ETHOS URBAN

AGL Gas Import Jetty Project

Landscape and Visual Impact Assessment

Crib Point

Submitted to: Jacobs Group (Australia) Pty Limited

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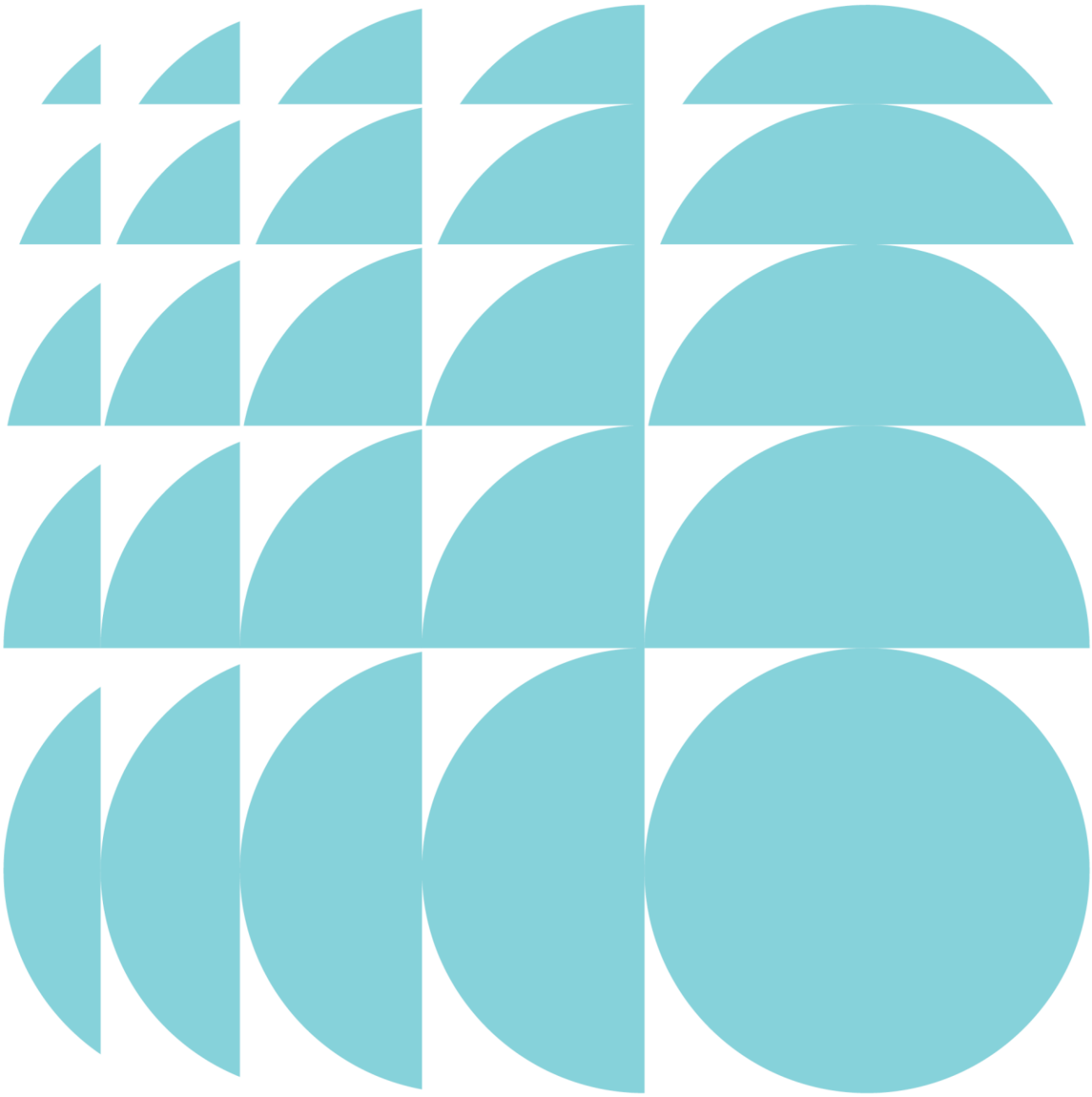
Final v3



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AGL Gas Import Jetty Project

Landscape and Visual Impact Assessment

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1.0 Executive Summary

1.1 Overview

AGL Wholesale Gas Limited (**AGL**) is proposing to develop a Liquefied Natural Gas (**LNG**) import facility, utilising a Floating Storage and Regasification Unit (**FSRU**) to be located at Crib Point on Victoria's Mornington Peninsula. The project, known as the "AGL Gas Import Jetty Project" (the Project) comprises:

- The continuous mooring of a FSRU at the existing Crib Point Jetty, which will receive LNG carriers of approximately 300 m in length
- The construction of ancillary topside jetty infrastructure (Jetty Infrastructure), including high pressure gas unloading arms and a high pressure gas flowline mounted to the jetty and connecting to a flange on the landside component to allow connection to the Crib Point Pakenham Pipeline Project (Pipeline Project).

There are several other activities that are related to the Project, including the Jetty Upgrade and the Crib Point Pakenham Gas Pipeline Project (Pipeline Project)which are the subject of separate assessment and approval processes carried out by separate entities.

The Crib Point Jetty in Victoria has been selected as the preferred location for the Project, building upon the existing maritime infrastructure already in place in an established, operating port.

This Landscape and Visual Impact Assessment (LVIA) assesses all components of the Project, including the operational activity of visiting LNG Carriers. The LVIA also assesses the Pipeline Project's "End of line facilities" (or onshore infrastructure) and the Jetty Upgrade, as the landscape and visual impacts need to be considered cumulatively. This assessment forms part of the larger planning and environmental assessments for the AGL Gas Import Jetty Project.

In this LVIA, "Project Site" includes the FSRU, visiting LNG carriers and onshore infrastructure. The "Study Area" covers a broader surrounding area around the Project Site (refer Figure 2). The Project and onshore infrastructure when assessed together for the LVIA are referred to as the "Combined Project".

This LVIA is premised on a number of assumptions that were required to be made at the outset of the assessment, as detailed below:

- The exact dimensions of the FSRU and LNG Carriers (length and width) will not be known until procurement tenders are complete. Therefore, standard height and general bulk and scale were benchmarked based on figures within Table 6: FSRU

and LNG Carrier Dimensions in the *Basis of Design* report dated 11 August 2017 provided by AGL. This table identifies the common appearance of other vessels with the same or similar size and purpose based on a sample of 80,000 deadweight tonnage trading vessel dimensions. These have been rounded up so the figures in this report are based on "not to exceed" calculations. The figures used to model the FSRU and LNG Carrier are as follows:

  - Overall length LOA 295m
  - Beam 46.4m
  - Moulded depth 26.5m
  - Laden tropical draft 12.6m;

- An area was delineated where the onshore infrastructure would be located, but the dimensions and layout of the onshore infrastructure will not be finalised until detailed design is completed as a subsequent step. Therefore the delineated area provided was assumed to be completely developed up to a height of 8 metres, so as to demonstrate a worst-case-scenario in terms of the bulk and scale of any onshore infrastructure.

1.2 Purpose of Report

This LVIA establishes a baseline understanding of the Project Site and Study Area within a strategic policy context. Sensitive landscape receptors and visually sensitive receptors were then identified within this context and assessed under the assessment framework consistent with the *Guidelines for Landscape and Visual Impact Assessment* (LI & IEMA 2013). This LVIA assesses the effects and subsequent impacts of the Combined Project on each of the identified receptors. The significance of these impacts could then be determined, accompanied by any recommendations to mitigate the potential impacts.

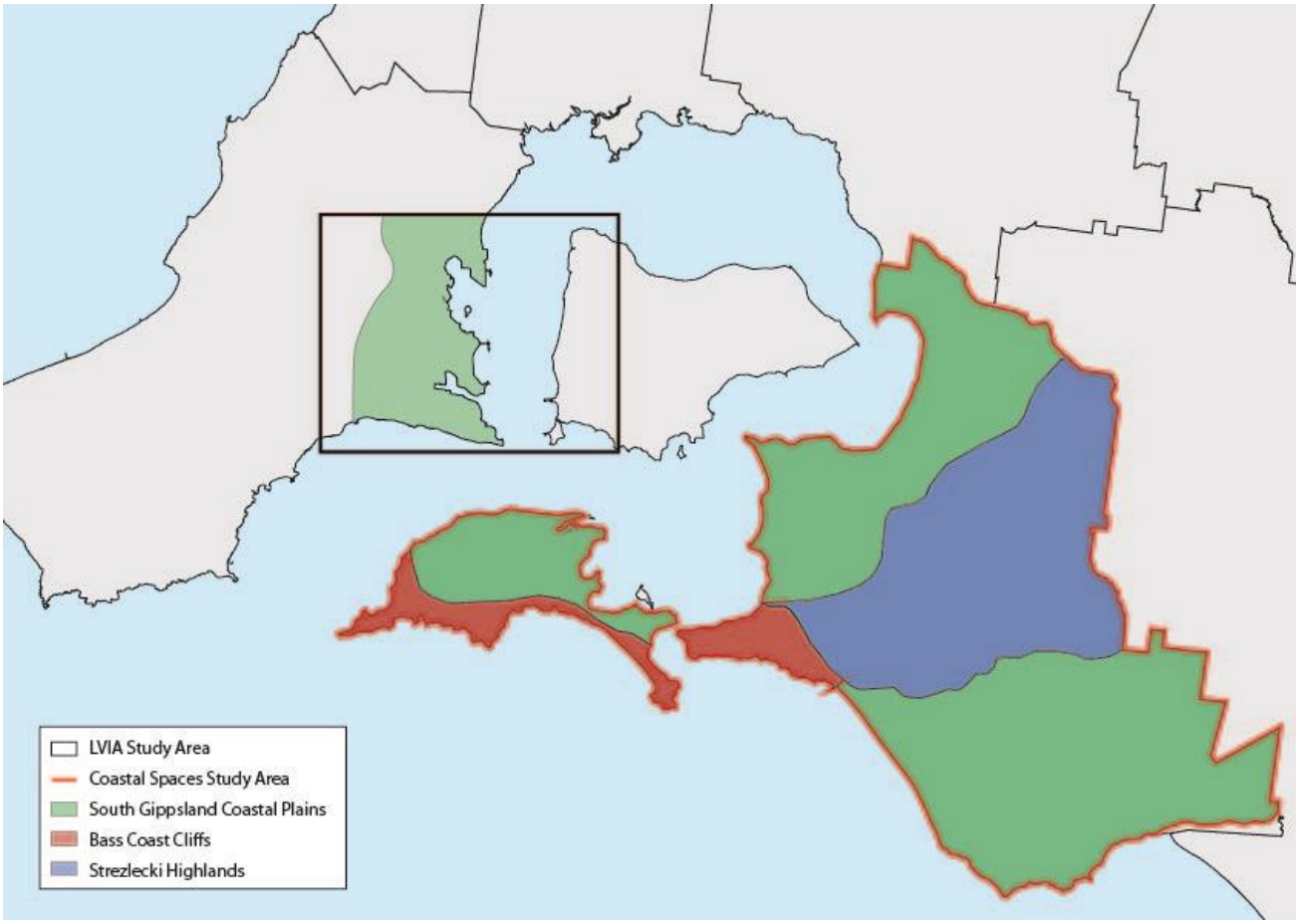


Figure 1: Overview of LVIA Study Area with Reference to Coastal Spaces Landscape Assessment Study (Ethos Urban, 2017)

1.3 Landscape Analysis & Assessment

Prevailing landscape characters were identified as sensitive receptors and assessed under the Landscape Impact Assessment (LIA) framework. The significance of the impact to these receptors was Low to Moderate.

1.4 Visual Analysis & Assessment

Visually sensitive receptors were identified and representative, specific and illustrative viewpoints were selected from within receptors and assessed against the Visual Impact Assessment (VIA) framework. The significance of the impact to these receptors was predominantly Low (six locations) with three locations considered Moderate, and one Moderate to High.

1.5 Conclusion & Recommendations

The Combined Project's impact on the landscape receptors is considered to be of Low to Moderate significance, and the impact on the majority of visual receptors is

considered to be of Low significance, with a maximum significance of Moderate to High.

The Project Site is surrounded by a flat, well vegetated landscape offering very few vantage points of the Project Site. The majority of sensitive receptors are located relatively far from the Combined Project, or are screened at least partially by vegetation.

The FRSU is capable of sailing away at the end of the Project and therefore its landscape and visual impact can be readily reversed. The "End of line Facilities" can be decommissioned, removed and the area rehabilitated.

The Crib Point Jetty is one of three port facilities under the control of the Port of Hastings Development Authority with industrial scale marine facilities already being a well-established feature of the area.

Receptors with an unimpeded view of the Combined Project generally also have a clear view of the existing port infrastructure at Crib Point. This, and the nature of Crib Point as an existing operational marine facility, provides sound context for the further development of maritime industry activities and is consistent with the general landscape character of the developed headlands.

Recommendations include that the finish and colour of the Combined Project be muted in tone and non-reflective, and comprise a colour scheme that complements existing infrastructure and other marine vessels that frequent Western Port and the existing jetty, so as to maintain the existing landscape character of the area and minimise the overall impact of the Combined Project. While assessed as part of this LVIA, recommendations in relation to the Crib Point Jetty, in addition to the "End of line Facilities" that will form part of the Pipeline Project, are subject to separate assessment and approval processes carried out by a separate entity.

2.0 Introduction

2.1 Project overview

AGL is proposing to develop a LNG import facility, utilising a FSRU to be located at Crib Point on Victoria's Mornington Peninsula. The Project comprises:

- The continuous mooring of a FSRU at the existing Crib Point Jetty, which will receive LNG carriers of approximately 300 m in length
- The construction of ancillary Jetty Infrastructure, including high pressure gas unloading arms and a high pressure gas flowline mounted to the jetty and connecting to a flange on the landside component to allow connection to the Pipeline Project.

There are several other activities that are related to the Project, including the Jetty Upgrade and the Pipeline Project which are the subject of separate assessment and approval processes carried out by separate entities.

Crib Point in Victoria has been selected as the preferred site for the Project building upon the existing maritime infrastructure already in place in an established and operating port. The FSRU will:

- Receive LNG cargoes from visiting LNG Carriers (only one LNG Carrier would be moored alongside the FSRU at any one time),
- Store the LNG, and
- Regasify LNG in order to supply high pressure pipeline gas to the market.

As a receiving location, Crib Point offers:

- An existing operational deep-water port in a sheltered bay,
- An existing under-utilized jetty of suitable size to be remediated to accommodate the FSRU at a dedicated berth,
- Connection to the existing high pressure gas transmission grid via the Pipeline Project.

This LVIA assesses all components of the Project, including the operational activity of visiting LNG Carriers. The LVIA also incorporates the Pipeline Project's "End of line Facilities" situated on approximately 1.5Ha area adjacent to the Crib Point Jetty includes metering, pressure let down, pig traps, and odourisation, quality analysis, and emergency shut down facilities and the Jetty Upgrade as the landscape and visual impacts need to be considered cumulatively. This assessment forms part of the larger environmental assessments for the Project.

2.2 Project Site and Study Area

The Project is to be located at the Crib Point Jetty in Western Port, 65 km south-east of Melbourne (Victoria) on the Mornington Peninsula. The Project Site is situated on the Western Port coastline within and adjacent to the Shire of Mornington Peninsula and on land managed by the Port of Hastings Development Authority (allotment 2040, The Esplanade, Crib Point). For the purposes of this study the Project Site includes the FSRU moored at the Crib Point Jetty, as well as the "End of line facilities" (or onshore infrastructure) located at the head of the jetty, as depicted in Figure 2.

The Study Area for the purposes of this LVIA includes analysis of the broader surrounding area around the Project Site as shown in Figure 2, as key landscape features and receptors outside of this Study Area may also be impacted by development within the Study Area boundary.

Figure 2: Study Area and Project Site

Figure 3: Site Context Plan (source: Advisian – modified)

The existing concrete jetty at Crib Point was constructed in the 1960's to support a refinery operated by BP. The refinery was closed in 1986 and the southernmost berth (Berth 2) at the jetty was decommissioned.

The northernmost berth (Berth 1) at the Crib Point jetty remains in operation for the import of liquid fuel by United Petroleum Australia (United), which operates the Berth 1 jetty head under a license from the Port of Hastings Development Authority (Port Authority).

In collaboration with the Port Authority, the pilots, the harbourmaster and the Victorian Regional Channels Authority, AGL has selected Berth 2 at Crib Point as the berthing location for the FSRU (Figure 3). Arriving LNG Carriers will berth into the ebb tide facing north, with Cargo transfer via the port side, and will depart via a deep-water swing basin.

Figure 4: Storage Tanks Associated with the Former Refinery (source: Jacobs)

Figure 5: Pipeline Heading West from the Existing Crib Point Jetty (source: Jacobs)

Figure 6: Support Buildings Associated with the Existing Crib Point Jetty (source: Jacobs)

2.3 Purpose of Report

The purpose of this report is to provide a LVIA and in doing so, determine the significance of the Combined Project's potential impacts upon visual receptors and landscape character in the broader surrounding area, and suggest potential mitigation measures in respect of the Project for any potential impacts. For the purposes of this assessment, the significance of impacts has been determined by considering the sensitivity of the landscape or visual receptor and the magnitude of change expected as a result of the development.

2.4 Scope

The scope for this report comprises a Desktop Study and a Detailed Study.

2.4.1 Desktop Study

The desktop study was used to identify relevant policy and legislation relating to the landscape and visual character and existing visual and landscape conditions for the Study Area. Key tasks included:

- Background Preparation
  - Draft methodology
  - Receive and collate spatial data
  - Review strategic / policy background
- Landscape and Visual Mapping
  - Mapping of landscape layers and key features
  - Identification of landscape significance / potential threats
  - Identification of views and potential receptor locations
  - Viewshed analysis
  - Identification of potential visual impacts
  - Confirm priority receptor locations

2.4.2 Detailed Study

The Detailed Study ground-truths the findings of the Desktop Study, and assesses the Combined Project's potential impacts upon visual receptors and landscape character in the Study Area, suggesting potential mitigation measures for any potential impacts.

- Site Survey
  - Ground-truthing and confirming landscape and visual character findings of Desktop Study
  - Confirming receptor locations for montages
  - Photography for montages

- Montage Preparation
  - Receive and collate 3d modelling / data
  - Preparation of montages (10 locations max)
- Assessment of Landscape and Visual Impact & Drafting of Detailed Study Report
  - Assessment of landscape impacts
  - Assessment of visual impacts
  - Assessment of significance of effects/impacts
  - Recommendations

2.5 Limitations & Assumptions

This LVIA is limited in its exactitude by a number of assumptions that were required to be made at the outset of the assessment, as detailed below:

- The exact dimensions of the FSRU and LNG Carriers (length and width) will not be known until procurement tenders are complete. Therefore, standard height and general bulk and scale were benchmarked based on figures within Table 6: FSRU and LNG Carrier Dimensions in the *Basis of Design* report dated 11 August 2017 provided by AGL. This table identifies the common appearance of other vessels with the same or similar size and purpose based on a sample of 80,000 deadweight tonnage trading vessel dimensions. These have been rounded up so the figures in this report are based on "not to exceed" calculations. The figures used to model the FSRU and LNG Carrier are as follows:
  - Overall length LOA 295m
  - Beam 46.4m
  - Moulded depth 26.5m
  - Laden tropical draft 12.6m
- An area was delineated where the onshore infrastructure would be located, but the dimensions and layout of the onshore infrastructure will not be finalised until detailed design is completed as a subsequent step. Therefore the delineated area provided was assumed to be completely developed up to a height of 8 metres, so as to demonstrate a worst-case-scenario in terms of the bulk and scale of any onshore infrastructure.
- The scope of this study only considers daylight hours, and does not consider lighting as a lighting design is not yet available for the Project. Nevertheless, lighting concerns are acknowledged and recommendations to minimise lighting impacts are included;

- Consideration of the visual impact from both the FSRU and an LNG Carrier present at the Project Site was assessed as the worst-case-scenario in terms of the bulk and scale of these vessels.
- Apart from the Pipeline Project's "End of line facilities", this LVIA does not assess the proposed gas pipeline which will be considered separately under the Pipeline Project. The FSRU will be connected to shore facilities by a topsides pipeline installed on the existing pipe rack at the Crib Point Jetty (Jetty Infrastructure). This pipe will be similar to pipelines already installed on the pipe rack and will have no additional visual impacts.

Additional specific limitations and assumptions were made throughout the various stages of assessment which are referred to in the relevant sections of this report.

3.0 Methodology

The methodology is derived from, and consistent with, the *Guidelines for Landscape and Visual Impact Assessment* (LI & IEMA 2013). There is no guidance on the assessment of landscape and visual impacts specific to Australia, however the *Guidelines* are an accepted professional guidance document in this country.

3.1 Existing Conditions and Context

3.1.1 Background Information

The desktop study reviews relevant background information, including:

- Relevant legislation, policy and strategic documents
- Geographical information systems data sourced from Vic DataMart
- Additional relevant mapping and aerial photography

3.1.2 Landscape Character Analysis

From the above sources landscape analysis plans were produced to map the following layers of the landscape in the broader Study Area:

- Geology, geomorphology and topography
- Hydrology and flooding patterns
- Vegetation cover and type
- Open space and recreational networks
- Historical and cultural features
- Community and tourist facilities.

Analysis of these layers identified the landscape Character Type of the Study Area; the broad area of common physical, environmental and cultural characteristics at a regional scale. A professional assessment of landscape character underpinned this part of the study, focussing on objective distinctions between character types, and the relationship between landscape Character Types and their constituent Character Areas. The landscape character analysis of this report refers to the *Coastal Spaces Landscape Assessment Study* (Planisphere, 2006) to determine the site's landscape Character Type.

At a local scale, the Character Type has been divided into landscape Character Areas, which are separate geographical units within the same Character Type, or areas across which local conditions such as the density of settlement, pattern of viewing, or

special landscape features vary. Landscape Character Types are designated a rating in terms of State, Regional or Local significance. Again, the landscape character analysis of this report refers to the *Coastal Spaces Landscape Assessment Study* to determine the site's landscape Character Area and its significance. In addition to the designation of the broader landscape Character Areas' significance, consideration of the Project Site's key characteristics contributed to an identification of the Study Area's landscape value (high, medium or low). These key characteristics include landscape features and notable aesthetic, perceptual or experiential qualities.

Each landscape character area was assigned a level of sensitivity according to the matrix outlined in Table 1 below. The sensitivity of the landscape considered the landscape value (discussed above) against the Susceptibility to Change, which is an assessment of the capacity for the landscape to accommodate change. This is a professional judgement based on analysis of the environmental and physical characteristics of the Character Area, and the types of change or development that could generally be expected to occur. Sensitivity is rated as high, moderate or low. For example, landscapes less sensitive to a residential form of development might include those in which buildings can be sited amongst vegetation, or nestled into topography without being prominent in the viewed landscape. The level of existing alteration to the landscape is also a factor for consideration.

Table 1: Sensitivity of Landscape

		Susceptibility to Change		
		High	**Moderate**	**Low**
Landscape Value	**High**	High	High	Medium
	Medium	High	Medium	Low
	Low	Medium	Low	Low

To determine the capacity for the landscape to accommodate change, the study first identified the types of change or development that could generally be expected to occur within each landscape Character Area. The estimated changes were considered against the capacity of the landscape to accommodate the threats to determine the landscape's susceptibility to change. The capacity for the landscape to accommodate

change considers the likelihood of topography or vegetation to screen change from representative viewpoints, and the variety of land cover / land uses in the area. For example, flat landscapes with minimal vegetation and a uniform land use/cover (i.e., pasture) have a low capacity to accommodate change.

3.1.3 Visual Character Analysis

The visual character of the Study Area was identified through the background literature review and ground-truthing at the Project Site. Potential places of visual significance in terms of natural, cultural or scenic value were identified and described in terms of the nature and frequency of views from that location.

Zone of theoretical visibility (ZTV) mapping identified land that, theoretically, is susceptible to the visual effects of the Combined Project. A site survey was conducted in August of 2017 to ground-truth the extent of this mapping. Within the area of visibility, clusters of people or places that will be visually affected by the changes were identified as 'visual receptors'. Visual receptors can include people who live or work in the area, people travelling through or by, people visiting promoted landscapes or attractions, and people engaged in recreation of various types.

The site survey was conducted on 11 September 2017 to ground truth the findings of the desktop study, collect photographic records that portray the existing landscape character, inform the viewpoint selection and assessment of viewpoints, and provide data to produce photomontages. Landscape and visual receptor sensitivity was the primary factor in determining which areas of the Study Areas were targeted for field results, with highly sensitive landscapes and visual receptors being the focus.

The viewpoints associated with each visual receptor were identified and categorised in terms of whether they are representative of a number of similar views (representative), specific viewpoints at key or promoted viewing locations (specific), or viewpoints that will demonstrate a particular effect or issue relating to the Combined Project (illustrative).

Each viewpoint was then assessed in terms of their sensitivity, with the following considered to identify the high, medium and low sensitivity receptors:

- Number of people likely to be affected
- Social and cultural value of receptor
- Visual characteristics of the existing views (nature of view, composition, foci and scale).

3.2 Significance Assessment

The outcomes of the landscape and visual analysis described in the preceding section were then brought together with the modelled effects of the Combined Project (described below) to predict the landscape and visual impact of the Combined Project.

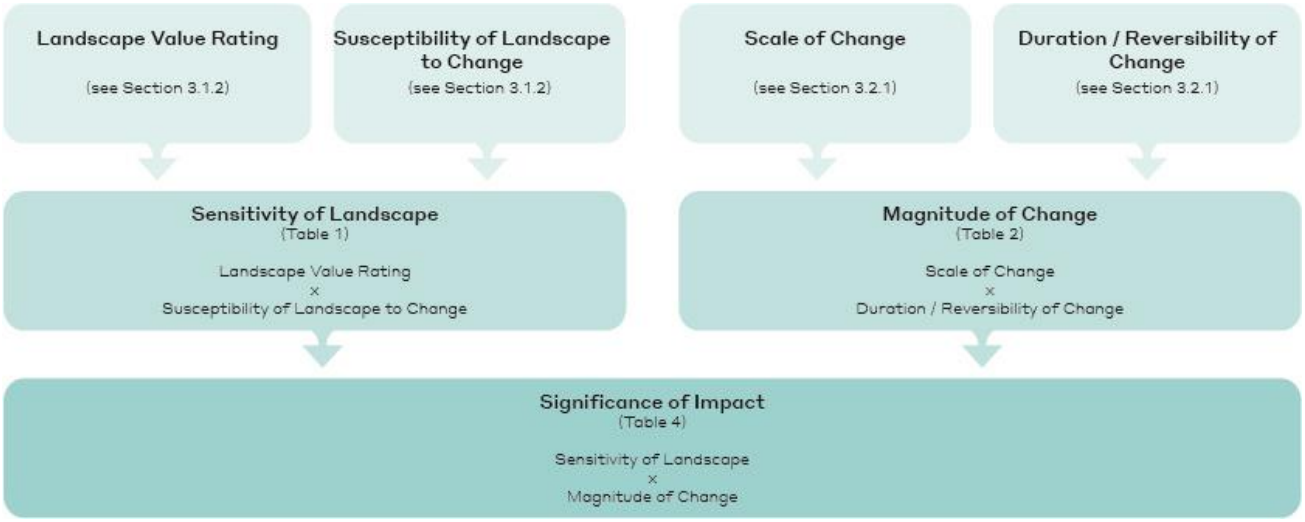


Figure 7: Landscape Impact Methodology Flowchart

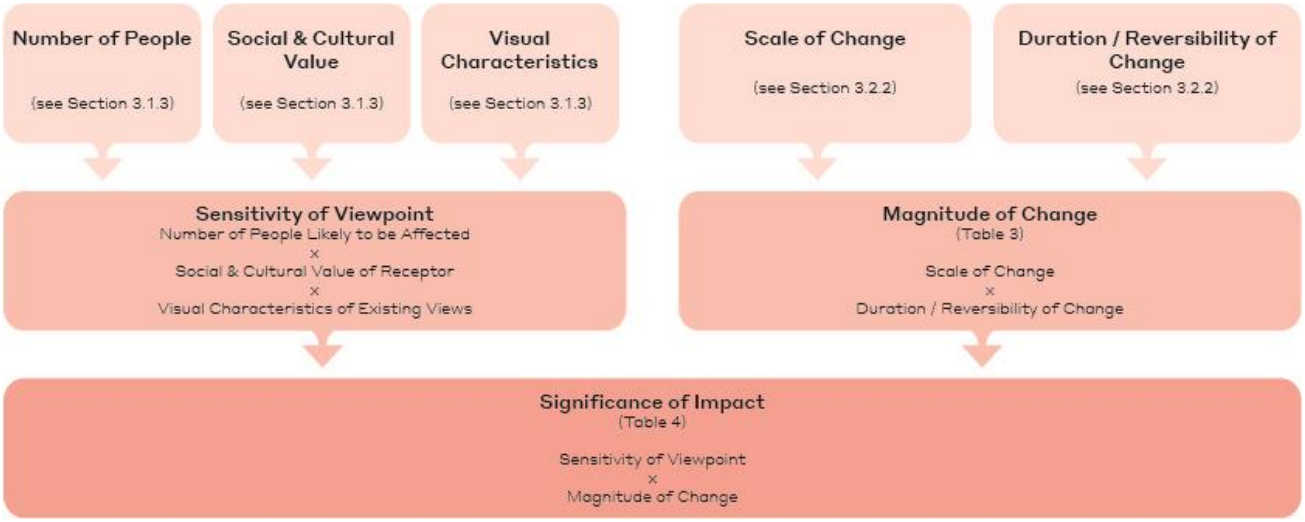


Figure 8: Visual Impact Methodology Flowchart

3.2.1 Identification of Landscape Effects

The estimated effects were described, and where relevant represented through the production of montages from sensitive visual receptor viewpoints or from illustrative viewpoints to demonstrate a particular effect.

The effect's magnitude of change on the landscape was assessed in terms of scale of change, the geographical extent of area influenced, and the duration and reversibility of the change. The scale of the change describes the scale of the change: (major, moderate, minor, or insignificant) as outlined in Table 2. Additionally, scale considered whether the impact affects a wide or restricted geographical area:

- The extent of loss or modification of landscape elements
- The degree to which the loss or modification alters the visual and perceptual qualities of the landscape.

The duration of the change considers whether the change is persistent or has a limited life span, and the reversibility considers the practicality of removing the effect.

The magnitude of change is determined by assessing the scale of change against the duration and/or reversibility of the change as detailed in Table 2:

Table 2: Magnitude of Change – Landscape Effects

		Duration and/or Reversibility of Change			
		An ongoing and irreversible change	An ongoing change that is able to be reversed	A change with a limited life of 5-10 years	A change with a limited life of less than 5 years
Scale of Change	A major change affecting a wide area	Dominant	Considerable	Considerable	Noticeable
	A major change over a restricted area, or A moderate change over a wide area	Considerable	Considerable	Noticeable	Noticeable
	A moderate change over a restricted area, or A minor change over a wide area	Considerable	Noticeable	Noticeable	Imperceptible
	A minor change over a restricted area, or An insignificant change	Noticeable	Imperceptible	Imperceptible	Imperceptible
	An imperceptible change	Imperceptible	Imperceptible	Imperceptible	Imperceptible

3.2.2 Identification of Visual Effects

Visual receptor viewpoints were used to identify areas from which the Combined Project would be visible. Receptors or individual viewpoints where there was no view of the Combined Project did not warrant further assessment and were discounted as having no impact. Only visual receptor viewpoints that were expected to have at least partial views of the Combined Project were assessed through consideration of their

visual character and in some instances the production of photomontages to ascertain the visual impact.

3.2.3 Photomontages

For visual receptors, the likely effects were described and represented through the production of montages from sensitive visual receptor viewpoints or from illustrative viewpoints to demonstrate a particular effect.

There were a number of programs/software, files and information sourced that were used in the preparation of the photo montages. Due to limited reliable data and information provided, there were multiple limitations and assumptions that were necessary to make during the photo montage process.

GIS layers attained from the VicDataMart website were translated into AutoCad files and georeferenced into Rhinoceros 3D. This included the following layers, contours (2.5m contour interval), Crib Point Jetty, georeferenced viewpoints (sites of photos) and georeferenced existing 'markers' (2-3 per montage/viewpoint). Layers without elevation data were assigned an elevation, which due to lack available data, was estimated as necessary.

The software used in producing the montages include, Geographic Information Systems-MapInfo 16.0, AutoCad 2016, Rhinoceros 3D 5.0 Commercial and Adobe Photoshop CC 2014. Google Earth maps and the site survey conducted on Monday 11th September 2017, also contributed to locating viewpoints and obtaining site photographs for which the 3D model was superimposed.

The photographs obtained during the site survey were taken using a Panasonic Lumix DMC-TZ60 which was set to a lens length of 36.0 with all photos captured at approximately eye level (1.6m approx.) and the GPS function switched on.

GIS layers attained from the VicDataMart website were translated into AutoCad files and georeferenced into Rhinoceros 3D. This included the following layers, contours (1-10m), Crib Point Jetty, georeferenced viewpoints (sites of photos) and georeferenced existing 'markers' (2-3 per montage/viewpoint). These layers were then all given an elevation, which due to lack available data, was estimated as necessary.

The 3D model was constructed using Rhinoceros 3D (Rhino). The elements that were built three-dimensionally are two carrier vessels (a FSRU and a LNG carrier vessel), the existing jetty, and a 'worst-case' scenario building envelope of the onshore infrastructure and Jetty Upgrade.

All viewpoints were georeferenced into Rhino and given an estimated elevation due to only having 1-10m contour information. An additional 1.6m was added to the elevation of each viewpoint to account for the photographs taken at approximately eye level.

Two to three existing markers were chosen and approximately georeferenced in MapInfo and then imported into Rhino and assigned an approximate elevation and height. These markers include identifiers such as; existing fences, residential properties, the jetty itself, appropriate vegetation (i.e., single trees) and other built forms. Building these markers ensures that the montages are geographically correct through the process of triangulation.

Cameras were placed within Rhino and set to a lens length of 36.0 to mimic the site survey photographs. The cameras were placed atop the georeferenced viewpoints (plus 1.6m) and a render produced. The onshore infrastructure (resembling a shed, as discussed above) and vessels were rendered using a nondescript white/grey reflective colour to illustrate their approximate visual impact on the surrounding environment, however information regarding the true aesthetics of the onshore infrastructure and vessels was not provided.

The renders were then saved with the same pixel height and width as the site photos and superimposed onto the photos using Photoshop. Each photo montage was assessed, and the render cropped where necessary, to ensure any vegetation or built form in the foreground of the image is achieved and therefore an accurate representation of the visual impact.

All photomontages are as true as possible, however due to many limitations and lack of information provided, the margin of error is increased.

General Assumptions and Limitations within the preparation of the photomontages include;

- Contour information/elevation between 10m contours
- Site survey photographs captured at1.6m eye level
- Margin of error within GPS settings of camera used on site
- Elevation of viewpoints
- Position/elevation/height of markers
- Dimensions and appearance of vessels and onshore infrastructure

3.2.4 Magnitude of Change – Visual Effects

The effect's magnitude of change on the viewpoint was assessed in terms of its size or scale of change, the geographical extent of area influenced, and the duration and reversibility of the change. The size or scale of the change describes the scale of the change (major, moderate, minor, or insignificant) considering the following, as well as whether it affects a wide or restricted geographical area within the view:

- The scale of loss or new features within the view
- The degree to which the loss or modification alters the compositional qualities of the view
- The nature of the view (i.e. extended view, filtered, glimpse).

The duration of the change considers whether the change is persistent or has a limited life span, and the reversibility considers the practicality of removing the effect.

The magnitude of change is determined by assessing the scale of change against the duration and/or reversibility of the change as detailed in Table 3:

Table 3: Magnitude of Change - Visual Effects

		Duration and/or Reversibility of Change			
		An ongoing and irreversible change	An ongoing change that is able to be reversed	A change with a limited life of 5-10 years	A change with a limited life of less than 5 years
Scale of Change	A major change to an extended area of view	Dominant	Considerable	Considerable	Noticeable
	A major change to a restricted or brief area of view, or A moderate change to an extended area of view	Considerable	Considerable	Noticeable	Noticeable
	A moderate change to a restricted or brief area of view, or A minor change to an extended area of view	Considerable	Noticeable	Noticeable	Imperceptible
	A minor change to a restricted or brief area of view, or An insignificant change	Noticeable	Imperceptible	Imperceptible	Imperceptible
	An imperceptible change	Imperceptible	Imperceptible	Imperceptible	Imperceptible

3.2.5 Significance of Impact

The magnitude of change caused by the likely effects were then assessed against the sensitivity of the setting within which they are proposed to take pace, to determine the significance of the impact caused. This assessment was completed for both the landscape effects and visual effects, as per Table 4:

Table 4: Significance of Landscape/Visual Impacts

		Magnitude of Change			
		Dominant Change	**Considerable Change**	**Noticeable Change**	**Imperceptible Change**
Landscape / Viewpoint Sensitivity	**High**	Major	High	Moderate	Negligible
	Medium	High	Moderate	Low	Negligible
	Low	Moderate	Low	Low	Negligible
	Negligible	Low	Low	Negligible	Negligible

4.0 Legislation and Policy

A review of the broader statutory framework and existing studies relating to landscape and visual qualities has informed the identification of the landscape and visual values of the Study Area.

4.1 Commonwealth Legislation

No Commonwealth legislation is specifically relevant to the LVIA, however, Commonwealth legislation relating to environmental law relates to landscape.

4.1.1 Environment Effects Act 1978

The *Environment Effects Act 1978* provides a legal framework for the assessment of proposed projects that are capable of having a significant effect on the environment. This Act enables the Minister administering the Act to decide whether an Environment Effects Statement (EES) is required.

The general objective of the EES process is to "*provide for the transparent, integrated and timely assessment of the environmental effects of projects capable of having significant effect on the environment*". Any project with potential adverse environmental effects that could be significant in a regional or State context should be referred.

The *Ministerial Guidelines for Assessment of Environmental Effects under the Environment Effects Act 1978* ("Ministerial Guidelines") includes referral criteria focused on the potential for a significant effect on the environment. The criteria for referral relevant to this LVIA are outlined in Table 5 below. For the reasons outlined in Table 5 it is considered that the Combined Project does not trigger the requirement for referral in regards to landscape and visual effects.

Table 5: Landscape and visual referral criteria defined by the Ministerial Guidelines

Criteria	Response
Potential extensive or major effects on landscape values of regional importance, especially where recognised by a planning scheme overlay or within or adjoining land reserved under the *National Parks Act 1975*.	Although the Combined Project does possess a potential moderate level of impact, it is not considered to have extensive or major effects on important landscape values. Further discussion regarding landscape impacts are found in section 6.0 of this report.
Potential significant effects on the amenity of a substantial number of residents, due to extensive or major, long term changes in visual, noise and traffic conditions.	This LVIA has assessed the potential effects to the amenity of residents due to changes in visual conditions. The key residential locations within the Study Area with the potential to be visually affected by the Combined Project are

Criteria	Response
	Warranqite Crescent, Jack's Beach and Lorimer Street, representing approximately 25 houses. Each location was assessed as having a low visual significance. Further discussion of the visual impact of the Combined Project is found in Section 7 of this report. The long term changes in noise and traffic conditions are not considered as part of this report.

Source: Referral criteria from Department of Sustainability and Environment, 2006.

4.1.2 Environment Protection and Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation Act* 1999 (EPBC Act) provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places—defined in the Act as matters of national environmental significance.

Proposals which may potentially impact on a matter of national environmental significance must be referred to the Department of the Environment and Energy. This includes threatened flora and fauna species and vegetation communities. It also includes nominated wetlands of international importance (often called 'Ramsar' wetlands after the international treaty under which such wetlands are listed). Most of the coastline and wetlands of Western Port are part of a Ramsar site.

This report does not seek to determine or qualify the requirement for a referral to the Commonwealth Minister for the Environment and Energy under the EPBC Act.

4.2 State Legislation

No State legislation is specifically relevant to the LVIA. However, various environmental, heritage and planning legislation is relevant as places of significance under these acts can relate to landscape and visual values.

4.2.1 Victorian Heritage Act 1995 & Victorian Heritage Register and Inventory

The *Victorian Heritage Act* provides for the protection and conservation of places and objects of cultural heritage significance. Under the Act, places and objects of significance to the State of Victoria are included on the Victorian Heritage Register, which provides the highest level of statutory protection.

4.2.2 Planning and Environment Act 1987

The *Planning and Environment Act* establishes a framework for planning the use and development of land in Victoria. It sets broad objectives for planning in Victoria and the procedures for preparing and amending the Victorian Planning Provisions. The Project does not require planning approval under this Act, but the policies in the Mornington Peninsula Planning Scheme have been used to identify landscape and visual values in the Study Area.

4.3 State Planning Policy Framework

The State Planning Policy Framework (SPPF) includes several policies of relevance to the LVIA.

Clause 11 Settlement

At clause 11.01-1 the policy states that 'networks of high quality settlements must be achieved by preserving and protecting features of rural land and natural resources and features to enhance their contribution to settlements and landscapes'.

At clause 11.04-2 strategies to effectively manage open space include the protection of 'sites and features of high landscape value'.

Clause 12 Environmental and Landscape Values

Clause 12.04-2 contains strategies for the protection of significant open spaces include ensuring 'sensitive landscape areas such as the bay and coastlines are protected, and that new development does not detract from their natural quality'.

Clause 18 Transport

Clause 18.03-1 recognises the transport and logistics role of the Port of Hastings in supporting the State's economy, with the objective to facilitate its ongoing sustainable operations and development. It also aims to support the effective and competitive operation of the port at local, national and international levels.

The clause also contains strategies to manage any impacts of the port and any related industrial development on nearby sensitive uses to minimise the impact of vibration light spill, noise and air emissions from port activities, and also to plan for and manage land in the environs of the port so that development and use are compatible with port operations and provide reasonable amenity expectations.

4.4 Mornington Peninsula Planning Scheme

The Study Area is comprised of mostly coastline of the Mornington Peninsula. The following sections of the Mornington Peninsula Planning Scheme are relevant to the LVIA.

4.4.1 Municipal Strategic Statement

Clause 21.04 Mornington Peninsula Strategic Framework Plan

Recognises and protects landscape areas of strategic importance around townships, due to their strong influence on the Peninsula's sense of place.

Clause 21.08 Foreshores and Coastal Areas

Objective one of this clause is to 'protect and enhance the natural ecosystems and landscapes of the coast for the benefit and enjoyment of present and future generations'. Strategies listed to achieve this objective include limiting development of new structures along the foreshore, containing development in coastal locations to existing settlements and ensuring that new construction and development is designed based on a site and landscape analysis.

Clause 21.10 Managing Port Area Development

Objective 1 of this clause aims to protect the long term value of Western Port for selected port and industrial purposes that depend upon or gain significant economic advantage from proximity to natural deep water channels

Objective 2 of this clause aims to ensure that port related development does not adversely affect or compromise the ecosystems of Western Port. Of relevance, the clause outlines that this is to be achieved by regulating building design, siting and

landscaping so that any industrial development is visually integrated with the landscape.

4.4.2 Local Planning Policies

22.14 Mornington Peninsula Land Units

An objective of this policy is to 'promote the siting and design of buildings, including the choice of building materials that is responsive to landscape character'.

Under this clause, it is policy that areas and sites with significant landscape values be protected.

As part of the decision guidelines for Maintaining Landscape and Recreational Values, the impact of a new development on the landscape's quality and existing views must be considered.

4.4.3 Zones

The key zone provisions within the Study Area that relate to the Landscape and Visual Impact Assessment are those which may contain public areas or other land uses considered potentially sensitive receptors, shown on Figure 17 and as follows:

Public Use Zone (PUZ)

The PUZ aims to provide for uses that are consistent with the intent of the public land or reservation purpose.

PUZ7 allows for port uses via Clause 36.01-6.

Low Density Residential Zone (LDRZ)

Decision guidelines for subdivisions within the LDRZ suggest that 'the protection and enhancement of the natural environment and character of the area including the retention of vegetation and faunal habitat and the need to plant vegetation along waterways, gullies, ridgelines and property boundaries'.

Public Conservation and Resource Zone (PCRZ)

The aims of the PCRZ include the protection and conservation of the natural environment, and their processes, for their landscape values.

The PCRZ also aims to provide for appropriate resource based uses.

Public Park and Recreation Zone (PPRZ)

The PPRZ aims to recognise, protect and conserve significant areas where appropriate.

Green Wedge Zone (GWZ)

Aims of the GWZ include recognising and protecting green wedge land for landscape values and to protect and conserve the cultural-heritage significance of landscapes.

Decision guidelines within the GWZ suggest that proposed infrastructure services are sited and located in ways that minimise visual impact on the landscape.

4.4.4 Overlays

The key overlay provisions within the Study Area that relate to the Landscape and Visual Impact Assessment are those which aim to protect or enhance the visual amenity of natural and built environments that may potentially be considered sensitive receptors, shown on Figure 18 and as follows:

Heritage Overlay (HO)

The aim of the HO includes the conservation and enhancement of places of natural or cultural significance, and to ensure that development does not adversely affect the significance of these places.

Environmental Significance Overlay (ESO)

The ESO aims to identify areas of land where development may be constrained by environmental features, and to ensure that development is compatible with environmental values.

Significant Landscape Overlay (SLO)

The aim of the SLO is to identify any landscape considered to be significant, and to conserve and enhance the character of these landscapes.

Decision guidelines within the SLO suggest that buildings and works are designed to enhance or promote landscape character objectives within the area.

Vegetation Protection Overlay (VPO)

The aim of the VPO is to protect significant vegetation through the recognition of significant vegetation areas, along with encouraging the regeneration of native vegetation.

4.5 Other Strategies

4.5.1 Coastal Spaces Landscape Assessment Study (2006)

The *Coastal Spaces Landscape Assessment Study* assesses the landscape character and significance of all coastal areas of Victoria (excluding the metropolitan Local Government Areas) and provides management recommendations. It identifies coastal landscape character types and areas through the documentation of geographical features, landscape features and patterns of viewing.

The study documents the 'South Gippsland Coastal Plains' landscape character type within proximity to the Study Area and lists the Western Port Bay coastline as a significant landscape. More information is provided about the study findings as related to this report in section 6.1.2.

4.5.2 Western Port Ramsar Wetland Ecological Character Description

The *Western Port Ramsar Wetland Ecological Character Description* includes a detailed description of the ecological character of the Ramsar wetlands in Western Port, with an aim to protect and maintain wetland values. The document establishes benchmarks that assess and monitor the wetlands.

The document notes that shipping has the potential to impact wetland components through pollution or loss or fragmentation of wetland vegetation. These impacts could lead to subsequent impacts on the coastal landscape.

4.5.3 Victorian Coastal Strategy

The strategy is a long-term vision for the future of Victoria's coastlines. The document focuses on five distinct themes which include population growth, climate change, coastal land and infrastructure, environmental values and marine planning. Of relevance, the document notes that:

- Development between coastal settlements should ensure that visually significant landscapes and views are protected.
- Coastal landscapes provide aesthetic and psychological wellbeing benefits
- Natural landscapes help to shape and define settlements and communities
- New infrastructure developments should exhibit excellence in siting and design, such that it integrates with the coastal landscape & avoids detrimental environmental impacts.

4.5.4 Landscape Setting Types for the Victorian Coast 1998 and Design Guidelines for Structures on the Victorian Coast

Developed to assist in implementing the Victorian Coastal Strategy by encouraging sympathetic coastal development. It also aims to increase the understanding of landscape character of the coast through the identification of significant features and characteristics.

The guidelines recommend that development proposals should respect and respond to relevant landscape character, and that to minimise the visual impacts of projects assessment should be made on the capacity of the landscape to absorb change without creating visual impacts from prominent viewpoints.

4.5.5 Hastings South Coastal Management Plan

The plan identifies the significance of the coastal landscapes of the Mornington Peninsula and specifically provides strategic guidance for the use, development and management of the Hastings South Foreshore reserve.

The plan states that visual amenity can be improved with soft and hard landscape improvements. The document also identifies an objective for foreshore and coastal areas that aims to protect and enhance natural landscapes along the coast for the benefit of present and future generations.

Where economically beneficial developments are considered, the plan recommends that they are appropriately integrated with the coastal landscape.

4.5.6 Interim Green Wedge Management Plan

The plan sets out policy direction to continue the effective management of Mornington Peninsula's green wedge, and the protection of its many significant landscapes. The plan identifies that the Mornington Peninsula's green wedge area consists of local, state, national and international significance areas, along with landscapes that are classified by the National Trust as being highly significant.

A new direction identified as part of this management plan involves the foreshadowing of controls that will regulate the location of earthworks and other developments that may detract from landscape quality.

As part of the plan's vision, it notes that coastal landscapes should be a place for all people to access for their health and wellbeing.

4.5.7 Marine Precinct Strategy

This document identifies the coastline of the Mornington Peninsula as being a significant asset that is subject to many users and demands. The strategy recognises that there is a need to identify the role and function of the coastline, along with environmental capacity, to maintain and enhance these spaces.

4.5.8 Port of Hastings Land Use & Transport Strategy

This document utilises the concept of 'port precincts' and includes the Crib Point precinct. The strategy identifies that the Crib Point precinct should continue to focus on liquid bulk trades (such as the existing oil and petrol) and make use of the existing deep-water access berths and pipelines.

5.0 Existing Conditions

The existing conditions assessment is based upon desktop analysis and a site survey conducted in August and September of 2017.

5.1 Geology, Geomorphology and Topography

Landscape characteristics are informed and defined by physical features and evident transitions in geology, geomorphology and topography. The Study Area is located along the edge of Western Port. It is low-lying, semi-rural with patches of settlement and industry, has tall shrub-lands, mangroves, coastal wetlands, riparian vegetation and coastal woodlands.

The broader surrounding area, north of Bittern, of tertiary alluvium has been formed by the emergence of the sea floor during Pliocene and early Pleistocene times. The topography of the Study Area and its surrounds, as depicted on the map below, is very flat and low-lying, with the vast majority of the area around the Crib Point Jetty lying between elevations of 10 and 20m above sea level.

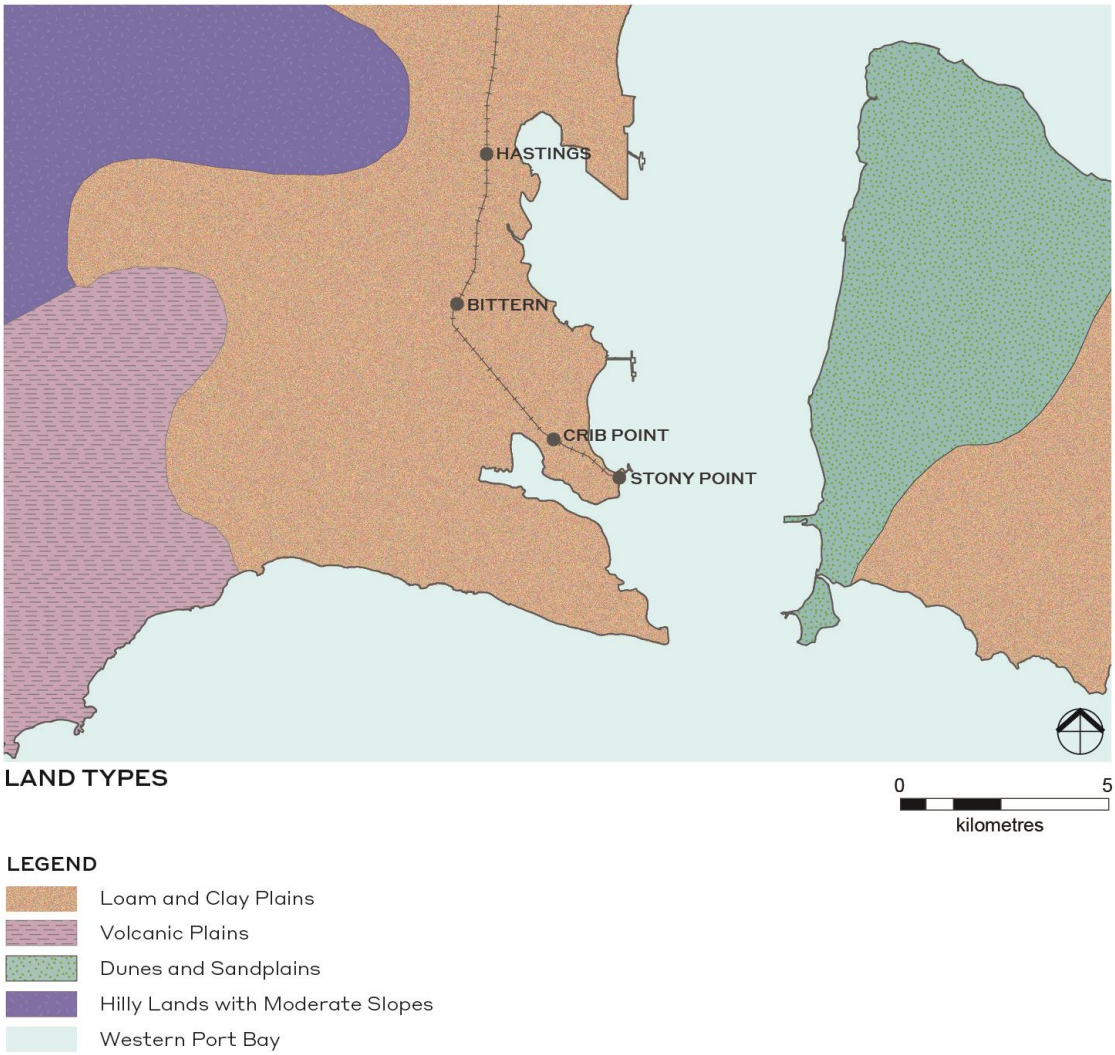


Figure 9: Land Types in the Study Area

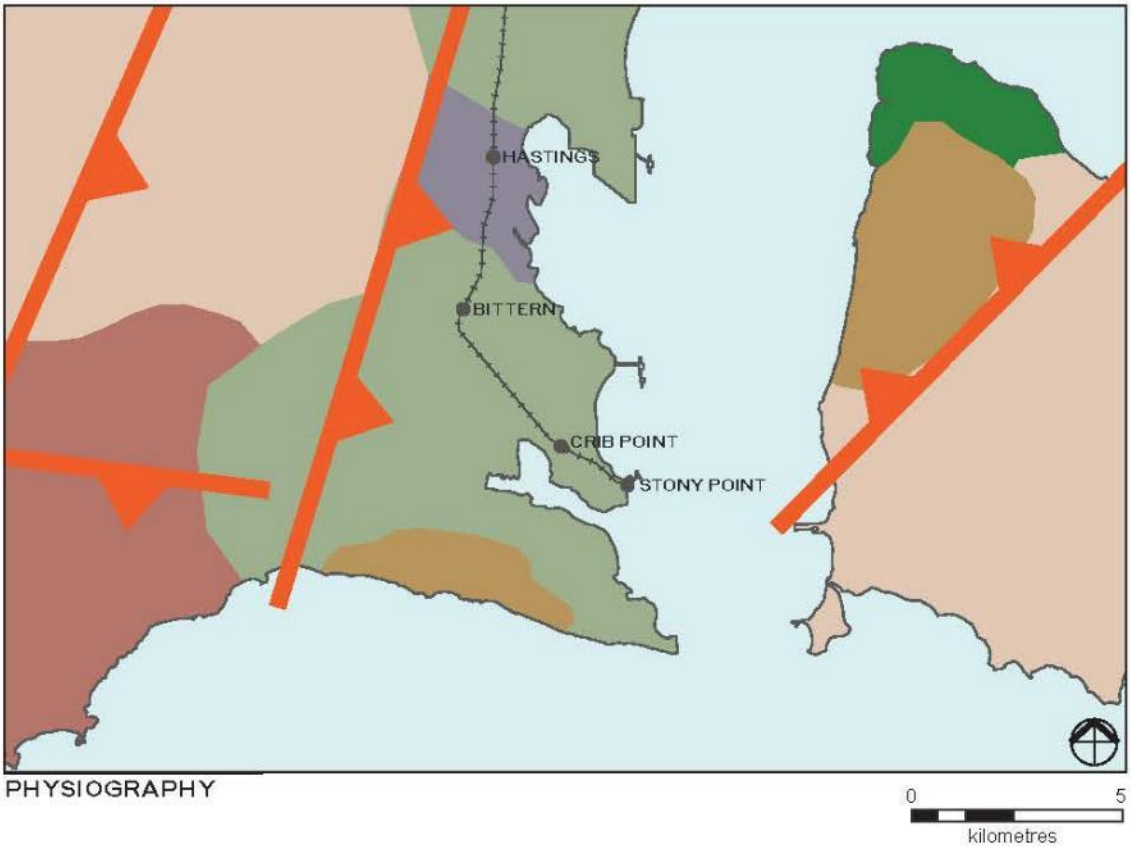


Figure 10: Physiography of the Study Area

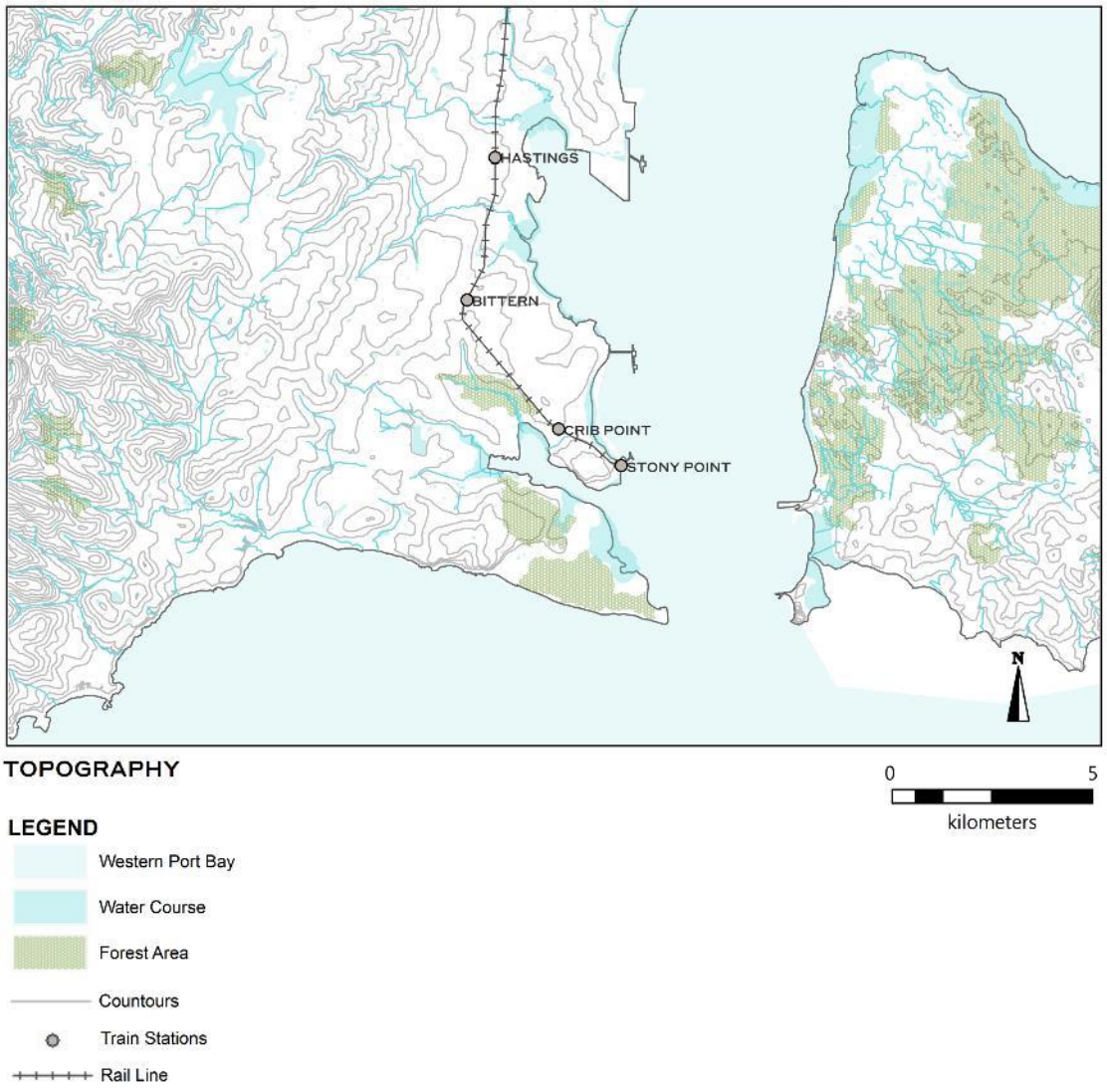


Figure 11: Topography of the Study Area

5.2 Hydrology

Planning scheme zones and overlays of the Study Area and its surrounds show that the land is not subject to overland water flows. However, hydrology mapping as shown below outlines areas of potential flooding within mangroves and coastal wetlands due to twice daily tides, with a range from 1.6m at Flinders to the west to approximately 2.2m at Tooradin to the north.

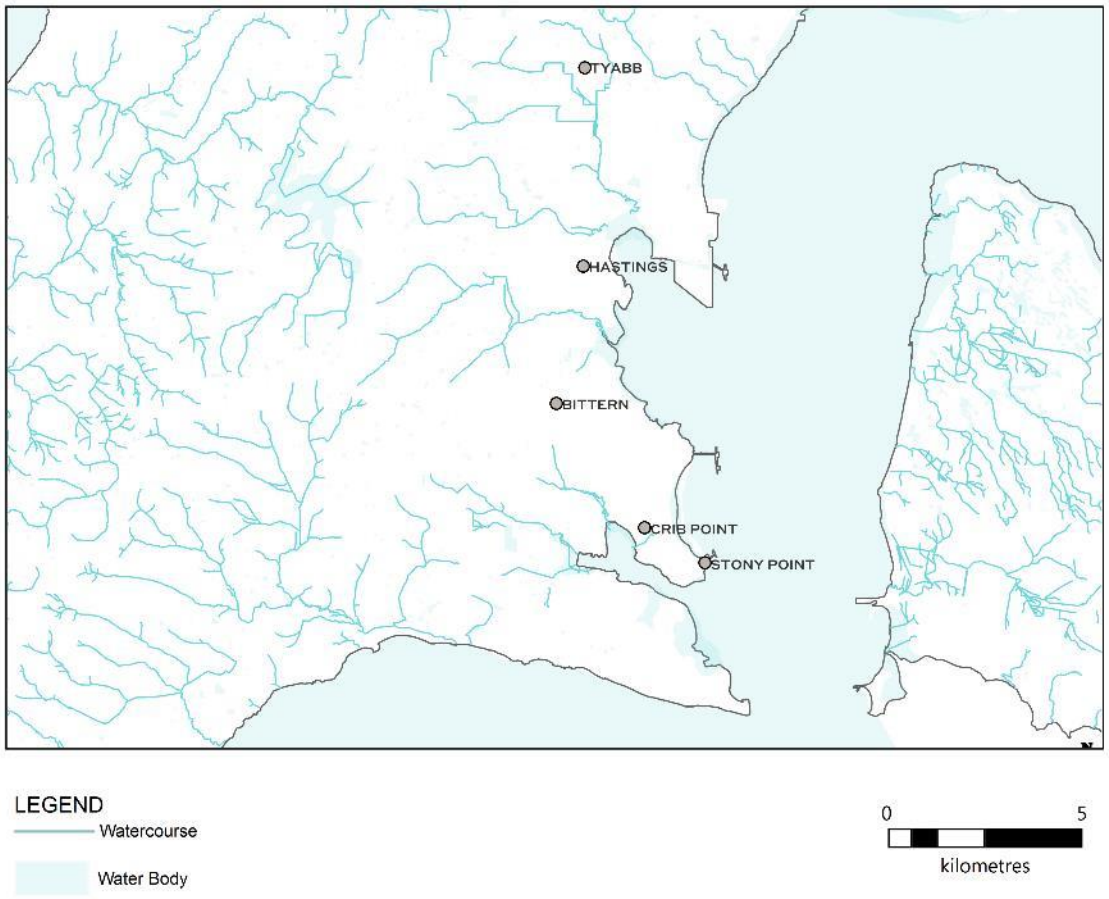


Figure 12: Hydrology of the Study Area

5.3 Vegetation

Vegetation surrounding the Crib Point Jetty is limited to and characterised as tall shrub-land and coastal wetlands. While the shrub-lands are dominated by woody plants, the wetlands located along the coastal edge of Western Port, consist of mangrove flats, coastal shrubs, saltmarsh and woodlands.

The Project Site sits within 59,950ha, The Western Port Ramsar Site, which boundary largely follows the boundaries of the Crown land and Crown owned reserves around Western Port and is inclusive of Yaringa Marine National Park, French Island Marine National Park, Churchill Island Marine National Park, Sandstone Island (privately owned) and Elizabeth Island (privately owned). The Ramsar site supports various species of mangroves along the coastal fringe that are considered rare in Victoria including Creeping Rush (*Juncus revolutus*), Marsh Saltbush (*Atriplex paludosa*) and Salt Lawrencia (*Lawrencia spictata*).

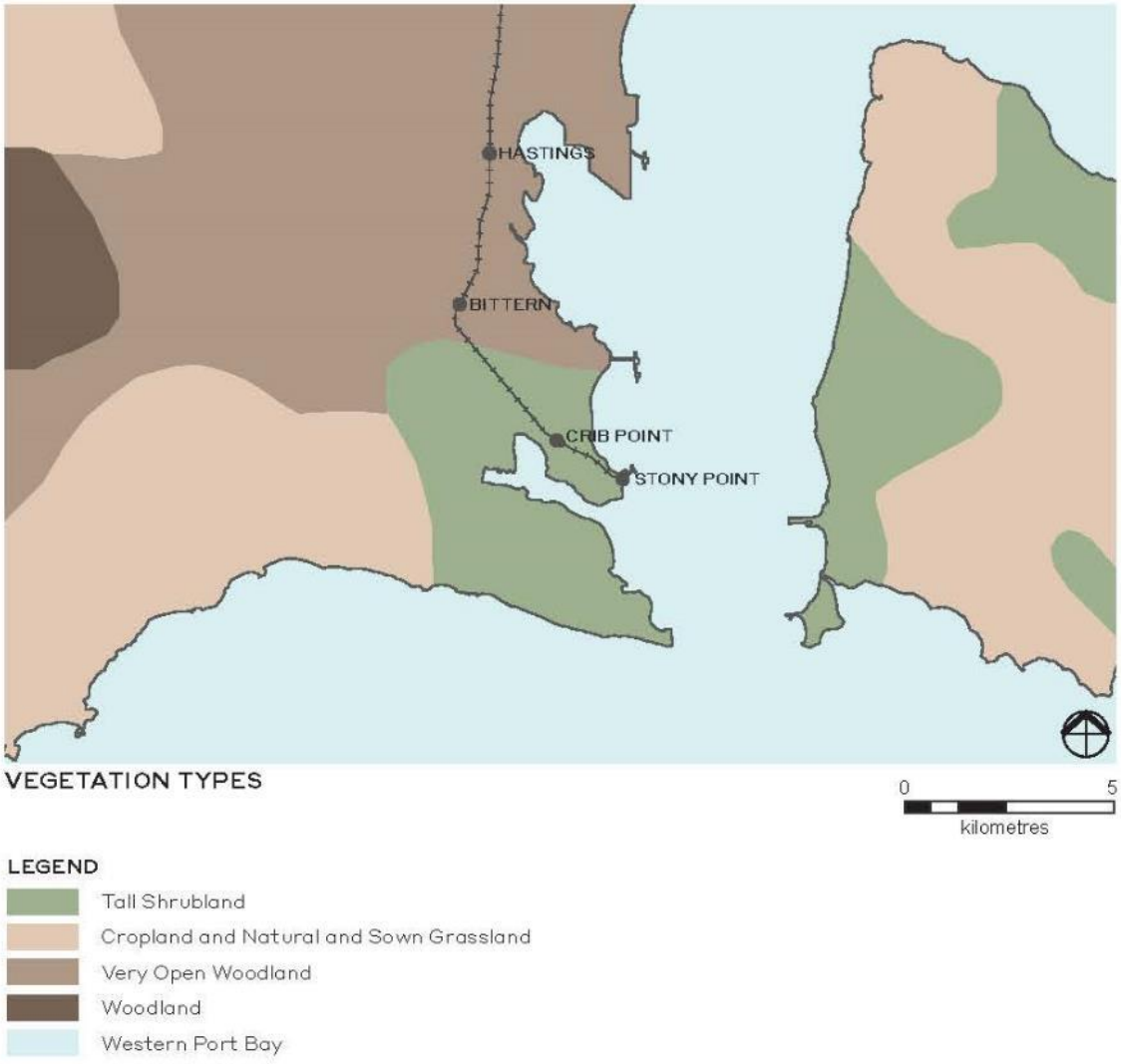


Figure 13: Vegetation Types in the Study Area

The map below demonstrates the tree density of the Study Area and the extent of the Ramsar wetlands within Western Port.

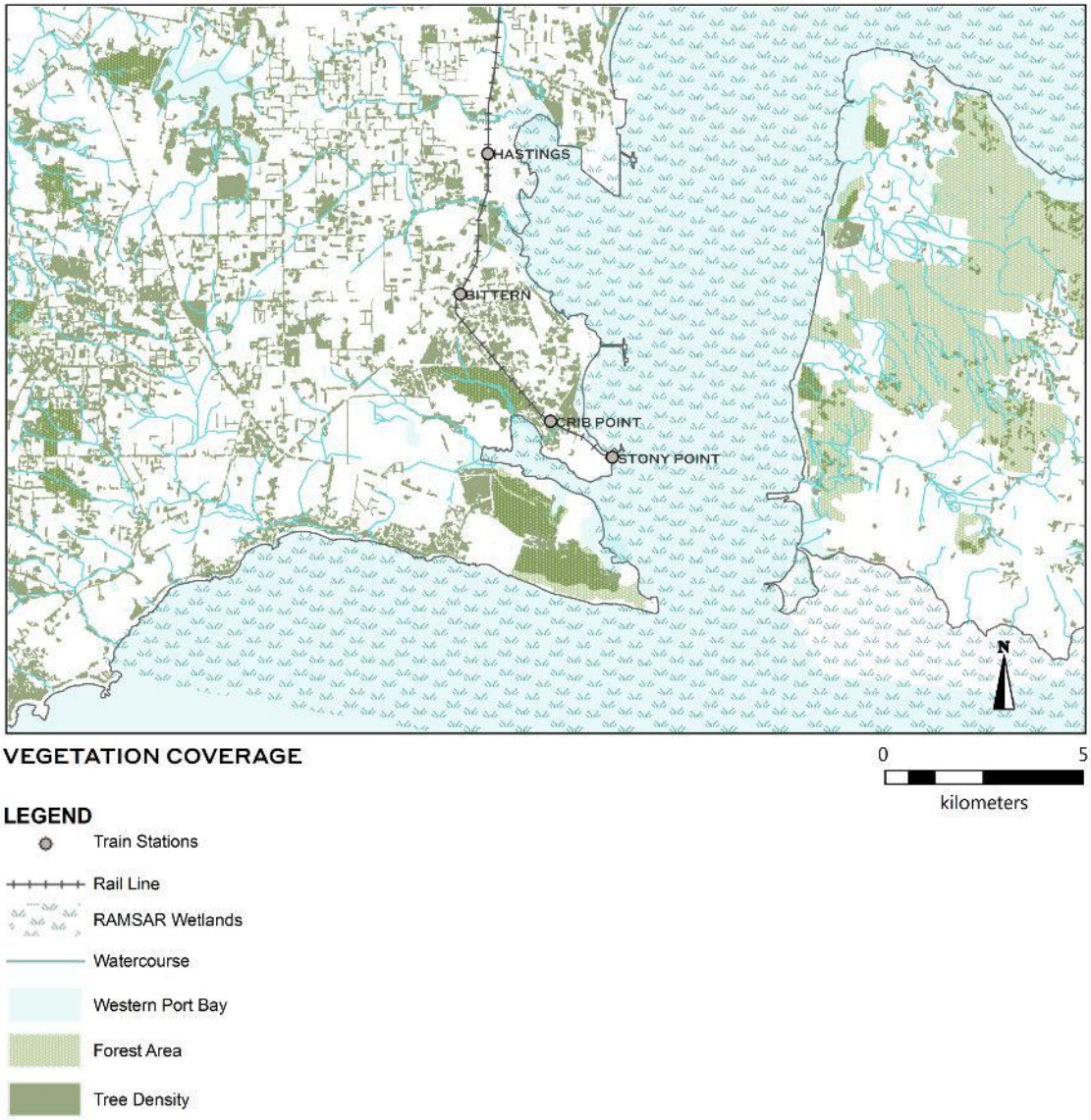


Figure 14: Vegetation Density in the Study Area

The maps below, sourced from The State of Victoria, Department of Environment, Land, Water and Planning 2016, shows the location of EVC Groups in both the 1750's and 2005. The Project Site is cleared for existing Port infrastructure and flanked to the north and south by Heathy Woodland, as shown in red in Figure 16. The majority of identified visual receptors are located in areas of remnant Coastal Saltmarsh (Salt-tolerant / Succulent Shrublands) as shown in grey in Figure 16. The notable exception is the Pinnacles on French Island which is located in a remnant area of Sand Heathlands, as shown in dotted-red in Figure 16. The coastal context of the

Study Area is largely represented by the EVCs of the broader Study Area (Coastal Saltmarsh and Heathy Woodlands).

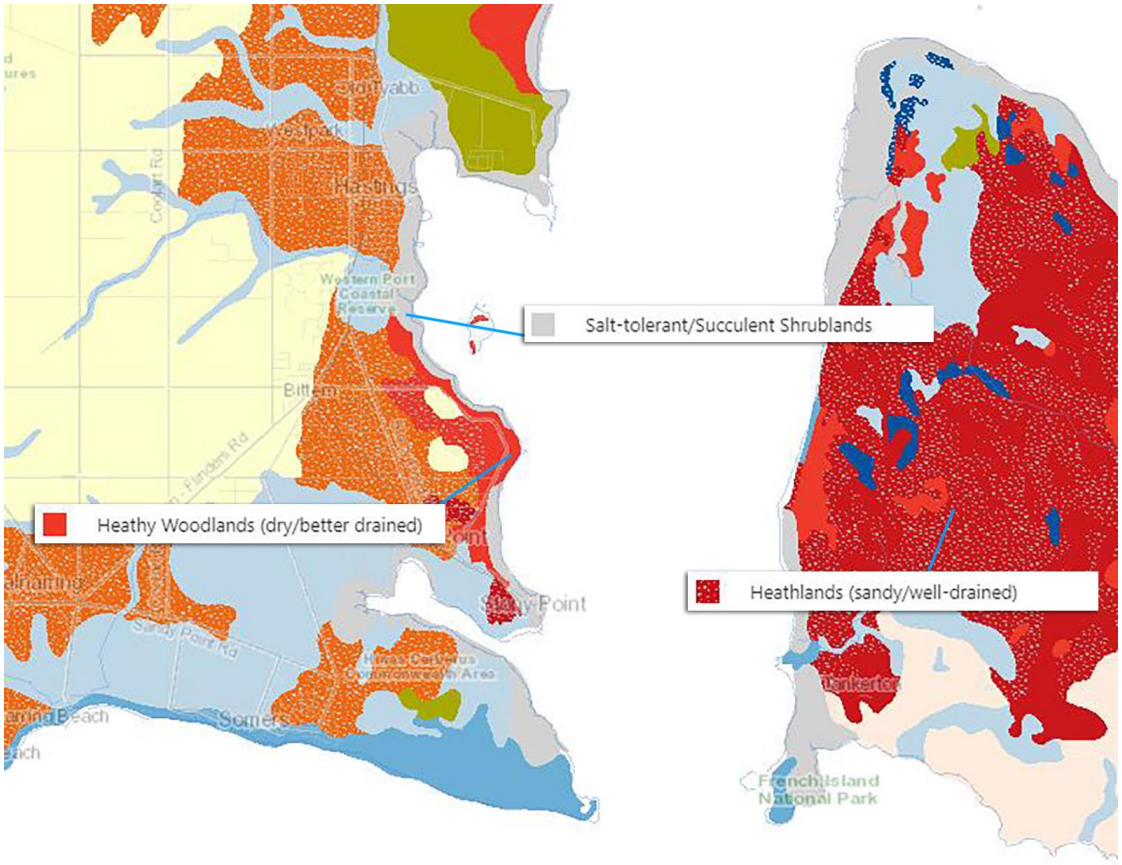


Figure 15: EVC Groups in the Study Area 1750s

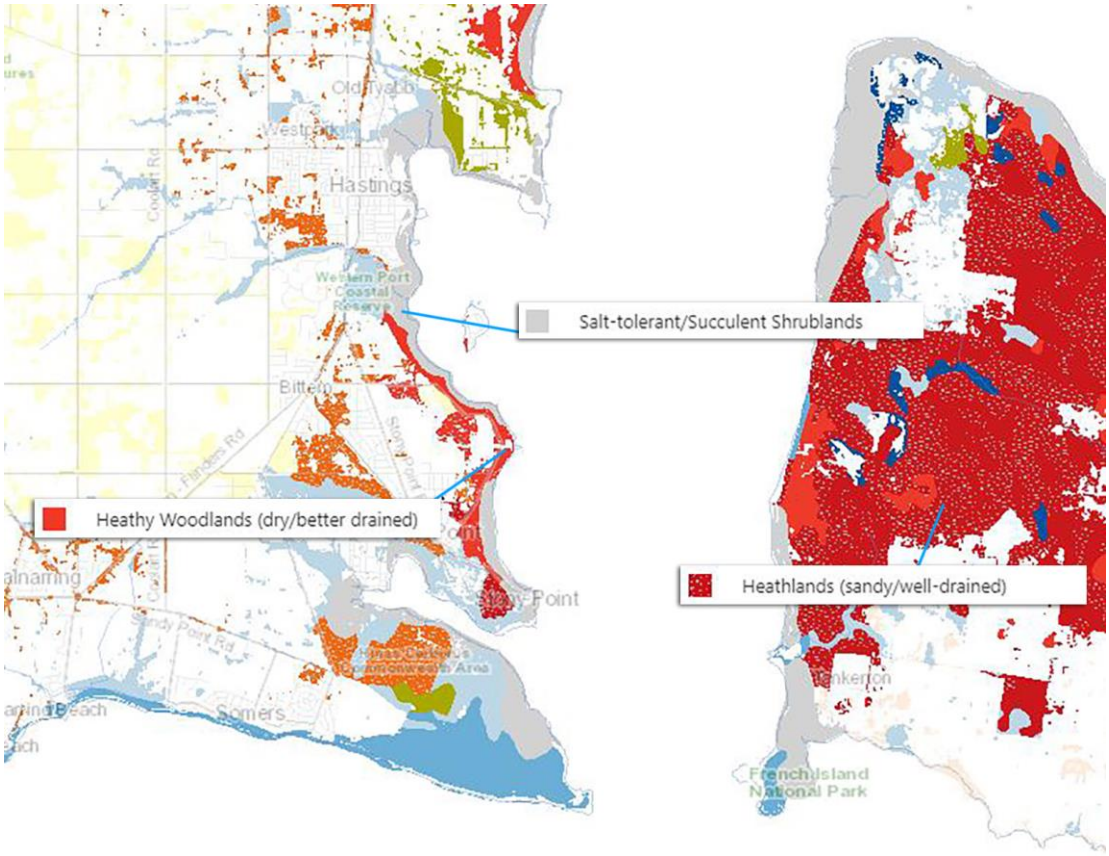


Figure 16: EVC Groups in the Study Area 2005

5.4 Settlement Pattern and Land Use

The settlement pattern and land uses of the Study Area and its surrounds are depicted on the below Planning Zones and Land Uses maps.

The Crib Point Jetty and associated land is located within the Port Zone and also a Bushfire Management Overlay. The land to the immediate north is zoned as Public Conservation and Resource, to the south the land is within a Public Use Zone and the land to the west is zoned as Special Use.

Identified visual receptors of the Combined Project's development are located in the following zones and overlays:

- Special Use Zone 1
- Public Conservation & Resource Zone
- Rural Conservation Zone
- Low Density Residential Zone
- Public Use Zone

- Port Zone
- Road Zone 1
- Heritage Overlay
- Bushfire Management Overlay
- Restructure Overlay
- Environmental Significance Overlay

The land surrounding the Project Site although essentially rural, have areas of low scale settlement and areas used for light industry. The majority of residential development is located more than 1km from the proposed onshore infrastructure and more than 1.7km from the berth, however there are a small number of properties both single and double storey located along The Esplanade, approximately 720 metres north west of the proposed onshore infrastructure and 1.4km north west of the berth. Directly west of the jetty along The Esplanade, is a large area of land that was the site of the Former Western Port Refinery. This area includes the Former BP administration Building and gatehouse and associated industrial plant facilities and buildings. The jetty is also located within 2km of the HMAS Cerberus, Royal Australian Naval Base, shown on the zoning map within the area zoned Commonwealth Land (CA), which is not controlled by the planning scheme.

Within this rural landscape are open space and recreation reserves including Western Port Coastal Reserve, Crib Point Recreation Reserve and Cyril Fox Reserve to the south, Wooley's Beach Reserve to the immediate south, Jack's Beach Reserve to the north and the Woolley's Road Equestrian Reserve to the north-west.

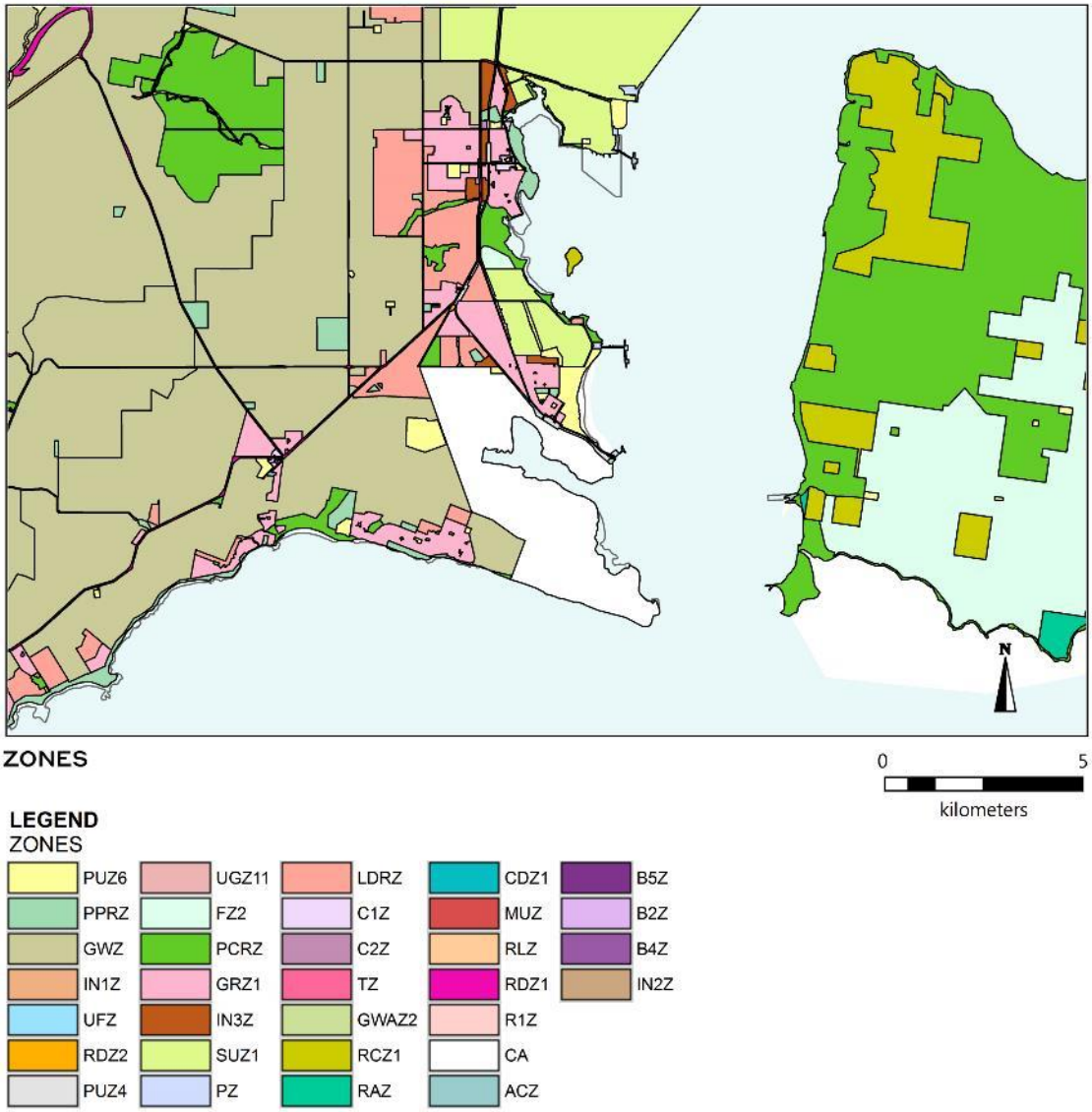


Figure 17: Zoning in the Study Area

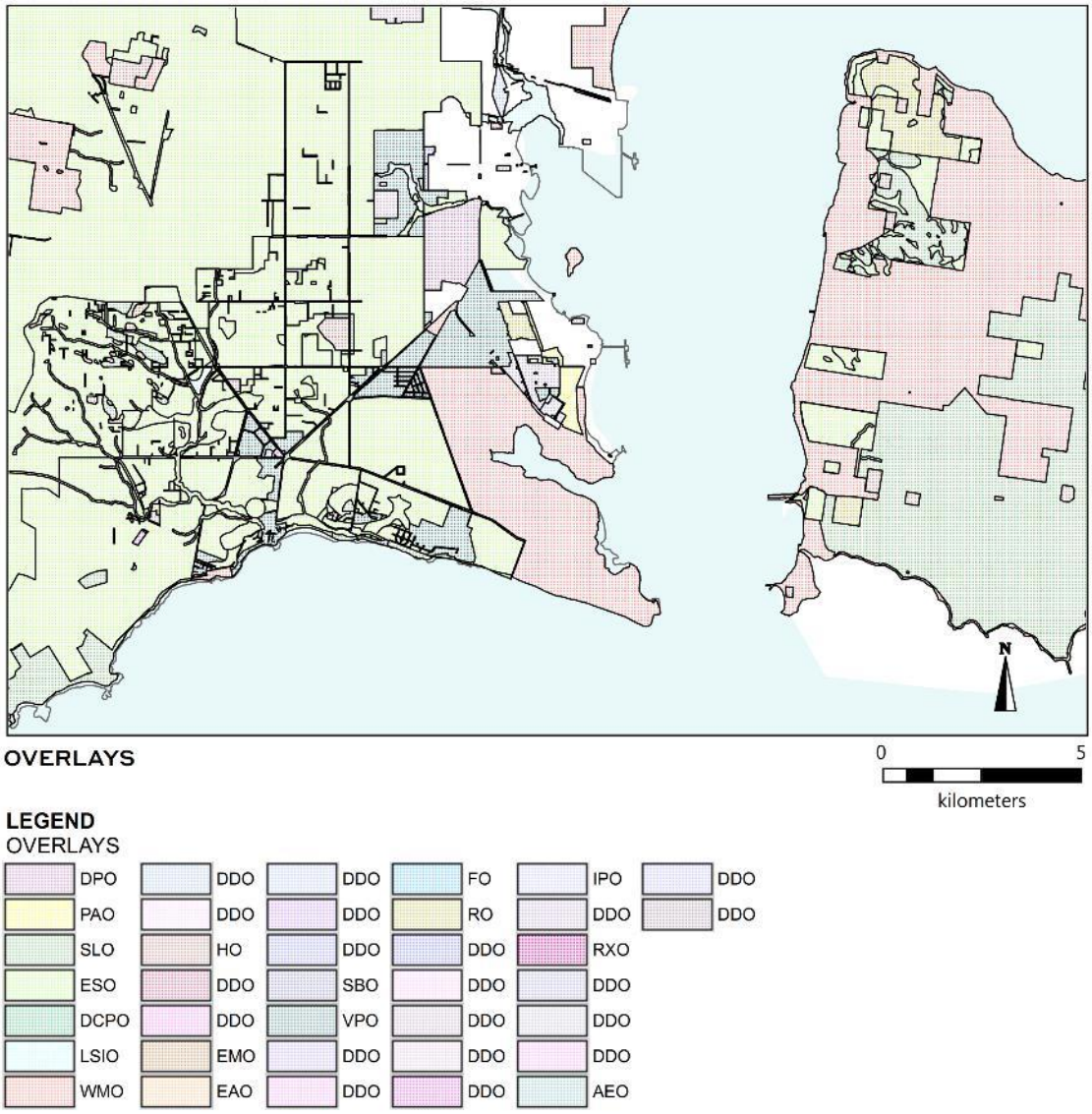


Figure 18: Overlays in the Study Area

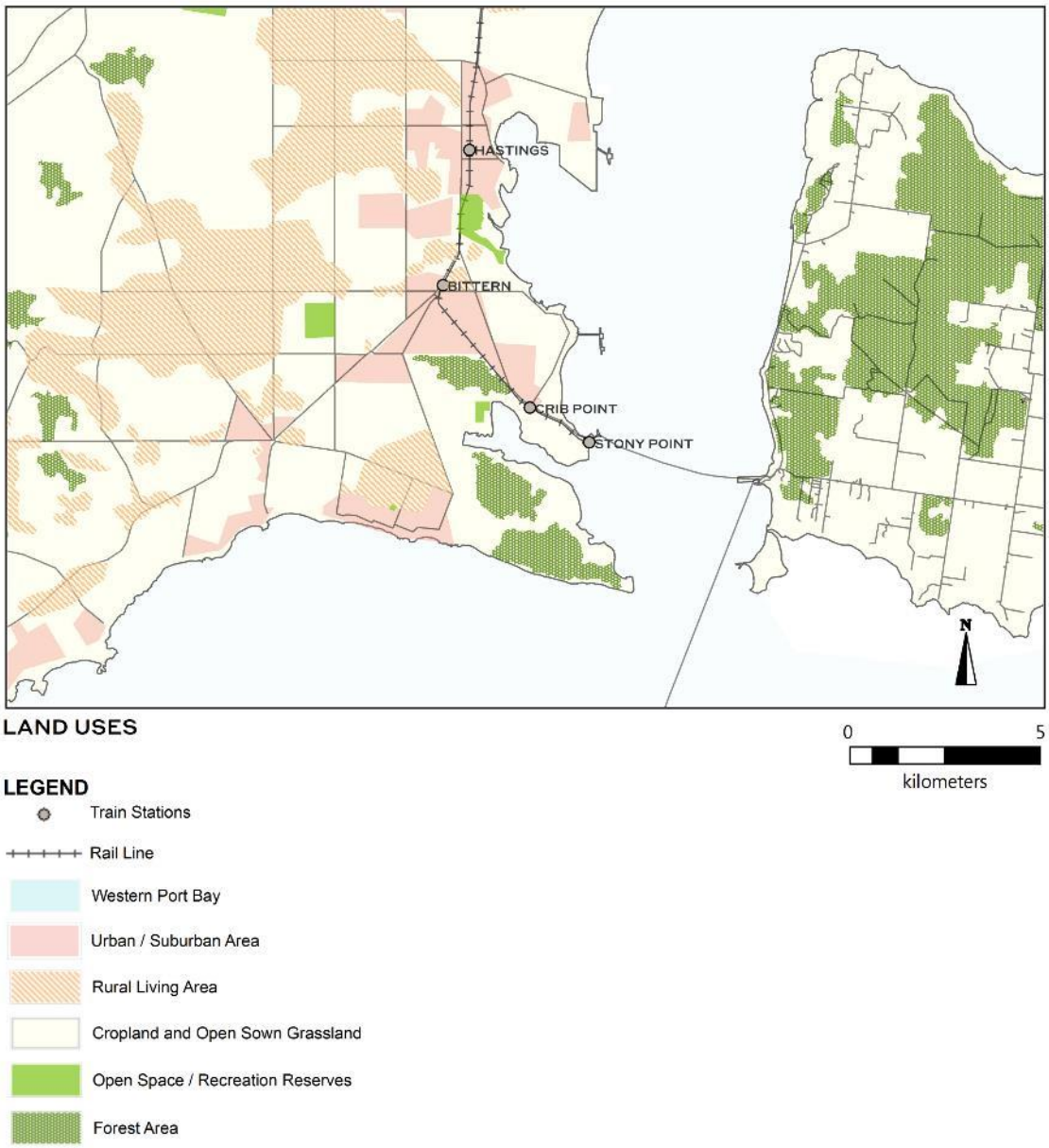


Figure 19: Land Uses in the Study Area

5.5 Natural and Cultural Values

A range of natural and cultural features have been identified through desktop analysis and the site survey conducted as part of this report. These include;

- The Western Port Ramsar Site, which is listed as an internationally significant wetland. It is of importance due to its terrestrial and marine flora and fauna, cultural heritage, potential recreational uses and views. Located within The Western Port Ramsar site are three Marine National Parks including; Yaringa, French Island and Churchill Island. The site has a total coastline of 263km and extends to within four local government jurisdictions; Mornington, Casey, Cardinia and Bass Coast.

- Heritage features proximate to the jetty include;
  - HO240 - Former BP Refinery Administration Building, designed by Melbourne architect Don Hendry Fulton and completed in 1965, is a State Level significant building due to its blending of structure and detail of ordered classical composition
  - H0274 - Crib Point Public Cemetery and HO270 - Tyabb Public Cemetery
  - HO 324 - Jack's Tanning Pit located off Woolley's Road, which is a stone pit that is an example of the area's first industry of tanning and/or hardening fishing nets and ropes
  - Sandstone Island (privately owned) and French Island, accessible only via ferry

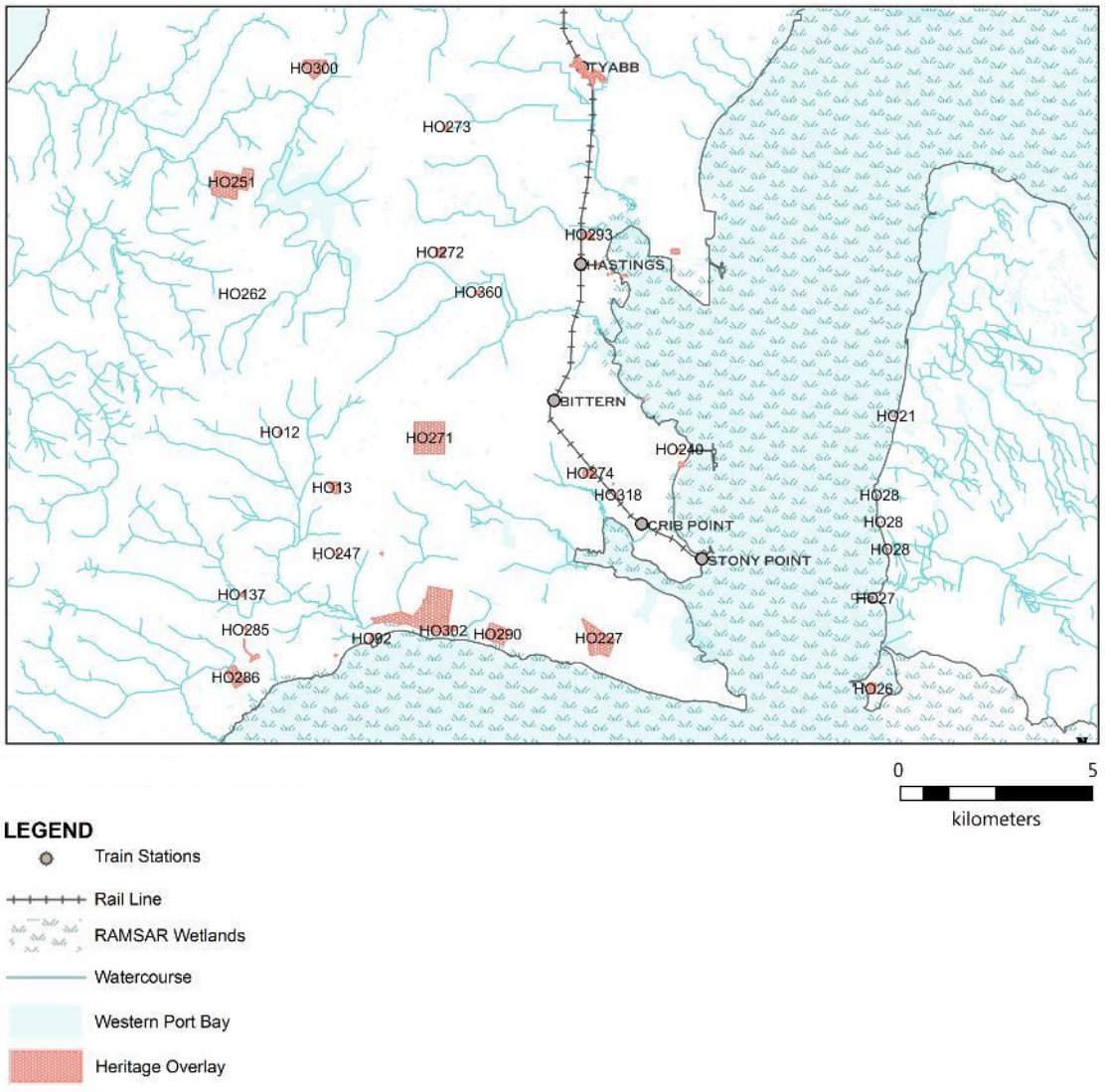


Figure 20: Heritage Overlay in the Study Area

5.6 Community and Tourism Value

The places of potential community and tourism value have been depicted on the map below. These places have been identified through desktop analysis and a site survey.

The Western Port area sustains various commercial and recreational activities such as, international and domestic shipping services, fishing, tourism, boating, aquaculture, bird watching and appreciation of the scenic qualities.

- Recreational and open space areas; French Island, Tankerton Jetty and Reserve, Stony Point, Western Port Coastal Reserve, Crib Point Recreation Reserve, Cyril Fox Reserve to the south, Wooley's Beach Reserve, Jack's Beach Reserve, Woolley's Road Equestrian Reserve and Warringine Park with Bittern Coastal Wetlands Boardwalk and lookout.
- Community facilities within close proximity to the Crib Point Jetty include; Victorian Maritime Centre, HMAS Cerberus Naval Base, Crib Point Primary School, St Joseph's Catholic Primary School, Bittern Primary School, Crib Point Community House, Crib Point Pool, Crib Point Medical Centre and Western Port Secondary College.

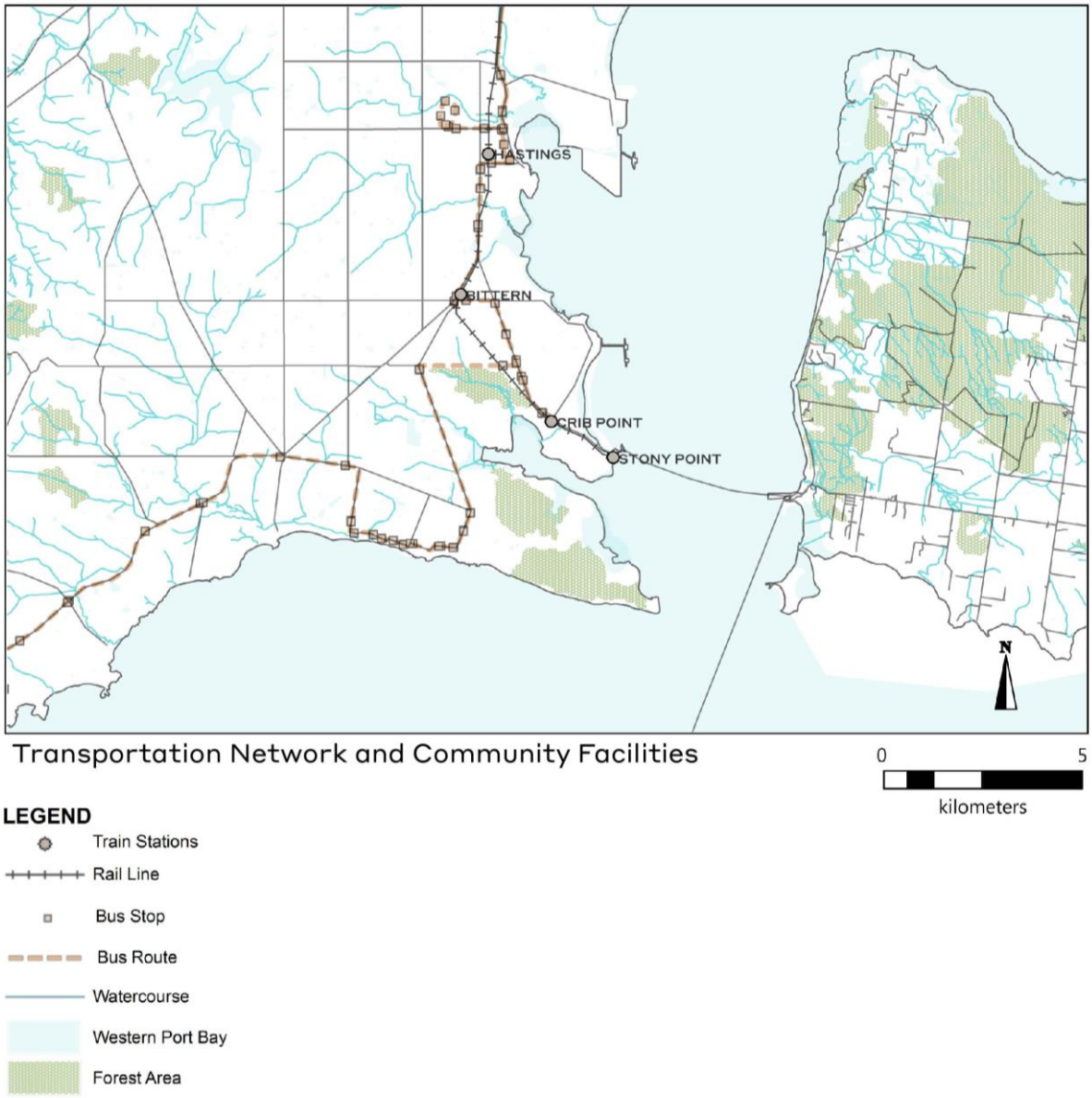


Figure 21: Transport Network and Community Facilities in the Study Area

6.0 Landscape Character Analysis & Impact

6.1 Background

The *Coastal Spaces Landscape Assessment Study (CSLAS)* (Planisphere, 2006) defines landscape character as the '*interplay of geology, topography, vegetation, water bodies and other natural features, combined with the effects of land use and built development, which makes one landscape different from another. The landscape character of an area provides the basis for understanding the features, views, and combinations of landscape elements that are important, and how different types of development sit within the landscape*."

An understanding of the broader landscape characteristics of the Study Area within its regional context is provided through review of existing bioregional mapping (*Interim Biogeographic Regionalisation for Australia* - IBRA) and the landscape characterisation of the eastern shore of Western Port in the Coastal Spaces Regional Landscape Assessment Study.

6.1.1 Bioregional Classification

Biogeographic regions (bioregions) capture the patterns of ecological characteristics in the landscape, and also underlying environmental features and patterns of use of the land, providing a natural framework to recognise and respond to biodiversity values.

Under the Interim Bioregionalisation for Australia (IBRA) classification system, the Study Area is located within the South East Coastal Plain (SCP) region, and the SCP02 – Otway Plain sub-region:

> *Otway Plain, located in the south west Victoria, includes coastal plains and dunes, foothills with river valleys and swamps in the lowlands. Ridges mark the positions of successive shorelines associated with the long-term retreat of the sea. The floodplains and swamps are earths and pale yellow and grey texture contrast soils (Hydrosols) supporting predominantly Grassy Woodland and Plains Grassy Woodland ecosystems. The coastal plains around Anglesea have sandy soils of low fertility, while the volcanic soils of the Bellarine Peninsula and clay soils around Werribee are more fertile.*

6.1.2 Coastal Spaces Landscape Assessment Study

The *Coastal Spaces Landscape Assessment Study* doesn't extend to the metropolitan Local Government Areas of Melbourne and as such doesn't cover the Study Area. However, it does define the eastern coastline of Western Port and the northern part of Phillip Island as the 'South Gippsland Coastal Plains' (areas 1.1 & 1.2 shown in green on Figure 22). The eastern coastline of Western Port is defined as the Western Port Lowlands Character Area:

> *Western Port Lowlands - This Character Area is located on the eastern edge of Westernport Bay. It is low-lying and mostly rural, with beaches, mangrove flats and coastal woodlands along a diverse coastal edge. ... The Character Area [study area] terminates in the south at the Anderson Peninsula, although it is likely to extend around Westernport Bay outside the study area for some distance to the north and west.*

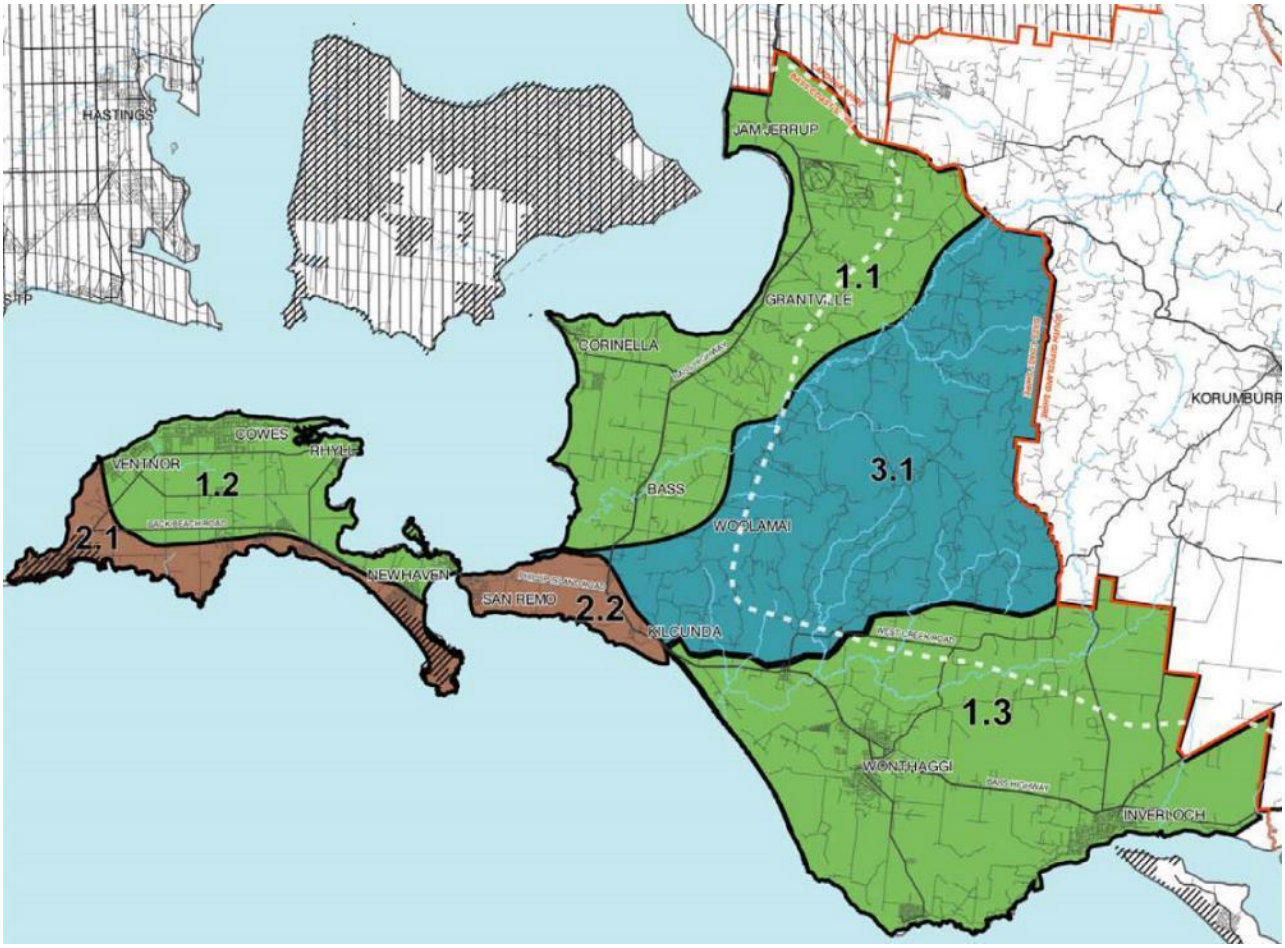


Figure 22: Character Types and Areas - Bass Coast Shire (CSLAS, 2016)

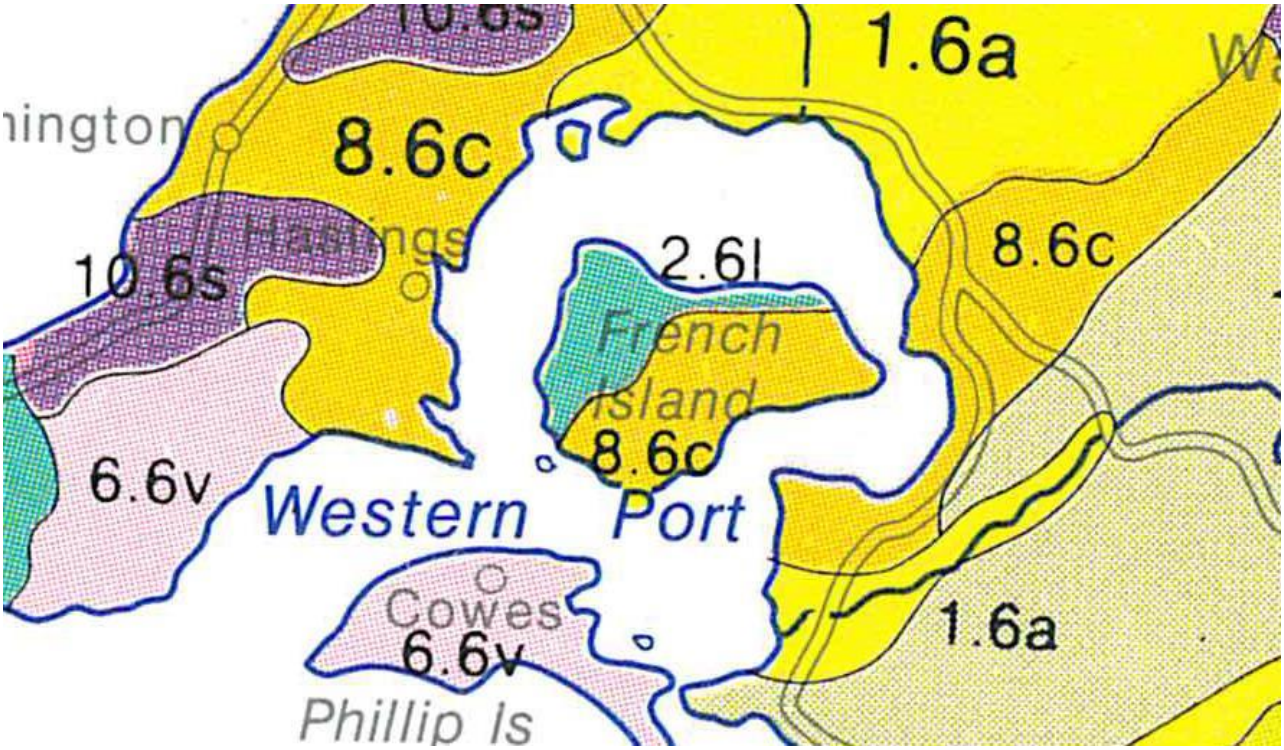


Figure 23: Victorian Land Types (Atlas of Victoria, 1982)

The Atlas of Victoria Land Types mapping as shown above in Figure 23, shows this same area of Western Port coastline as 8.6c (gold) land type - Loam and clay plains, humid, tertiary alluvium. It also shows this land type extending across to the western side of Western Port. This supports the statement in the Western Port Lowlands Landscape Character Area that the area is "*likely to extend around Westernport Bay outside the study area for some distance to the north and west*". Given this it is considered appropriate to apply the Western Port Lowlands Character Area to the Study Area, although it should be acknowledged that the western side of Western Port is characterised by greater development than the east originally assessed in the *Coastal Spaces Landscape Assessment Study*.

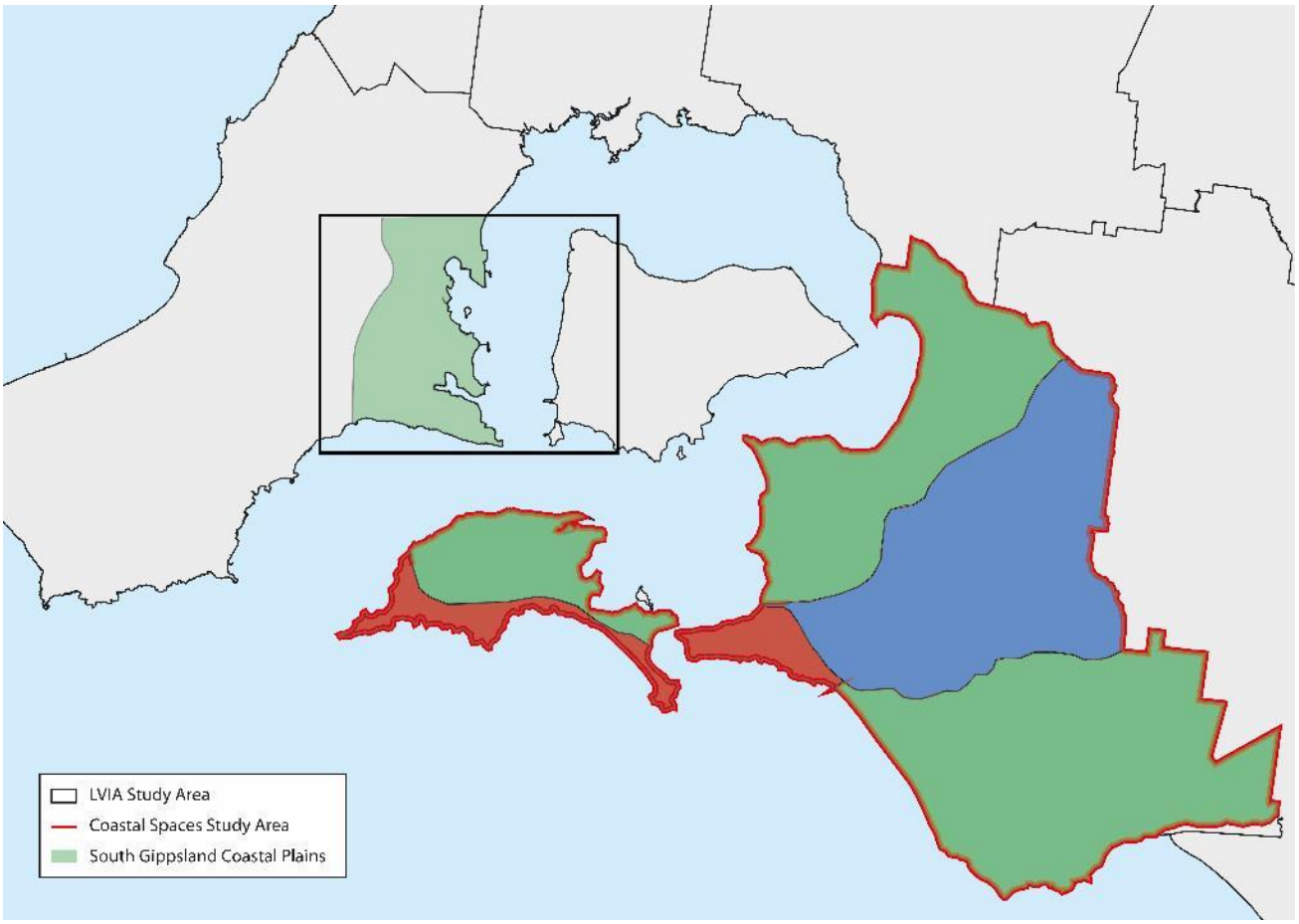


Figure 24: Extended Western Port Lowlands Character Area (Ethos Urban, 2017)

6.2 Landscape Character Area - Western Port Lowlands

6.2.1 Character Description

The Western Port Lowlands Character Area extends around the edge of Western Port, and is low-lying and largely rural to the east, tending to a peri-urban

settlement mix of rural, industry and residential land use on the western side of the bay. Open space reserves separate settlement, especially at the coast where the diverse coastal edge includes beaches, mangrove flats and coastal woodlands, with infrastructure associated with maritime industry located on points and headlands. In the Study Area the low-lying topography, together with the stands of remnant vegetation or exotic plantings, restricts broader views in the Study Area to those along the shoreline and across Western Port to Sandstone and French Islands from coastal areas. The Character Area extends from Anderson Peninsula at the south of the eastern shore, around Western Port to Sandy Point south of the Project Site. Within the Study Area the Character Area extends inland to the foothills of Red Hill and Tuerong.

In the immediate context of the Project Site, the landscape character is represented by a juxtaposition of the undeveloped and naturalistic qualities of the wetland and foreshore reserves and the maritime industrial development located on points and headlands. North-south views along these headland points contribute to a greater sense of development along the coastline than is actually present. In contrast, the embayments and inlets of the interstitial foreshore reserves focus views within and across Western Port beyond, creating a sense of an undeveloped coastline.

6.2.2 Described Landscape Values

The Project Site is within the coastal fringe of the Western Port Lowlands Character Area. This coastal landscape is valued for the visual qualities, including:

- Perceived naturalistic quality of the varied coastal edge, in particular the mangroves, salt marshes and beaches
- Waterbody of Western Port (key landscape feature within the Study Area)
- Remnant stands of woodland vegetation
- Native fauna, in particular birdlife
- Maritime associations of limited development along the coast
- Passive recreation uses at locations of access to wetlands and wider bay

The diverse and natural coastline of Western Port within the Character Area is considered of local significance. Given the above values and visual qualities of this coastal edge, the broader landscape surrounding the Project Site is considered of High landscape value.

6.2.3 Landscape Sensitivity

Development that would cause likely changes to the landscape include coastal development beyond existing settlements, new structures along undeveloped stretches of foreshore, and development that is not visually integrated with the landscape and responsive to the landscape character. Whilst the landscape is relatively flat, the stands of remnant vegetation in areas along the coast provide an opportunity to screen development. In addition, the likely changes to the landscape would be caused by development that is already present within the landscape Character Area and immediate setting. As such the landscape of the Project Site has a Moderate susceptibility to change.

Given the High landscape value and Moderate susceptibility to change, the landscape sensitivity of the Project Site is considered to be High.

6.3 Landscape Impact Assessment

The landscape features and values identified as landscape receptors potentially affected by the Combined Project are:

- The area's perceived naturalistic quality of the varied coastal edge
- The presence of maritime industry within the landscape, and
- The visual amenity of passive recreational uses at the coastline.

The following sections provide discussion on the Combined Project's potential effects on these landscape receptors and highlights potential landscape impacts to be assessed.

6.3.1 Perceived Naturalistic Quality of Coastal Areas

The Combined Project will increase the presence of maritime industry within the landscape, and accordingly may reduce the perceived naturalistic quality of the varied coastal edge. The landscape receptor of these perceived naturalistic coastal edges will be negatively impacted by development encroaching within their visual catchments.

The High sensitivity of the surrounding landscape Character Area is considered appropriate to this receptor. The Combined Project represents an ongoing change able to be reversed, and of moderate scale applying to a restricted area. According to Table 2 these effects are considered a Noticeable magnitude of change to this receptor, which results in a Moderate significance of impact on this landscape receptor as per Table 4.

6.3.2 Presence of Maritime Industry

The existing presence of active maritime industry is an historically established component of the landscape character of the Study Area and Project Site. The Combined Project will increase this presence and will positively impact this landscape receptor.

The High sensitivity of the surrounding landscape Character Area can be moderated to Low for this receptor, given that this receptor also represents a threat to the wider landscape character. The Combined Project represents an ongoing change able to be reversed, and of moderate scale applying to a restricted area. According to Table 2 these effects are considered a Noticeable magnitude of change to this receptor, which results in a Low significance of impact on this landscape receptor as per Table 4.

6.3.3 Passive Recreational Uses at the Coastline

The visual amenity of passive recreational uses at the coastline is an important landscape receptor that is related to the first landscape receptor in the perceived naturalistic coastal areas. The visual amenity of these locations relates to the particular aesthetic characteristics of their outlooks. Given that the Project Site is within an existing area of maritime industry development, the proposal will not significantly alter the characteristics of the landscape as experienced from this receptor. (Note, this is not necessarily the case for the visual receptors within this receptor and the visual impact upon these receptors is considered separately).

The High sensitivity of the surrounding landscape Character Area is considered appropriate to this receptor. The Combined Project represents an ongoing change able to be reversed, and of moderate scale applying to a restricted area. According to Table 2 these effects are considered a Noticeable magnitude of change to this receptor, which results in a Moderate significance of impact on this landscape receptor as per Table 4.

7.0 Visual Character & Analysis

7.1 Summary

Table 6: Potential visibility of viewpoints identified within each potential receptor

Receptor		Viewpoint	Combined Project Potentially Visible from Public Location(s)
1	Tyabb Cemetery	**a)** Cemetery	**Yes**
		b) Adjacent Foreshore	
2	Western Port Marina	**a)** Hastings Pier	**No**
3	Warringine Park	**a)** 'Warrenda' Building	**Yes**
		b) Residential Uses (Warranqite Crescent)	
		c) Boardwalk Lookout	
4	Sandstone Island	**a)** Sandstone Island (not verified)	**No**
5	Jack's Beach	**a)** Jack's Beach Tan Pit	**No**
		b) Residential Uses	
		c) The Esplanade	
6	Victorian Maritime Centre	**a)** Submarine Lookout	**Yes**
		b) Maritime Museum	
7	Woolley's Beach	**a)** Woolley's Beach Foreshore – North	**Yes**
		b) Woolley's Beach Foreshore – South (Heritage)	

	Receptor	Viewpoint	Combined Project Potentially Visible from Public Location(s)
8	Stony Point Pier	**a)** The Esplanade	**Yes**
9	French Island	**a)** Fairhaven Beach	**Yes**
		b) The Pinnacles Lookout	
		c) Tanketon Jetty & Reserve	
10	Residential Uses	**3(b)** Warranqite Crescent	**Yes**
		5(b) Jack's Beach	
		a) Lorimer Street	
11	Western Port	**a)** Western Port (not verified)	**Yes**
12	The Esplanade	**5(c)** Jacks Beach	**Yes**
		8(a) Stony Point	

Figure 25: Visually Sensitive Receptors identified in the Study Area

It should be acknowledged at the outset of the Visual Impact Assessment that the Project Site contains the historically established Crib Point Port and maritime industrial activities appropriately in accordance with the Port Zone, Public Use Zone – Schedule 7 and relevant approvals. From many viewpoints where the Project Site is visible, a view of these structures and uses already exists and provides sound context for the continued development of maritime industrial activities, such as the Combined Project.

7.2 Receptors

7.2.1 Tyabb Cemetery

Tyabb Cemetery is located approximately 5.7km north of the Project Site. Given its primary use there is potential for a high number of short-term visitors as part of a single gathering or as individuals and smaller groups at variable frequencies. It has good vehicle and pedestrian access and some onsite facilities.

7.2.1.1 Viewpoints

Viewpoint **1(a)** is representative of areas within the public land of the cemetery, and demonstrates that there is no visibility of the Project Site due to significant vegetation screening along the property boundaries.

Figure 26: Tyabb Cemetery – Viewpoint 1(a) **Cemetery Grounds facing south**

Viewpoint **1(b)** was selected on public land beyond the bordering vegetation and closer to the nearby foreshore, approximately 5.5km north of the Project Site.

Figure 27: Tyabb Cemetery – Viewpoint 1(b) **Adjacent Foreshore facing south**

7.2.1.2 1(b) Visual Character

This viewpoint shows the wide and far-reaching view to the south of the open sky, vegetation and ocean in the foreground, Sandstone Island in the middle ground and a distant background of French Island and Stony / Sandy Points is achievable from this area of the foreshore. This viewpoint will have an unimpeded, albeit distant, view of the Project Site.

Whilst the viewpoint is located on public land, it is considered Low sensitivity, given the foreshore does not currently have the infrastructure or facilities to be readily accessible or attract visitors. It is expected that the foreshore may be locally significant to a small number of persons for its environmental and scenic values.

7.2.1.3 1(b) Visual Impact Assessment

Although Viewpoint 1(b) is not in a location that the public would typically access, from this viewpoint the FSRU ship and the LNG carrier and its movements will be visible. The "End of Line facilities" onshore infrastructure (as estimated - see section 2.5) will likely be screened from view by the existing vegetation on the Project Site, while the installation of the Jetty Infrastructure and Jetty Upgrade (as estimated - see section 2.5) are not likely to be visible given the scale of these works and the distance of the viewpoint. The Combined Project's visual effects upon this viewpoint will be an increased visual presence of maritime and port infrastructure on the landscape.

The Combined Project is understood to be an ongoing change that is able to be reversed. This is because the proposal has a long-term duration, however The FSRU is able to sail away and the End of Line Facilities onshore infrastructure decommissioned, removed and the area rehabilitated. This value is fixed and does not change depending on the nature of the receptor or viewpoint. The scale of change is considered to be a moderate change to a restricted or brief area of view, primarily due to the separation distance causing the Project to be a small element in this setting. In accordance with Table 3, the resulting assessment is a Noticeable magnitude of change.

This viewpoint has been assessed to have a Noticeable magnitude of change and a Low viewpoint sensitivity, resulting in a rating of the significance of visual effects on this viewpoint as Low as determined by Table 4. Within the context of the existing jetty and maritime industrial activities at the Project Site, the modelled visual effects are considered to be neutral in terms of their impact on this view.

Figure 28: Wireframe Markup of Project from Viewpoint 1(b)

Figure 29: Photomontage of Project from Viewpoint 1(b)

7.2.2 Western Port Marina

The Western Port Marina receptor is located between approximately 4.7 - 5.4km north west of the Project Site. The Project Site and surrounds are used for a marina berth, commercial facilities (including restaurants), the Pelican Park Recreation Centre, Hastings Pier and associated car parking areas. This area promotes viewing of the coastal and oceanic landscape and is expected to attract a relatively large number of visitors for sightseeing, passive recreation, work and leisure for a range of short and medium-term trips with a seasonal or consistent frequency.

7.2.2.1 Viewpoints

Viewpoint **2(a)** was selected at the end of the publicly accessible Hastings Pier to illustrate the view from one of the easternmost points at this receptor from the typically low-lying elevation in the surrounding area. The Project Site is not visible from this viewpoint as it is blocked by Sandstone Island. Given this, it is considered that the Combined Project will also not be visible from any other area within the

Western Port Marina receptor, however, this could not be confirmed owing to lack of public access.

Figure 30: Western Port Marina – Viewpoint 2(a) Hastings Pier facing south east

7.2.3 Warringine Park

The Warringine Park receptor is located on the coast between Hastings and Bittern, between approximately 3 – 5.2km north west of the Project Site. The receptor is predominantly used for environmental conservation and passive recreation such as walking, cycling and bird watching. Facilities within the park that are expected to promote visitors include two walking trails: Bittern Coastal Wetlands Walk and Ted Harris Walk, seating areas, public amenities and a designated lookout. The receptor is expected to attract a high number of visitors using the existing facilities and involved in passive recreation for short and medium-term trips with a seasonal frequency.

7.2.3.1 Viewpoints

Viewpoint **3(a)** was selected from the front of the 'Warrenda' building off Frankston-Flinders Road immediately adjacent to the west of Warringine Park, and approximately 5.1km north west of the Project Site.

The viewpoint can be considered representative of the view from Frankston-Flinders Road that would be experienced by a relatively high volume of road traffic. This viewpoint could also be considered a specific viewpoint for the 'Warrenda' building. There is no visibility of the Project Site from this viewpoint due to the separation distance, low elevation and roadside vegetation screening.

Figure 31: Warringine Park – Viewpoint 3(a) 'Warrenda' Building facing south east

Viewpoint **3(b)** was selected generally from the rear property boundary shared between Warringine Park and residential uses along Warranqite Crescent, approximately 4.6km north west of the Project Site.

Figure 32: Warringine Park – Viewpoint 3(b) Residential Uses along Warranqite Crescent facing south east

Viewpoint **3(c)** was selected from the designated public lookout along the Bittern Coastal Wetlands Boardwalk within the Warringine Park as a specific location approximately 4.1km north west of the Project Site.

Figure 33: Warringine Park – Viewpoint 3(c) Boardwalk Lookout facing south east

7.2.3.2 3(b) Visual Character

The surrounding landscape is low-lying and mildly undulating, with dense pockets of vegetation and dominated by low density residential uses and open space promoting environmental conservation and passive recreation.

The view from this location is short and dominated by vegetation, however glimpses of Sandstone Island and French Island are visible through the vegetation along property boundaries and it is expected that the Project Site may be partially visible from certain aspects, particularly the higher elevation afforded to two-storey dwellings.

The sensitivity of this viewpoint is considered Medium, given a low number of dwellings have an outlook towards the Project Site, though considering the quality of this (filtered) outlook over the wetland reserve and greater Western Port.

7.2.3.3 3(b) Visual Impact Assessment

From this viewpoint, the Combined Project infrastructure that will likely be visible are the FSRU ship and the LNG carrier and its movements. The "End of Line facilities" onshore infrastructure (as estimated - see section 2.5) will likely be screened from view by the existing vegetation on the Project Site, while the installation of the Jetty Infrastructure and Jetty Upgrade (as estimated - see section 2.5) are not likely to be visible given the scale of these works and the distance of the viewpoint. The Combined Project's visual effects upon this viewpoint will be an increased visual presence of maritime and port infrastructure on the landscape.

The Project is understood to be an ongoing change that is able to be reversed. This is because the proposal has a long-term duration, however is able to be moved or decommissioned. This value is fixed and does not change depending on the nature of the receptor or viewpoint. The scale of change is considered to be a minor change to a restricted or brief view of the Combined Project, primarily due to the separation distance and vegetation screening causing the Combined Project to be a small element in this setting. In accordance with Table 3, the resulting assessment is a Noticeable magnitude of change.

This viewpoint has been assessed to have a Noticeable magnitude of change and a Medium viewpoint sensitivity, resulting in a rating of the significance of visual effects on this viewpoint as Low as determined by Table 4. Within the context of the existing jetty and maritime industrial activities at the Project Site, the modelled visual effects are considered to be neutral in terms of their impact on this view.

7.2.3.4 3(c) Visual Character

This viewpoint is promoted as a place for visitors to stop and focus on the fixed view of the surrounding panoramic landscape. The viewpoint is directly accessible by pedestrians and cyclists from the existing boardwalk and is complemented by other facilities within the park such as public seating and amenities. It is expected that this viewpoint would attract a moderate number of visitors for short or medium-term trips with seasonal frequency.

The low-lying elevation of this viewpoint causes the view to be foreground-heavy with large skies and a discrete middle-ground and background. The Project Site will be screened by vegetation but partially visible in the background of this view.

The sensitivity of this viewpoint is considered to be Medium, given the lookout is a promoted location and places direct emphasis on the visual amenity and prevailing

uses of environmental conservation and passive recreation in the predominantly undeveloped landscape.

7.2.3.5 3(c) Visual Impact Assessment

From this viewpoint, the Combined Project infrastructure that will be visible, yet at least partially screened, are the FSRU and the LNG carrier and its movements. The "End of Line facilities" onshore infrastructure (as estimated - see section 2.5) will likely be screened from view by the existing vegetation on the Project Site, while the installation of the Jetty Infrastructure and Jetty Upgrade (as estimated - see section 2.5) are not likely to be visible given the scale of these works and the distance of the viewpoint. The Combined Project's visual effects upon this viewpoint will be an increased visual presence of maritime and port infrastructure on the landscape, at least partially screened by existing vegetation on the Project Site.

The Combined Project is understood to be an ongoing change that is able to be reversed. This is because the Combined Project has a long-term duration, however is able to be moved or decommissioned. This value is fixed and does not change depending on the nature of the receptor or viewpoint. The scale of change is considered to be a minor change to a restricted or brief view, primarily due to the separation distance and vegetation screening causing the Combined Project to be a small element in this setting. In accordance with Table 3, the resulting assessment is an Imperceptible magnitude of change.

This viewpoint has been assessed to have an Imperceptible magnitude of change and a Medium viewpoint sensitivity, resulting in a rating of the significance of visual effects on this viewpoint as Negligible as determined by Table 4.

Figure 34: Wireframe markup of Project from Viewpoint 3(c)

Figure 35: Photomontage of Project from Viewpoint 3(c)

7.2.4 Sandstone Island

Sandstone Island is a private island between approximately 2.5 and 3.1km north west of the Project Site. The island is low-lying, mildly undulating and largely undeveloped with sparse vegetation and few structures. There is no existing access other than by private boat, no internal infrastructure and no public facilities on the island, so it is expected that this receptor will attract a very low number of visitors for short periods with an inconsistent frequency.

7.2.4.1 Viewpoints

No viewpoints were verified at this receptor due to lack of infrastructure and public access to the privately-owned land. In its current, undeveloped state, viewpoints from this receptor are expected to have an unimpeded or partially screened view of the Project Site.

7.2.4.2 Visual Character

Views from Sandstone Island were not verified, but it is expected that they will be far-reaching and panoramic towards the Combined Project with the ocean dominating the foreground, large skies and a distant background of French Island.

These viewpoints are expected to have a Low sensitivity due to the very low and infrequent number of visitors.

7.2.4.3 Visual Impact Assessment

From this viewpoint, the Combined Project infrastructure that is likely be visible are the FSRU ship and the LNG carrier and its movements. The "End of Line facilities" onshore infrastructure (as estimated - see section 2.5) will likely be screened from view by the existing vegetation on the Project Site, while the installation of the Jetty Infrastructure and Jetty Upgrade (as estimated - see section 2.5) are not likely to be visible given the scale of these works and the distance of the viewpoint. The Combined Project's visual effects upon this viewpoint will be an increased visual presence of maritime and port infrastructure on the landscape.

The Combined Project is understood to be an ongoing change that is able to be reversed. This is because the Combined Project has a long-term duration, however is able to be moved or decommissioned. This value is fixed and does not change depending on the nature of the receptor or viewpoint. The scale of change is considered to be a moderate change to a restricted or brief view, primarily due to the separation distance causing the Combined Project to be a small element in this setting. In accordance with Table 3, the resulting assessment is a Noticeable magnitude of change.

This viewpoint has been assessed to have a Noticeable magnitude of change and a Low viewpoint sensitivity, resulting in a rating of the significance of visual effects on this viewpoint as Low as determined by Table 4. Within the context of the existing jetty and maritime industrial activities at the Project Site, the visual effects are considered to be neutral in terms of their impact on this view.

7.2.5 Jack's Beach

Jack's Beach is a public beach and reserve between approximately 1.3 – 2.6km north west of the Project Site characterised by a largely undeveloped, low-lying coastal landscape and dense vegetation. This receptor contains the Jack's Beach Tanning Pit heritage item and is a promoted attraction. Dwellings to the north of the beach have permanent residential uses, and other areas are expected to be primarily used for passive recreation and sightseeing.

7.2.5.1 Viewpoints

Viewpoint **5(a)** was selected as a specific viewpoint from the promoted public attraction of the Jack's Beach Tanning Pit approximately 2.5km north west of the Project Site, which is also listed as a heritage item.

Figure 36: Jack's Beach – Viewpoint 5(a) Jack's Beach Tanning Pit facing south east

Viewpoint **5(b)** was selected as a representative viewpoint generally from the residential uses on private land on the northern side of The Esplanade and south east of Jack's Beach.

Figure 37: Jack's Beach – View of Residential Uses considered under Viewpoint 5(b) **from Viewpoint** 6(a) **Victorian Maritime Centre – Submarine Lookout facing north west**

Section AA below demonstrates that there is not expected to be a view of the Combined Project facilities due to the height of existing vegetation screening between this receptor and to the onshore facilities.

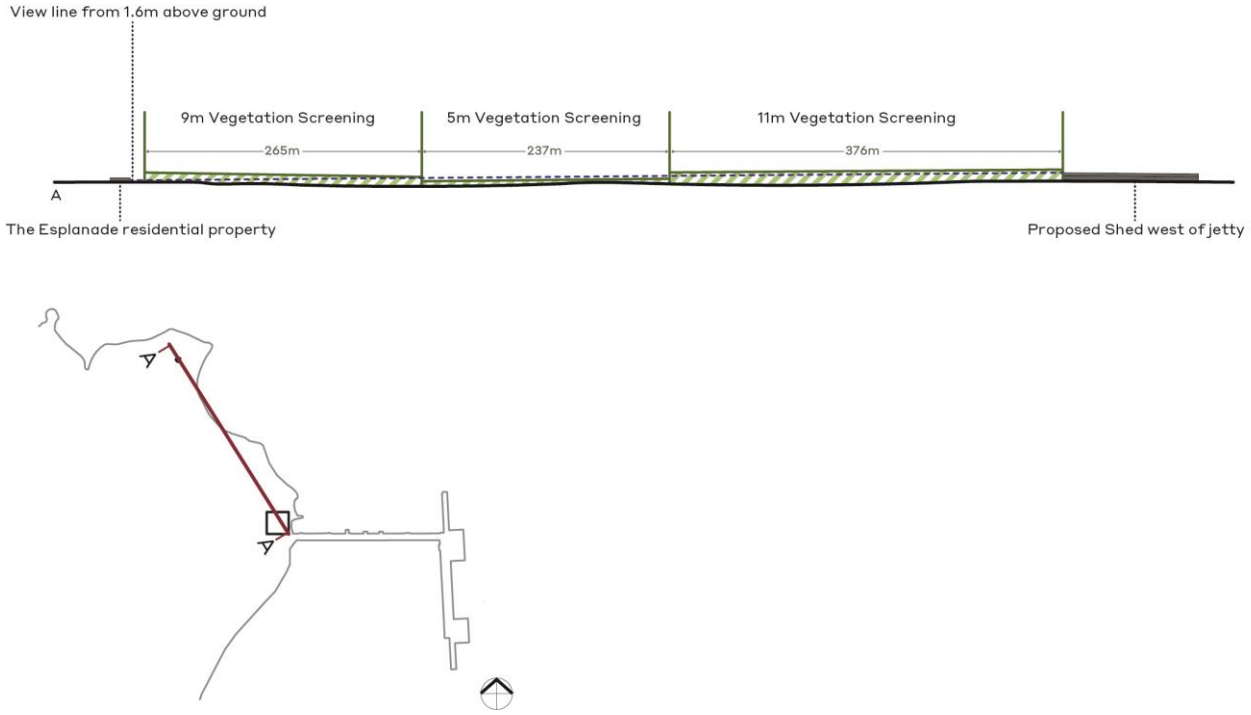


Figure 38: Section AA of View Between Viewpoint 5(b) and onshore facilities.

Viewpoint **5(c)** was selected as a representative viewpoint of the outlooked from the publicly accessible road reserve at the front of the residential uses considered under Viewpoint **5(b)**, and demonstrates that there is no view of the Project Site from this interface.

Figure 39: Jack's Beach – Viewpoint 5(c) The Esplanade facing south east

7.2.5.2 5(a) Visual Character

Viewpoint **5(a)** is accessible from The Esplanade via an existing crossover and car park, the viewpoint is accessible to pedestrians via signposting and an unconstructed footpath from the car park. The low elevation and flat topography allows for large skies and distant panoramic views of the ocean, Sandstone Island, surrounding peninsulas and the HMAS Otama submarine.

This viewpoint demonstrates that the Project Site will not be visible due to the interruption of the vegetated headland to the south.

7.2.5.3 5(b) Visual Character

This viewpoint was not verified as it is not publicly accessible, however both the Project Site and these residential uses were visible from ground level at Viewpoint **6(a)**. It is therefore expected that the outlook to the south east towards the Project Site from viewpoints **5(b)** and **6(a)** will be similar, with a greater separation distance, higher elevation and potentially more vegetation screening from the residential uses at viewpoint **5(b)**.

The sensitivity of this viewpoint is considered Medium, given a low number of dwellings have an outlook towards the Project Site, though considering the quality of this (filtered) outlook over Western Port and towards French Island.

7.2.5.4 5(b) Visual Impact Assessment

From this viewpoint, the Combined Project infrastructure that will be visible are the FSRU ship and the LNG carrier and its movements. The "End of Line facilities" onshore infrastructure (as estimated - see section 2.5) will likely be screened from view by the existing vegetation on the Project Site, while the installation of the Jetty Infrastructure and Jetty Upgrade (as estimated - see section 2.5) are not likely to be visible given the scale of these works and the distance of the viewpoint. The Combined Project's visual effects upon this viewpoint will be an increased visual presence of maritime and port infrastructure on the landscape.

The Combined Project is understood to be an ongoing change that is able to be reversed. This is because the Combined Project has a long-term duration, however is able to be moved or decommissioned. This value is fixed and does not change depending on the nature of the receptor or viewpoint. The scale of change is considered to be a moderate change to a restricted or brief view, primarily due to the separation distance causing the Combined Project to be a small element in this setting. In accordance with Table 3, the resulting assessment is a Noticeable magnitude of change.

This viewpoint has been assessed to have a Noticeable magnitude of change and a Medium viewpoint sensitivity, resulting in a rating of the significance of visual effects on this viewpoint as Low as determined by Table 4.

7.2.6 Victorian Maritime Centre

The Victorian Maritime Centre is located immediately adjacent and to the north of the Project Site. This receptor is characterised by low lying coastal land with flat topography and dense vegetation and contains promoted attractions such as the Maritime Museum (former BP Administration Building) and the HMAS Otama

submarine lookout. Primary uses within this receptor are expected to be passive recreation and sightseeing, while the Maritime Museum may attract a small amount of employment and functions.

7.2.6.1 Viewpoints

Viewpoint **6(a)** was selected as a specific public viewpoint from the submarine lookout beachfront, approximately 1km north west of the Project Site.

Figure 40: Victorian Maritime Centre – Viewpoint 6(a) Submarine Lookout facing south east

Viewpoint **6(b)** was selected as a specific public viewpoint from the Maritime Museum and former BP Administration Building, immediately to the west of the Project Site.

Figure 41: Victorian Maritime Centre – Viewpoint 6(b) Maritime Museum facing east

7.2.6.2 6(a) Visual Character

Viewpoint **6(a)** is a promoted attraction with associated signposting and unconstructed pedestrian access, however vehicle access and parking was not provided beyond an unmarked gravel shoulder off The Esplanade. The low-lying elevation of this viewpoint allows for a far-reaching panoramic view which is foreground and sky heavy, with a middle ground of the ocean, the HMAS Otama submarine and the Project Site, and discrete glimpses of French Island in the background.

This viewpoint has potential to attract a moderate number of visitors due to being a promoted attraction, however is likely to be an inconsistent frequency due to the lack of vehicle access and parking.

The sensitivity of this viewpoint is expected to be Medium, given the cultural and environmental significance of the area, potential for a moderate number of visitors to the promoted attraction of the HMAS Otama submarine and the panoramic nature of the view.

7.2.6.3 6(a) Visual Impact Assessment

From this viewpoint, the Project infrastructure that will be visible are the FSRU ship and the LNG carrier and its movements. The "End of Line facilities" onshore infrastructure (as estimated - see section 2.5) will likely be partially visible, however well screened by the existing vegetation on the Project Site, while the installation of the Jetty Infrastructure and Jetty Upgrade (as estimated - see section 2.5) are not likely to be visible given the scale of these works and the distance of the viewpoint. The Combined Project's visual effects upon this viewpoint will be an increased visual presence of maritime and port infrastructure on the landscape.

The Combined Project is understood to be an ongoing change that is able to be reversed. This is because the proposal has a long-term duration, however is able to be moved or decommissioned. This value is fixed and does not change depending on the nature of the receptor or viewpoint. The scale of change is considered to be a moderate change to an extended view, due to the close proximity of this viewpoint causing the Combined Project to be a significant element in this setting. In accordance with Table 3, the resulting assessment is a Considerable magnitude of change.

Figure 42: Wireframe Markup of Project from Viewpoint 6(a)

Figure 43: Photomontage of Project from Viewpoint 6(a)

This viewpoint has been assessed to have a Considerable magnitude of change and a Medium viewpoint sensitivity, resulting in a rating of the significance of visual effects on this viewpoint as Moderate as determined by Table 4. Within the context of the existing jetty and maritime industrial activities at the Project Site, the visual effects are considered to be neutral in terms of their impact on this view.

7.2.6.4 6(b) Visual Character

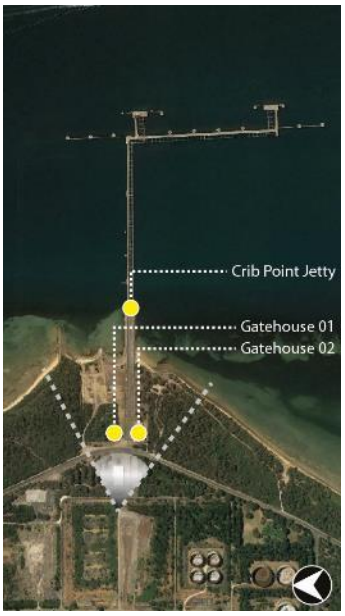
The signposting, good access and listing as a heritage item with significant cultural value mean that this viewpoint can be considered a promoted attraction. Pedestrian and vehicle access is provided by way of a sealed crossover and car parking area. A moderate to high number of visitors is predicted at this location, with seasonal or consistent frequency.

Surrounding development and vegetation dominates the foreground and interrupts distant views. Only a narrow vista of the ocean, jetty and a background of French Island are visible at ground level. It should be noted that the Maritime Museum is two

storeys and a higher elevated aspect may provide a better vantage point for less interrupted ocean views.

The sensitivity of this viewpoint is considered to be Medium, given the potential for a moderate number of visitors at consistent frequencies, potential for less interrupted or framed ocean views from the second storey, the promoted cultural and environmental significance of the Project Site and surrounds and the provision of constructed pedestrian and vehicle access and parking.

7.2.6.5 6(b) Visual Impact Assessment



From this viewpoint, the Combined Project infrastructure that will be at least partially visible are the FSRU ship and the LNG carrier and its movements, and the onshore infrastructure (as estimated - see section 2.5). The installation of the Jetty Infrastructure and Jetty Upgrade (as estimated - see section 2.5) will not cause significant visual impact, given the limited scale of the works and the context of established maritime infrastructure comprising the majority of the view. The Combined Project is partially screened from view by the existing vegetation on the Project Site when viewed from the ground floor, however is expected to be visible from certain vantage points in the Maritime Museum car parking area. Views of the Combined Project are likely to be less interrupted by vegetation screening when viewed from the higher elevation afforded by the second story of the Maritime Museum building. The Combined Project's visual effects upon this viewpoint will be an increased visual presence of maritime and port infrastructure on the landscape.

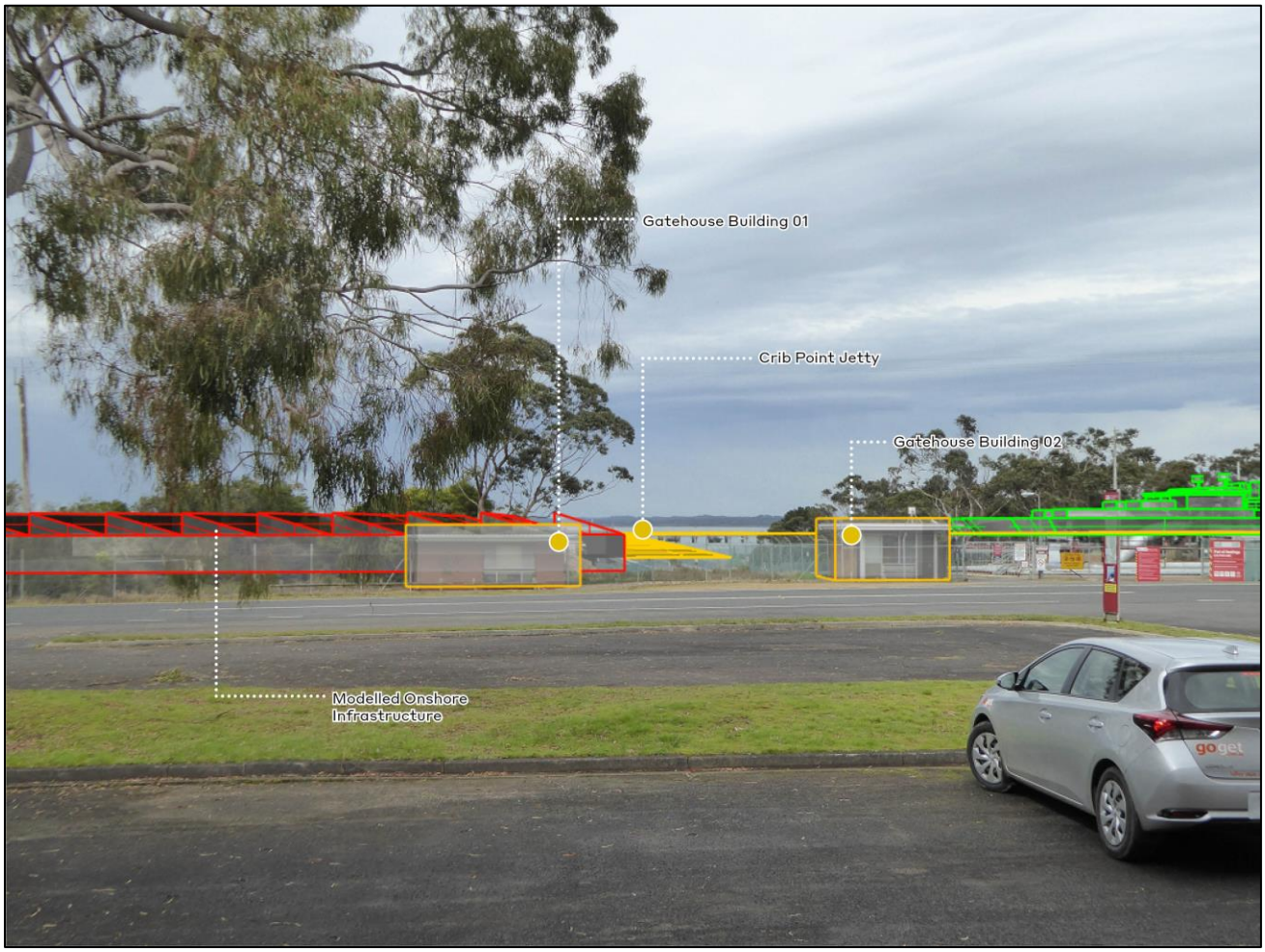


Figure 44: Wireframe Markup of Project from Viewpoint 6(b)

Figure 45: Photomontage of Project from Viewpoint 6(b)

The Combined Project is understood to be an ongoing change that is able to be reversed. This is because the proposal has a long-term duration, however is able to be moved or decommissioned. This value is fixed and does not change depending on the nature of the receptor or viewpoint. The scale of change is considered to be a major change to an extended view, due to the close proximity of this viewpoint causing the Combined Project to be a significant element in the screened view from ground level, and expected wider view from the second storey. In accordance with Table 3, the resulting assessment is a Considerable magnitude of change.

This viewpoint has been assessed to have a Considerable magnitude of change and a Medium viewpoint sensitivity, resulting in a rating of the significance of visual effects on this viewpoint as Moderate as determined by Table 4. Within the complementary context of the viewpoint being from a Maritime Museum, and the existing jetty and maritime industrial activities at the Project Site, the visual effects are considered to be positive in terms of their impact on this view.

7.2.7 Woolley's Beach

Woolley's Beach is located immediately adjacent and to the east of the Project Site. This location is characterised by low lying coastal land on public beach reserves, with flat and mildly undulating topography and patches of dense vegetation cover. It contains promoted heritage and environmental attractions with good vehicle and pedestrian access. Primary uses at Woolley's Beach are expected to be passive recreation and sightseeing.

7.2.7.1 Viewpoints

Viewpoint **7(a)** was selected to generally represent the view from areas along the northern part of the Woolley's Beach reserve.

Figure 46: Woolley's Beach – Viewpoint 7(a) Woolley's Beach North facing east

Viewpoint **7(b)** was selected to generally represent the view from areas along the southern part of the Woolley's Beach reserve.

Figure 47: Woolley's Beach – Viewpoint 7(b) Woolley's Beach South facing east

7.2.7.2 7(a) Visual Character

Viewpoint **7(a)** is a promoted location with significant signposting and vehicle and pedestrian access. The viewpoint also contains public facilities including seating and amenities. A moderate number of visitors is expected at this viewpoint, with seasonal or consistent frequency.

Mature coastal vegetation marginally interferes with the panoramic, long-distance views from some aspects, but the foreground is primarily dominated by the ocean and flat topography allows for a dominating view of the sky. An unimpeded view of the pier is visible in the middle-ground with discrete glimpses of French Island in the background.

The sensitivity of this viewpoint is considered to be Medium to High, given the potential for a moderate number of visitors, signposting and good vehicle and pedestrian access. Public facilities are orientated toward this viewpoint and place passive emphasis on the environmental and scenic value of the ocean, specifically focussed on the Project Site.

7.2.7.3 7(a) Visual Impact Assessment

From this viewpoint, the Combined Project infrastructure that will be visible are the FSRU ship and the LNG carrier and its movements. The "End of Line facilities" onshore infrastructure (as estimated - see section 2.5) may be partially visible to the north, however will be well screened by vegetation. The installation of the Jetty Infrastructure and Jetty Upgrade (as estimated - see section 2.5)may also be visible, however the scale of these works is not expected to cause significant visual impact. The Combined Project's visual effects upon this viewpoint will be an increased visual presence of maritime and port infrastructure on the landscape.

The Combined Project is understood to be an ongoing change that is able to be reversed. This is because the Combined Project has a long-term duration, however is able to be moved or decommissioned. This value is fixed and does not change depending on the nature of the receptor or viewpoint. The scale of change is considered to be a major change to an extended view, due to the close proximity causing the Combined Project to be a dominating element in this setting. In accordance with Table 3, the resulting assessment is a Considerable magnitude of change.

Figure 48: Wireframe Markup of Project from Viewpoint 7(a)

Figure 49: Photomontage of Project from Viewpoint 7(a)

Whilst the change is within the context of the existing jetty and maritime industrial activities at the Project Site, the modelled visual effects interrupt the broader scenic vista and are considered to be negative in terms of their impact on this view. Accordingly, his viewpoint has been assessed to have a Considerable magnitude of change and a Medium to High viewpoint sensitivity, resulting in a rating of the significance of visual effects on this viewpoint as Moderate to High as determined by Table 4.

7.2.7.4 7(b) Visual Character

Viewpoint **7(b)** is a promoted location with significant signposting and vehicle and pedestrian access. The viewpoint also contains a listed heritage item and public facilities including seating and amenities. A moderate number of visitors is expected at this viewpoint, with seasonal or consistent frequency.

Mature coastal vegetation marginally interferes with or frames the panoramic, long-distance views from some aspects, but the foreground is primarily dominated by the ocean and flat topography allows for a dominating view of the sky. An unimpeded

view of the pier is visible in the middle-ground with a discrete background of French Island.

The sensitivity of this viewpoint is considered to be Medium to High, given the potential for a moderate number of visitors, signposting, good vehicle and pedestrian access.

7.2.7.5 7(b) Visual Impact Assessment

From this viewpoint, the Combined Project infrastructure that will be visible are the FSRU ship and the LNG carrier and its movements. The "End of Line facilities" onshore infrastructure (as estimated - see section 2.5) may be partially visible to the north, however will be well screened by vegetation. The installation of the Jetty Infrastructure and Jetty Upgrade (as estimated - see section 2.5) may also be visible, however the scale of these works is not expected to cause significant visual impact. The Combined Project's visual effects upon this viewpoint will be an increased visual presence of maritime and port infrastructure on the landscape.

The Combined Project is understood to be an ongoing change that is able to be reversed. This is because the proposal has a long-term duration, however is able to be moved or decommissioned. This value is fixed and does not change depending on the nature of the receptor or viewpoint. The visual impact is marginally less than that of the northern section of Woolley's Beach considered under viewpoint **7(a)**, given the further proximity and the orientation of public facilities is focussed on the ocean to the south of the Project Site at this location. The scale of change is considered to be a major change to a restricted area of the view, due to the proposals location at the edge of a wider vista than that of 7(a). In accordance with Table 3, the resulting assessment is a Considerable magnitude of change.

Figure 50: Wireframe Markup of Project from Viewpoint 7(b)

Figure 51: Photomontage of Project from Viewpoint 7(b)

Whilst the change is within the context of the existing jetty and maritime industrial activities at the Project Site, the modelled visual effects interrupt the broader scenic vista and are considered to be negative in terms of their impact on this view. Accordingly, this viewpoint has been assessed to have a Considerable magnitude of change and a Medium to High viewpoint sensitivity, resulting in a rating of the significance of visual effects on this viewpoint as Moderate to High as determined by Table 4.

7.2.8 Stony Point Pier

The Stony Point Pier is located approximately 2.4km south of the Project Site. This location is characterised by low lying coastal land, a built-up residential and commercial area surrounding the transport hub and evenly scattered mature vegetation. The primary uses in this receptor are transit oriented and provide excellent access, including the ferry stopping at Stony Point Pier for French Island and Phillip Island and the Stony Point Railway Station.

7.2.8.1 Viewpoints

Viewpoint **8(a)** was selected as a general representation of the view from near the main transit oriented centre of Stony Point, along The Esplanade immediately adjacent to the west of the Stony Point Pier.

Figure 52: Stony Point Pier – Viewpoint 8(a) The Esplanade facing north

7.2.8.2 8(a) Visual Character

In the context of the general surrounds, this viewpoint is the least impeded by existing structures and vegetation and the most publicly accessible, primarily to passing vehicles and pedestrians travelling to or from the Stony Point Pier. A moderate to high number of visitors is expected at this viewpoint, for predominantly very short trips with seasonal or consistent frequency.

Low-lying and mildly undulating terrain allow for a far-reaching, panoramic view with large skies and dominated by vegetation in the foreground. Ocean views and discrete

distant views of the Project Site and the background of Sandstone Island are visible and not screened by low-lying vegetation.

The sensitivity of this viewpoint is considered to be Low to Medium, despite the high number of visitors expected and the terrain and vegetation allowing for distant, panoramic views. Most visitors are likely to be in transit and visit for a short amount of time, with an expectation based on the existing transit-orientated land uses rather than significant visual amenity.

7.2.8.3 8(a) Visual Impact Assessment

From this viewpoint, the Combined Project infrastructure that will be visible are the FSRU ship and the LNG carrier and its movements. The "End of Line facilities" onshore infrastructure (as estimated - see section 2.5) will likely be screened from view by the existing vegetation on the Project Site, while the installation of the Jetty Infrastructure and Jetty Upgrade (as estimated - see section 2.5) are not likely to be visible given the scale of these works and the distance of the viewpoint. The Combined Project's visual effects upon this viewpoint will be an increased visual presence of maritime and port infrastructure on the landscape.

The Combined Project is understood to be an ongoing change that is able to be reversed. This is because the proposal has a long-term duration, however is able to be moved or decommissioned. This value is fixed and does not change depending on the nature of the receptor or viewpoint. The scale of change is considered to be a moderate change to a restricted or brief view, primarily due to the separation distance causing the Combined Project to be a small element in this setting. In accordance with Table 3, the resulting assessment is a Noticeable magnitude of change.

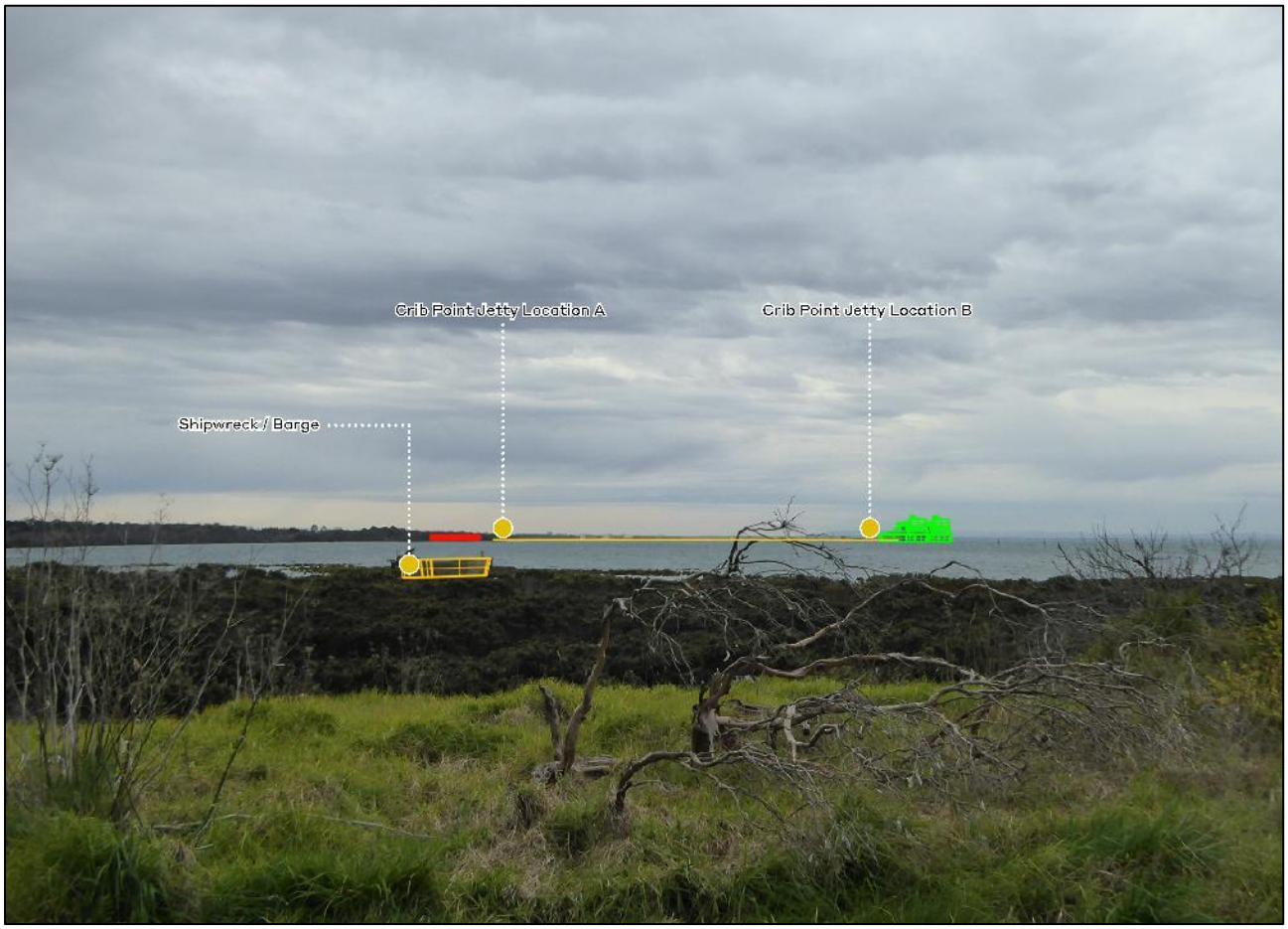


Figure 53: Wireframe Markup of Project from Viewpoint 8(a)

Figure 54: Photomontage of Project from Viewpoint 8(a)

This viewpoint has been assessed to have a Noticeable magnitude of change and a Medium viewpoint sensitivity, resulting in a rating of the significance of visual effects on this viewpoint as Low as determined by Table 4. Within the context of the existing jetty and maritime industrial activities at the Project Site, the modelled visual effects are considered to be neutral in terms of their impact on this view.

7.2.9 French Island

French Island is a comparatively large location of potential receptors, approximately 170km^2 and at its closest point, approximately 4km east of the Project Site. It is primarily characterised by the French Island National Park, which constitutes approximately 70% of the island. The remaining areas are relatively undeveloped and sparsely populated with minimal infrastructure, services and amenities. Primary uses in this receptor are expected to include short-term accommodation and passive recreation with a focus on the natural environment and scenic amenity. Visitors are likely to spend at least a day with the possibility of longer term temporary trips, with a small number of persons residing permanently on the island.

7.2.9.1 Viewpoints

Viewpoint **9(a)** was selected as the closest point of French Island to the Project Site, being approximately 4km east. This viewpoint was not verified but from a desktop assessment, is understood to be characterised by low lying topography with vegetation and marshlands adjacent to the beach and very low-density development.

Viewpoint **9(b)** was selected as a specific viewpoint from ground level at The Pinnacles Lookout, as a promoted viewpoint with a high level of environmental and scenic amenity value approximately 7.1km east of the Project Site.

Figure 55: French Island – Viewpoint 9(b) The Pinnacles Lookout

Viewpoint **9(c)** was selected to generally represent the view from Tankerton Jetty and the surrounding reserve, as this area is the drop off and pick up point for the French Island Ferry from Stony Point. This viewpoint was not verified but from a desktop assessment, is understood to be characterised by as being a relatively undeveloped, low-lying, coastal landscape.

7.2.9.2 9(a) Visual Character

Visitors are expected to spend a moderate amount of time at this viewpoint with a seasonal or inconsistent frequency. Long views are provided along the stretching, thin white sand beaches back towards the mainland and distant, unimpeded views of the Project Site in the background are expected.

Sensitivity at this viewpoint is expected to be Medium, given the purpose of persons visiting French Island is likely to focus on environmental and scenic values, of which coastal landscapes and far reaching views are expected to play a significant role and be highly valued.

7.2.9.3 9(a) Visual Impact Assessment

From this viewpoint, the Combined Project infrastructure that will be visible are the FSRU ship, the LNG carrier and its movements and the End of Line facilities" onshore infrastructure (as estimated - see section 2.5), while the Jetty Infrastructure and Jetty Upgrade (as estimated - see section 2.5) are not likely to be visible given the scale of these works and the distance of the viewpoint. The Combined Project's visual effects upon this viewpoint will be an increased visual presence of maritime and port infrastructure on the landscape.

The Combined Project is understood to be an ongoing change that is able to be reversed. This is because the proposal has a long-term duration, however is able to be moved or decommissioned. This value is fixed and does not change depending on the nature of the receptor or viewpoint. The scale of change is considered to be a moderate change to a restricted or brief view, primarily due to the separation distance causing the Combined Project to a small element in this setting. The resulting assessment is a Noticeable magnitude of change.

This viewpoint has been assessed to have a Noticeable magnitude of change and a Medium viewpoint sensitivity, resulting in a rating of the significance of visual effects on this viewpoint as Low as determined by Table 4. Within the context of the existing jetty and maritime industrial activities at the Project Site, the modelled visual effects are considered to be neutral in terms of their impact on this view.

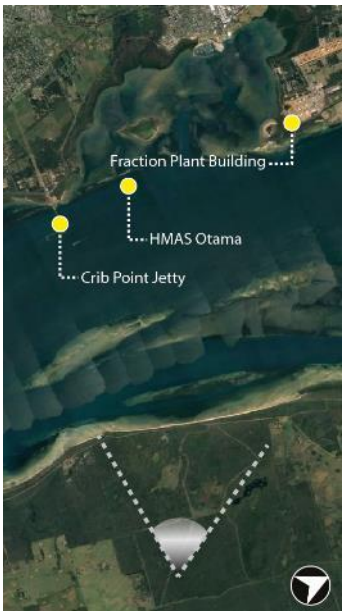
9(b) Visual Character

The lookout has vehicle and pedestrian access and is the junction of several sections of the Pinnacles Track. A moderate number of visitors are expected at this promoted viewpoint with seasonal or consistent frequency.

The lookout has a 360-degree panoramic outlook dominated by vegetated foreground and sky due to the lower and mildly undulating surrounds. The background along the horizon is made up of the ocean and distant mainland and an unimpeded view of the Project Site is expected.

Sensitivity at this viewpoint is expected to be Medium to High, given the purpose of persons visiting French Island and much more directly the role of The Pinnacles Lookout is to focus on the environmental and scenic values in the immediate and distant surrounds.

7.2.9.4 9(b) Visual Impact Assessment



From this viewpoint, the Combined Project infrastructure that will be visible are the FSRU ship, the LNG carrier and its movements, together with the "End of Line Facility" onshore infrastructure (from the Pipeline Project) (as estimated - see section 2.5), while the installation of the Jetty Infrastructure and Jetty Upgrade(as estimated - see section 2.5) are not likely to be visible given the scale of these works and the distance of the viewpoint. The Combined Project's visual effects upon this viewpoint will be an increased visual presence of maritime and port infrastructure on the landscape.

The Combined Project is understood to be an ongoing change that is able to be reversed. This is because the proposal has a long-term duration, however is able to be moved or decommissioned. This value is fixed and does not change depending on the nature of the receptor or viewpoint. The scale of change is considered to be a moderate change to a restricted or brief view, primarily due to the separation distance causing the Combined Project to be a small element in this setting. In accordance with Table 3, the resulting assessment is a Noticeable magnitude of change

This viewpoint has been assessed to have a Noticeable magnitude of change and a Medium to High viewpoint sensitivity, resulting in a rating of the significance of visual effects on this viewpoint as Moderate as determined by Table 4. Within the context of the proximity, existing jetty and maritime industrial activities at the Project Site, the modelled visual effects are considered to be neutral in terms of their impact on this view.

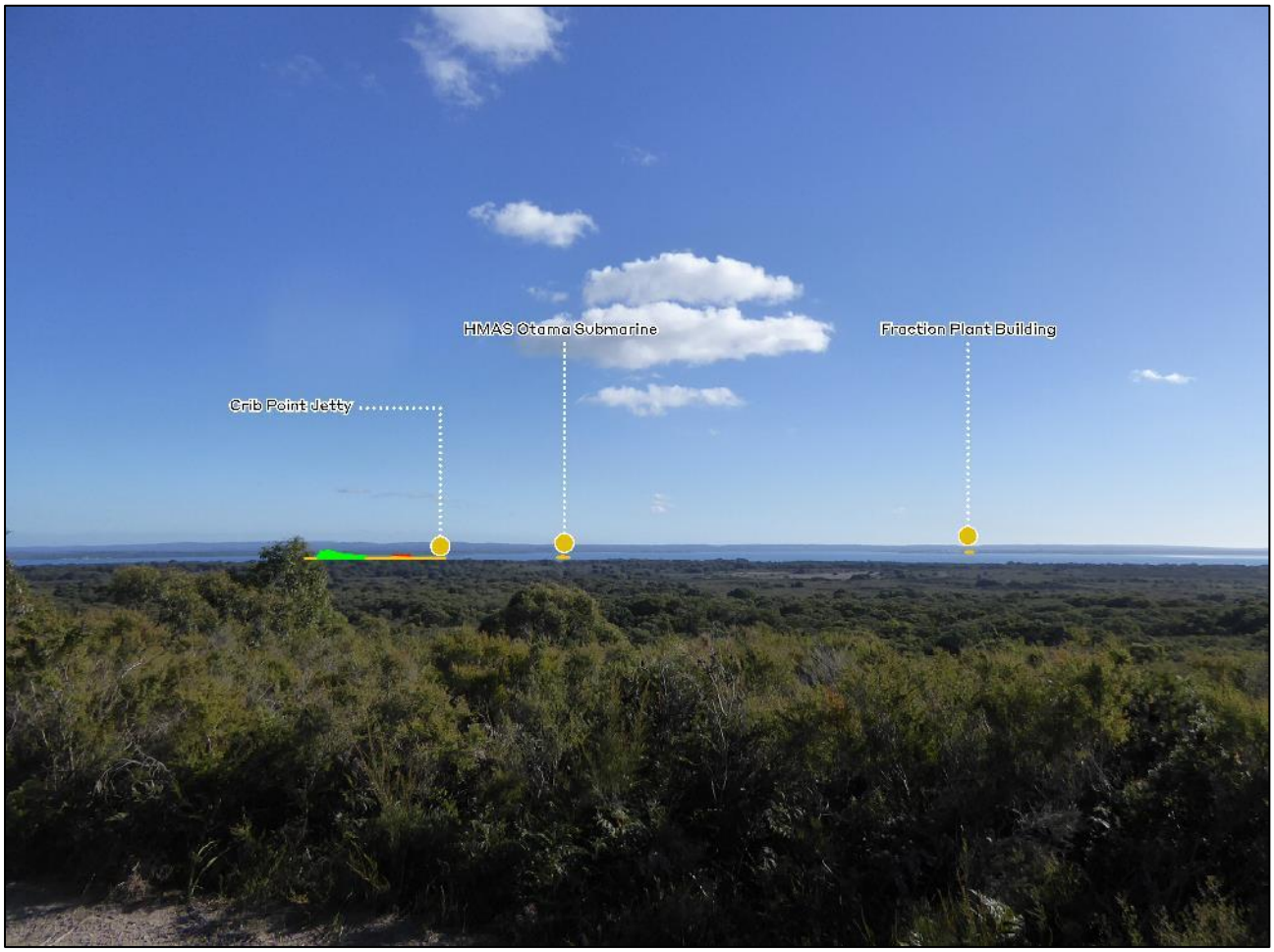


Figure 56: Wireframe Markup of Project from Viewpoint 9(b)

Figure 57: Photomontage of Project from Viewpoint 9(b)

9(c) Visual Character

The primary land uses within the vicinity is for transport hubs. A moderate to high number of visitors are expected to spend a short amount of time in this location with seasonal or consistent frequencies.

The sensitivity at this viewpoint is expected to be low, despite the moderate to high number of visitors, as they are likely to spend a short amount of time at this location between transport modes with a negligible expectation for high levels of scenic amenity and environmental values in this part of French Island.

7.2.9.5 9(c) Visual Impact Assessment

From this viewpoint, the Combined Project infrastructure that will be visible are the FSRU ship, the LNG carrier and its movements and the "End of Line facilities" onshore infrastructure (as estimated - see section 2.5), while the Jetty Infrastructure and Jetty Upgrade (as estimated - see section 2.5) are not likely to be visible given the scale of these works and the distance of the viewpoint. The

Combined Project's visual effects upon this viewpoint will be an increased visual presence of maritime and port infrastructure on the landscape.

The Combined Project is understood to be an ongoing change that is able to be reversed. This is because the proposal has a long-term duration, however is able to be moved or decommissioned. This value is fixed and does not change depending on the nature of the receptor or viewpoint. The scale of change is considered to be a moderate change to a restricted or brief view, primarily due to the separation distance causing the Combined Project to a small element in this setting. In accordance with Table 3, the resulting assessment is a Noticeable magnitude of change.

This viewpoint has been assessed to have a Noticeable magnitude of change and a Medium to High viewpoint sensitivity, resulting in a rating of the significance of visual effects on this viewpoint as Moderate as determined by Table 4. Within the context of the proximity, existing jetty and maritime industrial activities at the Project Site, the modelled visual effects are considered to be neutral in terms of their impact on this view.

7.2.10 Residential Uses

Residential uses identified within the surrounding visible landscape are at varying distances and directions, primarily used for permanent residency by a low number of persons with an expectation for a low number of visitors.

7.2.10.1 Viewpoints

Viewpoints from residential uses identified within other receptors have been discussed under viewpoints **3(b)** Warringine Park (Warranqite Crescent) and **5(b)** Jack's Beach.

An additional viewpoint from residential uses was selected, not specific to any previous receptors. Viewpoint **10(a)** was selected as a representative viewpoint for surrounding low density residential uses, taken from the southern side of Lorimer Street at the intersection of Lorimer Street and The Esplanade, approximately 1.3km south west of the Project Site.

Figure 58: Residential Uses – Viewpoint 10(a) Lorimer Street

7.2.10.2 10(a) Visual Character

The surrounding landscape is low-lying and mildly undulating, with dense pockets of vegetation and dominated by low density residential uses and open space that is expected to promote passive recreation.

The view from this location is short and dominated by vegetation, however glimpses of the ocean and French Island are visible through the roadside trees along The Esplanade and it is expected that the Project Site may be partially visible from certain aspects.

The sensitivity of this viewpoint is considered Medium, given a low number of dwellings have an outlook towards the Project Site and are generally well screened by vegetation, though considering the quality of this (filtered) outlook over the Western Port and towards French Island.

7.2.10.3 10(a) Visual Impact Assessment

From this viewpoint, the Combined Project infrastructure that will be partially visible are the FSRU ship and the LNG carrier and its movements. The “End of Line facilities" onshore infrastructure (as estimated - see section 2.5) will likely be screened from view by the existing vegetation on the Project Site, while the installation of the Jetty Infrastructure and Jetty Upgrade (as estimated - see section 2.5) are not likely to be visible given the scale of these works and the distance of the viewpoint. The Combined Project’s visual effects upon this viewpoint will be an increased, however interrupted, visual presence of maritime and port infrastructure on the landscape.

The Combined Project is understood to be an ongoing change that is able to be reversed. This is because the proposal has a long-term duration, however is able to be moved or decommissioned. This value is fixed and does not change depending on the nature of the receptor or viewpoint. The scale of change is considered to be a moderate change to a restricted or brief view, primarily due to reasonable proximity yet significant vegetation screening along the roadside causing the Combined Project to be visible yet well screened element on the landscape. In accordance with Table 3, the resulting assessment is a Noticeable magnitude of change.

Figure 59: Wireframe Markup of Project from Viewpoint 10(a)

Figure 60: Photomontage of Project from Viewpoint 10(a)

This viewpoint has been assessed to have a Noticeable magnitude of change and a Medium viewpoint sensitivity, resulting in a rating of the significance of visual effects on this viewpoint as Low as determined by Table 4. Within the context of the existing jetty and maritime industrial activities at the site, the modelled visual effects are considered to be neutral in terms of their impact on this view.

7.2.11 Western Port

Western Port is considered as a receptor immediately adjacent and surrounding the Project Site. Primary uses in Western Port are recreational boating, and transport of passengers or cargo by boat. There are no permanent uses within this receptor. A moderate to high number of visitors are expected at this receptor are expected to be short term with a consistent frequency.

7.2.11.1 Viewpoints

Viewpoint **11(a)** was not verified due to access constraints, but was identified as the passenger transport route between Stony Point Pier and Tankerton Jetty, between approximately 2.2 and 5.2 km south and south east respectively of the Project Site.

7.2.11.2 11(a) Visual Character

This viewpoint is expected to have a panoramic view of the surrounding ocean, mainland and French Island including the Project Site, due to low elevation and absence of any structures or vegetation.

The sensitivity of this viewpoint is expected to be Low to Medium, despite the moderate to high number of visitors and the unobscured, far reaching view, as these viewers will be temporary and have expectations of their surroundings consistent with the associated transit hubs developed along the headlands.

7.2.11.3 11(a) Visual Impact Assessment

From this viewpoint, the Combined Project infrastructure that will be visible are the FSRU ship, the LNG carrier and its movements and the "End of Line Facilities" (onshore infrastructure) (as estimated - see section 2.5), while the Jetty Infrastructure and Jetty Upgrade (as estimated - see section 2.5) are not likely to be visible given the scale of these works and the distance of the viewpoint. The Combined Project's visual effects upon this viewpoint will be an increased visual presence of maritime and port infrastructure on the landscape.

The Combined Project is understood to be an ongoing change that is able to be reversed. This is because the proposal has a long-term duration, however is able to be moved or decommissioned. This value is fixed and does not change depending on the nature of the receptor or viewpoint. The scale of change is considered to be a minor change to an extended view, primarily due to the separation distance causing the Combined Project to a small element in this setting. In accordance with Table 3, the resulting assessment is a Noticeable magnitude of change.

This viewpoint has been assessed to have a Noticeable magnitude of change and a Low to Medium viewpoint sensitivity, resulting in a rating of the significance of visual effects on this viewpoint as Low as determined by Table 4. Within the context of the existing jetty and maritime industrial activities at the site, the modelled visual effects are considered to be neutral in terms of their impact on this view.

7.2.12 The Esplanade

The Esplanade considers receptors using the road that runs parallel with the coastline adjacent to the Project Site from approximately 2.6km north west, to Stony Point Pier approximately 2.6km south of the Project Site. A moderate to high number of visitors are expected along this large receptor range for short term trips.

7.2.12.1 Viewpoints

Representative viewpoints were selected at various intervals along The Esplanade, and have been considered under **5(c)** Jack's Beach, **6(b)** Victorian Maritime Centre – Maritime Museum, **8(a)** Stony Point Pier and **10(a)** Residential Uses – Lorimer Street. The sensitivity of these viewpoints and visual impact of the Combined Project is considered individually as each is dependent on the contextual land uses and surrounding landscape.

8.0 Conclusions & Recommendations

The Combined Project's impact on the landscape receptors is considered to be of Low to Moderate significance.

The landscape character and assessment outlined that the majority of areas surrounding the Project Site are within the Western Port Lowlands Character Area, characterised by undeveloped coastal areas with environmental values, and developed headlands with maritime uses, densely spread areas of vegetation and a peri-urban settlement of rural, residential and commercial uses. Sensitive landscape receptors were identified and assessed and determined to have a moderately significant impact at most, which is considered acceptable considering the existing context and presence of maritime industry at this location and within this landscape.

Table 7: Summary of Landscape Impact Assessment

Receptor	Duration and/or Reversibility	Scale of Change	Magnitude of Change	Landscape Sensitivity	Significance of Landscape Impacts
Perceived Naturalistic Quality of Coastal Areas	An ongoing change that is able to be reversed	A moderate change over a restricted area	Noticeable	High	Moderate
Presence of Maritime Industry				Low	Low
Passive Recreational Uses at the Coastline				High	Moderate

The impact on the majority of visual receptors is considered to be of Low significance, given the majority of receptors were found to have a distant, partial or obscured view of the Project Site. Overall, this results in a visual impact of Low to Moderate significance.

Viewpoints with an unimpeded and relatively close view of the Project Site were assessed to have a Medium to High significance of visual impact. These viewpoints generally also have an unimpeded view of the existing maritime land uses on the Crib Point headland which provides sound context for the development, but may be perceived as a negative impact on, for example, an area of local significance with environmental and passive recreational value.

Table 8: Summary of Visual Impact Assessment

	Viewpoint	Duration and/or Reversibility	Scale of Change	Magnitude of Change	Visual Sensitivity	Significance of Visual Impacts
1	**Tyabb Cemetery**					
1(b)	Adjacent Foreshore	An ongoing change that is able to be reversed	A moderate change to a restricted or brief view	Noticeable	Low	Low
3	**Warringine Park**					
3(b)	Residential Uses (Warranqite Crescent)	An ongoing change that is able to be reversed	A minor change to a restricted view	Noticeable	Medium	Low
3(c)	Boardwalk Lookout			Imperceptible		Negligible
4	**Sandstone Island**					
4(a)	Sandstone Island	An ongoing change that is able to be reversed	A moderate change to a restricted or brief view	Noticeable	Low	Low
5	**Jacks Beach**					
5(b)	Residential Uses	An ongoing change that is able to be reversed	A moderate change to a restricted or brief view	Noticeable	Medium	Low
6	**Victorian Maritime Museum**					
6(a)	Submarine Lookout	An ongoing change that is able to be reversed	A moderate change to an extended view	Considerable	Medium	Moderate
6(b)	Maritime Museum		A major change to an extended view			
7	**Woolley's Beach**					

	Viewpoint	Duration and/or Reversibility	Scale of Change	Magnitude of Change	Visual Sensitivity	Significance of Visual Impacts
7(a)	Foreshore North	An ongoing change that is able to be reversed	A major change to an extended view	Considerable	Medium – High	Moderate – High
7(b)	Foreshore South					
8	**Stony Point Pier**					
8(a)	The Esplanade	An ongoing change that is able to be reversed	A moderate change to a restricted or brief view	Noticeable	Medium	Moderate
9	**French Island**					
9(a)	Fairhaven Beach	An ongoing change that is able to be reversed	A moderate change to a restricted or brief view	Noticeable	Medium	Moderate
9(b)	The Pinnacles				Medium – High	
9(c)	Tanketon Jetty & Reserve					
10	**Residential Uses**					
10(a)	Lorimer Street	An ongoing change that is able to be reversed	A moderate change to a restricted or brief view	Noticeable	Medium	Low
11	**Western Port**					
11(a)	Western Port	An ongoing change that is able to be reversed	A minor change to an extended view	Noticeable	Low – Medium	Low

The following recommendations outline the desired actions to mitigate the potential landscape and visual impacts of the Project.

8.1 Onshore Infrastructure

The location for the onshore infrastructure is well screened by existing mature vegetation to the north, west and south. Vegetation to the north is approximately 11

metres high, and approximately 9 metres to the west and south. The photomontages have been produced under the assumption that this structure would be 8 metres in height. It is recommended that infrastructure not be constructed over the estimated tree canopy height to the west and south of 9 metres, so as to take full advantage of surrounding vegetation screening.

The aesthetic bulk and scale of the Combined Project infrastructure can be reduced through design where practical, and should be finished in muted and non-reflective tones consistent with the Mornington Peninsula Shire Planning Scheme (even though no planning approval is required for the Project).

8.2 FSRU & LNG Carrier

The existing maritime infrastructure already installed at Crib Point, including the Maritime Museum and jetty, provides an existing context for the further development of appropriate and consistent maritime uses. It is recommended that the FSRU and LNG Carrier be of an exterior finish that is muted in tone and non-reflective consistent with the Mornington Peninsula Shire Planning Scheme (even though no planning approval is required for the Project), and in a colour scheme that does not detract from the existing maritime vessels that use this area of Western Port.

8.3 Crib Point Jetty

It is understood that there will be elements of the Combined Project that may impact or involve the existing Crib Point Jetty. Any construction or modification of the jetty should be finished as to be muted in tone and non-reflective consistent with the Mornington Peninsula Shire Planning Scheme (even though no planning approval is required for the Project), and in a colour scheme that complements the existing jetty and does not foster the perception of significant industrial activities at the Project Site. Any pipe infrastructure affixed to the Jetty should be subordinate in nature and complementary to the design of the existing structure.

8.4 Prevention & Maintenance

A schedule should be established that details the exterior materials and finishes to be used as part of the Project, alongside a strategy for cleaning, painting and general maintenance to prevent and manage the possible structural and aesthetic deterioration of all aspects of the development from effects such as salt-water corrosion and biofouling. Preventative maintenance should be implemented and scheduled to ensure the appropriate and ongoing visual appearance of the facilities proposed.

8.5 Lighting

The Crib Point jetty currently has lighting, some of which may require upgrading. There are a number of Australian and international lighting standards and regulations that will apply to the FSRU in port. Many of these are designed to ensure that the FSRU is sufficiently well lit that it is a safe working environment for the workers on-board, and to ensure that it can be seen by the masters of other vessels using the port. Additionally, these regulations require that illumination must be organised so that the risk of dazzle and glare is minimised and the Director of Maritime Safety retains a broader power to give directions to vessel masters with respect to lighting.

AGL and the masters of the FSRU and LNG carriers will have a legal obligation to comply with relevant standards and regulations, AGL takes its obligations with respect to occupational and maritime safety very seriously. However, the purpose of lighting on the FSRU is to illuminate the FSRU itself, and not the surrounding waters or Crib Point. AGL has advised that lighting will be designed in a manner, consistent with these standards and regulations, to avoid or minimise unreasonable light spill beyond the FSRU.

However, potential impacts of lighting on landscape receptors are an increased presence of maritime industry on the perceived naturalistic qualities of the area. The exact lighting configuration cannot be modelled as the preferred FSRU has not yet been selected. It is recommended that lighting on the Crib Point Jetty, FSRU and LNG carriers is designed, baffled and located as to prevent any significant increase in light spill into areas of perceived naturalistic qualities.

The visual amenity of visual receptors such as residential properties and coastal recreation areas should also protected by standard condition such as the following:

> *External lighting should be designed, baffled and located as to prevent any adverse effect on adjoining land to the satisfaction of the responsible authority.*

10.0 References

Landscape Institute and Institute of Environmental Management & Assessment [LI & IEMA] 2013, *Guidelines for Landscape and Visual Impact Assessment (third edition)*, Routledge, London.

The State of Victoria Department of Sustainability and Environment 2006, *Ministerial guidelines for assessment of environmental effects under the Environment Effects Act 1978 (seventh edition),* East Melbourne, Victoria.