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Project: M341

161-169 Jetty Road Pty Ltd  
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### **Preliminary ecological assessment for the properties bounded by Jetty Road, Thomas Street and Central Road, Drysdale**

Okologie Consulting was engaged by St Quentin Consulting on behalf of 161-169 Jetty Road Pty Ltd to undertake a preliminary ecological assessment for the properties bounded by Jetty Road, Thomas Street and Central Road, Drysdale (the site).

The purpose of the preliminary assessment was to ascertain the presence/absence of ecological values within the site and to identify any potential constraints associated with the proposed future development.

This report summarises the findings of the assessment and discusses environmental legislation and policy implications associated with future development of the site.

#### **Site Description**

The site covers approximately 20 hectares comprises several separate properties bound by Thomas Street to the north, Central Road to the east, private property to the south and Jetty Road to the west (Figure 1).

The site topography was flat to gently undulating, with low slopes to the southwest. The majority of the land within the site and immediate surrounds has been modified from agricultural use and residential development.


The site occurs within the Otway Plain bioregion, the Corangamite Catchment Management Authority area and the City of Greater Geelong municipality. The Native Vegetation Location Risk mapping shows the site occurs within Location A (DELWP 2016a). The site is zoned Rural Living Zone (RLZ) and is not subject to any environmental significance overlays under the Greater Geelong Planning Scheme (DELWP 2016b).

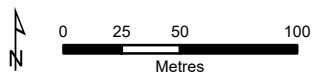
# Figure 1

## Site Location

Thomas Street, Central Road and Jetty Road  
Drysdale

### Legend

 Subject Site





## Methodology

### *Species Information*

Scientific and common names of flora species follow the Australian Plant Census (Australian National Botanic Gardens 2016). The names of terrestrial vertebrate fauna follow the Victorian Biodiversity Atlas (VBA) (DELWP 2016c). Vegetation community names follow the Ecological Vegetation Class (EVC) bioregion benchmarks (DELWP 2016a).

Native flora and fauna species referred to as 'threatened' refers to:

- Conservation status in Australia: listed as critically endangered, endangered or vulnerable under the *Environment Protection Biodiversity Conservation Act 1999* (EPBC Act) (DOE 2016).
- Listed as Threatened under the *Flora and Fauna Guarantee Act 1988* (FFG Act) (DELWP 2015).
- Conservation status in Victoria: listed as critically endangered, endangered, vulnerable or rare on Victoria's rare or threatened flora and fauna advisory lists (DEPI 2015; 2013).

### *Desktop Assessment*

A desktop assessment was undertaken of relevant databases and other resources, including:

- The Biodiversity Interactive Map for modelled biodiversity data (DELWP 2016a).
- Planning Schemes Online for planning information (DELWP 2016b).
- The VBA for threatened flora and fauna species records (DELWP 2016c).
- The Protected Matters Search Tool (PMST) for information relating to matters of National Environmental Significance (NES) (listed species and communities) under the *Environment Protection and Biodiversity Conservation Act 1999* (DOE 2016).
- Relevant environmental legislation, policies and strategies.

### *Field Assessment*

The field assessment was undertaken on 20 April 2016. The assessment involved traversing the site on foot to identify ecological values. A list of all observed flora and fauna species, and associated habitats were documented during the assessment. The extent of native vegetation was mapped onto an aerial photograph and with a hand held GPS (accuracy  $\pm$  five metres). Coordinates recorded to GDA 94 (WGS 84). EVCs were determined by reference to the relevant bioregion pre-1750 and extant EVC mapping and benchmarks descriptions (DELWP 2016a). Native vegetation in the area was classified and mapped according to the definitions of the Guidelines (DEPI 2013a).



## ***Biodiversity Assessment Guidelines***

The *Permitted clearing of native vegetation – Biodiversity assessment guidelines* (the Guidelines), outlines how impacts on biodiversity should be considered when assessing a permit application to remove, lop or destroy native vegetation (DEPI 2013a).

The definition of native vegetation in Clause 72 of the Victoria Planning Provisions is *plants that are indigenous to Victoria, including trees, shrubs, herbs and grasses* (DEPI 2013a). Under the Guidelines native vegetation is classified as a remnant patch or scattered tree.

A remnant patch of native vegetation (measure in hectares) is either:

- An area of native vegetation<sup>1</sup>, with or without trees, where at least 25 per cent of the total perennial understorey plant cover is native plants.
- An area with three or more indigenous canopy trees where the tree canopy cover is at least 20 per cent.

Scattered tree

- An indigenous canopy tree<sup>2</sup> that does not form part of a remnant patch (DEPI 2013a).

The native vegetation permitted clearing regulations have been designed to manage the risk to biodiversity associated with removing native vegetation. There are three risk-based pathways for assessing an application for a permit to remove native vegetation: low risk, moderate risk and high risk. The risk-based pathway is determined by combining the extent risk and the location risk of the native vegetation proposed to be removed (DEPI 2013a) (Table 1).

**Table 1: Risk-based pathways for remnant patches and scattered trees**

<b>For remnant patch</b>	<b>Location</b>		
<b>Extent*</b>	<b>Location A</b>	<b>Location B</b>	<b>Location C</b>
< 0.5 hectares	Low	Low	High
≥ 0.5 hectares and < 1 hectare	Low	Moderate	High
≥ 1 hectare	Moderate	High	High
<b>For scattered trees</b>	<b>Location</b>		
<b>Extent*</b>	<b>Location A</b>	<b>Location B</b>	<b>Location C</b>
< 15 scattered trees	Low	Moderate	High
≥ 15 scattered trees	Moderate	High	High

Source: DEPI (2013a).

<sup>1</sup> An area of native vegetation is defined as *continuous and unbroken native vegetation*. A break in remnant patch will occur where the definition of remnant patch has not been met for a continuous width of at least 10 metres (DEPI 2013a).

<sup>2</sup> DEPI defines a scattered tree as ‘A canopy tree is a mature tree that is greater than three metres in height and is normally found in the upper layer of a vegetation type’ (DEPI 2013b).



## Limitations

The preferred survey period for undertaking vegetation assessments in Victoria is spring, which maximises the likelihood of detecting all flora species within a site. Flora surveys provide a valuable 'snapshot' of vegetation at a point in time; however, the limitations of seasonal influence (autumn) on the presence/absence of flora species (particularly annuals or cryptic species) must be considered. The short duration of the assessment limited the opportunity to observe migratory, transitory or uncommon fauna species. Where access to private property was not available during the assessment, a visual assessment from the property boundary was undertaken.

The information outlined in this report relies on the accuracy of ecological database information, GIS layers and spatial imagery. To minimise potential errors, the most current available data was obtained from relevant sources.

The Department of Environment, Land, Water and Planning (DELWP) bioregion and EVC mapping are subject to inherently broad environmental and ecological parameters used in the mapping process. Where the observed EVC was not reflective of what would be expected from EVC mapping and classification, it was attributed to the most appropriate EVC based on combination of its floristic, life form and ecological characteristics, and particular environmental conditions.

## Results

### *Ecological Vegetation Classes*

The Biodiversity Interactive Map modelling for the Otway Plain bioregion indicates that pre-1750 EVC mapping for the site would have predominantly comprised of Grassy Woodland (EVC 175). Extant (2005) EVC mapping shows a sparse cover of Grassy Woodland throughout the site (DELWP 2016a). Remnant vegetation within the site was attributed to Grassy Woodland based on floristic, life form, ecological characteristics, and soil type (Figure 2).

### *Vegetation Condition*

The majority of the site was highly modified and characterised by areas of open pasture, interspersed with planted native (non-indigenous) and exotic trees and shrubs along windrows, property boundaries and around dwellings. Native vegetation was limited to several scattered trees, a sparse cover (<5%) of indigenous grasses within paddocks and a remnant patch within a road reserve (Figure 2).

Areas of open pasture were generally dominated by exotic species such as Perennial Ryegrass *Lolium perenne*, Cocksfoot *Dactylis glomerata*, Brown-top Bent *Agrostis capillaris*, Onion Grass *Romulea rosea*, Galenia *Galenia pubescens*, Soft Brome *Bromus hordeaceus*, Toowoomba Canary Grass *Phalaris aquatica*, Yorkshire Fog-grass *Holcus lanatus*, Sweet Vernal-grass *Anthoxanthum odoratum*, Kikuyu *Cenchrus clandestinus*, Rat-tail Grass *Sporobolus africanus*, Cape Weed *Arctotheca calendula*, Cat's Ear



*Hypochoeris radicata* and Ribwort *Plantago lanceolata*. Native vegetation was limited to a sparse cover (<5%) of native grasses such as Bristly Wallaby-grass *Rytidosperma setaceum* and Striped Wallaby-grass *Rytidosperma racemosum* (Plate 1). Planted native and exotic trees and shrubs included species such as Sugar Gum *Eucalyptus cladocalyx*, Drooping Sheoak *Allocasuarina verticillata* and Monterey Cypress *Cupressus macrocarpa* (Plate 2).

Scattered indigenous trees included Black Wattle *Acacia mearnsii* (Plate 3) and Manna Gum *Eucalyptus viminalis*. Grassy Woodland along Jetty Road reserve comprised a modified cover (~60%) of the indigenous Common Wallaby-grass *Rytidosperma caespitosum* and Soft Spear-grass *Austrostipa mollis*. Exotic species included Cocksfoot, Galenia and Flax-leaf Broom *Genista linifolia* (Plate 4).

### ***Threatened Flora Species***

No listed threatened flora species were recorded within the site during the field assessment. The VBA (DELWP 2016c) contains records of five listed threatened flora species in local area (within a five kilometre radius of the site). The PMST (DOE 2016) identified seven EPBC Act listed flora species or species habitats as likely to occur within the local area. There is a low likelihood of occurrence for any additional listed threatened species due to the absence of suitable habitat.

### ***Threatened Fauna***

No listed threatened fauna species or associated habitats were observed during the field assessment. The VBA (DELWP 2016c) contains records of 42 listed threatened fauna species in the local area. The PMST (DOE 2016) identified 33 EPBC Act listed fauna species (terrestrial) or species habitats as likely to occur within the local area. There is a low likelihood of occurrence for any listed threatened fauna species within the site, due to the absence of suitable habitat.

### ***Significant Vegetation Communities***

Review of the PMST (DOE 2016) identified four EPBC Act listed threatened ecological communities may occur within the local area, including:

- *Grassy Eucalypt Woodland of the Victorian Volcanic Plain* (Critically Endangered).
- *Natural Damp Grassland of the Victorian Coastal Plains* (Critically Endangered).
- *Natural Temperate Grassland of the Victorian Volcanic Plain* (Critically Endangered).
- *White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland* (Critically Endangered).

Native vegetation within the site does not meet the criteria or threshold requirements for any EPBC Act listed ecological communities.



Plate 1: Exotic dominated pasture and planted trees and shrubs within the site



Plate 2: Planted native trees along Central Road reserve



Plate 3: Scattered indigenous tree adjacent to Thomas Street








Plate 4: Remnant patch of native vegetation on Jetty Road reserve

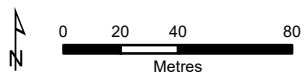
## Figure 2

### Ecological Values

Thomas Street, Central Road, and Jetty Road  
Drysdale

#### Legend

-  Subject Site
-  Grassy Woodland
-  Planted Vegetation
-  Predominantly Introduced Vegetation
-  Scattered Trees



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## **Environmental Legislation and Policy Implications**

### ***Environment Protection and Biodiversity Conservation Act 1999***

The EPBC Act provides a process for assessment of proposed actions that may have a significant impact on a matter of national environmental significance (NES), which includes EPBC Act listed flora, fauna and ecological communities (DOE 2013).

The EPBC Act affects any group or individual (including companies) whose actions (i.e. proposal or project) are assessed for environmental impacts under the EPBC Act. The proponent must refer the project to the Commonwealth Department of Environment. An action requires approval from the Commonwealth Environment Minister if it is considered likely to have a significant impact on a matter of NES (DOE 2013).

### ***Implications for the Proposed Works***

No EPBC Act listed threatened flora or fauna species were recorded within the site during the field survey, and none are considered likely to occur as no suitable habitat is present. Native vegetation within the surrounding area does not meet the threshold requirements for any EPBC Act listed ecological communities.

A referral to the Commonwealth Environment Minister is not required, as no matters of NES are likely to be significantly impacted by the proposed development.

### ***Flora and Fauna Guarantee Act 1988***

The FFG Act is the key piece of Victorian legislation for the conservation of threatened species and communities and for the management of potentially threatening processes.

A permit is required from DEPI to 'take' (kill, injure, disturb or collect) listed flora species, flora species that are members of listed communities or protected flora from public land. Protected flora species includes all members of the following plant families Asteraceae (Daisies), Epacridaceae (Heaths) and Orchidaceae (Orchids), all clubmosses, ferns and fern allies (excluding *Pteridium esculentum*). All species of the following genera are also protected: *Acacia* (excluding *Acacia dealbata*, *Acacia decurrens*, *Acacia implexa*, *Acacia melanoxydon* and *Acacia paradoxa*), *Baeckea*, *Calytrix*, *Correa*, *Darwinia*, *Eremophila*, *Eriostemon*, *Gompholobium*, *Grevillea*, *Prostanthera*, *Sphagnum*, *Thryptomene*, *Thysanotus* and *Xanthorrhoea* (Grass-trees) (DELWP 2015).

### ***Implications for the proposed development***

One listed protected flora species (Black Wattle) was recorded within the site; however, an FFG Act permit is generally not required for private property.

### ***Planning and Environment Act 1987***



The purpose of the *Planning and Environment Act 1987* is to establish a framework for planning the use, development and protection of land in Victoria. Native vegetation clearance is managed under the Act and through municipal planning schemes (DSE 2010a).

Under Clause 52.17 Native Vegetation, a permit is required to remove, destroy or lop native vegetation, including dead vegetation (on a site of more than 0.4 hectares) but this does not apply if the application is exempt under the schedule to Clause 52.17.

Planning schemes may contain other provisions in relation to the removal of native vegetation. For example several environment and land management overlays include requirements to obtain a planning permit to remove, destroy or lop any vegetation that are separate to the permit requirements in Clause 52.17 (DSE 2010a).

The impact on Victoria's biodiversity associated with removal of native vegetation requires consideration under the Guidelines, when applying for a permit under Clause 52.17. An application is classified under the low, medium or high risk-based pathway as defined in the Guidelines (DEPI 2013b). Each risk pathway has specific application requirements and decision guidelines that must be considered (DEPI 2013b).

Clause 66.02-2 requires that the following applications to remove native vegetation, triggered under Clause 52.17, be referred to DEPI for assessment:

- Applications in the low risk-based pathway where the native vegetation to be remove is 0.5 hectares or more;
- All applications in the moderate risk-based pathway;
- All applications in the high risk-based pathway;
- Applications where a property vegetation plan applies to the site; and,
- Applications on Crown land that is occupied or managed by the responsible authority (DEPI 2013b).

### ***Implications for the proposed development***

The site supports several scattered indigenous trees and a remnant patch along Jetty Road reserve. The site also supports a scattered cover (<5%) of indigenous grasses in areas of exotic pasture that do not meet the cover threshold for a remnant patch under the Guidelines (DEPI 2013a).

It is recommended that development design applies the principles of 'avoid and minimise' to reduce impacts to native vegetation as much as practicable. The proposed removal, destruction or lopping of native vegetation will require a permit under Clause 52.17 (Native Vegetation) of the Greater Geelong Planning Scheme (DELWP 2016b).

The proposed removal of any remnant patches (Grassy Woodland) or scattered trees will require a risk-based biodiversity application under the Guidelines. Based on the DELWP location risk and extent risk mapping (DELWP 2016a), this is likely to result in a



low risk-based application. Note that any permitted removal of remnant patches of native vegetation or scattered trees is subject to offsets in accordance with the Guidelines (DEPI 2013a).

## Conclusion and Recommendations

The site was highly modified and characterised by areas of open pasture, interspersed with planted native (non-indigenous) and exotic trees and shrubs along windrows, property boundaries and around dwellings. Native vegetation was limited to several scattered trees, a sparse cover (<5%) of indigenous grasses within paddocks and a remnant patch along Jetty Road reserve.

No listed threatened flora or fauna species or associated habitats were recorded within the site during the field assessment, and none are considered likely to occur due to the absence of suitable habitat.

No matters of National Environmental Significance (i.e. ecological communities or species habitats) are likely to be significantly impacted by the future development of the site; therefore, a referral under the EPBC Act is not required. One listed protected flora species (Black Wattle) was recorded within the site; however, an FFG Act permit is generally not required for private land.

It is recommended that development design applies the principles of 'avoid and minimise' to reduce impacts to native vegetation as much as practicable. The removal, destruction or lopping of native vegetation will require a permit under Clause 52.17 (Native Vegetation) of the Greater Geelong Planning Scheme. The removal of any remnant patches or scattered trees will require a risk based biodiversity application under the Guidelines.

Please contact me on 0419 786 533 if you have any questions.

Yours sincerely,

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## References

Australian National Botanic Gardens 2016. Australian Plant Census.

<http://www.anbg.gov.au/cpbr/databases/apni-search-full.html>

DEPI 2013a. *Permitted clearing of native vegetation: Biodiversity Assessment Guidelines*. Department of Environment and Primary Industries:

<http://www.dse.vic.gov.au>

DEPI 2013b. *Permitted clearing of native vegetation - Defining and classifying native vegetation, Fact sheet*. Department of Environment and Primary Industries:

<http://www.dse.vic.gov.au>

DEPI 2013c. *Permitted clearing of native vegetation - Meeting the moderate and high risk-based pathway applications requirements*. Department of Environment and Primary Industries:

<http://www.dse.vic.gov.au>

DELWP 2016a. Biodiversity Interactive Map. Department of Environment, Land, Water and Planning: [www.depi.vic.gov.au](http://www.depi.vic.gov.au)

DELWP 2016b. Planning Schemes Online. Department of Environment, Land, Water and Planning: <http://planningschemes.dpcd.vic.gov.au>

DELWP 2016c. Victorian Biodiversity Atlas. Sourced from: VBA\_FLORA25; VBA\_FLORA100; VBA\_FAUNA25 and VBA\_FAUNA100. Department of Environment, Land, Water and Planning: <https://vba.dse.vic.gov.au>

DOE 2013. *Matters of National Environmental Significance Significant impact guidelines: Environment Protection and Biodiversity Conservation Act 1999*. Commonwealth Department of Environment.

DOE 2016. Protected Matters Search Tool: <http://www.environment.gov.au/epbc/pmst/> Department of Environment.