143 Flinders Avenue
Lara

Vegetation
Assessment

A Report to
L. Bisinella Developments Pty Ltd

Prepared by

Mark Trengove **Ecological Services**
PO Box 1502 Geelong 3220
mtrengove@pipeline.com.au
ph 0428 298087

September 2015

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***Mark Trengove* Ecological Services**
PO Box 1502 Geelong 3220
mtrengove@pipeline.com.au
ph 0428 298087

1 INTRODUCTION

1.1 Project Background

Land at 143 Flinders Avenue, Lara, is proposed to be developed for residential use. This report was commissioned by L. Bisinella Developments P/L to assess the quantity and significance of any indigenous flora and fauna habitat that might be present in the subject site.

The State has gazetted the Native Vegetation Permitted Clearing Regulations 'the Regulations' (to replace the former Native Vegetation Management Framework). The reforms 'introduce a risk based approach to assessing applications to remove native vegetation' (DELWP Website i).

Refer to Section 4.2 for further discussion.

1.2 Objectives

The objectives of this investigation are to:

- Describe the flora values of the land.
- Evaluate the conservation significance of the land.
- Assess any potential impacts of the proposed development.
- Discuss the implications of relevant government policy and legislation.
- Determine any vegetation offset requirements.

1.3 Study Area

The study area is comprised of part of the land at 143 Flinders Avenue, Lara (approximately 4.5 ha), located within the City of Greater Geelong. The site is within the Victorian Volcanic Plains bioregion and is located within the Corangamite Catchment Management Authority region (DELWP Website ii). The study area is zoned Rural Living Zone under the City of Greater Geelong Planning Scheme (DTPLI Website i).

The site appears to have a history of disturbance. Areas of indigenous vegetation remain within the proposed development area. The location of the study area is shown on Figure 1.

1.4 Proposed Development

The proposed use is to create a residential development. It is anticipated that the proposed use will impact upon the entire study area.

Figure 1 Study area location

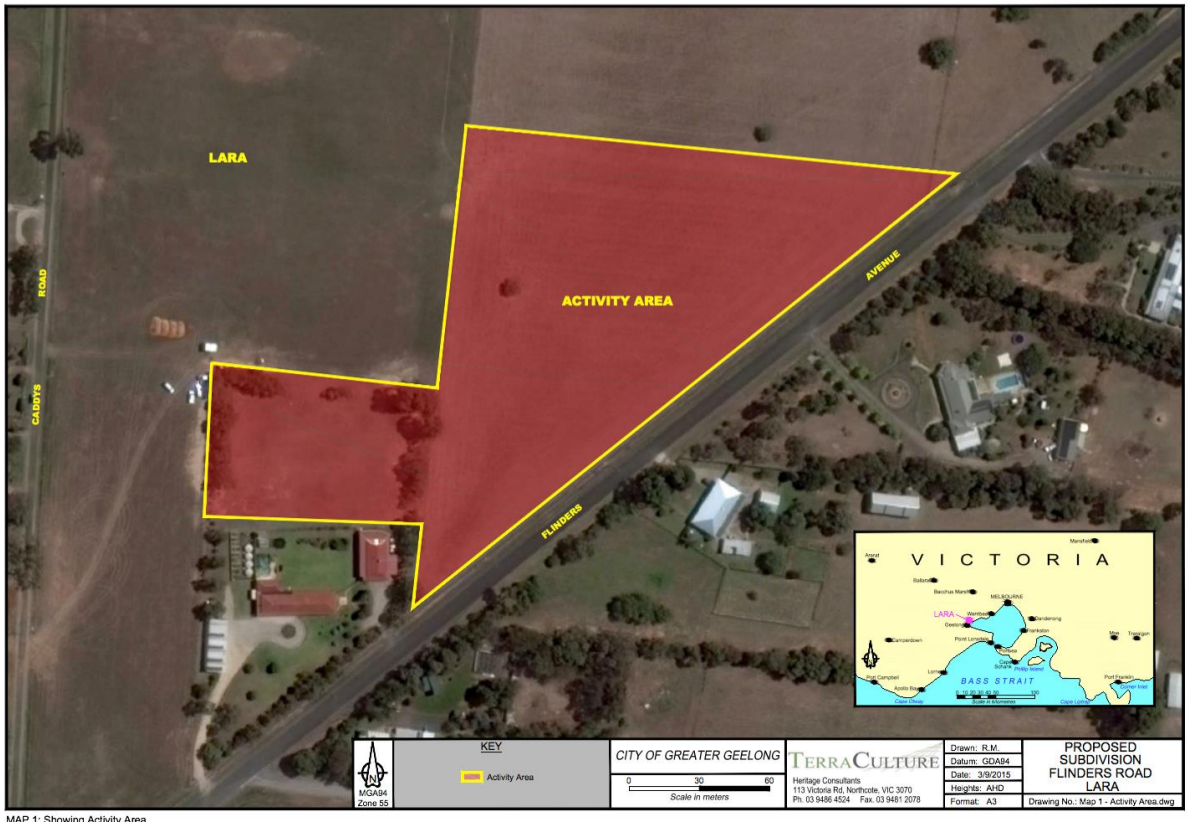

Figure 1. Study area location, shown in yellow outline.

2 METHODS

2.1 Taxonomy

Scientific names for plants follow the Census of Vascular Plants of Victoria (Walsh and Stasjic 2007). Common names for plants follow the Flora of Victoria Vols 2-4 (Walsh and Entwisle 1994-1999).

2.2 Literature and Database Review

Relevant literature and databases, including data from the relevant literature and databases, including data including data within the Victorian Biodiversity Atlas (DELWP website iv) and the Commonwealth Department of Sustainability, Environment, Water, Populations and Communities (EPBC Website i) were reviewed.

2.3 Field Survey

The site was inspected on foot on the 14th of September 2015. The entire site was traversed. Records were made of all indigenous vascular plant species. Records were made of the existing habitat values and dominant exotic vascular plant species.

2.4 Limitations

The assessment was conducted spring, a time of year that is suitable for the detection of most flora species likely to occur on site. Due to the overwhelmingly degraded nature of the study area, the site inspection is considered to be sufficient to assess the ecological values of the site. As a result there are not considered to be any significant limitations to the study.

The survey includes only vascular flora. As Habitat Hectare assessments were not required (*refer to* 4.2) non-vascular flora (mosses, lichens, fungi, etc.) were not recorded. Fauna was not surveyed.

2.5 Defining Significance

A number of criteria are applied in order to assess the significance of flora species and vegetation communities. The definition of the criteria is detailed in Appendix 1.

2.6 Defining and Assessing Vegetation

Native vegetation in Victoria has been defined by DELWP as belonging to two categories. These are:

Remnant Patch

A remnant patch of native vegetation is either:

- any area of vegetation where at least 25 per cent of the total perennial understorey plant cover is native
- any area with three or more native canopy trees where the canopy foliage cover is at least 20 per cent of the area.

Scattered Trees

A scattered tree is:

- a native canopy tree that does not form part of a remnant patch.

(DELWP Website ii).

Habitat Hectares

Habitat hectares (Vegetation Quality Assessment) is a site-based measure that combines extent and condition of native vegetation. The current condition of native vegetation is assessed against a benchmark for its Ecological Vegetation Class (EVC). EVCs are classifications of native vegetation types. The benchmark for an EVC describes the attributes of the vegetation type in its mature natural state, which reflects the pre-settlement circumstances. The condition score of native vegetation at a site can be determined through undertaking a habitat hectare assessment. The habitat hectares of native vegetation is calculated by multiplying the current condition of the vegetation (condition score) by the extent of native vegetation.

(DELWP Website ii).

3 RESULTS

3.1 Vegetation Condition

The majority of the site carries exotic vegetation (the eastern triangle). Small areas of native vegetation occur (located within the western rectangle). The cover value of the native vegetation is > 25%, being comprised of scattered Wallaby-grass and Windmill-grass.
The majority of the study area appears to have been de-rocked and disturbed at some time in the past and is currently cropped.

Refer to Figure 4 for the location of native vegetation. Refer to Plates 1 and 2 for photographs of vegetation existing conditions.

The vegetation is assessed to be substantially modified as a result of repeated cultivation and grazing and is considered to be of negligible ecological value.

Several non-indigenous native trees have been planted within the western rectangle.

Note that the adjacent Flinders Avenue roadside reserve was also inspected and was found to carry entirely exotic vegetation, comprised of species recorded in Table 2.

3.1.2 Faunal Habitat Values

No fauna assessment was undertaken. The planted specimens of non-indigenous native trees are immature and are likely to provide habitat and a food source for locally common faunal species only.

The majority of the study area, being pasture, is unlikely to provide more than negligible faunal habitat value.

3.2 Ecological Vegetation Class

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. Classification of EVCs in this report follows Oates and Taranto (2002).

The pre-1750 EVC mapping of the study area undertaken by DELWP (DELWP website i) indicates that the study area was comprised of EVC 55 Plains Grassy Woodland and EVC 132 Plains Grassland.

The current study records vegetation that potentially accords with both EVC 55 Plains Grassy Woodland and EVC 132 Plains Grassland.

EVC 55 Plains Grassy Woodland and EVC 132 Plains Grassland are both currently listed as 'Endangered' in the Victorian Volcanic Plain bioregion (DELWP website ii).

Refer to Figure 2 for DSE EVC mapping.

Figure 2 EVC Distribution

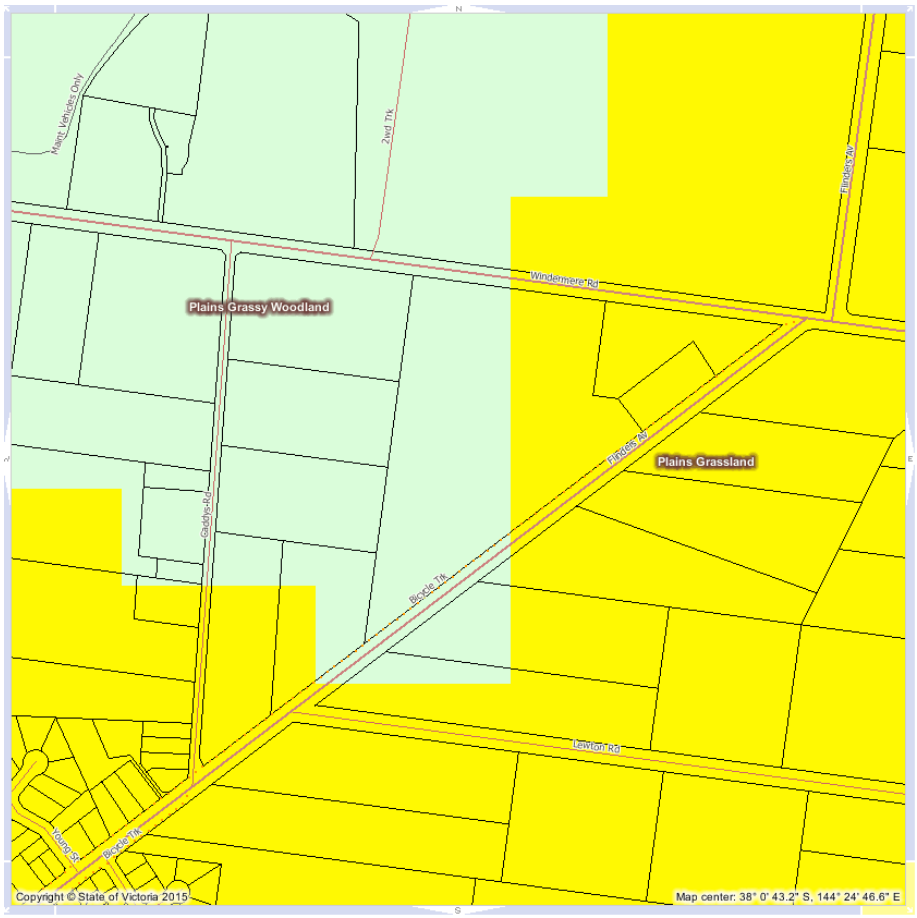

Figure 3. Distribution of EVCs pre-1750. Data by DSE (DSE website i).

3.3 Flora

A total of two indigenous vascular plant species were recorded from the study area.

Refer to Table 1 for a list of indigenous vascular plant species and conservation significance recorded during this survey. Refer to Table 2 for a list of dominant exotic vascular plant species recorded during this survey.

Refer to Figure 4 for the location of native vegetation. Refer to Plates 1 and 2 for photographs of vegetation existing conditions.

Table 1 Indigenous Species and Conservation Significance

Botanical Name	Common Name	Significance
Chloris truncata	Windmill-grass	Local
Rytidosperma racemosa	Slender Wallaby-grass	Local

Table 2 Dominant Exotic Plant Species

Botanical Name	Common Name	Comments
Cynodon dactylon	Couch Grass	
Galenia pubescens	Blanket Weed	
Lolium sp	Rye-grass	Cropping species
Lycium ferrocisimum	Boxthorn	
Marubium vulgare	Horehound	
Oxalis pes-caprae	Soursob	
Plantago lanceolata	Ribwort	
Romulea sp	Onoion-grass	
Salvia verbenacea	Wild Sage	
Schinus molle	Pepper Tree	

3.4 Significant Flora

No National, State or Regional significant plant species were recorded. The two indigenous plant species are of Local conservation significance.

4 LEGISLATION AND GOVERNMENT POLICY

4.1 Commonwealth

4.1.1 Environment Protection and Biodiversity Conservation Act (1999)

The Environment Protection and Biodiversity Conservation (EPBC) Act (1999) was **e**stablished to 'promote the conservation of biodiversity by providing strong protection for listed species and communities in the Commonwealth and for protected areas, Ramsar sites, Commonwealth Reserves, conservation zones and World Heritage sites, etc'.

The EPBC Act applies to developments and associated activities that have the potential to significantly impact on matters protected under the Act. Under the Act, unless exempt, actions require approval from the Australian Government Minister for Environment and Heritage if they are likely to significantly impact on a 'matter of national environmental significance'. There are currently seven matters of national environmental significance (NES):

- World Heritage properties;
- National Heritage properties;
- nationally listed threatened species and ecological communities;
- listed migratory species;
  Ramsar wetlands of international significance;
- Commonwealth marine areas; and
- nuclear actions (including uranium mining).

Any person proposing to take an action that may, or will, have a significant impact on a matter of national environmental significance must refer the action to the Australian Government Minister for Environment and Water Resources for determination as to whether the action is a 'controlled action' or is not approved.

Natural Temperate Grassland of the Victorian Volcanic Plain is an ecological community that is listed as 'Critically Endangered' under the EPBC Act (EPBC Website i). The study area once carried vegetation that may have been considered part of this community.

4.1.2 Implications

Due to the relatively degraded nature of the study area and small size of the impact area there are not considered to be any implications for the current proposal under the EPBC Act.

4.2 Native Vegetation Permitted Clearing Regulations

Under Clause 52.16 and Cluse 52.17 of the Victorian Planning Provisions, the State has gazetted the Native Vegetation Permitted Clearing Regulations 'the Regulations' (to replace the Native Vegetation Management Framework). The reforms 'introduce a risk based approach to assessing applications to remove native vegetation' (DELWP Website i).

The objective for the permitted clearing of native vegetation (*refer to* 2.6) is that it results in no net loss. This means permitted clearing has a neutral impact on Victoria's biodiversity.

When native vegetation removal is permitted, an offset must be secured which achieves a no net loss outcome for biodiversity. To achieve this the offset makes a contribution to Victoria's biodiversity that is equivalent to the contribution made by the native vegetation that was removed. The type and amount of offset required depends on the native vegetation being removed and the contribution it makes to Victoria's biodiversity.

Under the Regulations, any remnant 'patch' or 'scattered tree' native vegetation that is proposed to be removed is subject to protection/and or recruitment offsets, depending upon the characteristics of the site.

Within the bioregion, EVC 55 Plains Grassy Woodland has *Eucalyptus* spp as 'canopy trees'.

For practicality, a standard extent size (i.e. 0.071 ha) has been developed for scattered trees, based on the habitat hectare assessment method.

4.2.4 Implications

The results show that the current native vegetation condition is confined to Wallaby-grass and Windmill-grass, located in the western rectangle sector of the study area (the currently non-cropped area), that occurs at >25% cover value (i.e. non remnant patch vegetation). The proposed development area is within Location Risk A (i.e. least risk).

Consequently there are no implications for the removal of vegetation under the Regulations.

Refer to Figure 3 for Location Risk mapping. Refer to Figure 4 for the location of native vegetation. Refer to Plates 1 and 2 for photographs of vegetation existing conditions.

Figure 3 Location Risk

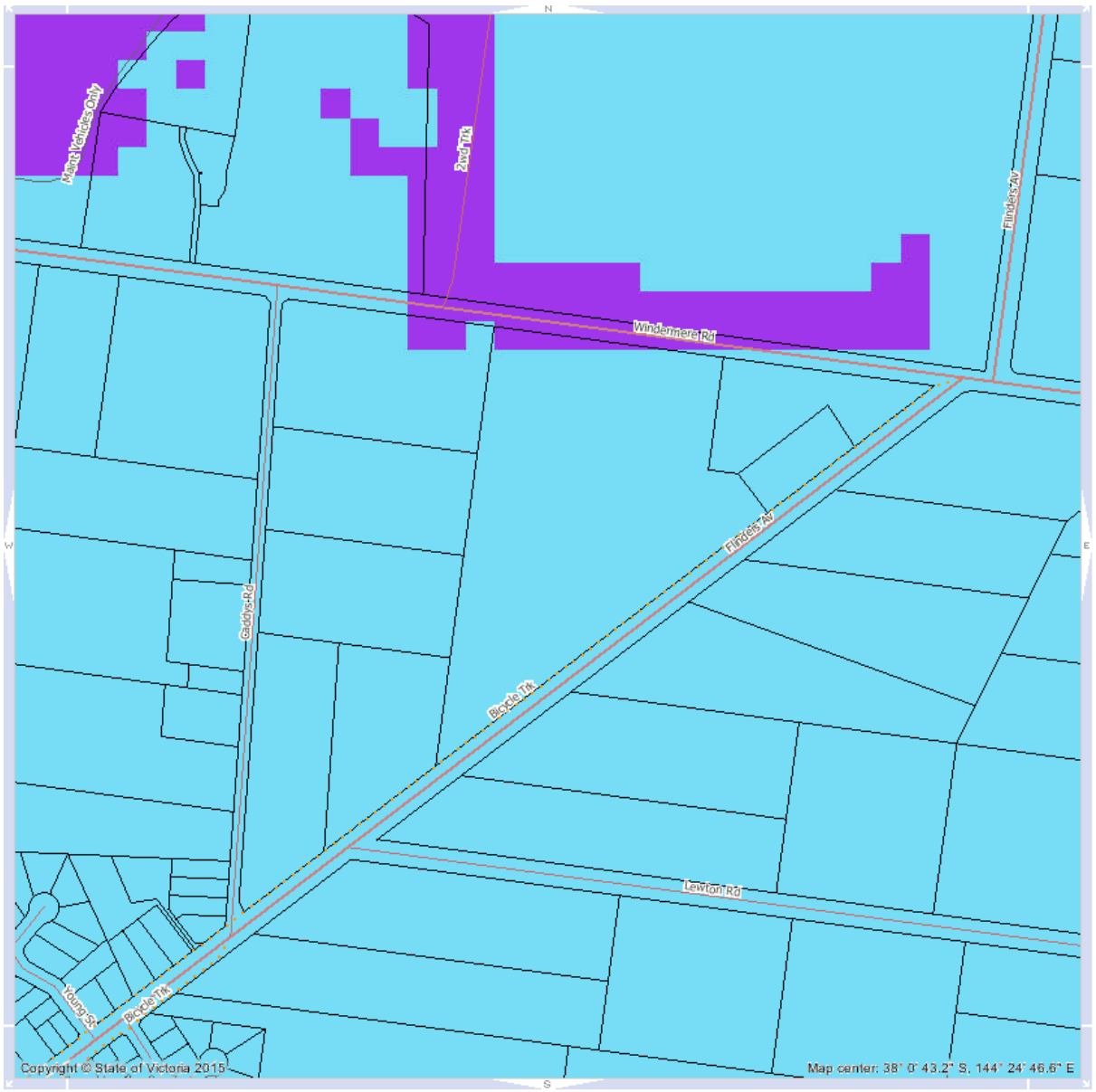

Figure 3. Distribution of vegetation according to 'Location Risk'. Blue equates to 'Location Risk A' (i.e. Least Risk). (DELWP Website i). The study area is sited within areas of Location Risk A.

5 CONCLUSIONS

Description

The privately owned land of approximately 4.5 ha, located at part of 143 Flinders Avenue Lara, that is the subject of this report, contains the following vegetation:

- The majority of the site carries exotic vegetation.
- Small areas of native vegetation occur. The cover value of the native vegetation is >25%, being comprised of scattered Wallaby-grass and Windmill-grass.

Implications

Indigenous vegetation, comprised of two locally significant species, was recorded.

No State, National or Regionally significant plant species were recorded.

The current study records vegetation that potentially accords with both EVC 55 Plains Grassy Woodland and EVC 132 Plains Grassland. EVC 55 Plains Grassy Woodland and EVC 132 Plains Grassland are both currently listed as 'Endangered' in the Victorian Volcanic Plain bioregion (DELWP website ii).

The proposal is not considered to have any implications under the Commonwealth EPBC Act.

No remnant patch or scattered tree vegetation is proposed to be removed. Consequently vegetation offsets or a referral to DELWP are not required.

Limitations

There are not considered to be any significant limitations to this study.

Figure 4 Location of vegetation

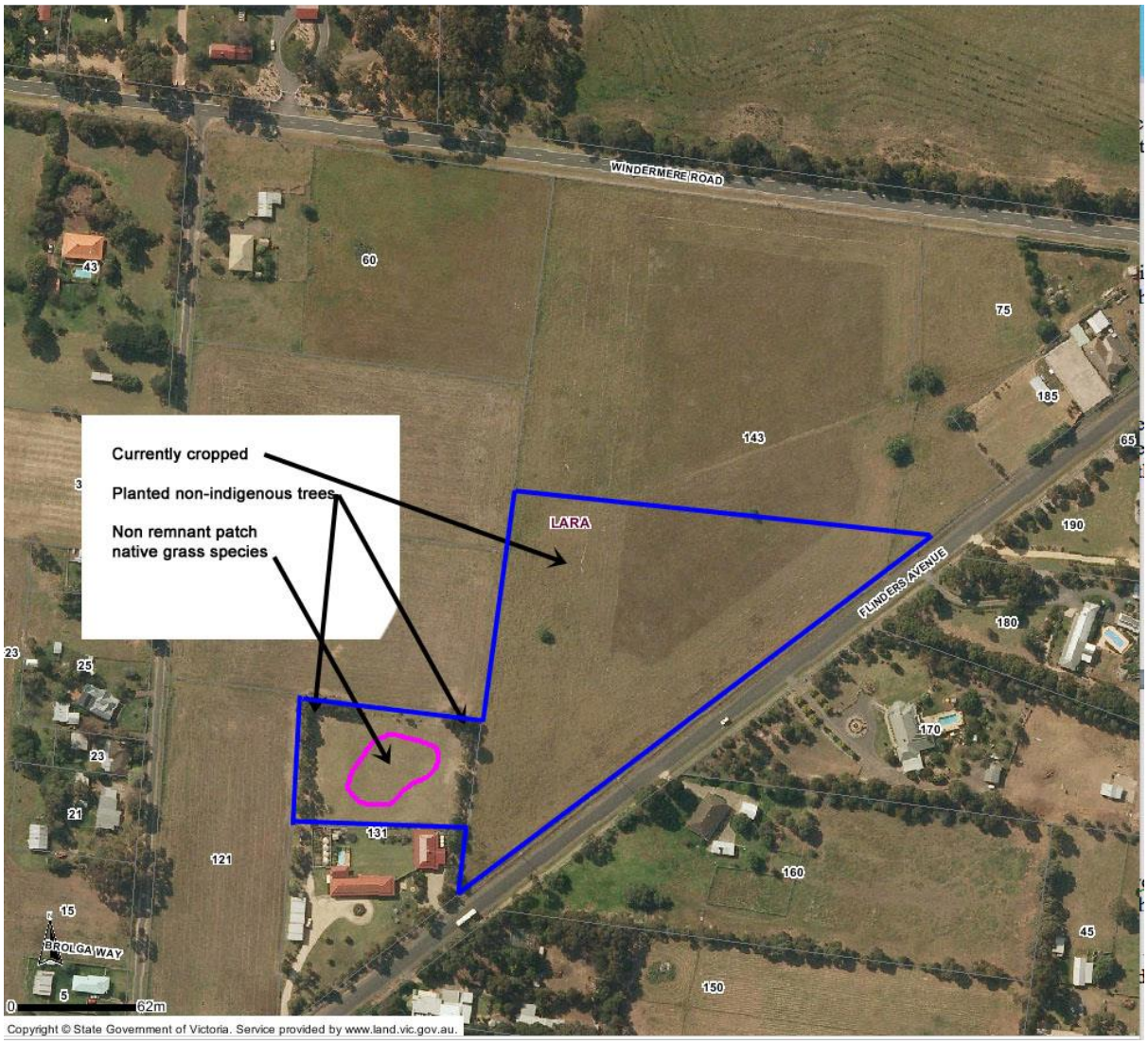

Figure 4. Location of vegetation.

Plates 1-2 Vegetation Existing Conditions

Plate 1. Degraded vegetation, Rye-grass crop with Pepper Tree (eastern triangle).

Plate 2. Degraded vegetation with non remnant patch Wallaby-grass and Windmill-grass and planted non-indigenous native trees (western rectangle).

Appendix 1 - ASSESSING CONSERVATION SIGNIFICANCE

Conservation significance is assessed at a range of scales, including global, international, national, state, regional and local. Criteria used for determining the conservation significance of flora and fauna at national to local scales are presented below for botanical and zoological conservation significance.

Botanical Significance

National botanical significance applies to an area when it supports one or more of the following attributes:

a population of at least one nationally threatened plant species listed by Briggs and Leigh (1996) or plant species listed on the schedules to the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*.

A nationally threatened ecological community listed on the schedules of the *Environment Protection and Biodiversity Conservation Act 1999*.

State botanical significance applies to an area when it supports one or more of the following attributes:

A population of at least one plant species threatened in Victoria, as listed by Gullan et al. (1990), NRE (2000a) or more recently in the unpublished records of the Flora Information System (NRE), or on the schedules to the Victorian *Flora and Fauna Guarantee Act 1988*.

An ecological community considered threatened in Victoria through its listing on the schedules of the *Flora and Fauna Guarantee Act 1988*.

Regional botanical significance applies to an area that supports one or more of the following attributes:

Supports a population of one or more regionally depleted species defined in a valid regional assessment of biodiversity (eg. Regional Native Vegetation Plan, Environment Conservation Council Report or Comprehensive Regional Assessment documents).

An ecological vegetation class that is considered endangered or vulnerable in a particular bioregion (based on Conn 1993 and the Regional Native Vegetation Plan), in which case the area is of **High Regional** significance.

An ecological vegetation class that is considered depleted in a particular bioregion (based on Conn 1993 and the Regional Native Vegetation Plan), in which case it is of **Regional** significance.

Local botanical significance applies to all remnant native vegetation that does not meet the above criteria. In much of Victoria native vegetation has been so depleted by past clearing and disturbance that all remaining vegetation must be considered to be of at least local conservation significance.

6 REFERENCES

Corangamite Catchment Management Authority (2005) 'Corangamite Native Vegetation Plan' CCMA Website.

DELWP Website i.
http://www.depi.vic.gov.au/environment-and-wildlife/biodiversity/native-vegetation/native-vegetation-permitted-clearing-regulations

DELWP Website ii.
http://nvim.depi.vic.gov.au

DELWP Website iii.
http://mapshare2.dse.vic.gov.au/MapShare2EXT/imf.jsp?site=bim

DELWP Website iv.
http://www.dse.vic.gov.au/dse/nrence.nsf/LinkView/A2A7B7D2CABBEE3CCA256F2B000257048062D358172E420C4A256DEA0012F71C

DELWP Website v.
http://www.dse.vic.gov.au/CA256F310024B628/0/B10DC61B8DF2A09FCA25760F0010DF1B/$File/Advisory+List+of+Threatened+Vert+Fauna+in+Victoria+-+2007+amended+11+august+2009.pdf

DTPLI Website i.
http://planningschemes.dpcd.vic.gov.au/schemes/greatergeelong

EPBC Website i.
http://www.environment.gov.au/cgi-bin/sprat/public/publicshowcommunity.pl?id=42&status=Critically%20Endangered

EPBC Website ii.
http://www.environment.gov.au/epbc/publications/pubs/ecological-communities-listing-approach-factsheet.pdf

EPBC Website iii.
http://www.environment.gov.au/arcgis-framework/apps/pmst/pmst.jsf

Oates, A. & Taranto, M. (2001): 'Vegetation mapping of the Port Phillip &Westernport region' Arthur Rylah Institute for Environmental Research, DNRE, Victoria.

Parkes, D., Newell, G. & Cheal, D. (2003): 'Assessing the quality of native vegetation: The habitat hectares approach. Parks, Flora & Fauna Division, DNRE, Victoria.

Walsh, N G and Stasjic, V (2007): 'A Census of the Vascular Plants of Victoria' Royal Botanic Gardens, Melbourne.

Walsh, N G & Entwisle, T (1994-1999): 'Flora of Victoria Vol 2-4' Inkata Press, Melbourne.