

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* (Seventh Edition, 2006). 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 Environment, Land, Water and Planning (DELWP) 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:	Port of Hastings Corporation
Authorised person for proponent: Position: Postal address: Email address: Phone number: Facsimile number:	Malcolm Geier Chief Executive Officer 1d Stony Point Rd, Crib Point, Victoria 3919 Malcolm.geier@portofhastings.vic.gov.au +61 3 5979 5512 N/A
Person who prepared Referral: Position: Organisation: Postal address: Email address Phone number: Facsimile number:	Natasha Reifschneider Environment Lead Port of Hastings Corporation 1d Stony Point Rd, Crib Point, Victoria 3919 Natasha.r@portofhastings.vic.gov.au +61 3 5979 5512 N/A
Available industry & environmental expertise: (areas of 'in-house' expertise & consultancy firms engaged for project)	<p>Port of Hastings Corporation (PoHC) as port operator has expertise in the management of operations at the Port of Hastings, including maintaining the associated port infrastructure.</p> <p>Arup have provided technical advisory services to Port of Hastings Corporation including investigation and assessment of various matters to inform this referral.</p> <p>Additionally, the following specialist investigations have been undertaken to inform this referral:</p> <ul style="list-style-type: none"> • Desktop and site assessment of terrestrial values by Biosis (Attachment 1). • Desktop assessment of marine ecosystem by CEE – Consulting Environmental Engineers and Scientist (Attachment 2). • Desktop assessment of waterbirds by Nature Advisory (Attachment 3). <p>Andrew Long and Associates undertook Aboriginal cultural heritage assessments in 2016 and 2021 (not attached).</p>

2. Project – brief outline

Project title: Victorian Renewable Energy Terminal

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)

The site for the Victorian Renewable Energy Terminal (the Terminal) is situated within the Port of Hastings, which is a major transport gateway supporting key industries associated with fuel imports and oil, gas and steel production. The Project is located to the southeast of Melbourne, approximately 72km from the Melbourne CBD, and 2.6km northeast of the centre of Hastings (Figure 1). As an operational port responsible for a significant share of Victoria's bulk liquid trade, access to Port of Hastings is well established. Connected by rail directly to Frankston, Port of Hastings is conveniently located in the southeast of Melbourne and provides access to the Melbourne labour force.

The Port of Hastings is located across four jetty complexes within Western Port being:

- BlueScope wharves
- Long Island Point Jetty
- Crib Point Jetty
- Stony Point Port Services Complex.

In addition to these jetty complexes, the Port of Hastings currently contains a range of industrial uses reliant on access to the port such as:

- Esso Long Island Point fractionation plant
- BlueScope steelworks
- United Petroleum's Hastings terminal.

The potential Terminal site is situated between BlueScope steelworks and Esso's Long Island Point fractionation plant at the Old Tyabb Reclamation Area (OTRA, Figure 1). The OTRA site borders the Western Port Ramsar site, an area identified to be of international importance, in particular to waterfowl habitat. The Ramsar site extends across the Western Port area which is connected to Bass Strait by a wide channel between Flinders and Phillip Islands, and a narrow channel between San Remo and Phillip Island.

The address of the OTRA land is 5 Long Island Drive, Hastings, and is known as Crown Allotment 76L, Parish of Tyabb.

The site location in AMG Coordinates is: 38°17'46.32", 145°13'24.92".

Short project description (few sentences):

The Terminal is a proposal to develop a facility to serve as a base of operations for the assembly of Offshore Wind (OSW) farms along the coast of Victoria. In the longer term, the facility could be used to support other typical seaborne trades and export locally manufactured items. The Terminal would include landside development, land reclamation, construction of a reinforced quay and dredging to allow for ship access.

3. Project description

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

The aim of the Project is to develop and operate a port to support the emerging OSW sector. There are many emerging OSW proponents in Victoria.

The *Victorian Commercial Ports Strategy* (July 2022) has identified the Victorian ports system as an integral part of the shift towards the production, distribution, and use of OSW power. At present, Victorian ports are not equipped to support this sector and if upgrades to ports are not undertaken, alternative solutions to generate renewable power will need to be considered. Upgrades to port infrastructure are required to handle the extreme loads and large operational areas required to support the OSW industry.

PoHC proposes to develop the Terminal as a facility to serve as a base of operations for the construction of OSW farms along the coast of Victoria. In the longer term, the facility could operate as a multi-function port, used to support other typical seaborne trades and to export locally manufactured items.

The project is consistent with the functions of the Port of Hastings Corporation outlined in the *Transport Integration Act 2010* that requires the Port of Hastings Corporation to:

- Plan for the development and operation of the Port of Hastings
- Provide land, waters and infrastructure necessary for the development and operation of the Port of Hastings
- Facilitate the integration of infrastructure and logistics systems in the Port of Hastings with the transport system and other relevant systems outside the port.

The project will:

- Support the transition to affordable, reliable, clean energy for Victoria
- Support a less carbon intensive energy network
- Increase employment opportunities for the region
- Develop a multi-use terminal for Victoria.

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

The *Victorian Offshore Wind Policy Directions Paper* (March 2022) outlines the State's vision to support the OSW industry by establishing targets and developing a pipeline of OSW projects. A summary of the Victorian government's commitments include:

- \$40 million earmarked for the initial development of three projects in the State
- Target of 2GW of capacity by 2032
- Victorian waters to support at least 13GW of generation
- Port of Hastings nominated as the State's preferred port for offshore wind projects.

Rationale for the Project

Port of Hastings is strategically located in Western Port, approximately 72 km to the south-east of Melbourne. The port's location provides the opportunity to support major trades along the Victorian coast without the requirement to transport materials through urban areas of Melbourne, avoiding road capacity constraints or transport complexities that could arise.

The *Victorian Commercial Ports Strategy* (July 2022) identified the key role of ports in receiving OSW components from overseas and hosting the assembly and storage of OSW components. The strategy commits support to the ports sector in servicing the transition to a net zero emissions economy by 2050 and identifies the Port of Hastings as a suitable facility to support this transition.

Ports typically play an important role as OSW assembly sites due to the size of OSW turbines and the difficulty of transporting components via land. Given the geographical clustering of proposed offshore wind farms, a primary offshore port capable of addressing wider logistics, storage and assembly requirements for the sector would lead to greater efficiencies of installation and facilitate faster deployment of OSW farms.

The growing size and capacity of offshore wind turbines will continue to increase the stress placed on supporting infrastructure, especially ports. Fixed foundation offshore wind towers are typically assembled at sea, with onshore facilities required for storage, subassembly, operating, and maintenance centres. High capacity berths, deep channels and large areas of heavy-duty pavements are required for the movement, laydown and pre-installation work of offshore wind tower components.

In October 2022, the Victorian Government released *Offshore Wind Implementation Statement 1*, outlining the government's plans for the establishment of an OSW industry. The Implementation Statement reaffirmed the government's position that the Port of Hastings is likely to be the preferred port to support OSW construction, subject to necessary community and industry consultation and environment and planning approvals. In the statement, the Victorian Government committed to providing early investment in the development of the Port of Hastings to support the establishment of the OSW sector. Stating that:

'The preference for the Port of Hastings comes after assessing and comparing the viability of various ports to deliver on offshore wind targets.'

This commitment to the Port of Hastings being the Victorian Government's preferred port to support OSW construction is reaffirmed in the Victorian Government's *Offshore Wind Implementation Statement 2*, released in March 2023. Stating that:

'The Port of Hastings has been selected as the most suitable primary port to assemble offshore wind infrastructure and, subject to planning and environment approvals, we will establish the Victorian Renewable Energy Terminal at the Port of Hastings.'

Further, the Hon. Daniel Andrews MP, Premier, released a statement identifying the Port of Hastings as the preferred OSW construction port for Victoria to enable the emerging OSW industry.

The Victorian Government, through the Department of Transport and Planning (DTP) and the Department of Energy, Environment and Climate Action (DEECA), has undertaken a study to determine the most suitable port in Victoria to support the construction of the OSW sector. DTP (then Department of Transport) engaged Jacobs to assess the relative strengths of Victorian ports to support offshore wind generation. The report identified the Port of Hastings as best placed to support the construction of OSW and recommended the proposed development of the OTRA site for this purpose.

The Port of Hastings has strategic advantages to assist the rapid uptake of OSW projects, driven by several key factors:

- 1) **Well-connected sea and land-side logistics** – The port has existing deep-water channels that require little to no maintenance dredging.
- 2) **Port location** – The port is accessible from Melbourne and close to the Gippsland region where several planned OSW projects are located. The location also provides access to a large labour market. The East Gippsland area has also been identified as a suitable location to support OSW developments by the Hon Chris Bowen MP the Commonwealth Minister for Climate Change and Energy.
- 3) **Land availability** – There is opportunity for undeveloped land surrounding the port to be utilised for industry which relies on the port for a transport route.
- 4) **Industrial partnerships** – The surrounding industries can be leveraged for sharing of infrastructure, where relevant.
- 5) **Operational capacity** – Port of Hastings can service OSW without impeding existing trade relationships and placing strain on current port operations.
- 6) **Access to patient (long term) capital** – Port of Hastings is a publicly owned entity, with access to long term capital.

The expeditious development of this project is essential to meet the Victorian Government's offshore wind targets. As such, the project needs to start detailed environmental studies, approval activities, and engineering and design as early as possible in 2023.

This timing provides a two-and-a-half-year window for approvals, feasibility, design and procurement, followed by a three-year construction window.

If port facilities are not available to support the OSW industry in time for the development of the first OSW farm, growth in Victoria's OSW sector will be curtailed due to a lack of suitable port infrastructure. Further, delays in port upgrades will lead to constraints for OSW developers, ultimately reducing the volume of renewable energy generated through OSW, compromising Victoria's clean energy milestones.

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

The Terminal will include an onshore operational area, a quayside assembly area and a shipping operational area. An indicative visual representation of these areas is provided in Figure 2.



Figure 2 Visual Representation of Potential Site Layout

The Terminal footprint will be approximately 43ha in size, comprising:

- 1) Onshore operational area of 37 ha (comprising the 25ha OTRA site and 12ha of new reclamation); and
- 2) Quayside assembly area of 6 ha.

The Onshore Operational Area is proposed to be located on the OTRA site and include additional reclaimed land (refer to Figure 3). Where feasible, dredged material would be placed in reclamation areas. Most of the site would be comprised of heavy-duty pavements to allow for storage of cargo and associated handling equipment, with approximately two hectares required for warehousing, offices, car parks, and other ancillary facilities.

The Onshore Operational Area would be designed for storage of both the foundations and wind turbine components.

The Quayside Assembly Area would include an approximately 600m long by 100m wide wharf structure located in deep water capped with a concrete apron. The six-hectare Quayside Assembly Area would be subjected to very large loads from turbine components coming off (or onto) vessels. The components would be loaded on (or off) vessels with cranes direct from the quay or driven directly onto vessels by large purpose-built vehicles and off-loaded.

Dredging of the seabed is likely to be required as part of the Project, there are three areas that could require dredging (both within the potential dredging area, refer to Figure 3):

- Approach channel and swing basin. This may be required to allow the import supply ships to approach and manoeuvre near the berths prior to berthing in all tidal conditions.

- Deepening of the berth pocket and removal of soft soils down to a firm stratum. This may be required to allow for the placement of rock onto a strong soil layer, so that the jack-up legs of the offshore installation vessels could be used in port.
- Removal of a layer of poor-quality material from the area to be reclaimed.

Figure 3 Project Component Locations (Project Area)



Legend

Project Area

-  OTRA Site
-  Potential Dredging Area
-  Potential Reclamation and Dredging Area
-  Ramsar Areas (Western Port)
-  Watercourses



Coordinate System: GDA2020 MGA Zone 55

Rev	Date	By	Chk'd	App'd	Auth'd
A	30/06/23	CT	AF	--	--

ARUP

Sky Park, 1 Melbourne Quarter
 499 Collins St, Docklands VIC 3008
 Tel +61 (0)3 9668 5500
 www.arup.com

Client

Port of Hastings Corporation

Project Name

**Port of Hastings - Victorian
 Renewable Energy Terminal**

Drawing Title

Project Area Map

Scale at A3

1:15,000

Role

--

Suitability

--

Project Number

288437

Drawing Name

--

Rev

A

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

Outside the perimeter of the facility, there would likely be extensions (and potentially some upgrades) required to electrical, communications, water and sewer services, and road infrastructure. At this stage there is little detailed information available on the ancillary components required.

Key construction activities:

Figure 3 shows the location of the three key components of the Project – the existing OTRA site, the quay and reclamation area (shown in Figure 2 as the Quayside Operational Area and the Onshore Operational Area) and the dredging area (shown in Figure 2 as the Shipping Operational Area). The existing OTRA site, reclamation area and dredging area are cumulatively defined as the Project Area.

Onshore Operational Area

The existing land was reclaimed in the past with dredge materials from the adjacent channel and placed directly over the in-situ soft marine sediments. Based on test pits dug in the area, the soil is not suitable for placement of a heavy pavement without treatment to minimise settlement and increase the subgrade strength. Additionally, imported fill with better engineering properties is likely to be required.

Reclamation would be required to increase the area of the Onshore Operational Area. This could be done using a combination of dredged material (if suitable) and engineered fill imported to the site as above. A description of the potential dredging activities is provided below.

Warehouses, laydown areas, offices and amenities and maintenance buildings would also require lighting, electrical, communications, water, sewer and storm water services.

Quayside Assembly Area

The wharf would likely be comprised of a large, cantilevered retaining wall (combi-pile or otherwise). Dredged material (if suitable) and fill could be placed from seabed level to sub-base, above which the pavement would be constructed to finished surface level.

The quayside construction activities may consist of:

- Removal (dredging) of a layer of existing soft seabed materials
- Installation of a combi pile wall (or alternative) and anchor wall, consisting of around 950 steel tube piles installed from marine based plant with vibro hammers and/or impact hammers.
- Installation of perimeter rock bunds across intertidal and shallow water areas using land based plant.
- Bulk fill of general fill material (imported and dredged) behind bunds and combi wall using land based plant.
- Installation of concrete decking supported on concrete precast piles if the loads are deemed too excessive for pavements supported on imported engineering fill.
- Fitting of electrical, water and drainage utility services and wharf facilities.

Ship Operational Area

The navigational approach depth would need to account for the vessel draft, potential wind and wave climate and vessel motion as well as bed geology/seabed type and the tidal limitations on the transit. As a result, dredging would be required:

- Adjacent to the berth – to remove a strip of existing soft seabed materials and replace the materials with rock fill to provide a stable foundation for the base of the jack-up legs of the offshore installation vessels.
- To widen and deepen the approach channel and swing basin for supply and offshore installation vessels, this would consist of localised dredging (in specific areas) to ensure that at low water, a navigable water depth is maintained within the channel.

Although the extent of the dredging is undefined, it will be limited to the Potential Dredging Area as shown in Figure 3. Port of Hastings Corporation is currently exploring opportunities for disposal of surplus dredge material either onshore or offshore to a dredge material ground.

Key operational activities:

Onshore Operational Area

The onshore (or yard) activities would typically include transport, fit out and storage of large numbers of the turbine components, wind turbine generators and electrical components. The yard would need considerable storage capacity to stockpile large numbers of units due to the vulnerability of a long international supply chain.

Most of the components would be stored in the open on the heavy-duty pavements. Some delicate components would be stored in a warehouse. Final fit out activities could include the installation of electronics, instruments and locally fabricated stairways.

Quayside Assembly Area and Shipping Operational Area

The wharf and shipping operations would have an import and an assembly/loadout phase. For the import phase, the components would be transported from the manufacturing site (likely to be overseas) to the Terminal site on general cargo vessels or specialist transport vessels. At the wharf, the components would be lifted or rolled off the ship onto the wharf and then stored in the adjacent yard.

When required, the components would be retrieved from the yard and collected near the wharf edge where they would be assembled into packages using shoreside mobile cranes approximately 10% taller than the turbine towers. Assembly would include the erection of the turbine towers from several sections resulting in an estimated turbine tower height of 150 to 200 metres tall and approximately 11 metres wide at the base. The height of turbine towers at the Terminal will depend on the technology available and the tower design chosen by the offshore wind farm proponent. A heavy lift pad would be required in the area adjacent to the quay to accommodate the complete tower units and crane.

Post assembly, the components of between four to eight foundation units or between five and eight wind turbine generator units with fully assembled turbine towers would be loaded onto an offshore installation vessel. The vessel would then transport the components to the offshore installation site. Typically, the cycle of activity for the assembly/loadout phase would be 5 to 10 days.

The number of incoming and outgoing vessels would be dependent on the size of the wind turbines of the OSW project and the location of the relevant OSW farms. The number of vessels will be dependent on the state of OSW projects throughout the state. It is expected that commercial ship visits associated with the Terminal would be in the order of 100 to 150 per year during OSW farm installation.

The Terminal facility will be designed and constructed with a wharf able to withstand heavy loads. If not at full capacity with offshore wind activities, the facility may be able to accommodate ad hoc shipments of oversize and over mass items such as electrical transformers, and industrial plant and equipment. However, the primary use of the Terminal is to facilitate offshore wind farm construction.

Key decommissioning activities (if applicable):

Decommissioning of the Terminal is not likely to occur. The history of port assets of this scale and functionality is that they are repurposed and upgraded until they are replaced by a new facility.

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.

As stated above in the rationale, the Project is related to offshore wind developments within Victoria.

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

Initial estimates indicate capital expenditure ranges from \$0.8 billion – \$1.4 billion.

4. Project alternatives

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

The Victorian Government, through the Department of Transport and Planning (DTP) and the Department of Energy, Environment and Climate Action (DEECA), has undertaken a study to determine the most suitable port in Victoria to support the construction of the OSW sector. DTP (then Department of Transport) engaged Jacobs to assess the relative strengths of Victorian ports to support offshore wind generation. The Jacobs report was released in August 2022 and stated that none of the existing port facilities throughout Victoria have the berths, wharves and land facilities to meet the requirements sought by OSW project proponents available at present, due to lack of suitable facilities, or suitable facilities being committed to other customer needs and trades. The report identified the need for development or upgrade of Victoria's port infrastructure to support OSW farm development and the Port of Hastings was determined to be best placed to support the construction of OSW farms.

As part of early works and assessment of the Project, a narrow wharf option was considered. This option did not include reclamation and contained the landside marshalling area within the OTRA site with connections to a narrow wharf through three separate access bridges. The option was originally considered as potentially a less environmentally impactful option and possibly more economically viable than the reclaimed land option.

Early engineering showed that the wharf would most likely be required to be built as a 'deck-on-piles' structure comprising up to 3,000 steel tubular piles in five metre by five metre spacings driven into place and capped with a reinforced concrete deck.

The narrow wharf option was not found to be economically viable because of the following reasons:

- The landside marshalling area was limited to approximately 23.5 ha on the existing land parcel – which did not meet the minimum requirement to support the requirements of one of the early OSW projects Star of the South.
- The construction methodology was complex, lengthy and would be considerably more expensive than the land backed quay option.
- Operationally, the narrow pile wharf was sub-optimal.

Additionally, from an environmental perspective,

- The extensive piling program involved in the narrow wharf option would result in a significant increase in marine traffic, underwater noise and suspended sediment during construction.
- Hydrodynamic modelling to investigate the impact on coastal process during operation of the facility showed that the narrow wharf option had similar impacts to current reclamation option under consideration.
- The 3000 steel piles exposed to the environment would require more ongoing maintenance than a reclaimed structure.

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

The Project quay wall structural configuration and dredging options are still being considered and will require further investigation to determine the preferred methodology.

The methods currently under consideration for dredging are described below including a summary of the key points for consideration:

- Cutter suction head dredging:
 - Suitable for moving materials over short distances and into reclamation areas.
 - Suitable for deep dredging cuts and working close to structures due to the high accuracy of placing the cutter head.
 - Potentially generates significant plumes of suspended materials.
- Backhoe dredging with hopper barges:
 - Works with all types of likely materials and is accurate making it suitable to work near structures.

- Creates less turbid plumes at the dredge site - there is less water volume moved and less mixing of soil and water.
- Allows for easier use of the material in a reclamation.
- Significantly less productive than cutter suction head dredging.

The environmental impact of the two methods would be further investigated in the next phase of design and assessment.

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:

The following are excluded from the scope of the Project for assessment:

- Business as usual operations including site management, cropping and pest management practices.
- New boundary fencing and creation of vehicle access into the site.
- All forms of invasive and non-invasive surveys of the terrestrial and marine environment that are required to inform the project including, without limitation:
 - Geotechnical and non-destructive digging surveys.
 - Geotechnical and related investigations to inform dredging methodology and spoil disposal.

Ancillary requirements outside the perimeter of the facility, such as extensions (and potentially some upgrades) to electrical, communications, water and sewer services, and road infrastructure, are yet to be defined. The consideration of ancillary requirements will be assessed as the design of the facility progresses.

6. Project implementation

Implementing organisation (ultimately responsible for project, ie. Not contractor):
The Port of Hastings Corporation

Implementation timeframe:

To meet the proposed development time of the nearby offshore wind projects the Project would require a first stage operational date towards the end of this decade.

Proposed staging (if applicable):

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 preferred site for the Project is the OTRA site, see Figure 1 and Figure 3.

Terrestrial Flora and Fauna

Biosis (2023) completed a site assessment of the OTRA site to ascertain the terrestrial ecological values (Attachment 1). Being entirely composed of reclaimed land, the OTRA site is dominated primarily by introduced pasture grasses namely Toowoomba Canary-grass *Phalaris aquatica*, Yorkshire Fog *Holcus lanatus* and Tall Fescue *Festuca arundinacea*. The south of the area is dominated by Pampas Grass *Cortaderia selloana* and Spiny Rush *Juncus acutus*, see Plates 1-5 (Attachment 1; Section 3.1).



Plate 1: Open pastures, indicative of the majority of the OTRA site.



Plate 2: Tall Marsh located in the northern section of the OTRA site.



Plate 3: Damp Sands Herb-rich Woodland adjacent to Long Island Drive



Plate 4: Tall Marsh in the southern section of the OTRA site



Plate 5: Bayside region of the OTRA site (facing north)

Approximately 3.9 ha of native vegetation was recorded within the OTRA site consisting of two ecological vegetation classes (EVCs): Tall Marsh (EVC 821, Least Concern) and Damp Sands Herb-rich Woodland (EVC 3, Vulnerable) (Attachment 1; Section 3.1).

Native vegetation has also colonised areas around the southern bund including Coast Tea-tree *Acacia sophorae*, Coast Beard-heath *Leucopogon parviflorus*, Large-leaf Bush-pea *Pultenaea daphnoides* and Drooping Sheoak *Allocasuarina verticillata*. It is considered that these species may have originated from revegetation works (Attachment 1; Section 3.3).

No threatened flora species are likely to occur on the OTRA site.

One species listed as endangered under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) was recorded at the OTRA site: Swamp Skink *Lissolepis coventryi*. Two species listed under the *Flora and Fauna Guarantee Act 1988* (FFG Act) were recorded at the OTRA site: Swamp Skink *Lissolepis coventryi* and Glossy Grass Skink *Pseudemoia rawlinsoni*. Suitable habitat for both species includes patches of Tall Marsh and immediately adjoining areas (Attachment 1; Section 3.3).

Targeted surveys for species listed under the EPBC Act were undertaken by Biosis Research in 2009 and 2011 and included surveys for the Orange-bellied Parrot *Neophema chrysogaster* and the Southern Brown Bandicoot *Isodon obesulus obesulus*. Neither species were recorded and both are considered unlikely to occur on the OTRA site (Attachment 1; Section 3.3).

Fauna species regularly recorded during the OTRA site assessment included Black Swan *Cygnus atratus*, Australian White Ibis *Threskiornis Molucca*, Pacific Black Duck *Anas superciliosa* and Australian Shell Duck *Tadorna tadornoides*. Amphibian species were also heard calling including Pobblebonk *Limnodynastes dumerilii*, Spotted Marsh Frog *Limnodynastes tasmaniensis* and Common Froglet *Crinia signifera* (Attachment 1; Section 3.1).

Migratory and Waterbirds

Nature Advisory (2023) completed a desktop review of biodiversity databases to ascertain the EPBC Act and FFG Act-listed migratory and waterbirds that may be impacted by the Project (Attachment 3). Nature Advisory identified 26 EPBC Act-listed species (of which 24 are listed as migratory and seven are listed as threatened) and eight FFG Act-listed species as potentially occurring in the Project Area.

Suitable habitat for wader birds includes the small marsh area in the south of the OTRA site (e.g. Australasian Bittern and Australian Painted Snipe) while the intertidal zone in the quayside area may provide suitable foraging habitat for migratory shorebirds (e.g. Bar-tailed Godwit, Common Greenshank and Curlew Sandpiper) (Attachment 3; *Waterbird and migratory bird likelihood of occurrence*).

There are important roosting and foraging areas for waterbirds, particularly migratory shorebirds in the vicinity of the study area. The closest roosting site is located south of the project area . (Attachment 3; *Waterbirds (EPBC Act listed threatened and migratory species)*).

Surveys for waterbirds and shorebirds are currently ongoing.

Marine Environment

CEE (2023) completed a desktop study of the marine environments in the vicinity of the project area (Attachment 2). The environment includes littoral seagrass bed, sublittoral seagrass beds and sublittoral coarse sediment.

There are no EPBC Act-listed marine species that are likely to occur within the vicinity of the Project Area. There are FFG Act-listed marine species that occur in the Project Area which may be impacted by the Project. These are the seagrass species *Zostera nigricaulis* and Western Port ghost shrimp *Calliax tooradin* (Attachment 2; Section 9.3).

Seagrass species typically found in Western Port and likely to be found in the Project Area include *Zostera muelleri* (found in muddy to sandy seabeds in lower intertidal areas), *Zostera nigricaulis* (subtidal areas to 5 m depth) and *Halophila australis* (similar to *Zostera nigricaulis* and to greater depths). *Zostera nigricaulis* is listed as threatened under the FFG Act (Attachment 2; Section 3).

Epifauna are species that grow on or are attached to the surface of the seabed. Species of epifauna that may be found in the Project Area include small red algae, small sponges, ascidians *Pyura stolonifera* and *Stolonica australis*, the small seapen *Sarcophyllum* sp., dwelling polychaetes, brachiopods *Magellania flavescens* and hydroids. The Project Area is also likely to support epifauna, infauna, plankton, phytoplankton, zooplankton, ichthyoplankton, marine mammals and fish species (Attachment 2; Section 5).

Fish species found in pelagic habitats would likely include small clupeoid species such as Australian Anchovy, Sandy Sprat and Australian Sardine, which form part of the food chain for larger fish and birds (Attachment 2; Section 7.1).

In seagrass habitat fish species likely to be found include Southern Longfin Goby *Favonigobius lateralis*, Bridled Goby *Arenigobius bifrenatus*, Common Weedfish *Heteroclinus perspicillatus*, and juvenilled King George Whiting, Australian Salmon and Yellow-eye Mullet (Attachment 2; Section 7.2).

On the unvegetated mud flats, Smooth Toadfish, King George Whiting, Greenback Flounder, Longsnout Flounder and Yelloweye Mullet are likely to be found (Attachment 2; Section 7.3).

Geology and Geochemistry

Ground conditions within the OTRA site are generally comprised of a variable thickness of fill, overlying a limited thickness of very soft to firm clay and very loose to loose sand, overlying more competent stiff clay and medium dense to very dense sand deposits (AECOM, 2009).

The tidal zone near the existing shoreline is comprised of very soft/very loose materials to depths of between 1.3m and 2.2m. Surface materials are typically comprised sands and clays, with layers of shells, sand and organic matter. Existing investigation information indicates very soft dark grey clayey silt materials overlying medium dense to very dense sand and clayey sand, interbedded with silt and clay layers (AECOM, 2009).

Within the potential dredging area, the seabed is generally comprised a surficial layer of very loose to loose sand/silty sand/clayey sand, overlying loose to dense silty sand/clayey sand and firm to hard sandy clay (AECOM, 2009).

Potential acid sulphate soils (PASS) were identified in the onshore and intertidal areas, and in the potential dredging area (AECOM, 2009).

Topography / Drainage

The proposed landside development area is a large open expanse with no discernible internal drainage systems. No topographical survey data are available at this stage of the Project, and as a result Google Earth levels were used to determine existing surface profile and grading. The following figures provide an

indication of typical land profiles for the OTRA site, noting that levels are shown as AHD (high point is approximately 6m AHD) (Arup, 2022).

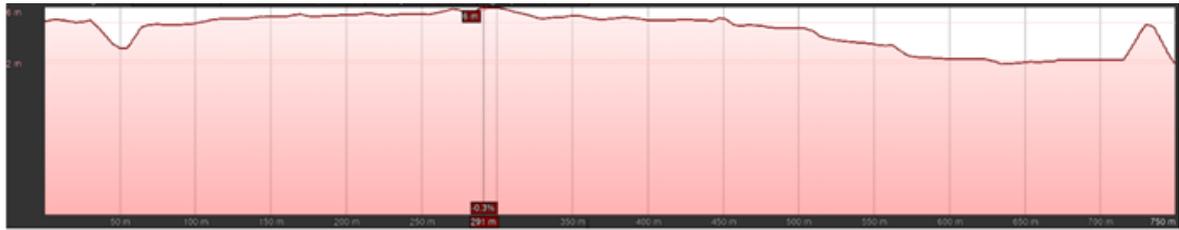


Figure 4 N-S Elevation (View to the East)

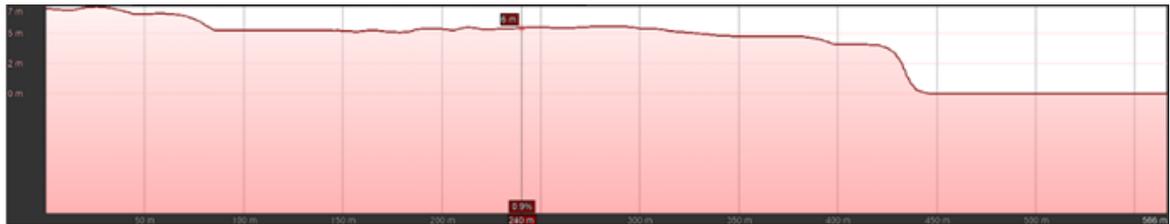


Figure 5 W-E Elevation (View to the North)

The above figures indicate that there is a ridge line across the existing OTRA site and that the northern third of the area grades towards the north. The figure also shows that there is an existing swale drain along the northern edge that conveys runoff from the OTRA site to an outfall into Western Port, located opposite the end of Bayview Road (Arup, 2022).

Site area (if known): Approximately 25 ha (OTRA site) + 17.5 ha (reclamation). Total area of 42.5 ha.

Route length (for linear infrastructure) (km) **and width** (m)

Current land use and development:

The OTRA site is regularly slashed and is not currently being utilised for any specific purpose. A concrete helicopter pad is located south of the centre of the site along the eastern boundary. This helipad is proposed to be removed as part of the development following consultation with the current helipad users.

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

The OTRA site is adjacent to the Esso Long Island Point Fractionation Plant and land held by BlueScope and Esso, see Figure 6. The BlueScope land is primarily used for the export of steel products through the BlueScope Steel Wharf. The Esso operation is primarily located within the eastern extent of the Esso land and is almost entirely screened from Long Island Drive by mature vegetation (Arup, 2022a). Several crude oil tanks are located along the western boundary of the site. A Development Licence and Planning Scheme Amendment to install power generation units to convert excess ethane into electricity has recently been approved on the Esso land to the west of the OTRA site (APP09563).



Figure 6 Land Ownership and Management

Refer to Section 2 for further information on the general location.

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

The following strategic planning documents are relevant to this project:

- *Delivering the Goods: Victorian Freight Plan* (Transport for Victoria, 2018)
- *Melbourne Industrial and Commercial Land Use Plan* (Department of Environment, Land, Water, Planning, 2020)
- *Mornington Peninsula Industrial Areas Strategy* (Essential Economics, 2018)
- *Mornington Peninsula Industrial Land Use & Infrastructure Assessment and Rezoning Strategy* (Hansen Partnership, 2020)
- *Navigating our Port Futures – The Victorian Commercial Ports Strategy* (Department of Transport, 2022)
- *Plan Melbourne* (Department of Environment, Land, Water, Planning, 2017)
- *Port Development Strategy* (Port of Hastings Corporation, 2018)

The OTRA site is located within the Port Zone (PZ) of the Mornington Peninsula Planning Scheme, see Figure 7. The purpose of the PZ is to:

- *To recognise the significant transport, logistics and prime maritime gateway roles of Victoria's commercial trading ports in supporting Victoria's economy.*

- To provide for shipping, road and railway access and the development of each of Victoria's commercial trading ports as key areas of the State for the interchange, storage and distribution of goods.
- To provide for uses which derive direct benefit from co-establishing with a commercial trading port.
- To provide for the ongoing use and development of Victoria's commercial trading ports that support the relevant port development strategy prepared pursuant to the Port Management Act 1995.

Planning Scheme Amendment (PSA) C284morn was prepared to facilitate the rezoning of the OTRA land from Public Use Zone – Schedule 7 (PUZ7) to the Port Zone (PZ). It was gazetted on 30 March 2023.

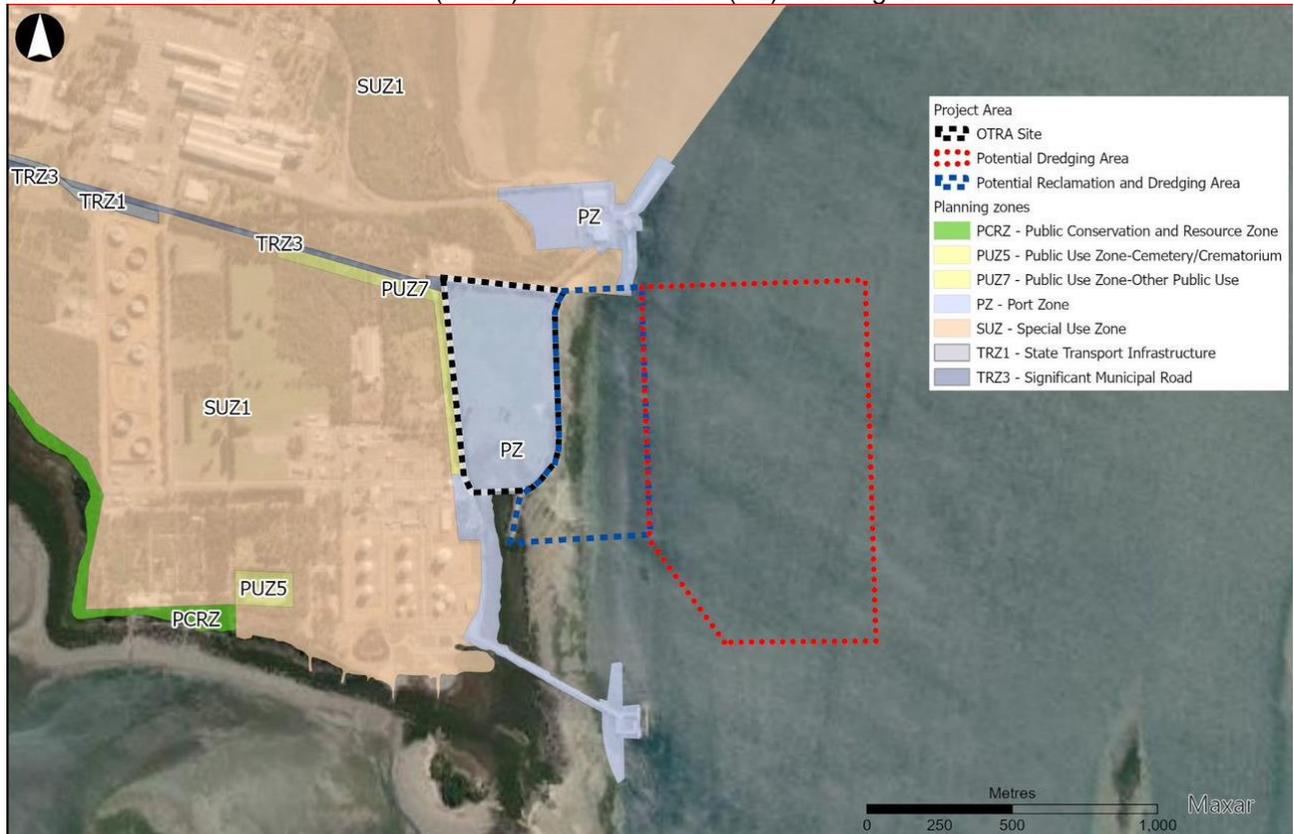


Figure 7 Existing Zone Plan for the OTRA Site and Surrounds

The OTRA site is affected by two overlays, a Land Subject to Inundation Overlay (LSIO) and a Bushfire Management Overlay (BMO), see Figure 8.

The purpose of the LSIO is to:

- Implement the Municipal Planning Strategy and the Planning Policy Framework.
- Identify flood prone land in a riverine or coastal area affected by the 1 in 100 (1 per cent Annual Exceedance Probability) year flood or any other area determined by the floodplain management authority.
- Ensure that development maintains the free passage and temporary storage of floodwaters, minimises flood damage, responds to the flood hazard and local drainage conditions and will not cause any significant rise in flood level or flow velocity.
- Minimise the potential flood risk to life, health and safety associated with development.
- Reflect a declaration under Division 4 of Part 10 of the *Water Act 1989*.
- Protect water quality and waterways as natural resources by managing urban stormwater, protecting water supply catchment areas, and managing saline discharges to minimise the risks to the environmental quality of water and groundwater.
- Ensure that development maintains or improves river, marine, coastal and wetland health, waterway protection and floodplain health.'

The LSIO applies to slivers of land on the northern, eastern and southern boundaries of the OTRA site, and measures approximately 125m in width at its widest point in the north-eastern corner.

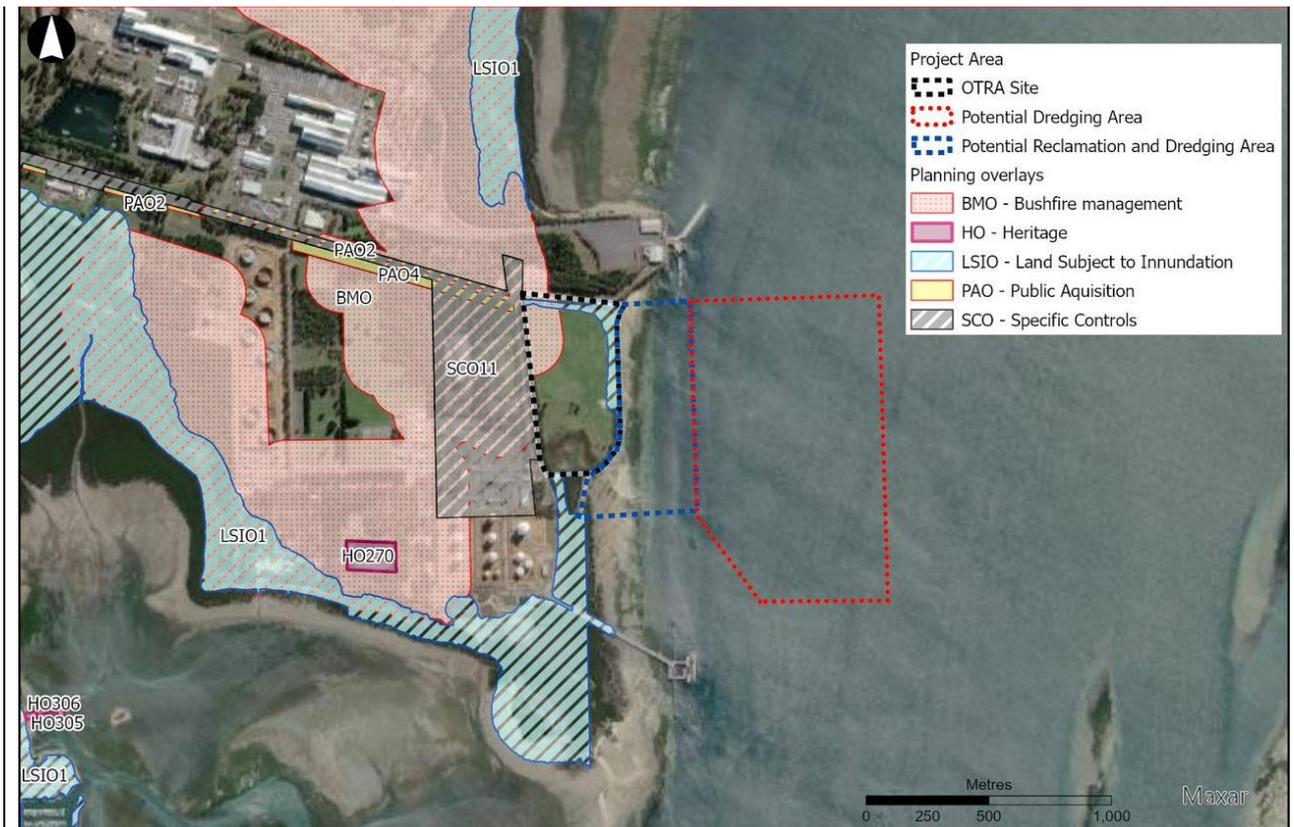


Figure 8: Existing Overlay Plan for the OTRA Site and Surrounds

Pursuant to Clause 44.04-2 (Buildings and works), a planning permit is required to construct a building or to construct or carry out works on land affected by the LSI01. A planning permit is also required under Clause 44.04-3 (Subdivision) to subdivide land.

The BMO applies to a portion of land in the north-western corner of the OTRA site and extends further north and west of the Site. The purpose of the BMO is to:

- Implement the Municipal Planning Strategy and the Planning Policy Framework.
- Ensure that the development of land prioritises the protection of human life and strengthens community resilience to bushfire.
- Identify areas where the bushfire hazard warrants bushfire protection measures to be implemented.
- Ensure development is only permitted where the risk to life and property from bushfire can be reduced to an acceptable level.

The BMO applies both north and south of Bayview Road, and extends beyond the northern, southern and eastern boundaries of the Site.

Pursuant to Clause 44.06-2 (Permit requirement), a planning permit is required to construct a building or to construct or carry out works associated with land uses related to a range of activities within the BMO. These include the use of land for industry and warehouse. A planning permit is also required to subdivide land under this Clause.

Application requirements (Clause 44.06-3) under the BMO specify that an application must be accompanied by a bushfire hazard site assessment, a bushfire hazard landscape assessment, and a bushfire management statement. Any application under the BMO must also meet the requirements of Clause 53.02 (Bushfire Planning) to ensure development in bushfire prone areas does not create risks to life.

Local government area(s):

The Old Tyabb Reclamation Area is in the municipality of Mornington Peninsula Shire.

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):

The Project Area is shown in Figure 3 – it consists of the OTRA site, the potential reclamation area and the potential dredging area.

The key environmental values to be considered as the Project develops are as follows:

- The Project Area is situated within a Ramsar Wetland and is considered a key habitat for migratory birds.
- Western Port is comprised of key habitats such as seagrass beds and intertidal mudflats that support nationally and state listed species.
- EPBC and FFG listed species have been identified within the Project Area.
- EPBC and FFG listed species have been identified as having the potential to occur within the Project Area and its surrounding habitats.
- As the OTRA site is entirely reclaimed land it is anticipated that there will little to no artefacts of Aboriginal or historical values on the OTRA site.

Below is a summary of the key environmental considerations for the Project;

- **Cultural heritage:** The OTRA site is entirely reclaimed land and as a result there has been substantial modification to the natural ground surfaces through extensive groundworks and the importation of fill deposits (ALA, 2009). In 2009, a programme of archaeological monitoring was formally carried out within the OTRA site. No Aboriginal or non-Aboriginal archaeological cultural heritage was identified during the monitoring of geotechnical testing. Stratigraphy across the activity area reflected the process of land reclamation through deposition of fill (ALA, 2009). As of 2021, there were no existing heritage listings on the OTRA site, however, the OTRA site is within an area of Aboriginal Cultural Heritage Sensitivity, as is the area intended for reclamation (ALA, 2021). There is also the potential for the project to impact on submerged cultural heritage (yet to be identified) and intangible cultural heritage values (both on and offshore) in the vicinity of the project area.
- **Geology and Geochemistry:** Potential acid sulphate soils (PASS) were identified in the onshore and intertidal areas and in the potential dredging area. The presence of PASS in the dredging area may have an impact on management of any reclaimed material. The presence of PASS in land-based and inter-tidal samples may also necessitate specific management measures even if this material remains in-situ (AECOM, 2009).
- **Marine Ecology:** The marine ecosystem of Western Port is considered both rich and diverse. The Mornington Peninsula, Frankston, Bass Coast, Casey and Cardinia Shires and Western Port all sit within a UNESCO biosphere reserve. Western Port is a Ramsar listed wetland and contains a variety of marine habitats and biological assemblages which are shaped by unusual combinations of physico-chemical factors. There are 41 protected marine species (excluding birds) that may occur within the vicinity of the Project (12 EPBC listed, 34 FFG listed) (Attachment 2; Section 9.3). However, the Project Area and its surrounds are not considered to be an important area for any of the identified EPBC listed species. The current Project Area intersects with known patches of FFG listed seagrass *Zostera nigricaulis* and shallow subtidal sand habitat that is potentially suitable habitat for the FFG listed Western Port ghost shrimp (Attachment 2; Section 3).
- **Terrestrial Ecology:** The entirety of the OTRA site is reclaimed land. As a result of dredging in the 1970s, the majority of the site is considered to be open-space, dominated by common pasture grasses. One species listed as endangered under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) was recorded at the OTRA site: Swamp Skink *Lissolepis coventryi*. Two species listed under the *Flora and Fauna Guarantee Act 1988* (FFG Act) were recorded at the OTRA site: Swamp Skink *Lissolepis coventryi* and Glossy Grass Skink *Pseudemoia rawlinsoni*. No threatened flora species are likely to occur on the OTRA site. The native vegetation on site are not FFG Act listed threatened communities, however 15 protected flora species were identified within the patches of Tall Marsh (Attachment 1; Section 4.2.1).

- **Migratory Birds and Waterbirds:** Waterbird species are considered a significant element of the Western Port Ramsar Site's ecological character. Thirty-four EPBC/FFG listed waterbird and migratory bird species are considered to have the potential to occur within the Project Area and its immediate surrounds. Of the 34 listed species 26 EPBC Act listed migratory waterbird and non-migratory waterbird species and eight FFG Act listed species have been identified as likely to occur within the Project Area and its immediate surrounds (Attachment 3; *Waterbirds (EPBC Act listed threatened and migratory species)*).

9. Land availability and control

Is the proposal on, or partly on, Crown land? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes If yes, please provide details.
Current land tenure (provide plan, if practicable): The OTRA site is identified as Crown Allotment 76L Parish of Tyabb. Pursuant to section 14(2) and 14(3) of the <i>Crown Land (Reserves) Act 1978</i> . The Port of Hastings Corporation has been appointed as the Committee of Management and the land is considered Crown land reservation for port purposes. The seabed is currently unreserved crown land within declared port waters of the Port of Hastings.
Intended land tenure (tenure over or access to project land): It is PoHC's intention that the new reclamation area becomes Crown land reserved for port purposes. This will reflect the OTRA site ownership and management arrangements. This will be further discussed and agreed with the Department of Energy, Environment and Climate Action, Crown Land Management and the Department of Transport and Planning.
Other interests in affected land (eg. easements, native title claims): N/A

10. Required approvals

State and Commonwealth approvals required for project components (if known): Commonwealth Approvals The Port of Hastings Corporation will lodge an EPBC referral primarily based on a potential impact on a Wetland of international importance. Additionally, a Protected Matters Search identified the following Matters of National Environmental Significance requiring consideration: <ul style="list-style-type: none">• Migratory species (59; Birds – 50, Mammals – 4, Reptile – 3, Sharks – 2)• Threatened ecological communities (2)• Threatened species (62; Birds – 36, Fish -5, Frogs – 1, Mammals – 7, Plants – 9, Reptiles -3, Sharks – 1)• Listed marine species (68; Birds – 63, Mammals – 2, Reptile – 3)• Whales and other cetaceans (7; Dolphins – 4, Whales – 3) State Approvals The assessments / key approvals likely to be required under Victorian legislation include: <ul style="list-style-type: none">• Environmental assessment under the <i>Environment Effects Act 1978</i> (EE Act)• Planning approvals under the <i>Planning and Environment Act 1987</i> (P&E Act)• Cultural Heritage Management Plan (CHMP) under the <i>Aboriginal Heritage Act 2006</i>.• Consent under the <i>Marine and Coastal Act 2018</i>.• FFG Permit under the <i>Flora and Fauna Guarantee Act 1988</i> (FFG Act). Have any applications for approval been lodged? No If yes, please provide details. Approval agency consultation (agencies with whom the proposal has been discussed): Mornington Peninsula Shire Council, Bunurong Land Council, DEECA, Department of Transport and Planning. Other agencies consulted: Ports Victoria

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):

A summary of the likely key environmental effects associated with the development of the Project are presented below:

Western Port Ramsar Site:

Although the Project Area is relatively small and the OTRA site is highly disturbed the impact to the ecological character of the Western Port Ramsar site needs to be taken into consideration. Primary and secondary effects on marine ecosystems and migratory birds (as discussed below) need to be considered, such as removal of FFG listed species and their potential habitat, increased suspended sediments in the water column during construction, and the introduction of pest species during operation all pose a risk to the overall character of the Western Port Ramsar site. Assessment of the potential for significant impact will need to be undertaken and subsequent management and mitigation measures identified to minimise the risk to the Ramsar site.

Marine Ecosystem:

Construction activities associated with reclamation, development of the quayside area, the dredging program and the operation of the port have the potential to significantly affect the marine ecosystem of Western Port. The key impacts are the removal of seagrass, in particular the FFG listed *Zostera nigricaulis*, the removal of potentially suitable habitat for the FFG listed Western Port ghost shrimp *Callinectes tooradin*, the potential for an increase in suspended sediments within the water column during construction and increased marine traffic during construction and operation (Attachment 2; Section 9.3).

The increase in suspended sediments due to construction activities could potentially impact both marine species and habitats because of direct sediment deposition, reduced visibility in the water column which may inhibit the ability of visual predators (birds and fish) to locate their prey or impacts to light attenuation further impacting seagrass beds within the vicinity of the Project. Suspended solids may also directly obstruct or damage filter feeding organs and gills of a range of invertebrates (epifauna, infauna and plankton) and fish. The effects depend on the sensitivity of the biota and the exposure (duration, frequency and concentration) of the biota to suspended solids. Early-stage modelling has indicated that sediment will be deposited up to 8km from the site, however this will likely be subject to change as the dredging methodology is still under investigation.

An increase in marine traffic may have a localised impact due to increased noise, chance collisions with marine species and the potential for oil spills, however the more significant risk is the primary introduction and secondary dispersal of non-indigenous species to a Ramsar site. Shipping and other maritime vessel traffic are one of the most significant vectors for both the primary introduction and secondary dispersal of non-indigenous species. Ports, or the waters in the vicinity of ports, are therefore often considered “hot spots” for non-indigenous marine species. Once a pest becomes established in one port, this port can then become a source for secondary dispersal to nearby environments by natural means or to other domestic ports, marinas, or harbours by maritime traffic. Although introduction of pests is a key concern for the development of ports, the processes involved in the development can be managed to keep risks of marine pest introduction to a negligible increase in risk to the Western Port marine ecosystem.

Impacts from noise produced by piling activities are likely to be localised. Large fish, marine mammals and birds are likely to avoid the area during construction but are likely to return within a short period (hours) of its completion. It is unlikely that any marine populations will be significantly affected by underwater noise from construction or operation of the Port. However, further investigation is required to confirm this assessment.

Migratory Birds and Waterbirds:

Due to the highly disturbed nature of the OTRA site indirect impacts from the Project (i.e., habitat loss) are likely to be insignificant due to the large amount of similar habitat available in the wider region. However, there are potentially significant secondary impacts associated with the construction and operation of the Project.

A total of 26 EPBC Act listed migratory waterbirds are likely to occur within the vicinity of the Project. There are important roosting and foraging areas for waterbirds, particularly migratory shorebirds, in the vicinity of the OTRA site (Figure 8). A number of these sites may be susceptible to construction activities, noise, and offset artificial lighting associated with port operations. Potential impacts to sites and appropriate mitigation need to be assessed. (Attachment 3; *Waterbirds (EPBC Act listed threatened and migratory species)*).

Another key potential impact to migratory birds from construction activities is the impact of sediment deposition within Western Port. Early-stage modelling results suggest that sediment may be deposited up to 8km from the site and deposited on important shorebird feeding areas to the north, south and south-west of the Project. The level of sediment deposition will need to be assessed including whether different dredging methods will have a different result and what impact this deposition will have on the quality of the foraging habitat or the foraging efficiency of birds. Further study will be required to quantify both.

Indirect impacts such as noise and artificial lighting could also impact nesting, resting and feeding of threatened non-migratory species near the OTRA site. If appropriate mitigation measures are used during construction and in designing the lighting of the facility, significant indirect impacts can be mitigated.

Terrestrial Ecology:

One species listed as endangered under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) was recorded at the OTRA site: Swamp Skink *Lissolepis coventryi*. Two species listed under the *Flora and Fauna Guarantee Act 1988* (FFG Act) were recorded at the OTRA site: Swamp Skink *Lissolepis coventryi* and Glossy Grass Skink *Pseudemoia rawlinsoni*. Suitable habitat for both species includes patches of Tall Marsh and immediately adjoining areas (Attachment 1; Section 3.3).

As a result of the Project, known habitat for the EPBC Act listed and FFG listed species may be removed. Due to the low quality of habitat and the relatively small extent to be removed, it is not likely that the Project will have a significant impact on the species population throughout Victoria.

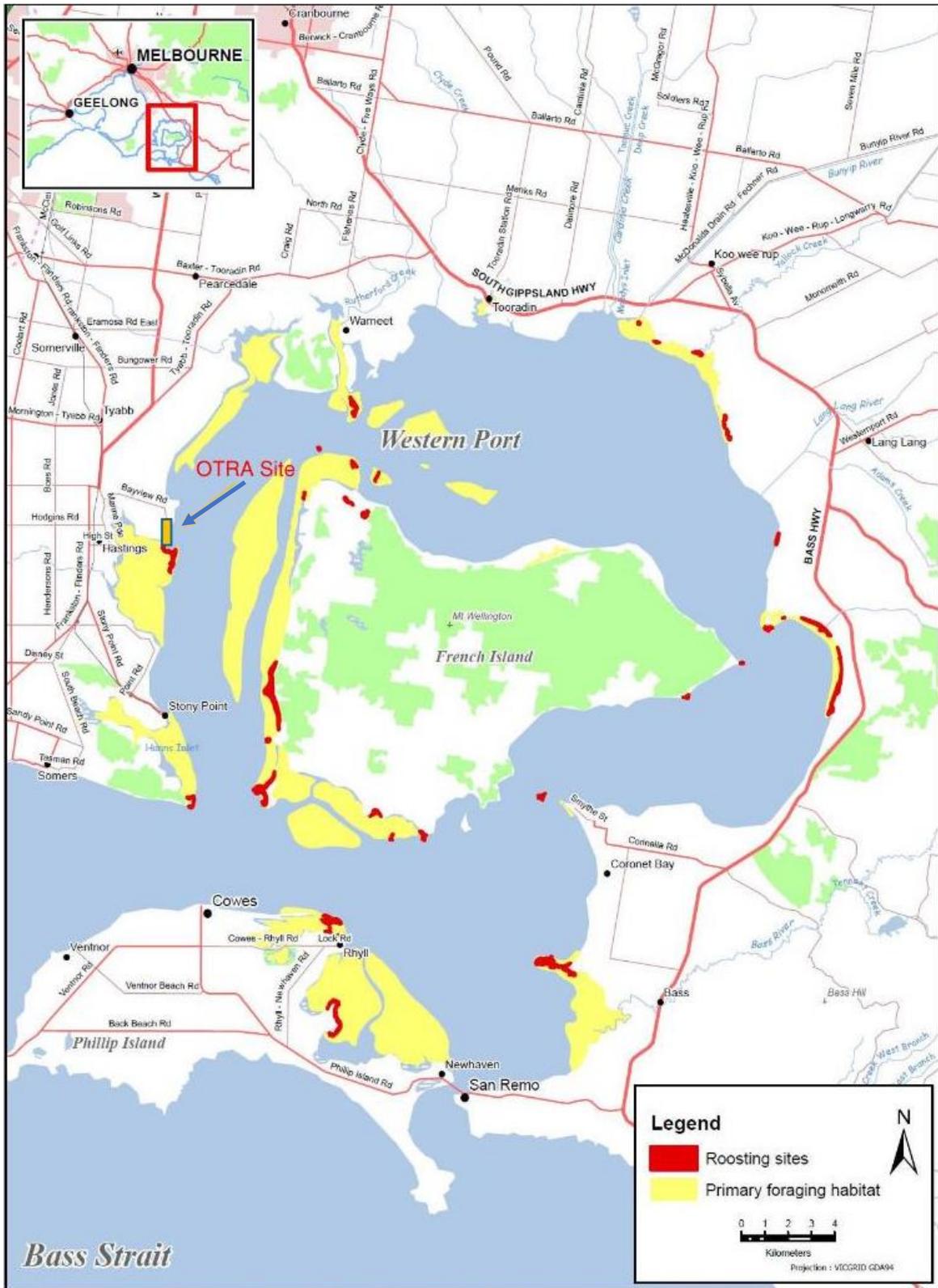


Figure 8 The location of shorebird roosting sites and foraging sites within Western Port (Nature Advisory, 2022)

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.

The entirety of the OTRA site is likely to be cleared. There is approximately 3.9 ha of native vegetation on the OTRA site. The following Ecological Vegetation Classes EVCs were identified on site:

- Three patches of Damp Sands Herb-rich Woodland (GipP0003)
- Two patches of Tall Marsh (GipP0821)

See Figure 9 for the native vegetation identified on site.

As the areas of anticipated seagrass removal are outside of the Mornington Planning Scheme, seagrass removal will likely not be classified as the removal of native vegetation under the planning scheme.

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

The following investigations have been undertaken to identify potential native vegetation values on the OTRA site:

- Victorian Clean Energy Terminal: Ecology Assessment (Biosis, 2023; Attachment 1)

As part of this assessment Biosis conducted a flora assessment on the 29 September 2022. A Vegetation Quality Assessment (VQA) was undertaken for all patches of native vegetation identified in the OTRA site. This assessment is consistent with DEECA's habitat hectare method (DSE 2004) and the Guidelines (DELWP 2017a).

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

NYD Estimated area3.9.....(hectares)

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.

As part of the 2023 Ecology Assessment conducted by Biosis (Attachment 1), two different Ecological Vegetation Classes (EVCs) were identified. Three separate areas of Damp Sands Herb-Rich Woodland and two separate areas of Tall Marsh were identified on site. None of these patches are considered threatened ecological communities.

Have potential vegetation offsets been identified as yet?

NYD Yes If yes, please briefly describe.

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

NYD = not yet determined



Figure 9 Ecological features of the OTRA Site (Biosis, 2023)

Note: The labels for each EVC are used for identifying the specific patch within the Biosis report and are not relevant to this referral

Flora and fauna

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)

The following investigations have been undertaken to identify potential threatened flora and fauna likely to occur on the OTRA site:

- Victorian Clean Energy Terminal: Ecological Assessment (Biosis, 2023; Attachment 1)
- Port Facility Feasibility North Arm Western Port Marine Ecosystem Existing Conditions (CEE, 2023; Attachment 2)
- Waterbird Assessment Desktop Report (Nature Advisory, 2023; Attachment 3)

The above documents have all been attached to support this referral and the detailed methodologies undertaken for each study are outlined in their respective reports. The following sections are informed by these reports.

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.

One species listed as endangered under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) was recorded at the OTRA site: Swamp Skink *Lissolepis coventryi*. There were no further migratory or threatened species listed under the EPBC Act identified within the Project Area or in its immediate surrounds. The following fauna and seagrass species listed under the FFG Act were identified as occurring within the Project Area (Attachment A):

- Glossy Grass Skink *Pseudemoia rawlinsoni* (Endangered)
- Swamp Skink *Lissolepis coventryi* (Endangered)
- Australian Grass-wrack *Zostera nigricaulis* (Endangered)

The Project Area is considered public land for the purposes of the FFG Act. Therefore, the following species identified on site are considered Protected under the FFG Act (Attachment 1; Section 3.3):

- Black Wattle *Acacia Mearnsii*
- Narrow-leaf Wattle *Acacia mucronata subsp. Longifolia*
- Golden Wattle *Acacia pycnantha*
- Hop Wattle *Acacia stricta*
- Common Cotula *Cotula australis*
- Rough Tree-fern *Cyathea australis*
- Common Heath *Epacris impressa*
- Creeping Cudweed *Euchiton japonicus s.s.*
- Tiny Cudweed *Gnaphalium indutum*
- Coast Beard-heath *Leucopogon parviflorus*
- Onion Orchid *Microtis spp.*
- Tree Everlasting *Ozothamnus ferrugineus*
- Annual Fireweed *Senecio glomeratus*
- Groundsel *Senecio spp.*
- Cranberry Heath *Styphelia humifusa*
- Sun Orchid *Thelymitra spp.*
- Small Grass-tree *Xanthorrhoea minor subsp. Lutea*
- Sallow Wattle *Acacia longifolia subsp. Longifolia*
- Spotted Gum *Corymbia maculata*

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.

The key impact on the FFG Act listed species and those protected under the FFG Act will be removal of native vegetation, specifically the Tall Marsh patches, on the OTRA site and the removal of seagrass because of the proposed dredging program and land reclamation.

The following processes listed under the FFG Act are applicable to the Project:

- The introduction of exotic organisms into Victorian marine waters
- Wetland loss
- Degradation as a result of change in water regime, dredging, draining, filling and grazing)

The following processes listed under the EPBC Act are applicable to the Project:

- Novel biota and their impact on biodiversity
- Land clearance

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 following migratory and threatened species listed under the EPBC Act have been identified as having the potential to occur on site or in the surrounding habitats:

- Australasian Bittern *Botaurus poiciloptilus* (Endangered)
- Australian Gull-billed Tern *Gelochelidon macrotars* (Migratory)
- Bar-tailed Godwit *Limosa lapponica* (Vulnerable & Migratory)
- Black-tailed Godwit *Limosa limosa* (Migratory)
- Caspian Tern *Hydroprogne caspia* (Migratory)
- Common Greenshank *Tringa nebularia* (Migratory)
- Common Sandpiper *Actitis hypoleucos* (Migratory)
- Crested Tern *Thalasseus bergii* (Migratory)
- Curlew Sandpiper *Calidris ferruginea* (Critically Endangered & Migratory)
- Double-banded Plover *Charadrius bicinctus* (Migratory)
- Eastern Curlew *Numenius madagascariensis* (Critically Endangered & Migratory)
- Fairy Tern *Sternula nereis* (Vulnerable)
- Far Eastern Curlew *Numenius madagascariensis* (Migratory)
- Great Knot *Calidris tenuirostris* (Critically Endangered & Migratory)
- Grey Plover *Pluvialis squatarola* (Migratory)
- Grey-tailed Tattler *Tringa brevipes* (Migratory)
- Latham's Snipe *Gallinago hardwickii* (Migratory)
- Lesser Sand Plover *Charadrius mongolus* (Endangered & Migratory)
- Little Tern *Sternula albifrons* (Migratory)
- Pacific Golden Plover *Pluvialis fulva* (Migratory)
- Red Knot *Calidris canutus* (Endangered & Migratory)
- Red-necked Stint *Calidris ruficollis* (Migratory)
- Ruddy Turnstone *Arenaria interpres* (Migratory)
- Sharp-tailed Sandpiper *Calidris acuminata* (Migratory)
- Short-tailed Shearwater *Ardenna tenuirostris* (Migratory)
- Terek Sandpiper *Xenus cinereus* (Migratory)
- Whimbrel *Numenius phaeopus* (Migratory)

The following species listed under the FFG Act have been identified as having the potential to occur on site or in the surrounding habitats:

- Australian Shoveler *Spatula rhynchotis* (Vulnerable)
- Blue-billed Duck *Oxyura australis* (Vulnerable)
- Eastern Great Egret *Ardea alba modesta* (Vulnerable)
- Hardhead *Aythya australis* (Vulnerable)
- Lewin's Rail *Lewinia pectoralis* (Vulnerable)
- Musk Duck *Biziura lobata* (Vulnerable)
- Plumed Egret *Ardea intermedia plumifera* (Critically Endangered)
- White-bellied Sea-Eagle *Haliaeetus leucogaster* (Endangered)

Additional threatened and migratory species have been identified as having the potential but are not considered likely to occur within the Project Area and its surrounding habitats, within the supporting document. These species can be viewed in Attachments 1 to 3.

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

NYD No Yes If yes, please briefly describe.

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

13. Water environments

<p>Will the project require significant volumes of fresh water (eg. > 1 GI/yr)? <input type="checkbox"/> NYD <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes If yes, indicate approximate volume and likely source.</p>
<p>Will the project discharge waste water or runoff to water environments? <input type="checkbox"/> NYD <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes If yes, specify types of discharges and which environments.</p>
<p>Are any waterways, wetlands, estuaries or marine environments likely to be affected? <input type="checkbox"/> NYD <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes If yes, specify which water environments, answer the following questions and attach any relevant details.</p> <p>Part of the Project Area is located within Western Port, a Ramsar listed Wetland. Specifically, the North Arm of Western Port will likely be affected by the development of the Project.</p>
<p>Are any of these water environments likely to support threatened or migratory species? <input type="checkbox"/> NYD <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes If yes, specify which water environments.</p> <p>There are 41 protected marine species (excluding birds) that may occur within the vicinity of the Project (12 EPBC listed, 34 FFG listed). However, the Project Area and its surrounds are not considered to be an important area for any of the identified EPBC listed species. The current Project Area intersects with known patches of FFG listed seagrass <i>Zostera nigricaulis</i> and shallow subtidal sand habitat that is potentially suitable habitat for the FFG listed Western Port ghost shrimp.</p> <p>A further 34 threatened waterbird and migratory bird species have been identified as having the potential to occur within the Project Area and its immediate surrounds. Of the 34 listed species 26 EPBC Act listed migratory waterbird and non-migratory waterbird species and eight FFG Act listed species have been identified as likely to occur within the Project Area and its immediate surrounds.</p>
<p>Are any potentially affected wetlands listed under the Ramsar Convention or in 'A Directory of Important Wetlands in Australia'? <input type="checkbox"/> NYD <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes If yes, please specify.</p> <p>As above part of the Project Area is located within Western Port, a Ramsar listed Wetland.</p>
<p>Could the project affect streamflows? NYD <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes If yes, briefly describe implications for streamflows.</p>
<p>Could regional groundwater resources be affected by the project? <input type="checkbox"/> NYD <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes If yes, describe in what way.</p>
<p>Could environmental values (beneficial uses) of water environments be affected? <input type="checkbox"/> NYD <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes If yes, identify waterways/water bodies and beneficial uses (as recognised by State Environment Protection Policies)</p>
<p>Could aquatic, estuarine or marine ecosystems be affected by the project? <input type="checkbox"/> NYD <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes If yes, describe in what way.</p> <p>There is potential for localised impacts to surface water quality during construction such as surface run off, potential for spills and potential for dewatering during construction.</p> <p>Dredging activities will directly impact seagrass beds within the dredging area. Increased sedimentation because of construction activities could also have an effect on both marine species and habitats (because of direct sediment deposition or impacts to light attenuation, etc). Additionally, underwater noise because of piling activities may potentially impact cetaceans and local fish populations. Increased marine traffic within the area may also increase the likely of oil spills and the introduction of pest species.</p>

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.

The potential long-term impacts as a result of the Project are largely associated with its operational activities. The operation of the Terminal will increase localised marine traffic and the associated risk of oil spills, increased likelihood of collision with significant marine species within the Western Port Ramsar Site. Ports are also considered high risk for the introduction and dispersion of marine pest species.

Is mitigation of potential effects on water environments proposed?

NYD No Yes If yes, please briefly describe.

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

14. Landscape and soils

Landscape

<p>Has a preliminary landscape assessment been prepared? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes If yes, please attach.</p>
<p>Is the project to be located either within or near an area that is:</p> <ul style="list-style-type: none"> • Subject to a Landscape Significance Overlay or Environmental Significance Overlay? <input type="checkbox"/> NYD <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes If yes, provide plan showing footprint relative to overlay. • Identified as of regional or State significance in a reputable study of landscape values? <input type="checkbox"/> NYD <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes If yes, please specify. • Within or adjoining land reserved under the <i>National Parks Act 1975</i> ? <input type="checkbox"/> NYD <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes If yes, please specify. • Within or adjoining other public land used for conservation or recreational purposes ? <input type="checkbox"/> NYD <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes If yes, please specify. <p>The Project is located within the identified Western Port Ramsar site. The Ramsar site has long been recognised for its diversity of native flora and fauna, particularly for its ability to support diverse assemblages of waterbirds and wetland vegetation, including seagrass, saltmarsh and mangroves.</p>
<p>Is any clearing vegetation or alteration of landforms likely to affect landscape values? <input type="checkbox"/> NYD <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes If yes, please briefly describe.</p>
<p>Is there a potential for effects on landscape values of regional or State importance? <input type="checkbox"/> NYD <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes Please briefly explain response.</p> <p>The turbine towers assembled at the Terminal will depend on technology available and design chosen by the offshore wind farm proponent. It is estimated turbine tower height may be between 150 to 200 metres tall and approximately 11 metre wide at the base. Turbine towers will be stored at the port, then transferred onto ships and transported vertical for installation offshore. The cranes at the port which will be approximately 10% taller than the turbine towers . Given the height of towers and cranes, they will impact on landscape values, although none of these structures will be permanent or fixed in nature.</p>
<p>Is mitigation of potential landscape effects proposed? <input checked="" type="checkbox"/> NYD <input type="checkbox"/> No <input type="checkbox"/> Yes If yes, please briefly describe.</p>
<p>Other information/comments? (eg. accuracy of information) The OTRA site is located in an industrial area and is approximately 765m from the nearest residence. However, a visual impact assessment will likely be required to assess the visual impact of the Terminal from Western Port and surrounding landscapes.</p>

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.

Potential acid sulphate soils (PASS) have been identified in the onshore and intertidal areas, and in the potential dredging area. The presence of PASS in the dredging area may have an impact on management of any reclaimed material. The presence of PASS in land-based and inter-tidal samples may also necessitate specific management measures even if this material remains in-situ.

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

NYD No Yes If yes, please briefly describe.

The following risks have been identified in association with the soil profile at the site. The risks may impact service life and constructability of the structure.

- There is the potential for differential settlement between piled structures and earthworks. The magnitude of potential settlement across the site is not yet known. More detailed assessment must be undertaken to inform the predicted magnitude of settlement, and potential ground improvements to mitigate against this.
- Ground improvement such as rolling surcharge, dynamic compaction, or other methodologies may be necessary to prepare the site for construction.
- Cemented bands between 50-200mm thick were identified within the Project Area. The cemented bands may impact pile driveability.

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

15. Social environments

<p>Is the project likely to generate significant volumes of road traffic, during construction or operation? <input checked="" type="checkbox"/> NYD <input type="checkbox"/> No <input type="checkbox"/> Yes If yes, provide estimate of traffic volume(s) if practicable.</p>
<p>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? <input type="checkbox"/> NYD <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes If yes, briefly describe the nature of the changes in amenity conditions and the possible areas affected.</p> <p>The closest residences are directly next to the Esso Long Island Point Fractionation Plant in the Cemetery Estate and are approximately 765 m from the OTRA site.</p> <p>The amenity impact of the development during construction and operation will need to be assessed including potential visual and noise impacts.</p> <p>There may be an impact to road users/traffic flow during construction due to the increased workforce and construction equipment movement. The level of impact this will have on the surrounding community is yet to be assessed.</p>
<p>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? <input type="checkbox"/> NYD <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes If yes, briefly describe the hazards and possible implications.</p>
<p>Is there a potential for displacement of residences or severance of residential access to community resources due to the proposed development? <input type="checkbox"/> NYD <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes If yes, briefly describe potential effects.</p>
<p>Are non-residential land use activities likely to be displaced as a result of the project? <input type="checkbox"/> NYD <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes If yes, briefly describe the likely effects.</p>
<p>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? <input type="checkbox"/> NYD <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes If yes, briefly describe the potential effects.</p> <p>Potential social issues would primarily occur during major construction works. These include:</p> <ul style="list-style-type: none"> • Residential inconvenience from construction noise and vibration. • Potential traffic impacts during construction and operations. • Visual amenity and landscape character during construction and operation .
<p>Is mitigation of potential social effects proposed? <input checked="" type="checkbox"/> NYD <input type="checkbox"/> No <input type="checkbox"/> Yes If yes, please briefly describe.</p>
<p>Other information/comments? (eg. accuracy of information)</p>

Cultural heritage

<p>Have relevant Indigenous organisations been consulted on the occurrence of Aboriginal cultural heritage within the project area? <input type="checkbox"/> No If no, list any organisations that it is proposed to consult. <input checked="" type="checkbox"/> Yes If yes, list the organisations so far consulted.</p> <p>The POHC has had preliminary discussions with the Registered Aboriginal Party the Bunurong Land Council Aboriginal Corporation (BLCAC).</p>
<p>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)</p>

Cultural Heritage Assessments of the OTRA site were undertaken in 2016 and in 2021 by Andrew Long and Associates. Both of the investigations involved a desktop assessment and site visit. This involved:

- Review of the following register sources:
 - Register of the National Estate - No listings
 - Victorian Aboriginal Heritage Inventory System (VAHR) – No listings
 - Victorian Aboriginal Places Register – No listings
 - Commonwealth Heritage List – No listings
 - National Heritage List – No listings
 - National Trust of Australia (Victoria) – No listings
- Review of prior assessments relevant to the site.
- Characterisation of historical land use.
- Recommendations of necessary approvals to develop on the site.

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

In 2009, a programme of archaeological monitoring was formally carried out within the Project Area. No Aboriginal archaeological cultural heritage was identified during the monitoring of geotechnical testing. Stratigraphy across the activity area reflected the process of land reclamation through deposition of fill.

As of 2021, there were no existing heritage listings on the OTRA site, however, due to the location of the site within a declared Ramsar site, the Project is within an area of Cultural Heritage Sensitivity.

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.

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

16. Energy, wastes & greenhouse gas emissions

<p>What are the main sources of energy that the project facility would consume/generate?</p> <ul style="list-style-type: none"><input checked="" type="checkbox"/> Electricity network. If possible, estimate power requirement/output<input checked="" type="checkbox"/> Natural gas network. If possible, estimate gas requirement/output<input checked="" type="checkbox"/> Generated on-site. If possible, estimate power capacity/output<input checked="" type="checkbox"/> Other. Please describe. <p>Please add any relevant additional information.</p>
<p>What are the main forms of waste that would be generated by the project facility?</p> <ul style="list-style-type: none"><input checked="" type="checkbox"/> Wastewater. Wastewater will be generated during construction of the facility.<input checked="" type="checkbox"/> Solid chemical wastes. Describe briefly.<input checked="" type="checkbox"/> Excavated material. Excavated material will be generated during establishment of foundations, hard stand and dredging activities.<input checked="" type="checkbox"/> Other. Describe briefly. <p>Please provide relevant further information, including proposed management of wastes.</p>
<p>What level of greenhouse gas emissions is expected to result directly from operation of the project facility?</p> <ul style="list-style-type: none"><input checked="" type="checkbox"/> Less than 50,000 tonnes of CO₂ equivalent per annum<input checked="" type="checkbox"/> Between 50,000 and 100,000 tonnes of CO₂ equivalent per annum<input checked="" type="checkbox"/> Between 100,000 and 200,000 tonnes of CO₂ equivalent per annum<input checked="" type="checkbox"/> More than 200,000 tonnes of CO₂ equivalent per annum <p>Please add any relevant additional information, including any identified mitigation options.</p> <p>This is yet to be determined</p>

17. Other environmental issues

<p>Are there any other environmental issues arising from the proposed project?</p> <p><input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> Yes If yes, briefly describe.</p>

18. Environmental management

<p>What measures are currently proposed to avoid, minimise or manage the main potential adverse environmental effects? (if not already described above)</p> <ul style="list-style-type: none"><input checked="" type="checkbox"/> Siting: Please describe briefly <p>The extent of the project layout and the potential impacts on key environmental values will need to be investigated prior to the siting of facilities and infrastructure.</p> <ul style="list-style-type: none"><input checked="" type="checkbox"/> Design: Please describe briefly <p>The design of the project is still in its preliminary stages. As details on the potential environmental effects are investigated, the design will be refined to avoid, minimise or manage potential environmental effects where appropriate.</p> <ul style="list-style-type: none"><input checked="" type="checkbox"/> Environmental management: Please describe briefly.

The construction techniques and operational methods, in particular dredging techniques, require further investigation to determine the likely environmental effects of the current options and determine a preferred methodology to minimise environmental effects.

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.

The OTRA site is adjacent to the Esso Long Island Point Fractionation Plant and land held by BlueScope and Esso. The BlueScope land is primarily used for the export of steel products through the BlueScope Steel Wharf. A large facility is located within the eastern extent of the existing Esso land.

On 11 August 2022, a development licence was issued to Esso Australia Pty Ltd to build power generators on Bayview Rd, Hastings next to the Esso liquid petroleum gas (LPG) processing plant. These generators would convert the excess ethane gas (a by-product of the liquid petroleum gas (LPG) processing) into 35-40 megawatts of electricity to power Victorian homes.

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.

Has a program for future environmental studies been developed?

No Yes If yes, briefly describe.

The following studies have been identified as necessary to support the development of the Project:

- Aboriginal and cultural heritage (incl. offshore)
- Aeronautical
- Air quality
- Coastal processes
- Groundwater
- Historic heritage
- Land use planning
- Landscape and visual
- Marine ecology – surveys have commenced
- Onshore ecology
- Noise and vibration
- Seabirds, shorebirds and migratory birds - surveys have commenced
- Social and business
- Soil and waste
- Surface water
- Traffic and Transport

The PoHC is currently in the process of engaging with the market to identify suitably qualified specialists to undertake these studies.

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.

The Victorian Government announced in October 2022 that the Port of Hastings is the likely preferred location for development of infrastructure to support construction of offshore wind, as part of the release of the Victorian Government's Offshore Wind Implementation Plan. Since the announcement, the PoHC has engaged a communication consulting firm and has spoken to key stakeholders, including local government, key community groups, and their existing Community Consultative Committee. These conversations have been receptive and constructive, with stakeholders broadly supporting the offshore wind industry and accepting that port infrastructure is needed to support its inception.

Over the summer of 2022/23 the PoHC has continued to progress this early engagement to establish awareness and relationships with a wide range of interested groups and communities, through proactive briefing requests and local community events.

PoHC also continues to meet with various offshore wind developers to understand their port needs and requirements.

Has a program for future consultation been developed?

NYD No Yes If yes, briefly describe.

A Communications and Engagement Strategy has been prepared to inform and involve local and First Nations communities, stakeholders, industry and government in the development of the proposed Terminal. The primary focus is the preparation of the project's design and EES including the statutory preparation, exhibition and independent inquiry process.

The EES Consultation Plan applies for the period of 2023 - 2026 as the EES is prepared, exhibited and assessed. It is designed to:

- Inform communities and stakeholders about the proposed project, the EES process and opportunities for participation.
- Promote an understanding the Project and EES process.
- Encourage participation and seek targeted input during the design development and EES preparation, to identify issues of potential concern, gain local insight and seek feedback on measures that respond to stakeholder concerns.
- Use and respond to community and stakeholder feedback and demonstrate how it has been considered in the development of the Project and the EES.

References:

1. AECOM (2009). Port of Hastings Stage One Scoping Geotechnical and Environmental Investigation Report. Work Package – M8: Geomorphology, Geology and Geotechnical.
2. Andrew Long + Associates (2009). Port of Hastings Stage One Investigations. Cultural Heritage Study
3. Andrew Long + Associates (2021). Old Tyabb Reclamation Area. Cultural Heritage Assessment and Implications for Development
4. Arup (2022). Victorian Clean Energy Terminal – OSW Logistics. Design Report.
5. Arup (2022a). Victorian Clean Energy Precinct. Land Use Planning Briefing Paper.

Authorised person for proponent:

I,Malcolm Geier.....(full name),
.....Chief Executive Officer- Port of Hastings Corporation...(position), confirm that
the information contained in this form is, to my knowledge, true and not misleading.

Signature 

Date 27th July, 2023

Person who prepared this referral:

I,Natasha Reifschneider.....(full name),
.....Environment Lead..... (position), confirm that the information
contained in this form is, to my knowledge, true and not misleading.

Signature 

Date: 27th July, 2023