fishes).
- Introduction of marine pests due to construction activities and increased vessel movements in Commonwealth waters – potential or changes to marine ecology in Victorian jurisdiction if marine pests are introduced by Project vessels
- Input of petroleum hydrocarbons and related products into the Victorian marine environment – potential for unplanned spills to occur in Commonwealth waters during construction as a result of vessel collisions or refuelling incidents, which could subsequently enter Victorian jurisdiction and affect protected marine parks and reserves, Ramsar wetlands and threatened species.

Aquatic waterways affected by the onshore transmission envelope may be affected by temporary changes in drainage patterns due to trenching and associated vegetation clearing. Trenching and earthworks may also increase turbidity in aquatic waterways from dust generation. These impacts may also occur to estuarine ecosystems near the shore crossing.

Is there a potential for extensive or major effects on the health or biodiversity of aquatic, estuarine or marine ecosystems over the long-term?

☒ No ☒ Yes If yes, please describe. Comment on likelihood of effects and associated uncertainties, if practicable.

Biodiversity is defined as the variability among living organisms from all sources and includes:

- Diversity within species and between species
- Diversity of ecosystems.

Extensive and major effects on the diversity of species or the diversity of aquatic, estuarine or marine ecosystems in the referral area are not expected over the long-term. Short term effects to the diversity of species, or the diversity of aquatic, estuarine or marine ecosystems within the

referral area have the potential to occur (as outlined below) but are not anticipated to be major or extensive and only localised and temporary in nature.

The key effects to the biodiversity of marine ecosystems in state waters are associated with seabed disturbance during cable installation, the physical presence and EMF effects of operating cables, and the potential for effects from unplanned events, such as the introduction of marine pests or unplanned fuel or chemical spills.

Seabed disturbance during installation of export cables in state waters would be localised and temporary. Seabed habitats in state waters are predominantly soft sediments with no visible biota. Areas of algae and seagrass are understood to be present. It is likely that significant areas of seagrass can be avoided by the selected export cable routes and micro-siting of infrastructure. Regardless, any disturbance would be localised and is not expected to have extensive or major effects.

The physical presence of cables and cable protection in state waters would create hard substrate and artificial habitat that would support the establishment of encrusting biota and associated assemblages (e.g., invertebrates, fish). The extent of these changes would be limited to the footprint of infrastructure and therefore is unlikely to be extensive in the context of the broader marine ecosystem.

Is mitigation of potential effects on water environments proposed?

☒ NYD ☒ No ☒ Yes If yes, please briefly describe.

The Project is committed to best practice environmental management in detailed design, construction, operations and decommissioning. The proposed referral area allows the Project the flexibility to adopt the principles of avoid, mitigate and offset to minimise the potential of adverse environmental effects (refer Section 18 of this form for details). Where effects on water environments cannot be avoided, best practice environmental management measures in both construction and operations would be detailed in the Project's management plans. Specific mitigation measures may be developed to address any residual effects.

Mitigation measures and controls applicable offshore may include:

- Benthic habitat surveys to inform cable route selection to avoid sensitive habitats and ecological communities, where possible.
- Application of EPBC Regulations, Part 8, Division 8.1 for vessel speeds and approach distances for marine mammals.
- Vessel waste and discharges will be managed in accordance with Australian and international maritime legislation (e.g., Marine Orders, International Convention for the Prevention of Pollution from Ships [MARPOL]).
- Limit lighting on vessels during construction, maintenance and decommissioning to that required for safe operations.
- Project management plan for shoreline crossing activities located near sensitive populations.
- Compliance with *Biosecurity Act 2015* (Cth) requirements, Australian ballast water management requirements and national biofouling management guidance.

Further mitigation strategies will be developed following the collection of site-specific baseline data (e.g., benthic habitats and communities) and detailed environmental impact assessment of the offshore cable route in state waters.

Detailed mitigation strategies applicable specifically to managing indirect effects in Victorian jurisdiction from Project components in Commonwealth waters will also be developed following the collection of site-specific baseline data, impact studies (e.g., coastal processes modelling, bird collision risk modelling, underwater noise modelling), and as part of detailed environmental impact assessment under the EPBC Act.

Underwater noise mitigation strategies for foundation installation will be in line with DCCEEW 'Australian National Anthropogenic Underwater Noise Guidelines (currently in preparation) and are expected to include:

- Observation and shutdown zones.
- Soft-start procedures.
- Shutdown procedures.

- Night time / low visibility procedures.

Subject to the outcomes of marine fauna surveys and detailed underwater noise impact assessment, the Project will also consider additional foundation installation noise monitoring and mitigation where practicable, for example:

- Passive Acoustic Monitoring (**PAM**).
- Engineering solutions.
- Adaptive management procedures for sensitive species and life stages.

Proposed mitigation and management measures for terrestrial water environments include:

- Avoiding/minimising alignment of Project components in areas that contain land stability issues, acid sulphate soils and/or highly erodible soils, or provide habitat for migratory and threatened species and ecological communities.
- Avoiding/minimising unnecessary duplication of impacts by utilising existing infrastructure for onshore Project components,
- Employing trenchless construction techniques such as HDD for shore crossings to avoid/minimise impacts to land stability and areas that contain acid sulphate soils and/or highly erodible soils, and habitats for migratory and threatened species.
- Managing construction and operational activities through environmental management plans to minimise impacts on land stability, acid sulphate soils and/or highly erodible soils, and habitats for migratory and threatened species and ecological communities.
- Implement Project specific water and dust controls and management plans during construction and operations phases.

Other information/comments? (eg. accuracy of information)
The currently completed desktop reviews describe the potential environmental effects of disturbing the onshore and offshore environment generally within the referral area. These assessments were used to inform a self-assessment against the EES referral criteria and to identify potential environmental risks. Further design development will occur to identify a preferred construction envelope and to enable further technical studies to be completed. The ultimate areas of disturbance are expected to be significantly less than the referral area once a preferred onshore and offshore cable route have been selected.

14. Landscape and soils

Landscape

Has a preliminary landscape assessment been prepared?

☐ No ☒ Yes If yes, please attach.

A Preliminary Visual Appraisal has been undertaken for the Project (refer to **Attachment 5**). The preliminary appraisal identifies that the wind farm site located in Commonwealth waters may be visible from representative locations at Seaspray, Woodside Beach, Port Albert, Wilsons Promontory Lighthouse, and the Five Mile Beach. Extent of impact to these locations will be assessed through a detailed Seascape and Visual Impact Assessment and community consultation as part of the ongoing planning and impact assessment process for the Project. This study will also evaluate the effects of planned onshore infrastructure once sighting and design has been progressed.

Is the project to be located either within or near an area that is:

- **Subject to a Landscape Significance Overlay or Environmental Significance Overlay?**

☐ NYD ☐ No ☒ Yes If yes, provide plan showing footprint relative to overlay.

The Project is not located within any area that is subject to a Landscape Significance Overlay (LSO). Certain areas of the Project are subject to Environmental Significance Overlays pursuant to the Wellington Planning Schemes. Refer to **Figure 5** in **Attachment 1** (Planning Overlay).

- **Identified as of regional or State significance in a reputable study of landscape values?**

☐ NYD ☒ No ☐ Yes If yes, please specify.

- **Within or adjoining land reserved under the *National Parks Act 1975*?**
  ☐ NYD ☒ No ☐ Yes If yes, please specify.

- **Within or adjoining other public land used for conservation or recreational purposes?**
  ☐ NYD ☐ No ☒ Yes If yes, please specify.

Public land used for conservation or recreational purposes within the referral area is limited to the McLoughlins Beach – Seaspray Coastal Reserve. Much of the coastal area is used for recreational purposes, including boating, fishing (including spear fishing), surfing, wind/kite surfing, SCUBA diving, and free diving. A detailed Seascape and Visual Impact Assessment will be completed to inform the design development.

Is any clearing vegetation or alteration of landforms likely to affect landscape values?
☐ NYD ☒ No ☐ Yes If yes, please briefly describe.

The extent of any vegetation clearing required for the Project has not yet been determined. However, any clearing of vegetation has the potential to affect landscape values in the areas immediate to the clearing. Mitigation measures will be considered including minimisation of vegetation clearance, particularly in sensitive areas.

The Project does not anticipate the need to alter existing landforms with consequential impacts to landscape values. The Project will seek to locate transmission infrastructure within existing utilities and infrastructure easements and corridors where possible. Additionally, the onshore transmission infrastructure will be underground further minimising visual impact. A detailed Seascape and Visual Impact Assessment will be undertaken to determine the potential to affect landscape values.

Is there a potential for effects on landscape values of regional or State importance?
☐ NYD ☐ No ☒ Yes Please briefly explain response.

The Project is not located within any area that is subject to a Landscape Significance Overlay.

There is potential for impacts to landscape values of state importance as the Project is located near areas identified as being of state significance in the *Coastal Spaces Landscape Assessment Study (2006)* including the Ninety Mile Beach, Corner Inlet Ramsar site, Gippsland Lakes, Nooramunga Marine and Coastal Park, and the Wilsons Promontory.

Where infrastructure is to be located above ground or above water, there is potential for impacts on landscape values. However, the onshore transmission infrastructure will be underground, minimising visual impact. A detailed Seascape and Visual Impact Assessment will be undertaken to inform the design development process for both offshore and onshore infrastructure.

The OWF site is located within the declared Gippsland Renewable Energy Zone, which was set back a further 10 km from the coast following stakeholder feedback on visual and amenity impacts received during consultation. The Project turbines would be located a minimum of 25 km from the coast, and may be visible from sensitive receptor viewpoints, including the Wilsons Promontory Lightstation and coastal towns. However, the magnitude of potential impacts is not anticipated to be extensive, and this will be confirmed through the detailed Seascape and Visual Impact Assessment.

Is mitigation of potential landscape effects proposed?
☐ NYD ☐ No ☒ Yes If yes, please briefly describe.

Where infrastructure is to be located above ground or above water, landscape effects will be mitigated through consideration of siting, built form, materials and existing landscape context.

These matters, including mitigation and management, will be further addressed during the impact assessment process.

Other information/comments? (eg. accuracy of information)

The Preliminary Visual Appraisal (refer to **Attachment 5**) included five view locations selected on the basis that they:

- Comprise of popular public viewpoints by virtue of their proximity to existing recreational, commercial, and civic facilities, and/or
- Contain public viewpoints in locations with significant statutory landscape significance.

Further, the selection of locations was informed by the *Coastal Spaces Landscape Assessment Study (2006),* a reference document in all Victorian Planning Schemes.

A detailed Seascape and Visual Impact Assessment would be undertaken, and community consultation would be sought in order to determine a larger number of view locations to inform the design development process.

Note: A preliminary landscape assessment is a specific requirement for a referral of a wind energy facility. This should provide a description of:

- The landscape character of the site and surrounding areas including landform, vegetation types and coverage, water features, any other notable features and current land use;
- The location of nearby dwellings, townships, recreation areas, major roads, above-ground utilities, tourist routes and walking tracks;
- Views to the site and to the proposed location of wind turbines from key vantage points (including views showing existing nearby dwellings and views from major roads, walking tracks and tourist routes) sufficient to give a sense of the overall site in its setting.

Soils

Is there a potential for effects on land stability, acid sulphate soils or highly erodible soils?

☐ NYD ☒ No ☐ Yes If yes, please briefly describe.

No Erosion Management Overlays exist within the referral area, however further assessment will be undertaken as part of the Project development process to identify the potential for highly erodible soils to occur and that could be affected by the Project.

The Australian Soil Resource Information System (**ASRIS**) databases indicate that most of the inland Project Boundary contains regions where acid sulfate soils have an extremely low probability of occurrence. However, along the coast, the Project Boundary contains a mix of areas where acid sulfate soils (**ASS**) have a high probability of occurrence and areas with extremely low probability to occur.

Areas of coastal acid sulfate soils (**CASS**) identified in the Nearshore Cable Envelope include the nearby areas of Corner Inlet, Port Albert, Shoal Inlet, Freshwater Swamp, Mcloughlin's Beach Coastal Reserve, and Jack Smith Lake.

Detailed assessment of ASS and CASS would be undertaken to inform the preferred export cable route and to avoid acid sulfate soils as far as practically possible. Where the disturbance of ASS and CASS cannot be avoided, management procedures will be prepared and implemented for the Project. The management measures will depend on the nature and location of the acid sulfate soils, though as per Publication 655.1 (Victorian Environment Protection Authority, 2009), the management measures may include:

- Avoid disturbance, i.e. select areas or alternative areas which do not contain acid sulfate soils.
- Minimise disturbance, i.e. re-designing project works and / or methodologies to minimise the need for excavation or disturbance of acid sulfate soils.
- Treatment of excavated acid sulfate soils to neutralise acidity.

Are there geotechnical hazards that may either affect the project or be affected by it?

☒ NYD ☐ No ☐ Yes If yes, please briefly describe.

Potential geotechnical hazards could be present. Further investigations are required to inform the cable route selection to avoid, minimise and to develop design solutions to manage any potential hazards, including avoidance of areas of highly erodible soils.

Other information/comments? (eg. accuracy of information)

The completed preliminary desktop assessment describes the potential environmental effects of disturbing the land generally within the referral area. It was used to inform a self-assessment against the EES referral criteria and to identify potential environmental risks. Further design development will occur to identify a preferred export cable corridor and to enable further technical studies to be completed. It is expected that the ultimate areas of disturbance would be significantly less than the referral area once a preferred cable route has been selected.

15. Social environments

Is the project likely to generate significant volumes of road traffic, during construction or operation?

☐ NYD ☒ No ☐ Yes If yes, provide estimate of traffic volume(s) if practicable.

During construction, temporary traffic diversions and road closures may be required to safely facilitate the delivery of materials, construction and other ancillary activities such as potential utilities relocations. Traffic management would be implemented to minimise potential impacts cause by disruptions. During peak construction, the Project is expected to support up to 1700 direct jobs.

A traffic impact assessment has not yet been undertaken. However, the operational phase of the Project is not expected to demand significant volumes of road traffic due to the staffing requirements of approximately 340 people.

Is there a potential for significant effects on the amenity of residents, due to emissions of dust or odours or changes in visual, noise or traffic conditions?

☐ NYD ☒ No ☐ Yes If yes, briefly describe the nature of the changes in amenity conditions and the possible areas affected.

The Preliminary Visual Appraisal (refer **Attachment 5**) concludes that a visual impact would occur due to the Project on the basis that some of the proposed offshore wind turbines would be visible from certain viewpoints along the Gippsland coast. The magnitude and significance of this impact will be determined through a detailed Seascape and Visual Impact Assessment.

Potential visual impacts form other above ground infrastructure such as the TJBs will be determined once a preliminary design is available; the placement of above ground infrastructure is flexible, and the Project will seek to locate infrastructure away from residents and other sensitive receivers.

The OWF site is located within the declared Gippsland Renewable Energy Zone, which was set back a further 10 km from the coast following stakeholder feedback on visual and amenity impacts received during consultation. The Project turbines would be located a minimum of 25 km from the coast, and may be visible from sensitive receptor viewpoints, including the Wilsons Promontory Lightstation and coastal towns. However, the magnitude of potential impacts is not anticipated to be extensive, and this will be confirmed through a detailed Seascape and Visual Impact Assessment.

Other potential effects are expected to be temporary only and unlikely to be significant and include:

- **Dust** – dust emissions are likely to occur from construction activity. However, these are unlikely to have significant effect on the amenity of residents and the emissions will be managed by implementation of the Project's management plans. Dust emissions in operations are not anticipated.

- **Noise** – the proposed TJB will generate noise in operations. The TJB will be located where possible to minimise impacts on residents. It is not anticipated that this will result in significant effects to a substantial number of residents due to long-term changes in noise conditions.
- **Traffic** – during construction, traffic disruption may occur as a result of temporary road closures to facilitate the construction works. This is not expected to be long-term and would be managed through worksite traffic management plans. Proposed works may generate some noise during construction. This would be temporary and is typical of most utility related construction Projects.

Is there a potential for exposure of a human community to health or safety hazards, due to emissions to air or water or noise or chemical hazards or associated transport?

☐ NYD ☒ No ☐ Yes If yes, briefly describe the hazards and possible implications.

There will be no ongoing emissions to air, water, chemical hazards, or associated transport due to Project operations resulting in potential human health risks. The AMSA and AHO would be engaged as part of ongoing Project design and development in relation to marine vessel activities and associated safety risks.

With the development of a comprehensive management plans for the Project, consideration of potential hazards will be further investigated, and mitigation measures will be designed to address any which are subsequently identified, as well as to proactively manage the potential for unknown or unforeseen hazards where possible.

Is there a potential for displacement of residences or severance of residential access to community resources due to the proposed development?

☐ NYD ☒ No ☐ Yes If yes, briefly describe potential effects.

It is not expected that onshore components of the Project would require displacement of residents. The placement of the onshore infrastructure is flexible, and the Project will seek to avoid existing residential and community areas.

Any potential impacts during construction would be temporary only and best practice management and mitigation measures would be implemented to mitigate any potential effects.

Are non-residential land use activities likely to be displaced as a result of the project?

☐ NYD ☒ No ☐ Yes If yes, briefly describe the likely effects.

As referenced above, the placement of onshore infrastructure can be designed to avoid Crown land, existing parks, reserves, recreational and other public areas and community facilities.

Do any expected changes in non-residential land use activities have a potential to cause adverse effects on local residents/communities, social groups or industries?

☐ NYD ☒ No ☐ Yes If yes, briefly describe the potential effects.

The Project requires the placement of export cable infrastructure within the onshore areas. The placement of such infrastructure can be designed to avoid existing parks, reserves, recreational and other public areas and community facilities.

Where the Project will affect existing industries and commercial activities, appropriate engagement will be conducted to inform the development of a suitable solution to mitigate both temporary construction impacts and long-term operational impacts.

The placement of offshore infrastructure in state and Commonwealth waters may result in indirect effects to marine users (e.g. commercial fisheries, tourism and recreation operators). Appropriate assessment and engagement will be conducted to inform the development of a suitable solution to mitigate both temporary construction impacts and long-term operational impacts.

Is mitigation of potential social effects proposed?

☐ NYD ☐ No ☒ Yes If yes, please briefly describe.

The Project will confirm land parcels required by the preferred export cable route corridor and identify the affected landowners, land managers, residents, community groups and industry stakeholders. Consultation has commenced with the identified affected stakeholders and Corio

will continue to consult on the potential impacts due to the Project. This consultation will inform an important part of the project and design development process, social impact assessment, and inform the development relevant mitigations and controls such as traffic management and access continuity plans, business continuity plans, potential temporary diversions, and relocations.

Other information/comments? (eg. accuracy of information)

In addition to road traffic consideration for onshore activities, there is also a need to consider offshore activities and their impact during construction and operation on maritime traffic and navigational safety.

Offshore, navigational aids will be installed to identify the area of avoidance during construction. Export cable installation activities in state waters represent an obstruction to navigation by other marine traffic. However, effects will be localised and temporary and are not expected to result in significant changes in vessel traffic or navigational safety. During operation, some activities (e.g., anchoring) may not be permitted along the export cable route.

The Australian Maritime Safety Authority (**AMSA**), Victorian Department of Transport and Planning (**DTP**) and Victorian Ports Corporation will be key stakeholders who will need to be satisfied that marine vessel safety is effectively managed. The Australian Hydrographic Office (**AHO**) issues Notice to Mariners and nautical charting in Australia. Nautical charts will be revised to include the export cable routes on relevant charts and publications by the AHO.

Cultural heritage

Have relevant Indigenous organisations been consulted on the occurrence of Aboriginal cultural heritage within the project area?

☒ No If no, list any organisations that it is proposed to consult.
☒ Yes If yes, list the organisations so far consulted.

The Project has held initial meetings with the following agencies and Traditional Owner Groups to discuss the Project:

- Aboriginal Energy – DEECA.
- First Peoples - State Relations.
- Gunaikurnai Land and Waters Aboriginal Corporation (**GLaWAC**).

Consultation will continue with GLaWAC throughout the development of the project and the assessment of Aboriginal cultural heritage within the Project Boundary.

What investigations of cultural heritage in the project area have been done?
(attach details of method and results of any surveys for the project & describe their accuracy)

A desktop review of the underwater, historic, and cultural heritage values that are relevant to the Project Area, comprising the OWF Site, Offshore Cable Envelope, Nearshore Cable Envelope and Onshore Transmission Envelope was completed. The results are presented in the attached Heritage Constraints Assessment (ERM, 2024c) (**Attachment 6**). A summary of the assessment is provided below:

- There are no historic heritage sites within the referral area.
- There are 17 VAHR sites in total within the Onshore Transmission Envelope.
- Areas of cultural heritage sensitivity (predominantly around watercourses) traverse the Onshore Transmission Envelope.
- There are no known underwater heritage items present within the referral area.

A Heritage Advisor will be engaged to prepare a CHMP for the Project.

A Heritage Advisor will be engaged to conduct a heritage impact assessment and to identify potential permit and consents required to facilitate the delivery of the Project.

Is any Aboriginal cultural heritage known from the project area?

☒ NYD ☒ No ☒ Yes If yes, briefly describe:

- Any sites listed on the AAV Site Register

- Sites or areas of sensitivity recorded in recent surveys from the project site or nearby
- Sites or areas of sensitivity identified by representatives of Indigenous organisations

There are 17 VAHR sites recorded within the Onshore Transmission Envelope. A Heritage Advisor will be engaged to prepare a CHMP for the Project.

Are there any cultural heritage places listed on the Heritage Register or the Archaeological Inventory under the *Heritage Act 1995* within the project area?

☐ NYD ☒ No ☐ Yes If yes, please list.

Is mitigation of potential cultural heritage effects proposed?

☐ NYD ☐ No ☒ Yes If yes, please briefly describe.

A detailed assessment of potential heritage impacts will be undertaken as project planning progresses and infrastructure corridors are selected. The Project will seek to avoid known cultural heritage places and undisturbed areas to help minimise potential impacts to Aboriginal and historic cultural heritage. These assessments will be undertaken with specialist technical advice and in consultation with the Registered Aboriginal Party and other relevant stakeholders.

The approved CHMP(s) for the Project will provide specific management and mitigation measures and procedures to be implemented during construction activity and in the event of any unexpected finds.

A Heritage Impact Statement would include a detailed assessment of potential impacts to the built environment, natural heritage areas, works, gardens, landscapes, views, and significant trees.

Other information/comments? (eg. accuracy of information)

The preliminary desktop assessment describes the potential environmental effects of disturbing the land generally within the referral area. It was used to inform a self-assessment against the EES referral criteria and to identify potential environmental risks. Further design development will occur to identify a preferred export cable corridor and to enable further technical studies to be completed. It is expected that the ultimate area of disturbance would be significantly less than the referral area.

16. Energy, wastes & greenhouse gas emissions

What are the main sources of energy that the project facility would consume/generate?

- ☒ Electricity network. If possible, estimate power requirement/output …….
- ☒ Natural gas network. If possible, estimate gas requirement/output ……...
- ☒ Generated on-site. If possible, estimate power capacity/output …….
- ☒ Other. Please describe.

Please add any relevant additional information.

The Project will be developed with a target total nameplate capacity of up to 2,500 MW, subject to final project design and grid capacity, comprised of a total of 100 to 172 offshore turbines to generate renewable energy.

What are the main forms of waste that would be generated by the project facility?

- ☒ Wastewater. Describe briefly.
- ☒ Solid chemical wastes. Describe briefly.
- ☒ Excavated material. Describe briefly.

Waste will primarily be accumulated during the construction phase, comprising excavated material from both onshore and offshore activities such as earthworks and trenching activities.

After prioritising the avoidance and reduction of quantities of waste expected to be generated during the continued development of detailed plans, assessments would be conducted to inform the ability to the Project to re-use excavated materials onsite, in accordance with the EPA Victoria's waste hierarchy:

1. Avoid creating waste
2. Reduce the amount of waste you create
3. Reuse waste
4. Recycle waste
5. Generate energy or extract valuable materials from waste
6. Contain waste.

Where re-use is not possible, the Project would seek to treat and/or dispose of generated waste, including containment on site, in accordance with EPA Victoria's hierarchy to minimise disposal to landfill.

Operation of the Project is not expected to generate significant quantities of waste because the infrastructure will be generally inert. Where maintenance or upgrades to facilities and components are required over the life of the Project, there may be waste generated such as minor earthworks if not entirely avoidable, and infrastructure components. It is expected that any infrastructure components which are removed from operation throughout the life of the Project will be able to be recovered, re-purposed or recycled.

This will be developed further through a decommissioning management plan to provide a process for mid-operation and post-operation material end-of-life management.

- ☒ Other. Describe briefly.

Please provide relevant further information, including proposed management of wastes.

What level of greenhouse gas emissions is expected to result directly from operation of the project facility?

- ☒ Less than 50,000 tonnes of CO_2 equivalent per annum
- ☒ Between 50,000 and 100,000 tonnes of CO_2 equivalent per annum
- ☒ Between 100,000 and 200,000 tonnes of CO_2 equivalent per annum
- ☒ More than 200,000 tonnes of CO_2 equivalent per annum

Please add any relevant additional information, including any identified mitigation options.

The Project is a renewable energy project and will result in the abatement of CO_2 emissions per year.

17. Other environmental issues

Are there any other environmental issues arising from the proposed project?

☒ No ☒ Yes If yes, briefly describe.

18. Environmental management

What measures are currently proposed to avoid, minimise or manage the main potential adverse environmental effects? (if not already described above)

☒ Siting: Please describe briefly

The referral area allows the Project the flexibility to adopt the principles of avoid, mitigate and offset to minimise the potential of adverse environmental effects.

Avoid

Further design development to identify a preferred corridor and siting of other Project infrastructure will consider the existing environment and identified areas of sensitivities, including cultural heritage, social, environmental and ecological, existing land holdings and existing infrastructure. Buffer zones and no-go zones would be implemented where proposed Project infrastructure may have the potential to impact on sensitive areas.

Mitigate

Where areas of sensitivities cannot be avoided, best practice measures will be implemented, where possible, to reduce the potential impact to acceptable levels. Such measures may include:

- Micro siting of infrastructure to reduce impacts to sensitive areas where they cannot be avoided.
- Adopting of trenchless technologies to avoid impacts to vegetation where relevant.
- Siting and design of above-ground infrastructure to reduce landscape and visual amenity impacts.
- Implementation of best practice and robust construction environmental management measures to reduce scale and intensity of potential temporary impacts.

Offset

Unavoidable impacts to native vegetation would be implemented to accord with the requirements of applicable Victorian and Commonwealth guidelines. Consultation with affected stakeholders and relevant regulatory authorities may inform other Project activities and design solutions.

☒ Design: Please describe briefly

Future design development will continue to adopt the principles of avoid and mitigate in informing both design and Project decisions. Operational Project infrastructure including transmission cabling and foundations will be inert and ongoing environmental impacts would be limited. Where infrastructure is to be located above ground or above water, landscape and visual impacts will be mitigated through consideration of siting, built form, materials and existing landscape context.

☒ Environmental management: Please describe briefly.

The Project is committed to best practice environmental management in detailed design, construction and operation. An environmental management framework would be developed to specifically address residual environmental risks after the application of the avoid, minimise and offset hierarchy. In relation to environmental management, the Environmental Management Framework would identify:

- Project objectives and targets.
- Roles and responsibilities.
- Environmental legislation, policies, and guidelines relevant to the Project.

- Environmental effects relevant to the Project.
- Performance based outcomes against the identified environmental effects. Management plans and environmental documentation required to address specific environmental aspects.
- Compliance, auditing, and environmental reporting requirements.

☒ Other: Please describe briefly

Add any relevant additional information.

19. Other activities

Are there any other activities in the vicinity of the proposed project that have a potential for cumulative effects?

☒ NYD ☒ No ☒ Yes If yes, briefly describe.

There are a number of other onshore and offshore projects within the Project region, and they include the:

- The *Tasmanian Gas Pipeline* (**TGP**) is a transmission pipeline operating and transporting gas from Longford in southern Victoria to northern Tasmania which transits through the OWF Site.
- The *Basslink* HVDC Interconnector and telecoms cable (Telstra/Basslink Telecoms) pass thorough the OWF Site and Offshore Cable Envelope.
- *CarbonNet* are proposing a carbon capture and storage (**CCS**) project to the north of the north-east of the site and have an exploration licence that overlaps with the OWF site.
- *Star of the South (***SOTS***)* are proposing to develop an offshore wind farm inshore of the OWF Site.
- BlueFloat are proposing to develop the *Gippsland Dawn Offshore Wind Project* to the north-east of the OWF Site.
- The *Aurora Green Offshore Wind Project* is proposed to comprise of an offshore wind farm east of the OWF site.
- Orsted is proposing to develop two offshore wind farms, *Gippsland 01* and *Gippsland 02*, both located further offshore directly south of the OWF Site.
- The *Blue Mackerel North* is a proposed offshore wind project inshore of the OWF Site.
- *High Sea Wind* is a proposed offshore wind farm project with a proposed capacity of 1.28 GW, located further offshore, south-east of the OWF Site.
- *Kent Offshore Wind* is a proposed offshore wind farm with a capacity of 2 GW, located further offshore, south-east of the OWF Site.
- The *Navigator North* is a proposed offshore wind farm with a proposed capacity of 1.5 GW, located east of the OWF Site.
- The *Gippsland Skies* is a proposed 2.5 GW offshore wind farm located to the south-west of Wilson's Promontory and the OWF Site.
- The *Kut-Kut Bratauaalung* is an offshore wind project with a proposed capacity of 2.2 GW located south-west of the OWF Site.

Cumulative impacts have the potential to occur either in combination with one or all of these projects. An assessment of all relevant projects and potential cumulative effects will be undertaken for the Project.

20. Investigation program

Study program

Have any environmental studies not referred to above been conducted for the project?

☒ No ☒ Yes If yes, please list here and attach if relevant.

A 2-year marine baseline survey program has commenced and is currently being undertaken to assess avifauna and marine mammals including:

- Visual and digital aerial surveys.
- Vessel based surveys.

- Passive acoustic monitoring.

These additional studies are not attached as part of this referral.

Has a program for future environmental studies been developed?

☐ No ☒ Yes If yes, briefly describe.

Additional environmental studies will be conducted to support the future detailed assessment and the ongoing design development of the Project. The assessment areas will likely include:

Onshore

- Bushfire
- Air quality
- Onshore ecology
- Hydrology and Hydrogeology
- Contamination and Geology
- Land Use Impact Assessment
- Traffic and Transport
- Noise and vibration
- Historic Heritage and Aboriginal Cultural Heritage

Offshore

- Marine Physical & Coastal Processes
- Water and Sediment Quality
- Benthic Epibenthic & Intertidal Ecology
- Bony Fish, Fish and Shellfish Ecology
- Marine Mammal and other Megafauna
- Offshore & Intertidal Ornithology
- Commercial & Recreational Fisheries
- Shipping and Navigation
- Marine Archaeology & Cultural Heritage
- Other Users of the Marine Env. Impact Assessment
- Aviation & Radar Impact Assessment (Whole Project)
- Telecommunications and interference (Whole project)
- Seascape, landscape and visual Impact Assessment (Whole project)
- Socio Economic (Whole project)

Following consultation with regulators, a study program for the environmental impact assessments will be provided to regulators to inform scoping guidelines for the project.

Consultation program

Has a consultation program conducted to date for the project?

☐ **No** ☒ **Yes If yes, outline the consultation activities and the stakeholder groups or organisations consulted.**

Corio has carried out extensive stakeholder engagement for the Project to understand the local community and stakeholder environment, with more than 250 meetings and events since commencing development activities in 2021.

There is overwhelming support for the Project among the key stakeholder groups which Corio have met. Many of these stakeholder groups are well connected to the local community and have provided great insights into some of the likely community impacts and concerns, and how the Project team can best engage and keep people informed throughout the life of the Project.

Corio have identified and engaged with 13 key stakeholder groups:

Federal Government departments and agencies:

- Australian Energy Infrastructure Commissioner.

- Australian Energy Market Operator.
- Department of Climate Change, Energy, the Environment and Water.
- Department of Defence.
- National Offshore Petroleum Safety and Environmental Management Authority.
- National Offshore Petroleum Titles Administrator.
- Offshore Infrastructure Regulator.
- Offshore Infrastructure Registrar

Federal Ministers & MPs:
- The Hon Chris Bowen, MP, Minister for Climate Change and Energy
- The Hon Tanya Plibersek, MP, Minister for Environment and Water
- The Hon Darren Chester, MP, Member for Gippsland.
- Mr Russell Broadbent, MP, Member for Monash.

State Government departments & agencies:
- Department of Energy, Environment and Climate Action (**DEECA**).
- Department of Transport and Planning.
- Offshore Wind Energy Victoria
- Latrobe Valley Authority.
- Parks Victoria.
- Ports Victoria
- Regional Development Victoria.
- Transport Safety Victoria
- VicGrid
- Aboriginal Energy, DEECA.
- First Peoples – State Relations.

State Government Ministers & MPs:
- The Hon Lily D'Ambrosio, MP, Minister for Climate Action, Energy and Resources, and State Electricity Commission.
- The Hon Jacinta Allan, Premier of Victoria
- Mr Tim Pallas, Treasurer of Victoria
- Mr Danny O'Brien MP, Member for Gippsland South.
- Ms Jordan Crugnale MP, Member for Bass.
- Mr Tom McIntosh, MP,Member for Eastern Victoria.

Traditional Owner Groups:
- Gunaikurnai Land and Waters Aboriginal Corporation.

Local Government and Councillors:
- Wellington Shire Council.
- South Gippsland Shire Council.
- Bass Coast Shire Council.
- Latrobe City Council.
- Baw Baw Shire Council
- East Gippsland Shire Council

Industry and Advocacy Groups:
- Australian Renewable Academy.
- CEC Offshore Wind Directorate.
- Committee for Gippsland.
- Committee for Wellington.
- Industry Capability Network (ICN Gateway)
- Lumia
- Supply-chain businesses

Utilities, service providers and other OSW developers:
- Utility groups (incl but not limited to AusNet, Energy Australia)

- BlueFloat (Gippsland Dawn)
- Iberdrola (Aurora Green)
- JERA Nex (Blue Mackerel)
- Mainstream Renewable Power/Reventus/AGL/Direct Infrastructure (Gippsland Skies)
- Ocean Winds (High Sea Wind)
- Origin (Navigator North)
- Orsted (Gippsland 01 & Gippsland 02)
- RWE (Kent Offshore Wind)
- Southerly Ten (Star of the South & Kut-Wut Brataulung)
- APA (Basslink)
- CarbonNet
- Commercial Aviation
- Cooper Energy
- ExxonMobil
- Marinus Link
- Tasmanian Gas pipeline (TGP)

Maritime Industries and Groups:
- Australian Fisheries Management Authority.
- Australian Maritime Safety Authority.
- Better Boating Victoria
- Commonwealth Fisheries Assoc (CFA)
- Eastern Zone Abalone Industry Assoc
- Seafood Industry Victoria
- South East Trawl Fishing Industry Assoc (SETFIA)/Southern Shark Industry Alliance
- Victorian Fisheries Authority
- Victorian Recreational (VR) Fish
- Port Anthony / Barrys Beach (Qube)
- Port of Hastings
- Port of Geelong
- Port of Melbourne

Environmental Groups:
- Friends of the Earth
- Gippsland Climate Change Network.

Local community members:
- Residents and visitors of Wellington Shire and South Gippsland Shire / wider Gippsland

Landholders:
- Landowners impacted by offshore wind (coastal) and/or transmission infrastructure

Educational institutions – primary, secondary, TAFE and universities:
- Primary & Secondary schools – Gippsland/Victoria
- TAFE Gippsland
- Federation University
- Gippsland Tech School
- University of Melbourne
- Monash University

Local Community Engagement

The Project team have engaged with over 3,000 community members at a range of pop-up and public-facing events, where they were provided project information. Feedback has been received for internal analysis and will be used to refine future stakeholder engagement. Community engagement events and student expos include but not limited to:

- Yarram Community Market, 10 Dec 2022.
- Foster Community Market, 11 Dec 2022.
- Gippsland Centre, Sale, 14 Dec 2022.
- Industry Capability Network Gateway, Morwell, 12 Apr 2023.

- Trades Fit Expo, Melbourne, 10-11 May 2023.
- JobSkills Expo, Lardner, 25 Jul 2023.
- Federation University Open Day, Churchill, 13 Aug 2023.
- Gippsland New Energy Conference and Community Days, Sale, 30 Aug – 2 Sep 2023.
- Trades Fit Expo, Melbourne, 8-9 May 2024
- GELLEN Student Expo, Bairnsdale, 29 May 2024.
- Monash Careers Launchpad, Monash, 19 Jul 2024.
- Jobskills Expo, Lardner, 23 Jul 2024.
- Gippsland Centre, Sale, 24 Jul 2024.
- Seaspray Public Hall, 24 Jul 2024.
- Yarram Regent Theatre, 15 Aug 2024.
- Online Information Session, 29 Aug 2024.
- Gippsland New Energy Conference (community & student expo), Traralgon, 3-5 Sep 2024.
- Gippsland Offshore Wind Day, Seaspray, 8 Nov 2024
- Gippsland Offshore Wind Day, Foster, 13 Nov 2024.
- Gippsland Offshore Wind Day, Traralgon, 14 Nov 2024
- Gippsland Offshore Wind Day, Yarram, 23 Nov 2024.

The Project has also undertaken other extensive stakeholder engagement activities, including:

- Coordinated community engagement events in collaboration with other Gippsland Feasibility Licence holders. The "Gippsland Offshore Wind Days" were held in Seaspray, Foster, Traralgon, Yarram in November 2024.
- Comprehensive community sentiment study of the Gippsland region, with eight qualitative focus groups and 800 quantitative interviews.
- Appointment of a well-regarded Regional Stakeholder Manager, to ensure the Project has a strong local presence and connection with key stakeholder groups in the region. Establishment of a Project website that clearly explains project details, key facts about offshore wind and the Project, upcoming events and the current status.
- Establishment of a Project Facebook page.
- Partnership with ICN Gateway, Australia's largest business networking platform, to gather expressions of interest from the local supply chain and businesses for the Project.
- Membership of Committee for Gippsland, a preeminent networking and business association in the local Gippsland region.
- Membership of the Clean Energy Council, a peak industry body representing Australia's clean energy sector
- Participation by the Project team in significant working groups aimed at building regional and industry collaboration.
    - Wellington Renewable Energy Forum
    - Gippsland Community Benefit Sharing Working Group
    - Gippsland New Energy Web Portal Working Group
    - Gippsland New Energy Conference Working Group
    - Gippsland Energy Industry Advisory Group
    - GLAC (Gippsland Licence Holder Advisory Committee)
    - OG12 (Offshore Gippsland 12 - incl sub working groups – Regional Engagement Exchange, Fishing, Planning & Environment)
    - GOWA (Gippsland Offshore Wind Alliance)
    - CEO Offshore Wind Taskforce & Directorate.

Has a program for future consultation been developed?

☒ NYD ☒ No ☒ Yes If yes, briefly describe.

Guided by the International Association of Public Participation's (**IAP2**) Core Values and Public Participation Spectrum and Quality Assurance Standard, our engagement approach is tailored according to the audience's level of Project awareness, interest and influence, as well as their renewable energy knowledge. The IAP2 is an internationally-recognised approach for advancing public involvement and participation to guide engagement, seek feedback and identify potential impacts for the project.

With a well-advanced program, Corio has drawn upon two years of feasibility and development activities for the Project to develop a robust and comprehensive stakeholder engagement

strategy. The strategy ensures we undertake an inclusive approach, provide multiple opportunities for engagement and has a clear process in place should concerns or impacts be raised by key stakeholders.
A range of communication and engagement tools will continue to be used to raise awareness, build understanding, support stakeholders, and allow the community to provide informed feedback as the Project develops.

Consultation tools, methods and platforms which will be used throughout the development phase, include:

- Project website (Home - Greateastern) – the Project website provides a range of project information and communication materials. It is used to promote engagement events and provide a mechanism for collecting feedback.
- Notification letters and emails – providing stakeholders with timely information about the Project, allowing us to build relationships and providing updates on the Project status, benefits and timelines.
- Market research
- Meetings – virtual and face-to-face presentations and discussions directly with key stakeholders to provide an introduction to the Project, clarify information and gather feedback, ideas and options to feed into Project planning.
- Supporting materials – a range of supporting materials including maps, fact sheets and Frequently Asked Questions (**FAQs**) help answer common questions and provide Project information, accessible via hard copy and via the Project website.

The Project recognises that several environmental and social constraints exist that have been considered during feasibility and will continue to be considered during design and implementation of the Project. Strategies will be developed to avoid, minimise and mitigate risks to marine fauna, seabirds and shorebirds, commercial fisheries, other marine users, cultural heritage as well as community concerns regarding visual impacts. Corio is committed to ongoing and meaningful engagement while working closely with Traditional Owners, all levels of government, industry, local communities, other marine users and key stakeholders in Gippsland to understand their concerns, potential impacts, aspirations and opportunities for the region. These will inform the most appropriate detailed design and layout of the offshore wind farm and export cable routes to avoid, minimise and mitigate impacts.

Ongoing engagement with key stakeholders, including those identified in the referral process, is critical through all phases of the project to ensure their feedback continues to shape project planning and design. As the Project progresses, Corio will refine and adjust our strategic engagement and communications approach, in response to local community and stakeholder feedback. It is envisaged that with appropriate design, management, and consultation, the Project can be constructed and operated in a manner that is sustainable for the environment and communities of the region.

Authorised person for proponent:

I, **Penny Pickett, Director of Great Eastern Offshore Wind Project Co Pty Ltd as trustee of the Great Eastern Offshore Wind Farm Asset Trust**, confirm that the information contained in this form is, to my knowledge, true and not misleading.

Signature _____

Date 05/05/2025

Person who prepared this referral:

I, **Jenny Luk, Partner, ERM**, confirm that the information contained in this form is, to my knowledge, true and not misleading.

Signature _____

Date 02/05/2025