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 Department of Transport, Planning and Local Infrastructure (DTPLI) 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.

PART 1 PROPONENT DETAILS, PROJECT DESCRIPTION & LOCATION

1. Information on proponent and person making Referral

Name of Proponent:	**Parks Victoria**
Authorised person for proponent: **Position:** **Postal address:** **Email address:** **Phone number:** **Facsimile number:**	David Ritman Acting Manager, Local Ports and Waterway Planning Level 10, 535 Bourke St, Melbourne Vic 3000 david.ritman@parks.vic.gov.au 0419 147 261 (03) 9678 9718
Person who prepared Referral: **Position:** **Organisation:** **Postal address:** **Email address:** **Phone number:** **Facsimile number:**	**Mandy Elliott** Director EnviroME Pty Ltd PO Box 445, Geelong VIC 3220 mandy@envirome.com.au 0421 980 512
Available industry & environmental expertise: (areas of 'in-house' expertise & consultancy firms engaged for project)	Parks Victoria has engaged AW Maritime Pty Ltd (AW Maritime) and EnviroME Pty Ltd ('EnviroME') to prepare the referral under the *Environment Effects Act* 1978 ('EE Act') and coordinate environmental approvals for the project. AW Maritime are port and coastal engineers and specialise in the design of marine structures including piers and breakwaters. EnviroME has specialised expertise in Environmental Impact Assessment (EIA), environmental planning and environmental management. Water Technology has provided updated water quality advice and AW Maritime will prepare the *Coastal Management Act* 1995 consent subsequent to a decision on this referral. CEE Pty Ltd have prepared an updated marine ecosystem conditions and assessment report. Several expert studies commissioned and used in the development of the *Portarlington Safe Harbour Masterplan* (Parks Victoria, 2009) have also been used in support of this referral.

2. Project – brief outline

Project title: Portarlington Safe Harbour – Stage 1 Harbour Works

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 township of Portarlington is located approximately 25km east of Geelong on the northern side of the Bellarine Peninsula overlooking the Geelong Arm of Port Phillip Bay (**Figure 1**). The town serves as a tourist destination for day trips and summer visitors, with a permanent population, largely comprising retirees and commercial fishing operators, of 3200-plus residents.

The safe harbour is to be developed as an extension of the existing Portarlington pier infrastructure on the township's central foreshore. The existing facility consists of a main pier extending 200m from shore, an outer jetty at right angles to the main pier and a shorter internal finger jetty, all protected behind an existing outer rock breakwater.

The site is located at the following coordinates:

MGA94 Zone 55 coordinates

294270

5779240

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

Parks Victoria has been tasked with upgrading the existing boating infrastructure at Portarlington to create a safe harbour in accordance with the *Portarlington Safe Harbour Masterplan* (Parks Victoria, 2009).

Key elements / works include:

- An approximately 370m extension to the existing outer (northern) breakwater, together with a new approximately 270m eastern breakwater to create a harbour configuration;
- Construction of a wave screen along the western side of the Portarlington Pier to provide an improved wave climate within the harbour.
- Upgrades to the existing outer jetty and reconstruction of the internal finger jetty to accommodate and better support up to 45 commercial vessels;
- Construction of two new loading platforms;
- Construction of ferry berths; and
- Sand management activities, including ongoing monitoring of the shoreline response to the new harbour and sand bypassing and dredging as required.

Further funding and market demand will determine the viability of other components of the Masterplan, including 100 new recreational berths. These components are not part of this Referral as they may or may not happen in the longer term.

3. Project description

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

The implementation of stage one of the Portarlington Safe Harbour Master Plan is a State government election commitment to facilitate better and safe facilities for the aquaculture and commercial fishing industry. This will enhance the existing industry and lead to a more viable future, including increasing employment opportunities in the region. The Portarlington safe harbour (Stage 1) has been provided for in the 2015 State budget.

Broadly, the overall aims of the safe harbour project at Portarlington are to:

- Provide necessary modern **infrastructure to support growth in aquaculture activity** in the area, with associated local employment and investment opportunities (noting that commercial aquaculture, particularly mussel farming, is synonymous with Portarlington and is a key economic activity in the region);
- Provide **facilities for other commercial operators** such as fishing charters, tour operators and passenger ferries;
- **Improve space and safety** for public maritime-based events, including the annual mussel festival.

Background/rationale of project (describe the context / basis for the proposal):

In October 2007, Parks Victoria commenced work on concept planning for the Portarlington Safe Harbour as part of the implementation of the *Bays and Maritime Initiative* (BMI). The BMI was a program of revitalisation of key maritime sites aiming to create activity hubs with high quality public spaces, improve public access to recreational and tourism opportunities (on land and water), and provide additional jobs in tourism, aquaculture and service industries.

Several technical studies and investigations were commissioned to support the development of a masterplan for the site, a process which was overseen by a Steering Committee comprising Parks Victoria, the (then) Department of Sustainability and Environment, the (then) Department of Innovation Industry and Regional Development, the (then) Department of Primary Industries, City of Greater Geelong, Marine Safety Victoria, Tourism Victoria, Central Coastal Board and Bellarine Bayside Foreshore Committee of Management.

In 2008, extensive consultation was held and community feedback was sought on a draft plan for the precinct, resulting in over 1000 submissions (largely in support of the vision and key elements of the safe harbour) which were then considered prior to finalising the *Portarlington Safe Harbour Masterplan* ('the Masterplan') (**Attachment 1**) in 2009. The City of Greater Geelong supports the Masterplan, and it is formally recognised in the Greater Geelong Planning Scheme via in Clause 21.14 that states *'Support Parks Victoria Safe Harbour Project, including ensuring appropriate integration with the adjacent foreshore reserve and Town Centre'*.

Funding to implement the first stage of the Masterplan (maritime components) was provided in the Government's 2015 State Budget.

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

Whilst the Masterplan (in its entirety) envisages a range of new land and water-based infrastructure, this referral is for the program of **water-based infrastructure** required to create the safe harbour. The key elements are shown in the Concept Plan, **Figure 2** and outlined below.

Eastern breakwater

A new 270m long rock breakwater, aligned with Fisher Street, will be created as one 'arm' of the harbour configuration.

Extension of the northern breakwater

The existing northern basalt rock armoured breakwater will be extended by 370m to create the second 'arm' of the harbour configuration. Pedestrian access will be extended the length of the breakwater.

Together, the two breakwaters will create the harbour configuration, with an entrance (opening) of approximately 30m. The safe harbour will be able to accommodate vessels of up to a length of approximately 40m.

Wave screen

As part of the safe harbour proposal, wave protection will be added along the western edge of the renewed pier to prevent waves from entering the new harbour.

Commercial berths and jetties

Up to 45 commercial berths will be created off Portarlington Pier to service the aquaculture industry and other new commercial users. These berths will be accessed from fixed structures (not floating) and the layout and design of these berths has been designed to meet the appropriate Australian Standards.

The existing east-west aligned timber jetty located along the northern breakwater is expected to remain with minor upgrades in the initial stages of the development.

The smaller east-west aligned finger jetty located to the south will be demolished and replaced with a new fixed jetty of a similar construction to the concrete deck supported by steel tubular piles.

Loading platforms

The existing loading platform / jetty head is proposed to be replaced and upgraded to provide two all weather berths, an accessible low landing. A new loading berth will be located at the eastern end of the new commercial berth jetty. These have been designed to facilitate unloading and loading of commercial vessels, refuelling and a sewage pump-out facility.

Navigation aids

Appropriate navigation aids will be included in the breakwater design to clearly identify the harbour entrance.

Dredging

Dredging of the safe harbour works will require approximately 30,000m^3 of sand (refer to **Figure 3** for extent of dredge). This may be staged depending on the timing of the ferry berth.

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

A temporary access track for construction of the eastern breakwater will be needed along the foreshore to enable vehicles to access the new eastern breakwater site.

Key construction activities:

Construction activities will include:

- Placing core, filter rock and armour rock to construct the northern and eastern breakwaters.
- Driving piles for the new piers and jetties, installing precast concrete structural members (e.g. cross heads, deck planks, etc);
- Demolition of existing Portarlington Pier head and inner timber jetty (including pile extraction where possible);
- Dredging to provide safe access to and from the berths.

Key operational activities:

It has been estimated by Meinhardt Infrastructure and Environment Pty Ltd (Portarlington Safe Harbour Coastal Processes and MetOcean Design Conditions Feb 2008) on the advice of Water Technology that net longshore transport along this stretch of coastline is in the order of approximately 2,000-5,000m^3 per year in a westerly direction. It is therefore likely that sand will build up against the eastern breakwater and this will need to be transported to the western side of the harbour to mitigate any down drift erosion. The requirement for this sand bypassing will vary with yearly differences in the wind and wave climate at the site but is expected to be required every 2 to 3 years.

The breakwaters and wavescreen will act to prevent sand migration into the harbour, however siltation of the entrance is likely to require maintenance dredging. Note that Parks Victoria currently undertakes maintenance dredging at Portarlington pier, with up to 21,000m^3 of material removed every 2 to 4 years. This is expected to be reduced with the development of the new harbour.

Key decommissioning activities (if applicable):

Nil.

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).

The program of water-based infrastructure referred here is likely to be delivered in two stages:

Stage 1 (immediate)

- Extension to northern breakwater
- New eastern breakwater
- Commercial berth precinct, including services (power, water, and pump out facilities within the low landing area)
- Replacement of jetty head, pier and low landing
- Ferry berths (subject to funding)

Stage 2 (longer term, subject to viability and market demand and not part of the scope of this Referral)

Recreational berthing and boating facilities (potential longer-term component)

An area for recreational berthing and boating facilities, with capacity for approximately 100 berths, is proposed to be located alongside the new eastern breakwater and would comprise a series of floating finger pontoons and walkways.

Ferry landing (potential longer-term component)

Allowance has been made for two ferry berths on the east-west finger jetty, to be constructed subject to viability (direct commuter services to the Docklands are canvassed in the *Melbourne Ferries Background Study* (Department of Planning and Community Development, 2013)). These berths are likely to consist of floating concrete pontoons to facilitate safe and consistent access to and from the ferries.

New landside infrastructure is envisaged in the Masterplan but is not within the scope of this referral (refer to Section 5).

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

☒ No Yes If yes, please identify related proposals.

4. Project alternatives

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

A strategic assessment of sites for a safe harbour on the Bellarine Peninsula was undertaken by Stratcorp Consulting in 2005. This investigation identified Portarlington as the preferred site for development of a safe harbour, and this was later reflected in the Boating CAP (Central Coastal Board, 2007).

The concept design in the Masterplan derives from in-depth consideration of coastal

engineering and process issues, including varying dimensions for the breakwaters; analysis of wave protection afforded by the harbour design; the options available to mitigate impacts on coastal processes; landscape and visual assessment studies, marine ecological studies and assessment of the dredging requirements. Outcomes of the environmental risk assessment are documented in the *Bellarine Safe Harbour: Baseline Assessment: Summary Report* (Maunsell, 2007, (**Attachment 2**)) and Portarlington Safe Harbour - Gap Studies report (Meinhardt Infrastructure, 2008) at **Attachment 4**.

In terms of the current concept put forward, this has resulted from further design refinement as a result of a geotechnical survey and further water flushing analysis. The footprint of the design is considered important to Parks Victoria to remain with that presented throughout the extensive master planning process.

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

Given that the design is currently at a Concept Plan level, the detailed design may have some alterations however the key project components will remain as per the concept plan. Details will be resolved prior to seeking the required approval under the *Coastal Management Act* 1995.

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 Government has announced its commitment through the 2015 budget to building the water-based components of this project described in section 3 of this referral. No other commitments have been made for any further components.

New land side infrastructure (part of the broader implementation of the Masterplan) anticipated in conjunction with the water-based infrastructure referred here may include:

- New power supply;
- Public facilities (toilets, showers and lighting);
- Beachfront boardwalk and commercial development incorporating up to three buildings (with a maximum of two storeys each).

Approval under the *Planning and Environment Act* 1987 is likely to be required for some of these elements should they proceed, and would be sought on a case-by-case basis by the relevant party (private or public).

All water-based works within the scope of this referral are fully functional regardless of whether onshore development occurs at a later date.

6. Project implementation

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

Parks Victoria

Implementation timeframe:

Works to commence early 2016, with expected completion late 2017.

Proposed staging (if applicable):

It is currently planned to construct the new commercial berth jetty and loading platforms first, followed by construction of the breakwaters.

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 Bellarine Peninsula extends northward into Port Phillip Bay so that Portarlington is exposed to onshore winds from a range of directions. The longest fetch across the Bay is from the northeast to east-northeast. Winds from these directions are primarily in summer. Winds from the north to northwest are most common and strongest in winter. The shoreline is relatively sheltered from offshore southwesterly to southeasterly winds, including summer sea breezes. The present use of the harbour is primarily restricted by the limited shelter that the offshore breakwater provides from wind generated waves under onshore winds from the west to the east.

The project site extends out into the waters of Port Phillip Bay to just beyond the existing northern breakwater, some 300 metres from shore. The site is generally bound west-east by Harding and Fisher Streets (refer to **Attachment 1: Masterplan**).

The site is located on sandy beach at the Portarlington pier. The topography can be divided into two distinct domains: the relatively flat beach (3° north-south slope) and bar sand, an intertidal basalt reef backing on to sloping weathered basalt cliff to the rear of the foreshore (prone to erosion). It is thought that some areas of the adjoining foreshore area may have been backfilled as part of previous reclamation projects (including construction of the existing car park and toilets).

Marine water quality at Portarlington is determined by the general clockwise circulation pattern of Port Phillip Bay as well as tidal currents that supply ocean water flushing from Port Phillip Heads. There are no significant freshwater inputs near Portarlington. Hence, nearshore water quality at Portarlington is generally very good.

As stated in CEE (Aug 2015) report, the marine habitats comprise:

- Artificial hard substrata: the wooden jetties and rock breakwater profile habitat for attached invertebrates and seaweeds as well as shelter for mobile species such as fish and squid;
- Natural reef: The relatively low relief intertidal to shallow subtidal reef also provides natural habitat for attached invertebrates and seaweeds. The nearest substantial natural subtidal reef is at Governor Reef (approximately 9 km around the coast to the southeast); and
- Extensive areas of sand: The soft sediments provide habitat for burrowing invertebrates, certain fish and seagrasses.

Site area (if known): **15 ha** (hectares)

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

Current land use and development:

A public jetty has been located on the site of the current jetty since 1859. The current infrastructure consists of the main Portarlington pier extending 200m from shore (currently being reconstructed to assist in facilitating the aquaculture industry), an outer jetty at right angles to the main pier and a shorter internal finger jetty, partially protected by an outer rock breakwater. Aquaculture is an important industry in Portarlington, and the majority of the berths available in the existing harbour accommodate commercial fishing vessels.

The jetty, beach and associated foreshore is a key destination for residents and tourists, particularly in the summer months when fishing, boating, swimming, picnicking, and promenading are popular.

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

The foreshore adjoining the project area contains a number of community and commercial buildings including the Senior Citizens Club, a Kindergarten, Bowls Club, Scouts Hall, Country Fire Authority building, a café, and BBQs and a playground.

In terms of nearby residences, the nearest to infrastructure are those that line the eastern side of Fisher Street and those along the coast road (The Esplanade) east of the site, starting at a distance of approximately 80m. A substantial foreshore caravan park is located 450m west of the site.

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

This project is the result of extensive strategic planning over the last decade and is supported by State and Local government policy.

- The *Boating CAP* (Central Coastal Board, 2007) outlines strategic directives for the future planning, management and funding of the network of recreational boating facilities within the central coastal region of Victoria. The CAP recommends that future development along the Bellarine coastline be directed to Portarlington, with an upgrade of facilities required to cater for the projected increase in visiting boaters. The following local policies are of particular relevance:

  A2.1 In the Bellarine Boating Area, the strategic focus for investment to significantly upgrade facilities will be at Portarlington. This will be encouraged to provide a mix of activities, opportunities and facilities for visiting and local boaters.

  A2.2 Any new boat moorings will be concentrated within the vicinity of the existing harbours, at Portarlington in the first instance.

- The *Recreational Boating Facilities Framework* (Central Coastal Board, 2014) and draft *Regional Coastal Plan* (Central Coastal Board, 2015)) confirm the 2007 BCAP directives for Portarlington and recognise the Masterplan as the blueprint for future development.
- The Masterplan vision is incorporated in the *Northern Bellarine Foreshore Plan* (Bellarine Bayside Foreshore Committee of Management, 2012).
- Clause 21.14 (Municipal Strategic Statement) of the Greater Geelong Planning Scheme explicitly supports the safe harbour project, with a focus on ensuring appropriate integration with the adjacent foreshore reserve and Portarlington town centre.

The project site is zoned Public Park and Recreation (PPRZ). The PPRZ supports the provision of public open space and recreational opportunities, protects areas of significance and allows for commercial uses where appropriate. No overlay controls apply to the site.

Local government area(s):

City of Greater Geelong (CoGG)

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 Portarlington foreshore is an important **recreational and social space**, offering an array of activities and experiences including boating, fishing, swimming, walking, cycling, picnics and passive recreation. **Views** around the coastline and across the Bay are a valued aspect of the township.

The **marine habitats and ecology** within the project area are broadly representative of the northern coastline of the Bellarine Peninsula. There are three key habitat types present – soft sandy sediment, natural nearshore reefs and man-made habitats of existing pier and breakwater – figure 4 in CEE marine ecosystem condition report provides a good summary, **Attachment 3**). Further description is provided below:

- Intertidal zone, comprising the sandy beach and **an inshore, low profile rock platform** able to be explored during low tide; and
- Offshore zone, comprising the sandy sea bed, an nearshore **basalt reef** extending seaward from the intertidal rock platform (part of the contiguous low-lying reef system that occurs in patches along the Bellarine coastline), pier pilings and the existing breakwater. The sandy sea bed is spatially the largest habitat in the study area, consisting of fine sand less than 1mm grain size. The offshore reef is dominated by algae, sponges, sea stars and sea urchins, all commonly found on shallow reefs along the northern Bellarine coastline. Some of the best available habitat is the artificial 'reef' created along the northern boulder breakwater. The new structures constructed for the safe harbour project will, over time (12months-2 years), lead to a similar colonisation of species and will act as artificial reefs.
- A small isolated patch of seagrass occurs within the existing harbour area and Parks Victoria will ensure that measures are put in place to minimise impacts on this area during construction.

Clear water and (artificially) **well-nourished sandy beaches** are important for both residents and the tourism operators, with good **water quality** key to the region's aquaculture industry.

In terms of the existing coastal processes, the gross sand transport rate is approximately 2-5,000m^3 /year that is currently trapped by the existing harbour, a relatively small volume compared to the dredging requirements at other locations in Port Phillip Bay such as Queenscliff.

9. Land availability and control

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

No ☒ Yes If yes, please provide details.

The Portarlington pier and waters surrounding it are managed by Parks Victoria. The majority of the coastal foreshore is managed by the Bellarine Bayside Foreshore Committee of Management (BBFCoM), with CoGG managing the roads within the foreshore zone.

The area of seabed outside the Parks Victoria and the BBFCoM managed areas is unreserved Crown Land managed by the Department of Environment, Land, Water and Planning (DELWP). Parks Victoria is undertaking a process of having an additional area of unreserved Crown Land assigned to Parks Victoria and a change to the existing Committee of Management boundary.

Current land tenure (provide plan, if practicable):

As above.

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

No change proposed.

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

Nil.

10. Required approvals

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

State

Consent under the *Coastal Management Act* 1995 is required for use and development on coastal crown land. In deciding whether to grant consent for the project, various matters are considered in accordance with the Victorian Coastal Strategy and including relevant coastal action plans.

A Cultural Heritage Management Plan (CHMP) under the *Aboriginal Heritage Act* 2006 was required because the proposal is deemed to be a 'high impact activity' and the inner foreshore an area of 'high cultural sensitivity'. A CHMP was approved in August 2010.

Note that a planning permit under the Planning and Environment Act 1987 is not required for building and works in the PPRZ when carried out by Parks Victoria (or other relevant land manager).

Commonwealth

There are minimal *Environment Protection and Biodiversity Conservation Act* 1999 (EPBC Act) listed or migratory species, or suitable habitat for such species, within the vicinity of the existing Portarlington pier or the proposed safe harbour area, though EPBC Act-listed species do occur in the broader Bellarine area. Those species identified as possibly being

present around Portarlington include the Southern Right Whale, Humpback Whale, Fairy Tern, and Great White Shark. Potential impacts on any such species from the project (construction noise and minor disturbance of sea floor sediment during construction activities) will be highly localised and short term and considered low by CEE. As there is no potential for a significant effects, it is considered that a referral and approval under this Act is not required.

Have any applications for approval been lodged?

No ☒ Yes If yes, please provide details.

A CHMP for all activities in the Masterplan (including the water-based infrastructure referred here) was approved in August 2010. A copy of the CHMP can be provided upon request.

A general consent under the Coastal Management Act 1995 has been granted for dredging and pier and jetty maintenance works. This can be provided to the Department on request. The general consent does not exempt Parks Victoria from the need for consent under the Coastal Management Act and development of the safe harbour on coastal crown land. In addition Parks Victoria undertakes maintenance dredging in Port Phillip and Western Port in accordance with an environmental management plan developed in accordance with the EPA 2001, Best practice environmental management – Guidelines for Dredging.

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

The proposal has been discussed with the relevant officers within DELWP, both at the State and regional office level.

Other agencies consulted:

This proposal has been discussed with the City of Greater Geelong and DELWP (Environment Assessment Unit) and DELWP (Regional Services).

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):

There is an existing pier and breakwater at Portarlington. This proposal aims to expand upon these facilities to ensure the Portarlington becomes a safe harbour for the existing commercial fisherman as well as any future recreational berths and possible ferry.

The placement of additional northern and eastern rock breakwaters to enclose the proposed harbour will result in approximately 17,100 m^2 (1.7 ha) of subtidal and intertidal seabed being covered with new rock breakwater. Approximately 80 percent of the area covered with new habitat (breakwaters) comprises mobile sands and the remaining 20 percent comprises shallow and intertidal rocky reef. Approximately 33,620 m^2 (3.4 ha) of soft seabed in the Harbour will be dredged to 3 m depth. As discussed previously, the sands and associated biota that will be affected are typical of large areas of Port Phillip Bay including the Bellarine Peninsula. The rocky reefs are relatively low in physical complexity with species common to most reefs in Port Phillip Bay. The existing habitats will be replaced by rock habitat (breakwater material) and dredged basin (fine sediments). These habitats will be colonised by species from the pool of biota that presently exists in similar habitats in the Portarlington area – including the existing breakwater and the dredged basin. CEE states that the effect of the replacement of this proportion of the Bay's existing habitats on Bay biodiversity is minor to negligible.

The change in coastal processes (natural sand movement along the coast) is minimal, with an estimated build up of sand to the east of the proposed safe harbour development expected to be at the net alongshore transport rate, which may be in the order of up to 2,000 m^3/year. This is significantly lower than the gross transport rate of 2-5,000 m^3/year that is currently trapped by the existing harbour.

Implementation of a more regular bypassing of sand will ensure a more natural coastal process for the areas within and adjacent to Portarlington harbour, including less occurrence of erosion.

A water quality assessment also determined that the e-folding times (the measure of how quickly the water from a harbour or other coastal water body can be exchanged or 'flushed') for each scenario modelled were well under 30 days or less (in fact did not exceed 4 days for any wind simulation undertaken) , thus causing minimal, if any, impact to water quality within the harbour.

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.

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

Meinhardt Infrastructure & Environment Pty Ltd ('Meinhardt') completed a terrestrial biodiversity assessment (including fieldwork) in 2007-2008 to inform the development of the Masterplan. The findings are reported in the document *Portarlington Safe Harbour: Masterplan, Technical Studies and Economic Feasibility Study – Gap Studies Report* (**Attachment 4**). Marine Science and Ecology (MSE) undertook a similar assessment of marine biodiversity during the same period and CEE Pty Ltd provided a further marine ecological assessment (Aug 2015) which is included as **Attachment 3** and mentioned previously).

Marine

The predominant natural habitat type in the region is soft sandy seabed. Soft seabed accounts for around 99 per cent of Port Phillip Bay habitats. The sandy seabed within and around Portarlington Harbour is mostly unvegetated sand.

Seagrass in the area was limited to sparse patches of *Heterozostera nigricaulis* in deeper water (>2.5 m) and sparse and patchy macroalgae (such as *Caulerpa* spp) growing on benthic invertebrates such as cunjevoi (*Pyura dalbyi*). There are no seagrass 'beds' in the Portarlington area, the nearest being Pt Richards over 2 km west (Blake and Ball, 2001). There have been seagrass beds in the area in the past, but these were lost over 20 years ago (MSE, 2007, Bulthuis, 1982). There were two very small patches of low grade *Heterozostera* seagrass near the beach within the existing harbour, around 1 m below mean sea level.

Patches of low relief basalt reef are found along the coastline east of the harbour as far as Indented Head. They include intertidal reefs accessible shore, and shallow subtidal reefs within a few hundred metres of shore. The breakwater and pier provide substantial additional hard substrate or reef habitat compared to the small amount of natural reef in the area. The pilings and boulders used to construct the breakwater and piers have been colonised by common Port Phillip Bay seaweed and invertebrate species. These habitat areas are further described in CEE (Aug 2015) report.

CEE (2015) suggest that the reef habitat and associated biota are relatively low in biodiversity value when compared with other reefs on the Bellarine Peninsula or particularly when compared to reefs in Marine Parks elsewhere in Port Phillip Bay.

Terrestrial

Meinhardt concluded that the Portarlington foreshore in the vicinity of the safe harbour infrastructure is highly modified and offers little to no indigenous habitat or ecological values. Small patches of native grasses were not substantial or diverse enough to be classed as EVCs, and regardless, will not be impacted by the safe harbour footprint.

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

☒ NYD Estimated area ……**0**……(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.

None.

Have potential vegetation offsets been identified as yet?

☒ NYD ☒ Yes If yes, please briefly describe.

Not applicable.

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

NYD = not yet determined

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)

Meinhardt completed a terrestrial biodiversity assessment (including fieldwork) in 2007-2008 to inform the development of the Masterplan. The findings are reported in the document *Portarlington Safe Harbour: Masterplan, Technical Studies and Economic Feasibility Study – Gap Studies Report* (**Attachment 4**). MSE undertook a similar assessment of marine biodiversity during the same period and CEE Pty Ltd provided an updated assessment of the marine ecology of Portarlington Harbour (included as **Attachment 3**).

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.

Marine

Through searches of State and Commonwealth databases, CEE found that it is possible that species such as the Southern Right Whale, Humpback Whale, Great White Shark, Australian Whitebait and the invertebrate Southern Hooded Shrimp may occur at Portarlington (refer to Table 1 in CEE report (Aug 2015).

The Burrunan Dolphin is likely to occur in Portarlington from time to time as it travels around Port Philip Bay. According to CEE, the likelihood of it occurring during construction is low.

Terrestrial

There are historical records of threatened and protected *Flora and Fauna Guarantee Act* 1988 (FFG)-listed species within 5km of the project area however, none of these have previously been recorded within the project area, nor were they observed during the

field survey. Further, there is no available habitat within the project site to support significant taxa.

In particular, migratory bird species are considered by previous assessments undertaken for the masterplan unlikely to visit the project site given its current form and level of human activity. While the nearby Point Richards Flora and Fauna reserve (approximately 1km east of the site) may support migratory species on an intermittent, seasonal basis, no impact on any such visitation is expected. There is no suitable habitat (coastal saltmarsh) in or adjacent to the project area for the Orange-bellied Parrot.

CEE's research of State and Commonwealth databases indicates that it is possible that coastal seabirds, including the Great Egret, Little Tern, Fairy Tern and Hooded Plover, may occur at Portarlington (refer to Table 1 in CEE report (Aug 2015)).

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.

Disturbance

During the construction period, there will be some disturbance to marine biota and seabirds from noise and seabed sedimentation, although with mitigation measures in place such impacts will be short term and minimal.

Habitat loss

Identifiable areas of existing habitats will be lost due to:

- Excavation/dredging of soft seabed habitat and associated biota to increase water depth within prescribed areas on the harbour.
- Covering of existing seabed by 17,100 m^2 of new rock breakwater on soft sediment habitat (81 percent) and nearshore and intertidal reef habitat (19 percent) and associated biota.
- Removal of existing pier piles with associated biota.

The effect will be permanent and localised to the area of the construction activities.

New habitat for colonisation by a range of species will be created in the form of:

- Placed dredged material
- New rock breakwaters
- New pier and jetty piles
- Floating berth pontoon

Construction Activities

Construction activities will produce various levels of marine noise. Most noise will be low level (rock placement, dredging) or similar to existing sources (vessels). Piling activities will produce the highest level marine noise.

The effect will be relatively localised due to the soft nature of the sediments and the barriers of transmittal through the water provided by the rock breakwaters. The

construction noise effects are expected to be minor and managed according to a project specific Construction Environment Management Plan, which will include a marine mammal management procedure.

Turbidity

Dredging using a cutter suction dredger will result in a small increase in turbidity in the area being dredged and more extensive turbidity in the area that the dredged material is placed. The effect will be intermittent and temporary during construction activities, with extent likely to be limited to less than 500 m from the activity. Pile driving does not produce turbidity.

Table 3 'Screening of construction risks to FFG and EPBC species in Portarlington region' in CEE's report (**Attachment 3**) provides a good summary of the potential impacts and magnitude of impact that may occur to listed species in the vicinity of Portarlington.

Overall, the construction activities for the safe harbour project will have a localised effect on the existing low natural value biological communities within the harbour. These communities are widespread in Port Phillip Bay, and are species better represented in protected marine parks around the Bay. Hence, the effect of construction activities on Bellarine Peninsula or Baywide marine biodiversity will be negligible. In fact, CEE suggest that the construction of the new facilities will add further range to the habitats (pontoon berth, decks, piles, wave screens) and environmental conditions (increased depth range, calmer conditions) within the harbour, which is expected to provide conditions suitable for a wider range of species and assemblages than presently occupy the harbour.

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.

Described in previous section.

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

NYD No ✕ Yes If yes, please briefly describe.

Potential effects on flora and fauna will be minimised through careful construction planning, to be detailed in a Construction Environmental Management Plan (CEMP), including a marine mammal management procedure.

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

No fish surveys have been undertaken for the project and are considered unnecessary for this referral. Observation suggests that the northern breakwater is a favoured fishing venue, with summer catches being predominantly squid and flathead.

13. Water environments

Will the project require significant volumes of fresh water (eg. > 1 Gl/yr)?
NYD ☒ No Yes If yes, indicate approximate volume and likely source.

Will the project discharge waste water or runoff to water environments?
NYD ☒ No Yes If yes, specify types of discharges and which environments.

The marine structures to be constructed under this referral will be used for pedestrian and vehicle traffic and for the loading and unloading of commercial vessels. No refuelling facilities are proposed, however refuelling will be able to occur on the new finger jetty loading platform.

Are any waterways, wetlands, estuaries or marine environments likely to be affected?
NYD No ☒ Yes If yes, specify which water environments, answer the following questions and attach any relevant details.

Water Quality

A report by Water Technology (2015) (**Attachment 5**) determined that the e-folding time (the measure of how quickly the water from a harbour or other coastal water body can be exchanged or 'flushed') for each scenario modelled were well under the target of 30 days or less. The e-folding time is predicted to be 3 days for a no-wind scenario and for typical winter conditions. Typical summer conditions resulted in an e-folding time of 2.5 days. The 30 day target is a standard value adopted by local authorities such as Melbourne Water and the EPA and has been applied to Patterson Lakes, Martha Cove, and Wyndham Harbour.

Coastal Processes

The key observations of historical aerial photographs (discussed in the Maunsell report at **Attachment 2**) have highlighted:

- The coastline in the immediate lee of the Portarlington existing breakwater has in general been gradually advancing
- The construction of the wave barrier/groyne along the Portarlington pier post 1984 has noticeably intercepted the longshore transport resulting in additional accumulation of sand behind the harbour
- Erosion of the coastline directly east of the harbour appears to have increased post 1984
- The coastline at Point Richards is dynamic with accretion and erosional features apparent throughout the photographic record.
- The width of the beach between Portarlington Harbour and Point Richards appears to have reduced and there is some evidence to suggest a small but gradual retreat of the coastline has also occurred.

The direction and magnitude of sediment transport is closely related to the seasonal wave climate within Port Phillip Bay. Larger waves come from the east, which would

imply a general net westward sediment transport. West to east sediment transport however is generally trapped within the existing harbour. Parks Victoria undertake a maintenance dredge of up to 21,000m^3 approximately every 2-4 years. This implies an average gross transport of between 2-5,000m^3 per year.

The master plan for the Portarlington safe harbour development shows an almost fully enclosed harbour with the offshore breakwater extended to both the east and west, a wave screen along the western side of the existing jetty alignment, and a reclamation area constructed out from the shore at the eastern end of the harbour. Water Technology (2007) suggest that a harbour of this type would be expected to provide a complete barrier to the alongshore transport of sand.

Creating a navigable depth of -3.5m AHD (i.e., -3.0m to Chart Datum) for the proposed commercial berths, loading platforms and ferry berths will require dredging of approximately 30,000m^3 excluding over dredging. The dredging method to be used will be very dependent upon the properties of the material to be dredged. For sand, silty sand, silts and clays, a cutter suction dredge is likely to be the most effective plant, and based on information currently available this appears to be the most likely methodology.

This is considered consistent with transport rates observed in other locations within Port Phillip Bay. However, it should be noted that this number is the gross sediment transport at the harbour. That is, the amount of sand transported into the harbour from the east during north-easterly waves plus the amount of sand transported into the harbour from the west during west and north-westerly waves.

The net westerly transport is likely to be significantly lower than the gross sediment transport. Further investigations as part of the CMA consent process would be required to quantify the actual net transport rate; however, it may be in the order of 1-2,000 m^3/year. The Maunsell coastal processes report is attached as **Attachment 6** and additional information is also available in the Meinhardt 2008 report **(Attachment 4).**

Regular by-passing of sand from the east of the harbour to the beaches in the west would help reinstate the natural westward sediment transport rates in the area. Overall, it is expected that the proposed new harbour will have less impact on the longshore sediment transport regime in the area, and will require less maintenance dredging than the existing harbour (see Water Technology report).

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

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

As discussed in Section 12, none of the species or species groups present is rare, threatened or considered to be of high conservation value.

Rather, the marine environment supports a limited range of species common throughout Port Phillip Bay. The sandy sea bed is the dominant habitat type, and supports burrowing polychaetes, crustaceans and bivalve molluscs. The offshore basalt reef is dominated by algae.

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

NYD ☒ No Yes If yes, please specify.

The nearest sections of the 'Port Phillip (Western Shoreline) and Bellarine Peninsula' Ramsar site are north across the Geelong Arm of the Bay or approximately 15km south at Swan Bay.

Could the project affect streamflows?

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

Could regional groundwater resources be affected by the project?

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

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

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

The Portarlington safe harbour site is covered by SEPP (Waters of Victoria) Schedule F6, for which specific water quality indicators and objectives are prescribed.

The beneficial uses to be protected are:

- maintenance of natural aquatic ecosystems and associated wild life (substantially natural ecosystems with some modifications);
- water based recreation, including primary contact (swimming and water skiing), secondary contact (boating and fishing) and aesthetic enjoyment;
- production of molluscs for human consumption (aquaculture);
- commercial and recreational use of edible fish and crustaceans; and
- navigation and shipping.

Considering the lack of industry and modest levels of development in the area, it is likely that the water quality in the general vicinity of Portarlington will be similar to, or better than, the Bay wide averages.

Water Technology's report on water quality modelling confirms that the existing water quality will not be impacted upon by the project, due to the quick dispersal of the water within the harbour.

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

NYD No x Yes If yes, describe in what way.

As described above in section 12, soft sediment habitat (81 percent) and nearshore and intertidal reef habitat (19 percent) and associated biota will be affected by the project. The water quality modelling report suggests that there will be minimal changes to the water quality of the area due to the harbour development. Flushing time is no more than 3 days, and the modelling indicates that once water leaves the harbour it is quickly dispersed and any tracer in the water is rapidly diluted.

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.

See description above.

Is mitigation of potential effects on water environments proposed?

NYD No ☒ Yes If yes, please briefly describe.

Mitigation of potential effects on the marine environment will be detailed in the Construction Environmental Management Plan.

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

14. Landscape and soils

Landscape

Has a preliminary landscape assessment been prepared?

No ☒ Yes If yes, please attach.

A *Baseline Assessment Study of Landscape Values* was undertaken by EDAW in 2007. The findings are reported in the *Bellarine Safe Harbour: Baseline Assessment Summary Report 2007* at **Attachment 2**.

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

- **Subject to a Landscape Significance Overlay or Environmental Significance Overlay?**
  NYD ☒ No Yes If yes, provide plan showing footprint relative to overlay.
- **Identified as of regional or State significance in a reputable study of landscape values?**
  NYD ☒ No Yes If yes, please specify.

The *Coastal Spaces Landscape Assessment Study 2006* undertaken by State government provides an assessment of the landscape characteristics along the entirety of the Victorian coastline. The Study identifies the stretch of coastline around Portarlington as being of local landscape significance only.

- **Within or adjoining land reserved under the *National Parks Act 1975* ?**
  ☒ NYD ☒ No ☒ Yes If yes, please specify.
- **Within or adjoining other public land used for conservation or recreational purposes?**
  ☒ NYD ☒ No ☒ Yes If yes, please specify.

The Safe Harbour site adjoins the Portarlington section of the 'Northern Bellarine Foreshore', a contiguous 17 kilometres stretch of low-lying Crown land along the northern Bellarine Peninsula coast between Point Richards, immediately west of Portarlington, to Edwards Point at the southern edge of the St Leonards township.

The closest conservation reserve is at Point Richards, approximately 1km west and of the

project site. This 52ha reserve contains ephemeral wetlands and a diverse range of coastal woodland flora and fauna.

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

No vegetation clearance or alternation of natural landforms is required as part of the project.

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

EDAW undertook a viewshed analysis to identify locations in the surrounding area from which the safe harbour development could be observed.

Sightlines to the harbour are generally confined to the coastline along a three kilometre stretch between Point Richards in the west and the boat ramp at the end of Fairfax Street one kilometre to the east. Further inland, the extent of the viewshed varies significantly depending on the topography and the screening effect of the buildings and vegetation. At the eastern end of the proposed safe harbour, the foreshore reserve is devoid of vegetation and the adjacent residences have direct views over the study area.

The existing pier structure is relatively simple but is of visual interest to residents, tourists and land and water-based recreational users, fitting within the coastal context of the location. The safe harbour configuration will be of similar interest, and is designed at a scale that reflects the local environment. Notwithstanding, some particular users of the setting will be sensitive to significant changes in the landscape, particularly residents who are sensitive to development in the local area. However, these changes cannot be considered as an impact of regional or state significance.

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

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

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.

Erosion is evident along the basalt cliffs behind the Portarlington beach, parts of which also appear geologically unstable. The safe harbour project will not impact this area.

Are there geotechnical hazards that may either affect the project or be affected by it?
NYD ☒ No Yes If yes, please briefly describe.

Site investigations completed to date have indicated the presence of a basaltic rock platform (Tertiary Older Volcanics (basalt)) underlying parts of the harbour.

The rock platform appears to be sufficiently deep below the existing seabed to not influence the dredging required to provide safe navigation to and from the commercial berths and loading platforms. It may however influence the dredging works for the future recreational marina and ferry terminal and this will need to be considered when assessing the viability of these facilities in the future.

Geotechnical investigations have been completed and found that the conditions are suitable for construction of the new pier and inner finger jetty and loading platforms.

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

Dredged material will be used to renourish adjacent beaches, providing a beneficial use of this material.

15. Social environments

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

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

A traffic and car parking assessment was undertaken by GTA consultants in 2009 to inform the Masterplan development process.

The upgrade of the Portarlington Pier to a safe harbour (Stage 1 works) is expected to generate approximately 5,000 to 10,000 construction vehicles for the duration of the Stage 1 works. Parks Victoria will consult with the CoGG regarding the designated truck/construction vehicle route to ensure community impacts are minimised. A Traffic Management Pan will also be prepared.

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

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

There is the potential for between 5,000-10,000 trucks over the construction period that may cause some amenity impacts. Parks Victoria is working with CoGG to determine an appropriate traffic management plan and truck route to mitigate the potential impacts on the local community.

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

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

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

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

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

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

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

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

There may be some disruption to access during the construction period, however Parks Victoria will work with the community and commercial fishing operators to ensure that disruptions are minimised. Peak holidays and important seasonal periods for the aquaculture industry will be avoided (where possible).

Is mitigation of potential social effects proposed?

☒ NYD No Yes If yes, please briefly describe.

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

Cultural heritage

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

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

When work on the Masterplan was being undertaken during 2008-2009, there was no Registered Aboriginal Party (RAP) for the project area, so both the (then) Wathaurong RAP Authorisation Group and the Wathaurung Aboriginal Corporation were consulted at that time.

The Wathaurung Aboriginal Corporation was later appointed as the RAP for the Portarlington area, and was the only group consulted during the preparation of the complex assessment phase of the CHMP, which has subsequently been approved.

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)

Desktop investigation, ground survey and archaeological testing (complex assessment) have been completed for the entire Masterplan area, culminating in the approval of Cultural Heritage Management Plan #10182 in August 2010.

The extent of one previously known Aboriginal heritage place (Esplanade 3 BPAS 4 (VAHR 7821-0361)), a sparse and disturbed shell midden covering an area of approximately 500m^2 at the top of the cliffs behind the Portarlington Beach, was confirmed in this process. The safe harbour infrastructure will not impact on this 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

See above.

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.

Mitigation measures, including training requirements and contingency plans, are detailed in the Cultural Heritage Management Plan.

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

16. Energy, wastes & greenhouse gas emissions

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

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

Please add any relevant additional information.

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

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

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

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

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

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

17. Other environmental issues

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

☒ No Yes If yes, briefly describe.

18. Environmental management

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

- ☒ Siting: Please describe briefly
- ☒ Design: Please describe briefly
- ☒ Environmental management: Please describe briefly.
- ☒ Other: Please describe briefly

Add any relevant additional information.

A Construction Environmental Management Plan will be prepared for the safe harbour works addressing:

- Environmental performance standards and management measures for each environmental issue or impact;
- How statutory requirements, standards, guidelines and environmental

commitments will be complied with;

- The environmental monitoring program for the construction and operational phases, including in relation to water quality, sand management and marine mammals;
- Impacts of the options on existing uses and users during development; and
- Assignment of responsibilities for the implementation, monitoring and compliance with any Coastal Management Act consent conditions or other environmental controls.

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.

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.

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 community and stakeholders were extensively engaged throughout the preparation of the Portarlington Harbour Masterplan through regular community bulletins, community workshops, focus group meetings, a community information day and one-on-one discussions.

A report summarising the feedback received during exhibition of the draft Masterplan in 2008 can be provided upon request.

Has a program for future consultation been developed?

☒ NYD No Yes If yes, briefly describe.

Park Victoria will prepare a Communications Program for Stage 1 Portarlington Safe Harbour project prior to commencement of works. This is Parks Victoria's standard practice for works it undertakes in sensitive environments. A Steering Group has been established to oversee the implementation of the Portarlington Safe Harbour project.

Authorised person for proponent:

I, David Ritman, Acting Manager, Local Ports and Waterway Planning, confirm that the information contained in this form is, to my knowledge, true and not misleading.

Signature _____

Date 03 September 2015

Person who prepared this referral:

I, Mandy Elliott, Director, EnviroME Pty Ltd, confirm that the information contained in this form is, to my knowledge, true and not misleading.

Signature

Date 03 September 2015

List of Figures

Figure 1: Site Location
Figure 2: Concept Plan
Figure 3: Extent of Dredge Works

List of Attachments

Attachment 1: Portarlington Harbour Masterplan
Attachment 2: Bellarine Safe Harbour: Baseline Assessment – Summary Report (Maunsell, 2007)
Attachment 3: Portarlington Safe Harbour Project – Marine ecosystem conditions and effects screening assessment, (CEE Pty Ltd, Aug 2015)
Attachment 4: Portarlington Safe Harbour: Masterplan, Technical Studies and Economic Feasibility Study – Gap Studies Report (Meinhardt, 2008)
Attachment 5: Portarlington Harbour Water Quality Modelling (Water Technology, 2015)
Attachment 6: Portarlington Safe Harbour Coastal Processes Investigation (Maunsell, Feb 2007)