

**Paul Kelly & Associates
Ecological Services**

**Ecological Features and Constraints
Preliminary Assessment**

Fellow & Murray Roads Development Plan

31 May 2014

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Contents

1	Introduction	4
1.1	Project Background	4
1.2	Site location	4
1.3	Objectives	5
<hr/>		
2	Methods	5
2.1	Literature and Database Review	5
2.2	Field Survey	5
<hr/>		
3	Results	6
3.1	Flora	6
3.1.1	Database assessment	6
3.1.2	Report Reviews	6
3.1.3	Site Assessment	7
3.1.4	Flora Significance	9
3.1.5	EPBC Listed Communities	9
3.2	Fauna	9
3.2.1	Desktop Assessment	9
3.2.2	Field Assessment:	10
<hr/>		
4	Legislative Requirements	10
4.1	Environment Protection and Biodiversity Conservation (EPBC) Act	10
4.2	Planning and Environment Act 1987	11
<hr/>		
5	Proposed Development & Discussion	11
6	Conclusion	12
7	References	13

Appendix 1 – Site Map

Appendix 2 – Flora List

Appendix 3 – EPBC Report

Appendix 4 – Biodiversity Assessment Report

1 Introduction

1.1 Project Background

PKA was commissioned by Planisphere. to prepare a preliminary ecological assessment of a site on the corner of Fellows Road and Murray Road, Queenscliff. This assessment will be used to assist in the preparation of a Development Plan of land zoned Residential 1 and owned by the Borough of Queenscliffe.

1.2 Site location

The study site is located east of the township of Queenscliff. It is located within the Borough of Queenscliffe Local Government area. It is situated in the Otway Plain Bioregion.

The entire site is approximately 7ha in area and is adjoined by Murray Road on the northern boundary, Fellows Road on the western boundary, the Bellarine Highway on the southern boundary and residential development on the eastern boundary.

As an overview, the subject site is undeveloped and is centrally dominated by saltmarsh with two areas of fill (Appendix 1). Other smaller dumps of rubbish occur on the site.

The site is separated from Swan Bay by an elevated road (Murray Road) and an elevated railway line (Bellarine Railway) and as such is not considered to be hydraulically connected to Swan Bay.

The site is zoned Residential (R1Z). The site is within a Vegetation Protection Overlay (VPO1) to provide for the protection of remnant native vegetation.

Appendix 1 is a map of the site and includes elements of the flora and fauna of the site.

Approximately half of the subject site has Location Risk A and half of Location Risk C (DEPI 2014). The modelled Strategic Biodiversity scored for the subject site ranges between 0.01 to 1.00 (DEPI 2014)

No property vegetation plan applies to the site and no native vegetation was permitted to be removed in the five year period prior to the proposed development.

1.3 Objectives

The purpose of this assessment is to:

- Interrogate and analyse a range of biological databases and relevant references/reports to provide a list of flora and fauna or their habitat that is or are potentially present on the site;
- Review the previous ecological reports of the site as required;
- Consult with DEPI on their expectations of any assessment;
- Carry out a detailed assessment of the vegetation quality of the site including mapping of any remnant patches of native vegetation;
- Prepare a report on the findings of this assessment including any recommendations for additional assessment.

2 Methods

2.1 Literature and Database Review

Several databases and reports were interrogated and reviewed, these include;

- Flora and Fauna records within 2 km radius of the study area held in the Atlas of Victorian Wildlife, Flora Information System, Biodiversity Interactive Maps and Sites of Biological Significance - a state-wide database maintained by the Department of Environment and Primary Industries(DEPI) (DEPI 2014):
- Federal Department of Environment Protected Matters Database (DoE) (DoE 2014), using a 2 km radius search area (Appendix 3):
- Flora & Terrestrial Fauna assessment of corner of Murray and Fellows Roads, Queenscliff, Victoria. BIOSIS 2007:
- Ecological assessment of land at the corner of Fellows Road and Murray Road, Queenscliff, Victoria. BIOSIS 2004
- Conservation Advice .for Subtropical and temperate coastal saltmarsh DoE 2014 –

2.2 Field Survey

The study area was assessed on foot on 30 April 2014 and 5 May 2014. A targeted fauna assessment was not carried out.

The location and species of all remnant patches of indigenous vegetation (Habitat Zones) was determined using a Trimble Juno 3B handheld GPS. The location of these features was plotted on an aerial image of the site (Appendix 1)

The field survey provides a comprehensive assessment of the flora and fauna habitat as observed at the time. The survey is considered to be a sample of the flora and fauna values of the entire site at the time of the assessment.

3 Results

3.1 Flora

3.1.1 Database assessment

The modelled (DSE 2014a) 1750 pre-European Ecological Vegetation Class (EVC) of the site consists primarily of EVC 858 – Coastal Alkaline Scrub. This EVC occurs on near-coastal, deep calcareous (alkaline) and largely stable sand dunes and swales commonly dominated by Moonah *Melaleuca lanceolata* ssp. *lanceolata*. It occurs at low elevations of 20-60 m above sea level, average annual rainfall is approximately 550- 950 mm, and it occurs on a variety of geologies and soil types (DEPI 2014b).

A small area of EVC 302 Coastal Saltmarsh/Mangrove Shrubland Mosaic is modelled as occurring on the northern boundary of the site adjoining Swan Bay. EVC 9 Coastal Saltmarsh (a component of the EVC 302 Coastal Saltmarsh/Mangrove Shrubland Mosaic) occurs on and immediately above marine and estuarine tidal flats and contains distinct floristic communities as bands or zones in the same location, depending on the positioning of the various floristic communities in relation to the saline environment. EVC 9 Coastal Saltmarsh consists of a range of life forms including succulent herbs, low succulent shrubs, rushes and sedges (DEPI 2014c).

The 2005 EVC mapping (DEPI 2014a).indicates that fragmented remnants of EVC 858 – Coastal Alkaline Scrub occur on the majority of the site with scattered fragments of EVC 302 Coastal Saltmarsh/Mangrove Shrubland Mosaic occurring in the vicinity of Murray Road, Bellarine Railway and the foreshore of Swan Bay.

Four threatened species of flora are recorded as present in the vicinity of the subject site (DEPI 2014a), namely Coast Wirilda *Acacia uncifolia*, Yellow Sea-lavender *Limonium australe*, Marsh Saltbush *Atriplex paludosa* subsp. *paludosa* and Salt Lawrencia *Lawrencia spicata*.

The threatened Glossy Grass Skink *Pseudemoia rawlinsoni* was recorded in the north east corner of the site in 2007 (DEPI 2014a).

3.1.2 Report Reviews

Biosis 2004 concluded that in the absence of further studies, the site had high regional conservation significance based on the potential presence of several significant species of flora on the site, the proximity to the Ramsar Wetland (Port Philip Bay) and the potential use of the site by Orange-bellied Parrot.

Biosis 2007 concluded that no flora or fauna of national or state conservation significance were recorded within the study area during the present assessment. The condition of remnant native vegetation within the study areas is variable. Where the original soil surface is intact, the vegetation is generally in good condition. However, vegetation condition is generally poor in sections of the study area that have been subjected to substrate disturbance and the dumping of fill (particularly in the north and east of the site). Biosis 2007 considered that the site

is no longer periodically inundated by seawater and that a number of introduced species have colonised parts of the study area. In addition, the reduced salt levels have allowed Common Boobialla *Myoporum insulare* to colonise parts of the saltmarsh resulting in the gradual elimination of some light-sensitive saltmarsh species.

3.1.3 Site Assessment

The site assessment was carried out by Paul Kelly, Senior Ecologist, Paul Kelly & Associates and Thomas Wright, Senior Botanist, AECOM.

The areas that have been filled are generally dominated by exotic plants, most likely introduced with the fill. The other areas of the site are dominated by a range of generally salt tolerant plants. The assessment considered that the site contains several EVC consistent with the assessment carried out by Biosis 2007. Several minor differences were noted in the composition and extent of the component EVC on the site.

A list of the flora recorded on the site is tabled as Appendix 2

A remnant patch of native vegetation was recorded on the site. The patch contains ten (10) habitat zones. The results of the Habitat Hectare assessment are tabled (Table 3-1)

Table 3-1 - Quantification and significance of remnant patches of Native Vegetation

Habitat Zone			HZ1	HZ2	HZ3	HZ4	HZ5	HZ6	HZ7	HZ8	HZ9	HZ10
Bioregion			OP	OP	OP	OP	OP	OP	OP	OP	OP	OP
EVC #: Name			914	9	914	13	9	9	9	9	9	13
EVC Bioregional Conservation Status			E	E	E	E	E	E	E	E	E	E
		Max Score	Score	Score	Score	Score	Score	Score	Score	Score	Score	Score
Site Condition	Large Old Trees	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Canopy Cover	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Understorey	25	15	5	15	10	5	5	15	15	15	10
	Lack of Weeds	15	9	9	9	7	6	6	7	4	9	7
	Recruitment	10	0	0	0	3	0	0	6	6	6	3
	Organic Matter	5	3	0	3	5	4	4	0	0	2	5
	Logs	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Total Site Score	75	27	14	27	25	15	15	28	25	32	25
	EVC standardiser (e.g. 75/55) [1]		1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36
	Adjusted Site Score		37	19	37	34	20	20	38	34	44	34
Landscape value	Patch Size	10	1	1	1	1	1	1	1	1	1	1
	Neighbourhood	10	2	2	2	2	2	2	2	2	2	2
	Distance to Core	5	4	4	4	4	4	4	4	4	4	4
Habitat Score		100	44	26	44	41	27	27	45	41	51	41
Habitat points = #/100		1	0.44	0.26	0.44	0.41	0.27	0.27	0.45	0.41	0.51	0.41
Habitat Zone area (ha)		(#.###)	0.217	0.116	0.679	1.024	0.021	0.012	0.837	0.862	0.378	0.103
Habitat Hectares		(#.###)	0.095	0.030	0.297	0.420	0.006	0.003	0.377	0.353	0.191	0.042

3.1.4 Flora Significance

Table 3-2 lists those species of plants or their habitat recorded on the EPBC database and the Flora Information System (Viridans 2012a) within 2 km of the site.

Table 3-2 Significant plant species (or their habitat) recorded within 2km of the subject site

Species Name	Common Name	Likelihood of presence
Acacia nano-dealbata	Dwarf Silver Wattle	Unlikely - Not recorded on site
Acacia uncifolia	Coast Wirilda	Unlikely - Not recorded on site
Atriplex paludosa	Marsh Saltbush	Unlikely - Not recorded on site
Glycine Latrobeana	Clover Glycine	Unlikely - Modified habitat onsite
Lawrencia spicata	Salt Lawrencia	Unlikely - Not recorded on site
Limonium australe	Yellow Sea-lavender	Unlikely - Not recorded on site
Prasophyllum frenchii	Maroon Leek Orchid	Unlikely - Modified habitat onsite
Tecticornia halocnemoides subsp. halocnemoides	Grey Glasswort	Recorded on site
Triglochin minutissimum	Tiny Arrow Grass	Unlikely - Modified habitat on site

None of these species other than Grey Glasswort were observed during the site assessment.

3.1.5 EPBC Listed Communities

Four EPBC listed threatened Ecological communities are recorded as likely to occur in the area (Appendix 3). These are Giant Kelp Marine Forests; Grassy Eucalypt Woodland of the Victorian Volcanic Plain; Natural temperate Grassland of the Victorian Volcanic Plain and White Box – Yellow Box Grassy Woodland and derived Native Grassland. None of these communities are considered as occurring on the subject site.

3.2 Fauna

3.2.1 Desktop Assessment

The EPBC search and the Atlas of Victorian Wildlife (Viridans 2012a) identified those species of animals or their habitat recorded that may occur or have been recorded within the vicinity of the site (Table 3-3).

Table 3-3 Significant fauna species (or their habitat) potentially occurring within the vicinity

Species Name	Common Name	Likelihood of presence on site
<i>Anthochaera phrygia</i>	Regent Honeyeater	Unlikely, habitat absent on site
<i>Botaurus poiciloptilus</i>	Australasian Bittern	Unlikely, habitat absent on site
<i>Galaxiella pusilla</i>	Eastern Dwarf Galaxias	Unlikely, habitat absent on site
<i>Lathamus discolor</i>	Swift Parrot	Unlikely, habitat absent on site
<i>Litoria raniformis</i>	Growling Grass Frog	Unlikely, habitat absent on site
<i>Neophema chrysogaster</i>	Orange-bellied Parrot	Potentially use parts of the site as feeding area.
<i>Potorous tridactylus</i>	Long-nosed Potoroo	Unlikely, habitat absent on site
<i>Prototroctes maraena</i>	Australian Grayling	Unlikely, habitat absent on site
<i>Pseudomys novaehollandiae</i>	New Holland Mouse	Unlikely, habitat absent on site
<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox	Unlikely, No records for the vicinity, may overfly.
<i>Rostratula australis</i>	Australian Painted Snipe	Unlikely, habitat absent on site
<i>Sternula nereis nereis</i>	Australian Fairy Tern	Unlikely, habitat absent on site
<i>Pseudemoia rawlinsoni</i>	Glossy Grass Skink	Recorded on site

Several species of threatened marine species of birds, mostly Albatross and Petrels have been recorded in the vicinity of the site but have not been include in Table 3-3 for obvious reasons.

It is considered that the site does not contain critical habitat for any threatened species of fauna that potentially occur in the vicinity other than the vulnerable Glossy Grass Skink and critically endangered Orange-bellied Parrot.

The saltmarsh areas of the site contain several species of plant that are considered food plants of Orange-bellied Parrots. The species has been regularly recorded at several locations in the vicinity of the site. As such it is considered that there is potential for Orange-bellied Parrots to utilise the site.

3.2.2 Field Assessment:

No EPBC or FFG listed fauna species were observed during field investigations.

4 Legislative Requirements

4.1 Environment Protection and Biodiversity Conservation (EPBC) Act

The site is located within 10km of Port Phillip Bay (western shoreline) and Bellarine wetland of international importance (Ramsar).

Orange-bellied Parrot is an EPBC listed nationally significant species and may utilise the site.

Sub-tropical and temperate Coastal Saltmarsh is an EPBC listed community. It is considered that this EPBC listed community does not occur on the site for the following reasons:

- The map of the distribution of the listed community does not include the Queenscliff area;
- The EPBC Protected Matters Report (Appendix 3) does not include this community as occurring or likely to occur in the area and most importantly;
- The ecological community present on the subject site does not have an ongoing connection to the tidal regime. This connection is a key diagnostic characteristic and condition threshold (DOE 2014)

An EPBC referral of the development plan to the federal Department of Environment is recommended once the preferred option has been selected due to the potential use of the site by Orange-bellied Parrot and the proximity of the site to the Ramsar wetland.

4.2 Planning and Environment Act 1987

A planning permit from the Borough of Queenscliffe Council is required to remove, destroy or lop any native vegetation as part of any proposed development works in accordance with the Borough of Queenscliffe Planning Scheme.

It is likely that the removal of native vegetation i.e. any of the mapped saltmarsh community (Appendix 1) will require offsets. A preliminary Biodiversity Assessment Report has been prepared (Appendix 4) as a worst case scenario. Output from this report suggests that the removal of all the native vegetation on the site (approximately 4.077ha) will be assessed under the high risk pathway. Under this pathway, a planning permit application to remove native vegetation will be required to be prepared using DEPI (2014d). This planning permit application will in summary, require the submission of the GIS data (already collected) of the vegetation mapping to DEPI to prepare a *Biodiversity impact and offset requirements report*; the preparation of an impact statement; the preparation of an offset strategy and the subsequent submission of the package to Borough of Queenscliff Council for their evaluation.

5 Proposed Development & Discussion

This report, in particular the location of indigenous vegetation, will be used to inform the development of the site. Three significant ecological issues may be impacted by development of the site for residential purposes.

1. The potential utilisation of the site by the critically endangered Orange-bellied Parrot;
2. The proximity of the site to a Ramsar wetland and;
3. The apparent significance of the native vegetation on the site.

The critically endangered status of the Orange-bellied Parrot requires that any development must comprehensively evaluate the contribution the site makes to the sustainable conservation of the species and the impact of the removal/modification of the habitat. It is suggested that such an assessment be

carried out by a zoologist with considerable experience and knowledge of the habitat and biology of the species.

In the absence of a *Biodiversity impact and offset requirements report* it is difficult to assess the offset requirement for the removal of the native vegetation on the site. The provision of such a report combined with an offset strategy will greatly assist with the evaluation of a range of development options.

While the native vegetation on the site has been evaluated by the Biodiversity Assessment Report as being at high risk, the quality of the vegetation is considered by this review and assessment to be low. The remnant patches are surrounded by exotic plants many of which are aggressive competitors/invasers of native vegetation. There are current indications that the invasion of exotic plants continues to occur. The primary ecological determinant of the vegetation quality, tidal influence, no longer appears to operate. As such, in the absence of active and probably expensive management, the quality of the vegetation will continue to change with the longer term outcome for the site being dominated by weeds. Such changes in vegetation quality will include the disappearance of the currently relatively small area of Orange-bellied Parrot feeding habitat.

The vegetation on the site is of variable quality. The vegetation associated with the areas of fill is dominated by aggressive weeds, principally Kikuyu. The saltmarsh community is located central to the site and is generally surrounded by aggressive weeds. It is considered that the primary influence of the quality of the vegetation of the saltmarsh community, tidal influence, no longer operates due to the prior construction of the Murray Road and the Bellarine Railway embankments. It is considered likely that the current dominance of halophytic plants on parts of the site is determined primarily by the residual salt deposited when the tidal influence was historically more frequent.

It is considered that the presence of the saltmarsh vegetation on the site is currently a significant constraint on development of the site for residential purposes. It is also considered that the saltmarsh vegetation on the site makes only a minor contribution to the sustainable conservation of biodiversity due principally to the ongoing but insidious modification of the extant vegetation. In the absence of active management it is considered that the conservation significance of the saltmarsh vegetation will continue to decrease.

6 Conclusion

It is suggested that a preferred and more sustainable conservation outcome would be to offset the removal of the saltmarsh vegetation (and Orange-bellied Parrot habitat) by securing higher quality freehold saltmarsh vegetation contiguous with similar vegetation in the public conservation estate. The *Biodiversity impact and offset requirements report* will determine the offset requirements for the removal of the native vegetation. A search for a suitable offset site would be appropriate once the offset requirement is known, This is likely to be an expensive option.

It is recommended that an assessment of the quality of the Orange-bellied Parrot habitat be carried out by an experienced zoologist and that this information be

used to assist in evaluation of the ecological impact of developing the site for residential purposes.

7

References

BIOSIS 2004 **Ecological assessment of land at the corner of Fellows Road and Murray Road, Queenscliff, Victoria.** Biosis Research ,Port Melbourne

BIOSIS 2007 **Flora & Terrestrial Fauna assessment of corner of Murray and Fellows Roads, Queenscliff, Victoria.** Biosis Research ,Port Melbourne:

DEPI 2013 **Biodiversity Assessment Guidelines.** Department of Environment & Primary Industries, Melbourne

DEPI 2014a **Mapping Website – Biodiversity Interactive Mapping**
<http://mapshare2.dse.vic.gov.au/MapShare2EXT/imf.jsp?site=bim> Department of Environment & Primary Industries, Melbourne

DEPI 2014b EVC 858 - **Coastal Alkaline Scrub Benchmark – Otway Plain Bioregion.** Department of Environment & Primary Industries, Melbourne

DEPI 2014c EVC 9 - **Coastal Saltmarsh Benchmark – Otway Plain Bioregion.** Department of Environment & Primary Industries, Melbourne.

DEPI 2014d **Permitted clearing of native vegetation- meeting the moderate and high risk-based pathway application requirements.**
http://www.depi.vic.gov.au/_data/assets/pdf_file/0010/198964/Meeting-moderate-and-high-risk-based-pathway-application-requirements-March2014.pdf
Department of Environment & Primary Industries, Melbourne.

DoE 2014 – **Conservation Advice .for Subtropical and temperate coastal saltmarsh**
<http://www.environment.gov.au/biodiversity/threatened/communities/pubs/118-conservation-advice.pdf> Department of Environment Canberra.

Appendix 1 Site Map

Appendix 2 Flora List

Species Name	Common Name	Origin
<i>Acacia cyclops</i>	Western Coastal Wattle	#
<i>Acacia longifolia</i> subsp. <i>sophorae</i>	Coast Wattle	
<i>Acacia saligna</i>	Golden Wreath Wattle	#
<i>Acaena novae-zelandiae</i>	Bidgee-widgee	
<i>Agapanthus praecox</i> subsp. <i>orientalis</i>	Agapanthus	*
<i>Agave americana</i>	Centauray Plant	*
<i>Ammi majus</i>	Bishop's Weed	*
<i>Aster subulatus</i>	Aster-weed	*
<i>Atriplex prostrata</i>	Hastate Orache	*
<i>Austrostipa stipoides</i>	Prickly Spear-grass	
<i>Banksia integrifolia</i> subsp. <i>integrifolia</i>	Coast Banksia	
<i>Brassica fruticulosa</i>	Twiggy Turnip	*
<i>Briza minor</i>	Lesser Quaking-grass	*
<i>Bromus catharticus</i>	Prairie Grass	*
<i>Bromus diandrus</i>	Great Brome	*
<i>Casuarina glauca</i>	Grey She-oak	#
<i>Chenopodium album</i>	Fat Hen	*
<i>Cirsium vulgare</i>	Spear Thistle	*
<i>Clematis microphylla</i>	Small-leaved Clematis	
<i>Conyza bonariensis</i>	Flax-leaf Fleabane	*
<i>Coprosma repens</i>	Mirror Bush	*
<i>Critersonia</i> sp.	Barley Grass	*
<i>Cynodon dactylon</i> var. <i>dactylon</i>	Couch	*
<i>Dactylis glomerata</i>	Cocksfoot	*
<i>Delairea odorata</i>	Cape Ivy	*
<i>Dianella brevicaulis</i>	Small-flower Flax-lily	
<i>Diplotaxis tenuifolia</i>	Sand Rocket	*
<i>Distichlis distichophylla</i>	Australian Salt-grass	
<i>Ficinia nodosa</i>	Knobby Club-sedge	
<i>Foeniculum vulgare</i>	Fennel	*
<i>Frankenia pauciflora</i> var. <i>gunnii</i>	Southern Sea-heath	
<i>Freesia</i> sp.	Freesia	*
<i>Gahnia filum</i>	Chaffy Saw-sedge	
<i>Galenia pubescens</i> var. <i>pubescens</i>	Galenia	*
<i>Genista linifolia</i>	Flax-leaf Broom	*
<i>Genista monspessulana</i>	Montpellier Broom	*
<i>Hakea laurina</i>	Pincushion Hakea	#
<i>Helminthotheca echioides</i>	Ox-tongue	*
<i>Hemarthria uncinata</i> var. <i>uncinata</i>	Mat Grass	
<i>Hemichroa pentandra</i>	Trailing Hemichroa	
<i>Holcus lanatus</i>	Yorkshire Fog	*
<i>Hypochoeris radicata</i>	Cat's Ear	*
<i>Juncus acutus</i> subsp. <i>acutus</i>	Spiny Rush	*
<i>Juncus kraussii</i> subsp. <i>australiensis</i>	Sea Rush	
<i>Lachnagrostis billardierei</i> subsp. <i>billardierei</i>	Coast Blown-grass	
<i>Lagurus ovatus</i>	Hare's-tail Grass	*

Species Name	Common Name	Origin
Lepidium sp.	Pepper Cress	*
Leucopogon parviflorus	Coast Beard-heath	
Lophopyrum ponticum	Tall Wheat-grass	*
Lycium ferocissimum	African Box-thorn	*
Myoporum insulare	Common Boobialla	
Osteospermum fruticosum	Shrubby Daisy-bush	*
Oxalis pes-caprae	Soursob	*
Parapholis strigosa	Slender Barb-grass	*
Paraserianthes lophantha subsp. lophantha	Cape Wattle	*
Pennisetum clandestinum	Kikuyu	*
Phalaris aquatica	Toowomba Canary-grass	*
Plantago coronopus	Buck's-horn Plantain	*
Plantago lanceolata	Ribwort	*
Poa poiformis var. poiformis	Coast Tussock-grass	
Polygala myrtifolia var. myrtifolia	Myrtle-leaf Milkwort	*
Rhagodia candolleana subsp. candolleana	Seaberry Saltbush	
Rhamnus alaternus	Italian Buckthorn	*
Romulea rosea	Onion Grass	*
Rumex crispus	Curled Dock	*
Rytidosperma sp.	Wallaby Grass	
Samolus repens	Creeping Brookweed	
Sarcocornia blackiana	Thick-head Glasswort	
Sarcocornia quinqueflora	Beaded Glasswort	
Schoenus nitens	Shiny Bog-sedge	
Selliera radicans	Shiny Swamp-mat	
Senecio pinnatifolius	Variable Groundsel	
Sonchus oleraceus	Common Sow-thistle	*
Sporobolus africanus	Rat-tail Grass	*
Sporobolus virginicus	Salt Couch	
Stenotaphrum secundatum	Buffalo Grass	*
Suaeda australis	Austral Seablite	
Tecticornia arbuscula	Shrubby Glasswort	
Tecticornia halocnemoides subsp. halocnemoides	Grey Glasswort	
Tecticornia pergranulata subsp. pergranulata	Blackseed Glasswort	
Tetragonia implexicoma	Bower Spinach	
Vicia sativa	Common Vetch	*
Wilsonia backhousei	Narrow-leaf Wilsonia	
Wilsonia humilis	Silky Wilsonia	

Appendix 3 EPBC Report

Appendix 4 **Biodiversity Assessment Report**

Swan Bay

Fellow & Murray Roads, Queenscliff Development Plan Habitat Zones

Legend

- Boundary
- Habitat Zones

Fellows Road

Bellarine Railway

Murray Road

1

10

2

9

8

4

7

6

3

5

Aerial Image flown 10 December 2012

50 0 50 100 150 200 m

Bellarine Highway



EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected.

Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

Information is available about [Environment Assessments](#) and the EPBC Act including significance guidelines, forms and application process details.

Report created: 25/05/14 19:10:12

[Summary](#)

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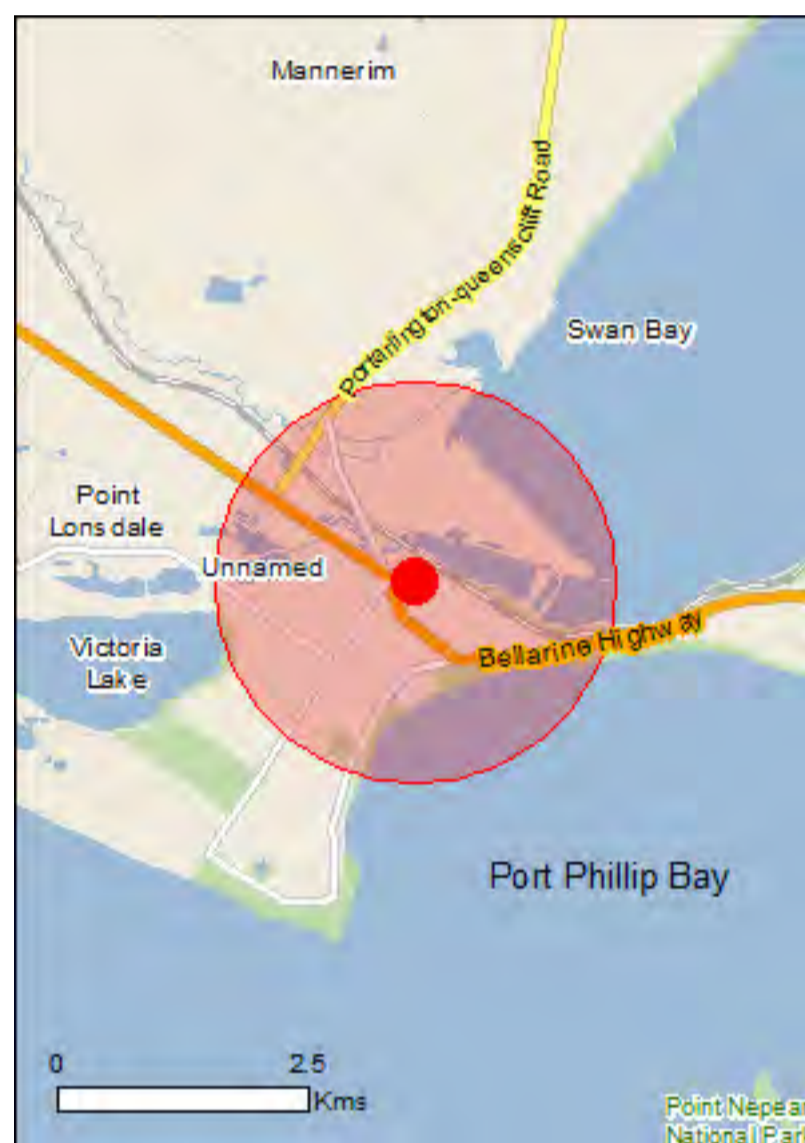
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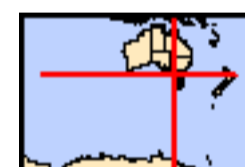
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Buffer: 2.0Km



Summary

Matters of National Environmental Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the [Administrative Guidelines on Significance](#).

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance:	1
Great Barrier Reef Marine Park:	None
Commonwealth Marine Areas:	None
Listed Threatened Ecological Communities:	4
Listed Threatened Species:	35
Listed Migratory Species:	60

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As [heritage values](#) of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place and the heritage values of a place on the Register of the National Estate.

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

A [permit](#) may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Land:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	65
Whales and Other Cetaceans:	11
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Commonwealth Reserves Marine	None

Extra Information

This part of the report provides information that may also be relevant to the area you have nominated.

Place on the RNE:	1
State and Territory Reserves:	3
Regional Forest Agreements:	1
Invasive Species:	37
Nationally Important Wetlands:	1
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

Wetlands of International Importance (RAMSAR) [\[Resource Information \]](#)

Name	Proximity
Port phillip bay (western shoreline) and bellarine	Within Ramsar site

Listed Threatened Ecological Communities [\[Resource Information \]](#)

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Name	Status	Type of Presence
Giant Kelp Marine Forests of South East Australia	Endangered	Community may occur within area
Grassy Eucalypt Woodland of the Victorian Volcanic Plain	Critically Endangered	Community likely to occur within area
Natural Temperate Grassland of the Victorian Volcanic Plain	Critically Endangered	Community may occur within area
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland	Critically Endangered	Community likely to occur within area

Listed Threatened Species [\[Resource Information \]](#)

Name	Status	Type of Presence
Birds		
Anthochaera phrygia Regent Honeyeater [82338]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat known to occur within area
Diomedea epomophora epomophora Southern Royal Albatross [25996]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea epomophora sanfordi Northern Royal Albatross [82331]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Diomedea exulans antipodensis Antipodean Albatross [82269]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea exulans exulans Tristan Albatross [82337]	Endangered	Species or species

Name	Status	Type of Presence
<u>Diomedea exulans (sensu lato)</u> Wandering Albatross [1073]	Vulnerable	habitat may occur within area Foraging, feeding or related behaviour likely to occur within area
<u>Lathamus discolor</u> Swift Parrot [744]	Endangered	Species or species habitat likely to occur within area
<u>Macronectes giganteus</u> Southern Giant-Petrel [1060]	Endangered	Species or species habitat may occur within area
<u>Macronectes halli</u> Northern Giant-Petrel [1061]	Vulnerable	Species or species habitat may occur within area
<u>Neophema chrysogaster</u> Orange-bellied Parrot [747]	Critically Endangered	Species or species habitat known to occur within area
<u>Pterodroma leucoptera leucoptera</u> Gould's Petrel [26033]	Endangered	Species or species habitat may occur within area
<u>Rostratula australis</u> Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area
<u>Sternula nereis nereis</u> Australian Fairy Tern [82950]	Vulnerable	Species or species habitat known to occur within area
<u>Thalassarche bulleri</u> Buller's Albatross, Pacific Albatross [64460]	Vulnerable	Species or species habitat may occur within area
<u>Thalassarche cauta cauta</u> Shy Albatross, Tasmanian Shy Albatross [82345]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
<u>Thalassarche cauta salvini</u> Salvin's Albatross [82343]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
<u>Thalassarche cauta steadi</u> White-capped Albatross [82344]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
<u>Thalassarche chrysostoma</u> Grey-headed Albatross [66491]	Endangered	Species or species habitat may occur within area
<u>Thalassarche melanophris</u> Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area
<u>Thalassarche melanophris impavida</u> Campbell Albatross [82449]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Fish		
<u>Galaxiella pusilla</u> Eastern Dwarf Galaxias, Dwarf Galaxias [56790]	Vulnerable	Species or species habitat likely to occur within area
<u>Prototroctes maraena</u> Australian Grayling [26179]	Vulnerable	Species or species habitat likely to occur within area
Frogs		

Name	Status	Type of Presence
Litoria raniformis Growling Grass Frog, Southern Bell Frog, Green and Golden Frog, Warty Swamp Frog [1828]	Vulnerable	Species or species habitat likely to occur within area
Mammals		
Eubalaena australis Southern Right Whale [40]	Endangered	Species or species habitat known to occur within area
Megaptera novaeangliae Humpback Whale [38]	Vulnerable	Species or species habitat likely to occur within area
Potorous tridactylus tridactylus Long-nosed Potoroo (SE mainland) [66645]	Vulnerable	Species or species habitat may occur within area
Pseudomys novaehollandiae New Holland Mouse, Pookila [96]	Vulnerable	Species or species habitat likely to occur within area
Pteropus poliocephalus Grey-headed Flying-fox [186]	Vulnerable	Species or species habitat likely to occur within area
Plants		
Glycine latrobeana Clover Glycine, Purple Clover [13910]	Vulnerable	Species or species habitat likely to occur within area
Prasophyllum frenchii Maroon Leek-orchid, Slaty Leek-orchid, Stout Leek-orchid, French's Leek-orchid, Swamp Leek-orchid [9704]	Endangered	Species or species habitat likely to occur within area
Reptiles		
Caretta caretta Loggerhead Turtle [1763]	Endangered	Foraging, feeding or related behaviour known to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Foraging, feeding or related behaviour known to occur within area
Sharks		
Carcharodon carcharias Great White Shark [64470]	Vulnerable	Species or species habitat known to occur within area
Listed Migratory Species		[Resource Information]
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence
Migratory Marine Birds		
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
Diomedea dabbenena Tristan Albatross [66471]	Endangered*	Species or species habitat may occur within area
Diomedea epomophora (sensu stricto) Southern Royal Albatross [1072]	Vulnerable*	Foraging, feeding or related behaviour likely

Name	Threatened	Type of Presence
Diomedea exulans (sensu lato) Wandering Albatross [1073]	Vulnerable	to occur within area Foraging, feeding or related behaviour likely to occur within area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered*	Foraging, feeding or related behaviour likely to occur within area
Macronectes giganteus Southern Giant-Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli Northern Giant-Petrel [1061]	Vulnerable	Species or species habitat may occur within area
Puffinus carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [1043]		Foraging, feeding or related behaviour likely to occur within area
Sterna albifrons Little Tern [813]		Species or species habitat may occur within area
Thalassarche bulleri Buller's Albatross, Pacific Albatross [64460]	Vulnerable	Species or species habitat may occur within area
Thalassarche cauta (sensu stricto) Shy Albatross, Tasmanian Shy Albatross [64697]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
Thalassarche chrysostoma Grey-headed Albatross [66491]	Endangered	Species or species habitat may occur within area
Thalassarche impavida Campbell Albatross [64459]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area
Thalassarche salvini Salvin's Albatross [64463]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
Thalassarche steadi White-capped Albatross [64462]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
Migratory Marine Species		
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat may occur within area
Caperea marginata Pygmy Right Whale [39]		Species or species habitat may occur within area
Carcharodon carcharias Great White Shark [64470]	Vulnerable	Species or species habitat known to occur within area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Foraging, feeding or related behaviour known to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known

Name	Threatened	Type of Presence
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	to occur within area Foraging, feeding or related behaviour known to occur within area
Eubalaena australis Southern Right Whale [40]	Endangered	Species or species habitat known to occur within area
Lagenorhynchus obscurus Dusky Dolphin [43]		Species or species habitat may occur within area
Lamna nasus Porbeagle, Mackerel Shark [83288]		Species or species habitat likely to occur within area
Megaptera novaeangliae Humpback Whale [38]	Vulnerable	Species or species habitat likely to occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Migratory Terrestrial Species		
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area
Hirundapus caudacutus White-throated Needletail [682]		Species or species habitat known to occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat likely to occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat likely to occur within area
Migratory Wetlands Species		
Actitis hypoleucos Common Sandpiper [59309]		Roosting known to occur within area
Ardea alba Great Egret, White Egret [59541]		Breeding known to occur within area
Ardea ibis Cattle Egret [59542]		Species or species habitat likely to occur within area
Arenaria interpres Ruddy Turnstone [872]		Roosting known to occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Roosting known to occur within area
Calidris alba Sanderling [875]		Roosting known to occur within area
Calidris canutus Red Knot, Knot [855]		Roosting known to occur

Name	Threatened	Type of Presence
Calidris ferruginea Curlew Sandpiper [856]		within area Roosting known to occur within area
Calidris ruficollis Red-necked Stint [860]		Roosting known to occur within area
Calidris tenuirostris Great Knot [862]		Roosting known to occur within area
Charadrius bicinctus Double-banded Plover [895]		Roosting known to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]		Roosting known to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]		Roosting known to occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Roosting known to occur within area
Heteroscelus brevipes Grey-tailed Tattler [59311]		Roosting known to occur within area
Limicola falcinellus Broad-billed Sandpiper [842]		Roosting known to occur within area
Limosa lapponica Bar-tailed Godwit [844]		Roosting known to occur within area
Limosa limosa Black-tailed Godwit [845]		Roosting known to occur within area
Numenius madagascariensis Eastern Curlew [847]		Roosting known to occur within area
Numenius minutus Little Curlew, Little Whimbrel [848]		Roosting likely to occur within area
Numenius phaeopus Whimbrel [849]		Roosting known to occur within area
Pluvialis fulva Pacific Golden Plover [25545]		Roosting known to occur within area
Pluvialis squatarola Grey Plover [865]		Roosting known to occur within area
Rostratula benghalensis (sensu lato) Painted Snipe [889]	Endangered*	Species or species habitat likely to occur within area
Tringa stagnatilis Marsh Sandpiper, Little Greenshank [833]		Roosting known to occur within area
Xenus cinereus Terek Sandpiper [59300]		Roosting known to occur within area

Other Matters Protected by the EPBC Act

Listed Marine Species [[Resource Information](#)]

* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
Birds		
Actitis hypoleucos		
Common Sandpiper [59309]		Roosting known to occur within area
Apus pacificus		
Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardea alba		
Great Egret, White Egret [59541]		Breeding known to occur within area
Ardea ibis		
Cattle Egret [59542]		Species or species habitat likely to occur within area
Arenaria interpres		
Ruddy Turnstone [872]		Roosting known to occur within area
Calidris acuminata		
Sharp-tailed Sandpiper [874]		Roosting known to occur within area
Calidris alba		
Sanderling [875]		Roosting known to occur within area
Calidris canutus		
Red Knot, Knot [855]		Roosting known to occur within area
Calidris ferruginea		
Curlew Sandpiper [856]		Roosting known to occur within area
Calidris melanotos		
Pectoral Sandpiper [858]		Roosting known to occur within area
Calidris ruficollis		
Red-necked Stint [860]		Roosting known to occur within area
Calidris tenuirostris		
Great Knot [862]		Roosting known to occur within area
Charadrius bicinctus		
Double-banded Plover [895]		Roosting known to occur within area
Charadrius leschenaultii		
Greater Sand Plover, Large Sand Plover [877]		Roosting known to occur within area
Charadrius mongolus		
Lesser Sand Plover, Mongolian Plover [879]		Roosting known to occur within area
Charadrius ruficapillus		
Red-capped Plover [881]		Roosting known to occur within area
Diomedea antipodensis		
Antipodean Albatross [64458]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
Diomedea dabbenena		
Tristan Albatross [66471]	Endangered*	Species or species habitat may occur within area
Diomedea epomophora (sensu stricto)		
Southern Royal Albatross [1072]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area

Name	Threatened	Type of Presence
Diomedea exulans (sensu lato) Wandering Albatross [1073]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered*	Foraging, feeding or related behaviour likely to occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Roosting known to occur within area
Gallinago megala Swinhoe's Snipe [864]		Roosting likely to occur within area
Gallinago stenura Pin-tailed Snipe [841]		Roosting likely to occur within area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area
Heteroscelus brevipes Grey-tailed Tattler [59311]		Roosting known to occur within area
Himantopus himantopus Black-winged Stilt [870]		Roosting known to occur within area
Hirundapus caudacutus White-throated Needletail [682]		Species or species habitat known to occur within area
Lathamus discolor Swift Parrot [744]	Endangered	Species or species habitat likely to occur within area
Limicola falcinellus Broad-billed Sandpiper [842]		Roosting known to occur within area
Limosa lapponica Bar-tailed Godwit [844]		Roosting known to occur within area
Limosa limosa Black-tailed Godwit [845]		Roosting known to occur within area
Macronectes giganteus Southern Giant-Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli Northern Giant-Petrel [1061]	Vulnerable	Species or species habitat may occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat likely to occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area
Neophema chrysogaster Orange-bellied Parrot [747]	Critically Endangered	Species or species habitat known to occur within area
Numenius madagascariensis Eastern Curlew [847]		Roosting known to occur within area

Name	Threatened	Type of Presence
Numenius minutus Little Curlew, Little Whimbrel [848]		Roosting likely to occur within area
Numenius phaeopus Whimbrel [849]		Roosting known to occur within area
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area
Pluvialis fulva Pacific Golden Plover [25545]		Roosting known to occur within area
Pluvialis squatarola Grey Plover [865]		Roosting known to occur within area
Puffinus carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [1043]		Foraging, feeding or related behaviour likely to occur within area
Recurvirostra novaehollandiae Red-necked Avocet [871]		Roosting known to occur within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat likely to occur within area
Rostratula benghalensis (sensu lato) Painted Snipe [889]	Endangered*	Species or species habitat likely to occur within area
Sterna albifrons Little Tern [813]		Species or species habitat may occur within area
Thalassarche bulleri Buller's Albatross, Pacific Albatross [64460]	Vulnerable	Species or species habitat may occur within area
Thalassarche cauta (sensu stricto) Shy Albatross, Tasmanian Shy Albatross [64697]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
Thalassarche chrysostoma Grey-headed Albatross [66491]	Endangered	Species or species habitat may occur within area
Thalassarche impavida Campbell Albatross [64459]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area
Thalassarche salvini Salvin's Albatross [64463]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
Thalassarche steadi White-capped Albatross [64462]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
Thinornis rubricollis Hooded Plover [59510]		Roosting known to occur within area
Thinornis rubricollis rubricollis Hooded Plover (eastern) [66726]		Species or species habitat known to occur within area
Tringa stagnatilis Marsh Sandpiper, Little Greenshank [833]		Roosting known to occur within area

Name	Threatened	Type of Presence
Xenus cinereus Terek Sandpiper [59300]		Roosting known to occur within area
Mammals		
Arctocephalus forsteri New Zealand Fur-seal [20]		Species or species habitat may occur within area
Arctocephalus pusillus Australian Fur-seal, Australo-African Fur-seal [21]		Species or species habitat may occur within area
Reptiles		
Caretta caretta Loggerhead Turtle [1763]	Endangered	Foraging, feeding or related behaviour known to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Foraging, feeding or related behaviour known to occur within area
Whales and other Cetaceans		[Resource Information]
Name	Status	Type of Presence
Mammals		
Balaenoptera acutorostrata Minke Whale [33]		Species or species habitat may occur within area
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat may occur within area
Caperea marginata Pygmy Right Whale [39]		Species or species habitat may occur within area
Delphinus delphis Common Dophin, Short-beaked Common Dolphin [60]		Species or species habitat may occur within area
Eubalaena australis Southern Right Whale [40]	Endangered	Species or species habitat known to occur within area
Grampus griseus Risso's Dolphin, Grampus [64]		Species or species habitat may occur within area
Lagenorhynchus obscurus Dusky Dolphin [43]		Species or species habitat may occur within area
Megaptera novaeangliae Humpback Whale [38]	Vulnerable	Species or species habitat likely to occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Tursiops aduncus Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418]		Species or species habitat likely to occur within area
Tursiops truncatus s. str. Bottlenose Dolphin [68417]		Species or species habitat may occur within area

Extra Information

Places on the RNE [\[Resource Information \]](#)

Note that not all Indigenous sites may be listed.

Name	State	Status
Natural		
Swan Bay and Islands	VIC	Registered

State and Territory Reserves [\[Resource Information \]](#)

Name	State
Lonsdale Lakes W.R	VIC
Port Phillip Heads	VIC
Queenscliff N.F.R	VIC

Regional Forest Agreements [\[Resource Information \]](#)

Note that all areas with completed RFAs have been included.

Name	State
West Victoria RFA	Victoria

Invasive Species [\[Resource Information \]](#)

Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resources Audit, 2001.

Name	Status	Type of Presence
Birds		
Acridotheres tristis Common Myna, Indian Myna [387]		Species or species habitat likely to occur within area
Alauda arvensis Skylark [656]		Species or species habitat likely to occur within area
Anas platyrhynchos Mallard [974]		Species or species habitat likely to occur within area
Carduelis carduelis European Goldfinch [403]		Species or species habitat likely to occur within area
Carduelis chloris European Greenfinch [404]		Species or species habitat likely to occur within area
Columba livia Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat likely to occur within area
Passer domesticus House Sparrow [405]		Species or species

Name	Status	Type of Presence
Passer montanus Eurasian Tree Sparrow [406]		habitat likely to occur within area
Streptopelia chinensis Spotted Turtle-Dove [780]		Species or species habitat likely to occur within area
Sturnus vulgaris Common Starling [389]		Species or species habitat likely to occur within area
Turdus merula Common Blackbird, Eurasian Blackbird [596]		Species or species habitat likely to occur within area
Turdus philomelos Song Thrush [597]		Species or species habitat likely to occur within area
Mammals		
Canis lupus familiaris Domestic Dog [82654]		Species or species habitat likely to occur within area
Capra hircus Goat [2]		Species or species habitat likely to occur within area
Felis catus Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Feral deer Feral deer species in Australia [85733]		Species or species habitat likely to occur within area
Lepus capensis Brown Hare [127]		Species or species habitat likely to occur within area
Mus musculus House Mouse [120]		Species or species habitat likely to occur within area
Oryctolagus cuniculus Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
Rattus norvegicus Brown Rat, Norway Rat [83]		Species or species habitat likely to occur within area
Rattus rattus Black Rat, Ship Rat [84]		Species or species habitat likely to occur within area
Sus scrofa Pig [6]		Species or species habitat likely to occur within area
Vulpes vulpes Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		
Asparagus asparagoides Bridal Creeper, Bridal Veil Creeper, Smilax, Florist's Smilax, Smilax Asparagus [22473]		Species or species habitat likely to occur within area

Name	Status	Type of Presence
Asparagus scandens Asparagus Fern, Climbing Asparagus Fern [23255]		Species or species habitat likely to occur within area
Chrysanthemoides monilifera Bitou Bush, Boneseed [18983]		Species or species habitat may occur within area
Chrysanthemoides monilifera subsp. monilifera Boneseed [16905]		Species or species habitat likely to occur within area
Eichhornia crassipes Water Hyacinth, Water Orchid, Nile Lily [13466]		Species or species habitat likely to occur within area
Genista linifolia Flax-leaved Broom, Mediterranean Broom, Flax Broom [2800]		Species or species habitat likely to occur within area
Genista monspessulana Montpellier Broom, Cape Broom, Canary Broom, Common Broom, French Broom, Soft Broom [20126]		Species or species habitat likely to occur within area
Lycium ferocissimum African Boxthorn, Boxthorn [19235]		Species or species habitat likely to occur within area
Nassella neesiana Chilean Needle grass [67699]		Species or species habitat likely to occur within area
Nassella trichotoma Serrated Tussock, Yass River Tussock, Yass Tussock, Nassella Tussock (NZ) [18884]		Species or species habitat likely to occur within area
Opuntia spp. Prickly Pears [82753]		Species or species habitat likely to occur within area
Rubus fruticosus aggregate Blackberry, European Blackberry [68406]		Species or species habitat likely to occur within area
Salix spp. except S.babylonica, S.x calodendron & S.x reichardtii Willows except Weeping Willow, Pussy Willow and Sterile Pussy Willow [68497]		Species or species habitat likely to occur within area
Ulex europaeus Gorse, Furze [7693]		Species or species habitat likely to occur within area
Nationally Important Wetlands		[Resource Information]
Name		State
Swan Bay & Swan Island		VIC

Coordinates

-38.26686 144.62099

Caveat

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World Heritage and Register of National Estate properties, Wetlands of International Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

For species where the distributions are well known, maps are digitised from sources such as recovery plans and detailed habitat studies. Where appropriate, core breeding, foraging and roosting areas are indicated under 'type of presence'. For species whose distributions are less well known, point locations are collated from government wildlife authorities, museums, and non-government organisations; bioclimatic distribution models are generated and these validated by experts. In some cases, the distribution maps are based solely on expert knowledge.

Only selected species covered by the following provisions of the EPBC Act have been mapped:

- migratory and
- marine

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants
- some species and ecological communities that have only recently been listed
- some terrestrial species that overfly the Commonwealth marine area
- migratory species that are very widespread, vagrant, or only occur in small numbers

The following groups have been mapped, but may not cover the complete distribution of the species:

- non-threatened seabirds which have only been mapped for recorded breeding sites
- seals which have only been mapped for breeding sites near the Australian continent

Such breeding sites may be important for the protection of the Commonwealth Marine environment.

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

- [-Department of Environment, Climate Change and Water, New South Wales](#)
- [-Department of Sustainability and Environment, Victoria](#)
- [-Department of Primary Industries, Parks, Water and Environment, Tasmania](#)
- [-Department of Environment and Natural Resources, South Australia](#)
- [-Parks and Wildlife Service NT, NT Dept of Natural Resources, Environment and the Arts](#)
- [-Environmental and Resource Management, Queensland](#)
- [-Department of Environment and Conservation, Western Australia](#)
- [-Department of the Environment, Climate Change, Energy and Water](#)
- [-Birds Australia](#)
- [-Australian Bird and Bat Banding Scheme](#)
- [-Australian National Wildlife Collection](#)
- Natural history museums of Australia
- [-Museum Victoria](#)
- [-Australian Museum](#)
- [-SA Museum](#)
- [-Queensland Museum](#)
- [-Online Zoological Collections of Australian Museums](#)
- [-Queensland Herbarium](#)
- [-National Herbarium of NSW](#)
- [-Royal Botanic Gardens and National Herbarium of Victoria](#)
- [-Tasmanian Herbarium](#)
- [-State Herbarium of South Australia](#)
- [-Northern Territory Herbarium](#)
- [-Western Australian Herbarium](#)
- [-Australian National Herbarium, Atherton and Canberra](#)
- [-University of New England](#)
- [-Ocean Biogeographic Information System](#)
- [-Australian Government, Department of Defence](#)
- [-State Forests of NSW](#)
- [-Geoscience Australia](#)
- [-CSIRO](#)
- Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the [Contact Us](#) page.

Biodiversity assessment report

Biodiversity information for applications for permits to remove native vegetation under clause 52.16 or 52.17 of the Victoria Planning Provisions

Date of issue: 05 May 2014

Time of issue: 20:41:01

Property address	FELLOWS ROAD QUEENSCLIFF 3225 260 FELLOWS ROAD QUEENSCLIFF 3225 61-75 MURRAY ROAD QUEENSCLIFF 3225
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Summary of marked native vegetation

Risk-based pathway	High
Total extent	4.077 ha
Remnant patches	
1	4.077 ha
Location risk	C

See Appendix 1 for risk-based pathway details

Offset requirements

If a permit is granted to remove the marked native vegetation the permit condition will include the requirement to obtain a native vegetation offset.

The biodiversity assessment tool does not currently calculate offset requirements for moderate and high risk-based pathway applications. Please contact DEPI to determine the offset requirements for your proposal.

Next steps

This proposal to remove native vegetation must meet the application requirements of the high risk-based pathway and it will be assessed in the high risk-based pathway.

If you wish to remove the marked native vegetation you are required to apply for a permit from your local council.

The Biodiversity assessment report should be submitted with your application for a permit to remove native vegetation you plan to remove, lop or destroy.

The Biodiversity assessment report provides the following information that is required to be provided with your application for a permit to remove native vegetation:

- The location of the site where native vegetation is to be removed.
- The area of the patch of native vegetation and/or the number of any scattered trees to be removed.
- Maps or plans containing information set out in the *Permitted clearing of native vegetation - Biodiversity assessment guidelines*.
- The risk-based pathway of the application for a permit to remove native vegetation.

Additional information is required when submitting an application for a permit to remove native vegetation. Refer to the *Permitted clearing of native vegetation - Biodiversity assessment guidelines* for a full list of application requirements.



Biodiversity assessment report

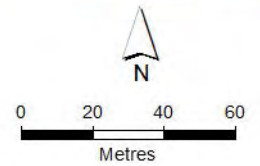
Maps of marked native vegetation

Marked native vegetation to be removed, lopped or destroyed



Legend

-  Marked native vegetation
-  Property boundary





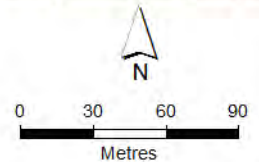
Biodiversity assessment report

Property view of marked native vegetation



Legend

-  Marked native vegetation
-  Property boundary



Department of
Environment and
Primary Industries 

See Appendix 2 for biodiversity information maps

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For more information contact the DEPI Customer Service Centre 136 186

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www.depi.vic.gov.au

Obtaining this publication does not guarantee that an application will meet the requirements of clauses 52.16 or 52.17 of the Victoria Planning Provisions or that a permit to remove native vegetation will be granted.

Notwithstanding anything else contained in this publication, you must ensure that you comply with all relevant laws, legislation, awards or orders and that you obtain and comply with all permits, approvals and the like that affect, are applicable or are necessary to undertake any action to remove, lop or destroy or otherwise deal with any native vegetation or that apply to matters within the scope of clauses 52.16 or 52.17 of the Victoria Planning Provisions.

Department of
Environment and
Primary Industries



Biodiversity assessment report

Appendix 1 - Risk-based pathway details

Risk-based pathway	High
Total extent	4.077 ha
Remnant patches	
1	4.077 ha
Location risk	C

Why is the risk-based pathway high?

The following table explains how the risk-based pathway is determined:

Extent	Location A	Location B	Location C
< 0.5 hectares	Low	Low	High
≥ 0.5 hectares and < 1 hectares	Low	Moderate	High
≥ 1 hectares	Moderate	High	High

The marked native vegetation is located, either wholly or partly, within Location C and has a total extent of greater than or equal to 1 hectare.

At this location, native vegetation removal of this size is likely to have a significant impact on the habitat of one or more rare or threatened species. As a result, an application for the removal of this native vegetation must meet the requirements of, and will be assessed in, the high risk-based pathway.

For further information on location risk please see *Native vegetation location risk map factsheet*. For information on the determination of the risk-based pathway see *Permitted clearing of native vegetation – Biodiversity assessment guidelines*.

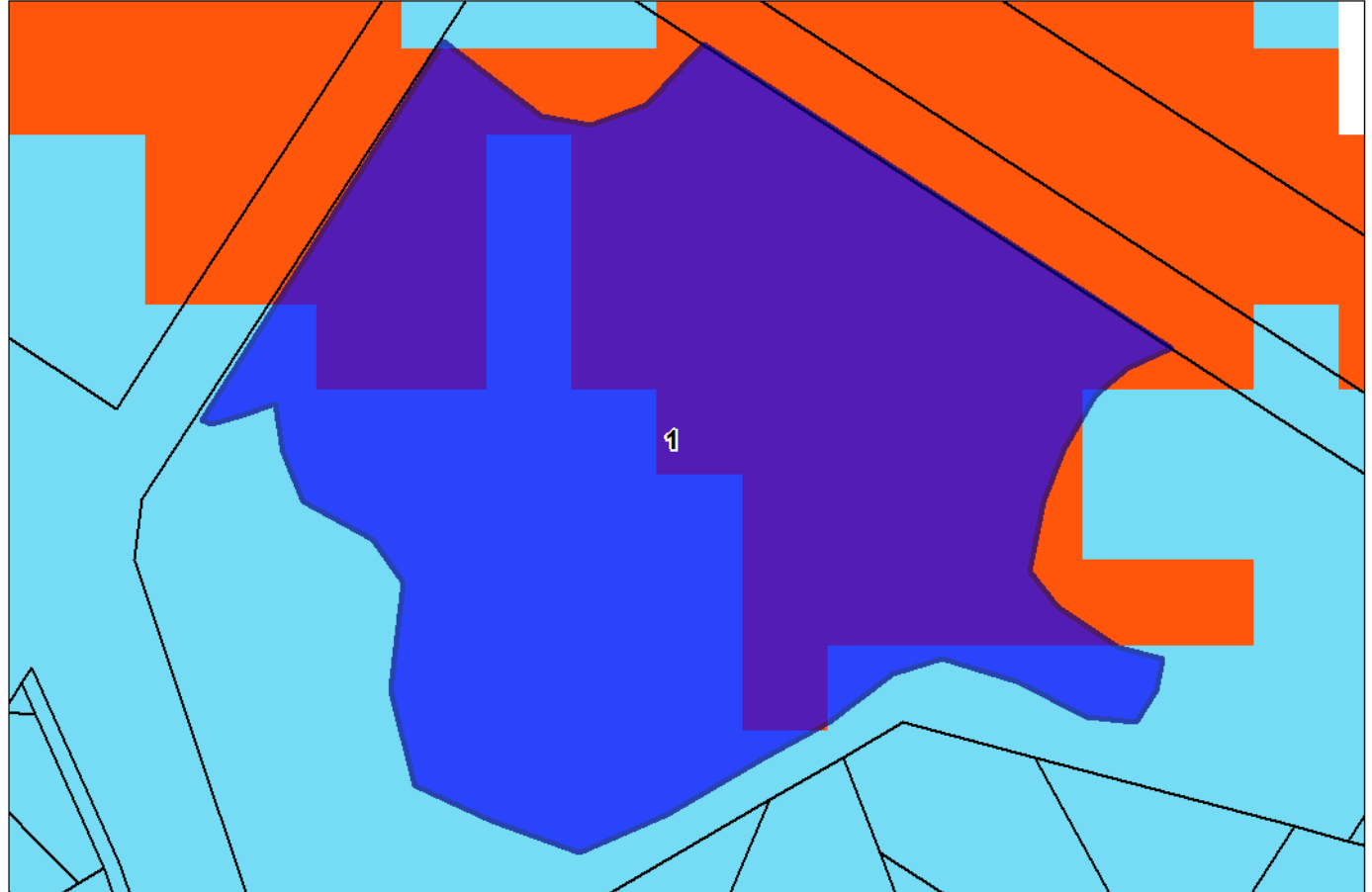
Have you received a planning permit to remove native vegetation in the last five years?

If you have undertaken any permitted clearing on your property within the last five years, the extent of this past clearing must be included in the total extent of your current permit application. The risk-based pathway for your application requirements and assessment pathway is determined using the combined extent of permitted clearing within the last five years and proposed clearing.



Biodiversity assessment report

Appendix 2 - Biodiversity information maps

Marked native vegetation and the *Native vegetation location risk map*



Legend

-  Marked native vegetation
-  Property boundary

Native vegetation location risk

-  Location C
-  Location B
-  Location A

