Bellarine Safe Harbour Project
Terrestrial Ecology Assessment

Parks Victoria

April 2007

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Terrestrial Ecology Assessment

Prepared for

Parks Victoria

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1.0 Introduction

The flora and fauna values of the local environment around the study area have been identified through a desktop assessment of key databases and a review of the *Baseline Assessment Study of Landscape Values* (EDAW 2007). A detailed field assessment (ie. Net Gain assessment) has not been undertaken and would not be required until detailed design phase. The terrestrial environment within and adjacent to the study area has been heavily modified by human activity and is dominated by introduced grass species and Cyprus and Pine trees. A number of scattered Eucalypts and Cyprus trees are present along the Portarlington foreshore. This report describes the habitat values and likelihood of occurrence of significant terrestrial flora and fauna species at Portarlington Pier.

2.0 Legislative Policy Framework

2.1 Environment Protection and Biodiversity Conservation (EPBC) Act 1999

The EPBC Act provides a high level of protection for matters of national environmental significance, which are identified within seven categories. Two of these categories, listed below, may be applicable for the proposed development:

- Threatened species and ecological communities
- Migratory species

Threatened species listed under the EPBC Act are listed as being 'vulnerable', 'endangered', 'critically endangered' or 'extinct in the wild'. These are afforded an increasing level of protection under the Act. Migratory species are listed in recognition of their inclusion under international treaties such as the China Australia Migratory Bird Agreement and the Japan Australia Migratory Bird Agreement.

All species listed under the EPBC Act are considered by the Commonwealth Department of Environment and Water Resources to be of significance. Species listed under the EPBC Act which have been recorded in the study area are listed below in Table 1.

2.2 Flora and Fauna Guarantee (FFG) Act 1988

Species considered to be threatened in Victoria are listed under provisions of the FFG Act and/or by DSE (2003). Species listed as threatened on those lists are considered to be of state significance. Unlike the EPBC Act, species are not listed with a status and all species are afforded equal protection. FFG Act listed species which have been recorded in the study are listed below in Table 1.

2.3 Planning and Environment 1987

The Bellarine Safe Harbour area is zoned Public Park and Recreation (PPRZ) within the City of Greater Geelong Planning Scheme. The PPRZ provides for the implementation of objectives, including recognising the area for public recreation and open space, protecting and conserving areas of significance and providing for commercial uses where appropriate.

No overlays apply within the study area.

Native Vegetation Framework

In 2002, the Victorian Department of Natural Resources and Environment (now known as the Department of Sustainability and Environment) released *Victoria's Native Vegetation Management – A*

Framework for Action. The document establishes a framework for the protection, enhancement and revegetation of native vegetation across the State. Significantly, the document explains a reporting framework that enables accounting for native vegetation, allowing the State government to progress towards a Net Gain result (i.e. achieve an overall net gain in the amount and quality of native vegetation in Victoria).

A Framework for Action sets out the following vision for native vegetation in the state:

> *Management of native vegetation provides a sustainable landscape and protects the long-term productive capacity and environmental values of our land and water resources.*
>
> *The unique beauty and diversity of Victoria's landscapes and the importance of the underlying complex ecosystems are recognised internationally.*

The primary goal for native vegetation management in Victoria (as set out in the document) is to achieve:

> *A reversal, across the entire landscape, of the long-term decline in the extent and quality of native vegetation, leading to a Net Gain.*

Ecological Vegetation Classes (EVCs) are the primary level of classification of vegetation communities within Victoria. An EVC contains one or more plant (floristic) community and represents a grouping of vegetation communities with broadly similar ecological attributes. Conservation significance ratings are also assigned to each EVC to ensure the appropriate level of protection.

Draft Corangamite Native Vegetation Plan

This document (NRE 2000) has been prepared to develop a strategic and co-ordinated approach to the problem of the continuing decline in quantity and quality of native vegetation throughout South-western Victoria.

3.0 Results of Desktop Assessment

3.1 Results of Desktop Assessment

An Ecological Vegetation Class (EVC) – Grassy Woodland – is present in the southeastern half of the WG Little Reserve, and overlaps with a small portion of the defined study area at the corner of Geelong-Portarlington Road and Fisher Street. A site walkover confirmed the presence of scattered plantings at this location (Figure 1). This EVC is also scattered throughout Portarlington and along the foreshore to the east of Fisher Street. Grassy Woodland is considered to be endangered in the Otway Plains bioregion, and is characterised by a variable eucalypt cover up to 15m over a diverse ground layer of grasses and herbs.

Table 1 presents a list of protected species identified through a search of the Flora Information System (FIS) which have been recorded within 1 kilometre of Portarlington. The species are protected under the *Environment Protection and Biodiversity Conservation Act* 1999 (EPBC Act) or the *Flora and Fauna Guarantee Act* 1988 (FFG Act). An additional search of the EPBC online database identified a further three listed species which are considered likely to occur within 1km of the study area.

Table 1: Protected flora species recorded in the FIS as occurring within 1km of Portarlington

Common name	Scientific name	Protection status	
		EPBC Act	FFG Act
Species recorded within 1km of Portarlington (FIS)			
Adamson's Blown-grass	*Lachnagrostis adamsonii*	E	Listed
Purple Blown-grass	*Lachnagrostis punicea subsp. filifolia*	-	Listed
Species likely to within 1km of the study area (EPBC database)			
Maroon-leek orchid	*Prasophyllum frenchii*	E	Listed
Metallic-sun orchid	*Thelymitra epipactoides*	E	Listed
Curly Sedge	*Carex tasmanica*	V	Listed
Purple Clover	*Glycine latrobeana*	V	Listed

E – Endangered; V – Vulnerable

The fauna species listed in Table 2 and Table 3 are recorded in the Atlas of Victorian Wildlife (AVW) as having occurred within 1km of Portarlington. Additionally, a search of the EPBC online database revealed a further thirteen species which may occur, or whose habitat may occur, within 1km of the study area.

Table 2: Listed terrestrial bird species which have been recorded, or which may occur, within 1km of study area

Common name	Scientific name	Protection status		
		EPBC Act	FFG Act	Treaty
Species recorded within 1km of Portarlington (AVW)				
Latham's Snipe	*Gallinago hardwickii*	Mi	-	CAMBA/JAMBA
Australasian Bittern	*Botaurus poiciloptilus*	-	Listed	-
Fairy Tern	*Sterna nereis*	-	Listed	-
Little Tern	*Sterna albifrons*	-	Listed	CAMBA/JAMBA
Cattle Egret	*Ardea ibis*	-	-	CAMBA/JAMBA
Fork-tailed Swift	*Apus pacificus*	-	-	CAMBA/JAMBA
Sharp-tailed Sandpiper	*Calidris acuminata*	-	-	CAMBA/JAMBA
Species which may occur, or whose habitat may occur in the study area (EPBC database)				
Swift Parrot	*Lathamus discolor*	E	Listed	-

Common name	Scientific name	Protection status		
		EPBC Act	FFG Act	Treaty
Northern Royal Albatross	*Diomedea sanfordi*	E, Mi	-	-
Regent Honeyeater	*Xanthomyza phrygia*	E, Mi	Listed	-
Southern Giant-Petrel	*Macronectes giganteus*	E, Mi	Listed	-
Australian Painted Snipe	*Rostratula australis*	V	-	CAMBA
Buller's Albatross	*Thalassarche bulleri*	V, Mi	Listed	-
Campbell Albatross	*Thalassarche impavida*	V, Mi	Listed	-
Gibson's Albatross	*Diomedea gibsoni*	V, Mi	-	-
Northern Giant-Petrel	*Macronectes halli*	V, Mi	Listed	-
Salvin's Albatross	*Thalassarche salvini*	V, Mi	Listed	-
Shy Albatross	*Thalassarche cauta*	V, Mi	Listed	-
Southern Royal Albatross	*Diomedea epomophora*	V, Mi	Listed	-
Rufous Fantail	*Rhipidura rufufrons*	Mi	-	-
Satin Flycatcher	*Myiagra cyanoleuca*	Mi	-	-
Painted Snipe	*Rostratula benghalensis spp lat.*	Mi	Listed	CAMBA
Rainbow Bee-eater	*Merops ornatus*	Mi	-	-
White-bellied Sea-eagle	*Haliaeetus leucogaster*	Mi	Listed	-
White-throated Needletail	*Hirundapus caudacutus*	Mi	-	CAMBA
Species for which migration routes may occur in within 1km of the study area (EPBC database)				
Orange-bellied Parrot	*Neophema chrysogaster*	CE, Mi	Listed	-

E – Endangered; CE – Critically Endangered; *V – Vulnerable; Mi – Migratory*

Table 3: EPBC listed terrestrial species which have been recorded within 1km of study area (AVW)

Common name	Scientific name	Protection status	
		EPBC Act	FFG Act
Growling Grass Frog	*Litoria raniformis*	V	Listed
Southern Brown Bandicoot	*Isoodon obesulus obesulus*	E	-

E – Endangered; V – Vulnerable

Given the highly modified nature of the foreshore reserve (Figure 1), it is unlikely that any of the flora species listed in Table 1 occur within the immediate vicinity of the study area and would therefore be disturbed by proposed harbour redevelopment works. Without a detailed spring flora survey having been undertaken, these species are considered more likely to occur in the Point Richards Flora and Fauna Reserve some distance to the west, or along the foreshore to the east.

Figure 1: Looking west towards the harbour from Fisher Street, Portarlington (Jan 2006)

It is also unlikely that any significant habitat for the species listed in Table 2 and Table 3 exists in the study area, as outlined below:

Orange-Bellied Parrot

Although the Orange-bellied Parrot is listed in Table 2 as likely to migrate through the area, there is no suitable habitat (coastal saltmarsh) in or adjacent to the study area for the species to utilise for breeding or foraging activity. It is therefore highly unlikely that the species will occur or be affected by the proposed works.

Growling Grass Frog

The Growling Grass Frog has been recorded within 1km of the study area, however the status of this species in the local area is uncertain. The species is found in wet environments in woodlands, shrublands and open or disturbed areas. Although the species may occur in areas near Portarlington, there is no suitable habitat within the study area, and it is therefore unlikely that the species will be affected.

Southern Brown Bandicoot

The Southern Brown Bandicoot is known to occur in dry heath, shrubland and heathy forest and woodland usually associated with well-drained soils. Although it has been recorded within 1km of the study area, the site does not support suitable habitat for this species. No characteristic signs of this species were noted such as scats, scratchings etc. Therefore it is unlikely that the Southern Brown Bandicoot will occur in the study area.

4.0 Recommendations

Whilst the occurrence of remnant native vegetation in the study area is sparse, it is possible that harbour related construction or designation of access routes on the coastal cliffs has the potential to result in the clearing of remnant trees and native vegetation. However, as stated in the geotechnical assessment, development on the cliffs in the eastern section of the study area, where this vegetation occurs, is not recommended due to instability issues. In fact, the proposed development provides an opportunity to improve the stability and conservation outcomes through the revegetation of this area.

If removal of native vegetation is proposed, these areas should be subject to both a spring flora survey and a net gain assessment. However, any loss in vegetation is likely to be less than the 0.01 hectare trigger for offset under the NVF. In addition, any offsets for such losses could be achieved on-site through revegetation and management of the larger areas of native vegetation beyond the eastern boundary of the study area (near Fisher Street).

Regardless of the location of specific developments within the study area, an environmental management plan should be developed to ensure that damage to ecologically significant areas or individual flora and fauna species during and after construction is avoided or minimised.

Any areas retained for conservation value should be fenced prior to construction to prevent any accidental damage, such as soil disturbance.

Signage, induction and careful supervision of contractors should also be implemented.

Best practice sedimentation management should be implemented to protect native vegetation and habitat values. This is of particular relevance to the cliffs located in the eastern section of the study area. Therefore, there are no significant terrestrial flora or fauna values that would constrain the proposed Bellarine Safe Harbour Development.