Bruce Street, Harvey Road and Ormond Road Bannockburn

Vegetation Assessment and Native Vegetation Removal Report

A Report to
TGM Group P/L

Prepared by

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

July 2018

Contents

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

1 INTRODUCTION

1.1 Project Background

Land at Bruce Street, Harvey Road and Ormond Road Bannockburn, is proposed to be rezoned for high-density residential sub-division. This report was commissioned by TGM Group P/L to assess the quantity and significance of any indigenous flora and fauna habitat that might be present in the subject site.

Under Clause 52.17 of the Victorian Planning Scheme, the State has gazetted the Native Vegetation Removal Regulations (revised in December 2017). 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 and fauna habitat values of the study area.
- Evaluate the conservation significance of the study area.
- Assess any potential impacts of the proposed development.
- Determine the implications of any native vegetation removal for the relevant government policy and legislation.
- Determine any vegetation offset implications.

1.3 Study Area

The study area is comprised of approximately 19 ha of land at Bruce Street, Harvey Road and Ormond Road Bannockburn, located within the Golden Plains Shire. 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 currently zoned Farm Zone (FZ) and is in part (i.e. the Bruces Creek corridor) subject to Environment Significance Overlay 2 under the Golden Plains Shire Planning Scheme (DPCD website i).

The site appears to have a history of disturbance. Small areas of degraded indigenous vegetation, including areas of partially intact native vegetation within the Bruces Creek corridor, occur.

The adjacent areas of the Bruce Street, Harvey Road and Ormond Road roadside reserves were inspected and were found to be comprised, in part, of native vegetation.

The location of the study area is shown on Figure 1.

1.4 Proposed Development

The proposed use is to rezone the land for medium-density residential use. It is anticipated that the proposed use will impact upon the majority of the study area. The area of Bruces Creek corridor is proposed to be retained and designated as a reserve.

Figure 1 Study area location

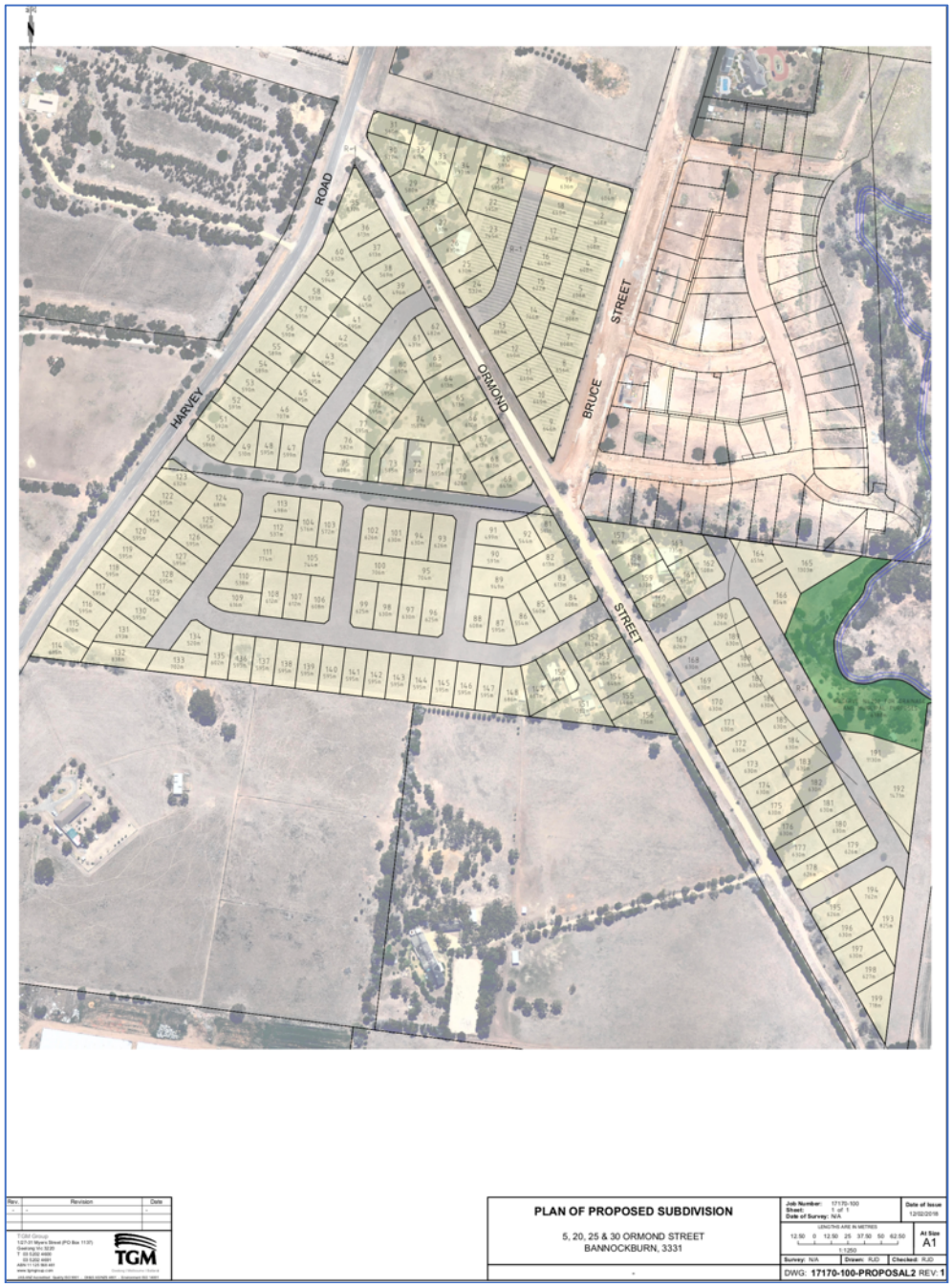


Figure 1. Study area location and proposed sub-division layout.

2 METHODS

2.1 Taxonomy

Scientific names for plants follow the Flora of Victoria (RBG Website i). 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, online resources and databases were reviewed to provide an up to date assessment of ecological values associated with the study area and surrounds, including:

- The Victorian Department of Environment, Land, Water and Planning (DELWP) Naturekit Interactive Map (DELWP website ii) for:
    - Modelled data for remnant vegetation patches and habitat for rare or threatened species and
    - the extent of historic and current Ecological Vegetation Classes (EVC)s.
- The Victorian Biodiversity Atlas (VBA) (DELWP website iii) for previously documented flora and fauna records within the project locality (to approximately 10 kilometres of the study area)
- Aerial photography of the study area (Google maps).

2.3 Field Survey

The site was inspected on foot on the 3rd of July 2018. The entire site was traversed. Records were made of all indigenous vascular plant species. Records were made of the existing faunal habitat values and dominant exotic vascular plant species.

2.4 Limitations

The assessment was conducted winter, a time of year that is suitable for the detection of most, but not all, flora species likely to occur on site. Due to the relatively degraded nature of the understorey vegetation of the majority of the study area, the site inspection (with the exception of the roadside reserves) 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. Habitat Hectare assessments were not undertaken. Consequently, 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:

Patch native vegetation

Patch 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 continuous.

Scattered Tree native vegetation

Scattered tree native vegetation is:

- a native canopy tree that does not form part of a 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 study area carries predominately exotic vegetation. Small areas of native vegetation consisting of isolated Rive Red Gum (*Eucalyptus camaldulensis*) and Manna Gum (*Eucalyptus viminalis*) mature trees occur. The majority of the study area appears to have been subject to intensive agriculture (improved pasture, intensive grazing, vineyards, etc.) and rural residential use.

With the exception of the areas of mature Eucalypts and associated understorey vegetation, the vegetation of the study area is assessed to be substantially modified as a result of disturbance and is assessed to be of negligible ecological value.

Areas of native vegetation were recorded on Ormond Street.

Areas of non-indigenous native trees and exotic Cypress and Pine trees have been planted, mostly as shelter belts and in association with the existing residences.

Refer to Figure 4 for the location of the native vegetation. Refer to Plates1-7 for photographs of the vegetation existing conditions.

3.2 Faunal Habitat Values

No fauna assessment was undertaken. Given the degraded nature of the surrounding area and the substantially modified understorey, the River Red Gum, Manna Gum and the planted specimens of non-indigenous native trees are assessed as being likely to provide habitat and a food source for locally significant faunal species.

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

3.3 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 (the majority of the study area), EVC 68 Creekline Grassy Woodland (Bruces Creek riparian zone) and EVC 132 Plains Grassland.

The current study records vegetation that accords with EVC 55 Plains Grassy Woodland and EVC 68 Creekline Grassy Woodland.

EVC 55 Plains Grassy Woodland and EVC 68 Creekline Grassy Woodland are both listed as 'Endangered' in the Victorian Volcanic Plain bioregion (DELWP website ii). Endangered refers to an EVC that has less than 10% of its pre-european distribution remaining within the bioregion. Refer to Figure 2 for DELWP EVC mapping.

Figure 2 EVC Distribution

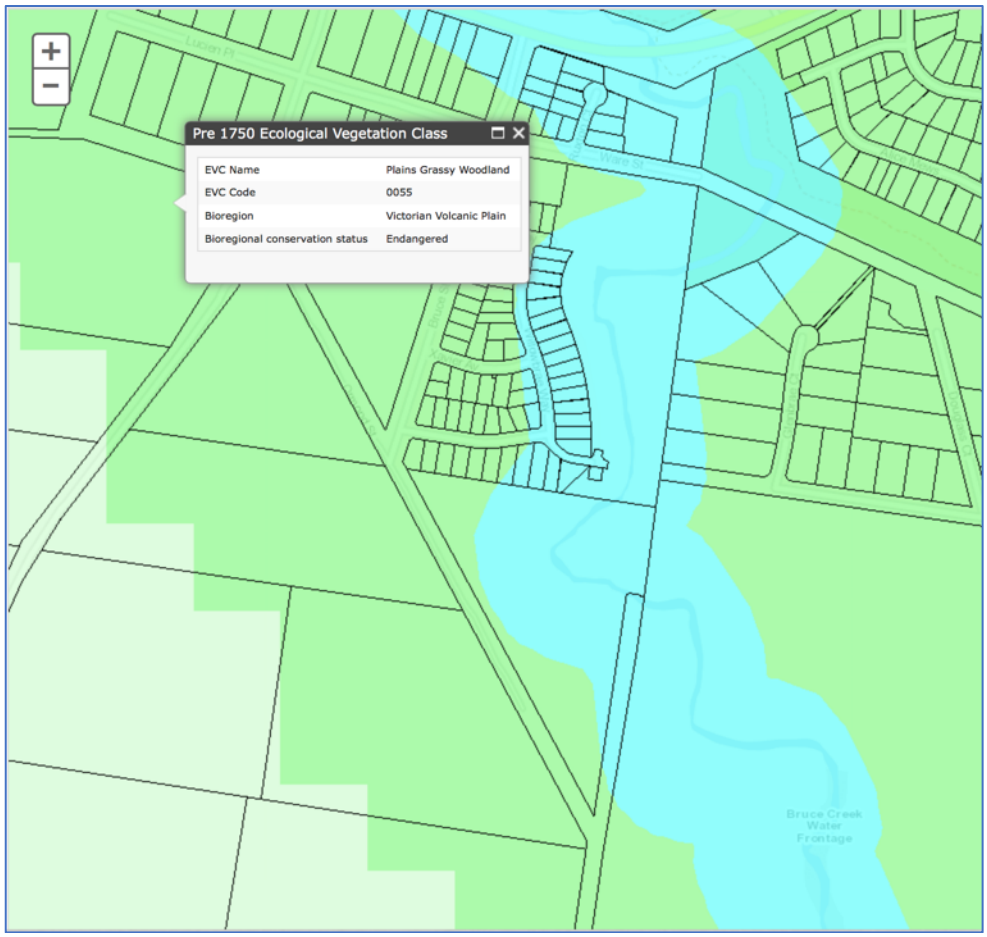


Figure 2. Distribution of EVCs pre-1750. Data by DELWP (DELWP website ii).

3.4 Flora

A total of 12 indigenous vascular plant species was recorded from the study area.

Refer to Table 1 for a list of indigenous vascular plant species, location 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 vegetation. Refer to Plates 1-7 for photographs of vegetation existing conditions.

Table 1 Indigenous Vascular Plant Species, Location and Conservation Significance

Botanical Name	Common Name	Private Property	Roadside Reserve	Creek Reserve	Significance
Acacia mearnsii	Late Black Wattle	✓	✓		Local
Acacia paradoxa	Hedge Wattle	✓		✓	Local
Acacia pycnantha	Golden Wattle		✓		Local
Austrostipa mollis	Spear-grass	✓	✓		Local
Dianella revoluta	Black-anther Flax-lily		✓		Local
Eucalyptus camaldulensis	River Red Gum	✓		✓	Local
Eucalyptus viminalis	Manna Gum	✓	✓		Local
Lomandra filiformis	Wattle mat-rush		✓		Local
Microleana stipoides	Weeping Grass	✓	✓		Local
Phragmites australis	Common Reed			✓	Local
Rytidosperma caespitosum	Common Wallaby-grass	✓	✓		Local
Themeda triandra	Kangaroo Grass		✓		Local

Table 2 Dominant Exotic Vascular Plant Species

Botanical Name	Common Name
Acetosella vulgare	Sheep Sorrel
Arctotheca calendula	Capeweed
Argrostis stolonifera	Creeping Bent-grass
Cirsium vulgare	Spear-thistle
Cynodon dactylon	Couch Grass
Dactylis glomeratus	Cock's-foot Grass
Ehrhartia calycina	Veldt-grass
Galenia pubescens	Blanket Weed
Juncus acuta	Spiny-rush
Lolium sp	Rye-grass
Lycium ferrocisimum	Boxthorn
Marubium vulgare	Horehound
Nassella neesiana	Chilean Needle-grass
Nassella trichotoma	Serrated Tussock

Oxalis pes-caprae	Soursob
Phalaris aquatica	Canary-grass
Pinus radiata	Monterey Pine
Plantago lanceolata	Ribwort
Romulea sp	Onion-grass
Schinus molle	Pepper Tree

3.5 Flora Significance

The 12 recorded indigenous vascular plant species are all assessed to be of local conservation significance. Refer to Table 1 for significance. Refer to Appendix 1 for the rational for assessing 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 established 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.

Grassy Eucalypt Woodland 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 small and degraded nature of the native vegetation of the study area there are not likely to be any implications for the Grassy Eucalypt Woodland of the Victorian Volcanic Plain community for the current proposal under the EPBC Act.

4.2 State Native Vegetation Permitted Clearing Regulations

Under Particular Provision (Native Vegetation Clause 52.17) the State has gazetted the Native Vegetation Permitted Clearing Regulations (the 'Guidelines'), revised in December 2017. The reforms introduce a risk-based approach to assessing applications to remove native vegetation.

The purpose of Clause 52.17 is to ensure that there is no net loss to biodiversity as a result of the removal, destruction or lopping of native vegetation. This means permitted clearing has a neutral impact on Victoria's biodiversity. This is achieved by applying the following three step approach in accordance with the *Guidelines for the removal, destruction or lopping of native vegetation* (Department of Environment, Land, Water and Planning, 2017):

1. Avoid the removal, destruction or lopping of native vegetation.

2. Minimise impacts from the removal, destruction or lopping of native vegetation that cannot be avoided.

3. Provide an offset to compensate for the biodiversity impact if a permit is granted to remove, destroy or lop native vegetation.

To manage the removal, destruction or lopping of native vegetation to minimise land and water degradation. (DELWP Website i).

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.

Implications for the current proposal are discussed as follows. Refer to Figure 3 for Location mapping (DELWP data).

Figure 3 Vegetation Location

Figure 3. Distribution of vegetation according to 'Location'. Light green equates to 'Location 1' (i.e. least risk). Dark green equates to 'Location 2' (i.e. medium risk) (DELWP Website i). The study area is sited within areas of both Location 1 and 2.

4.2.1 Patch native vegetation

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

Two areas of patch native vegetation were recorded for the study area. These are:

- The Bruces Creek linear riparian zone dominated by River Red Gum. This vegetation is proposed to be retained and incorporated into the creek corridor reserve system.
- One area of Manna Gum dominated vegetation, comprised of 9 small trees and Wallaby-grass.

Note that patch native vegetation also occurs on Ormond Street roadside reserve.

4.2.2 Scattered Tree native vegetation

Under the Regulations, any scattered native canopy trees that are proposed to be removed are subject to protection/and or recruitment offsets, depending upon the characteristics of the site.

Within the VVP bioregion, EVC 55 and ECV 68 have *Eucalyptus* spp as 'canopy trees'.

For practicality, standard extent amounts has been developed for scattered trees, based tree size and the habitat hectare assessment method.

A total of 1 scattered tree was recorded for the study area.

Table 3 gives the following data for the recorded trees, tree number, species name, diameter at beast height and Tree Protection Zone. Figure 4 shows the location of the scattered trees.

Table 3 Scattered trees recorded for the study area

Tree #	Botanical Name	DBH (cm)	TPZ (m)
1	Eucalyptus camaldulensis	42	5

Tree protection zones are calculated in accordance with Australian Standard AS4970-2009 *Protection of trees on development sites.* Refer to Appendix 3.

4.2.3 Implications

The results show that the current native vegetation condition is confined to one scattered tree and two patches of native vegetation. Of that vegetation one scattered tree and one patch of vegetation is proposed to be removed. The larger patch of native vegetation, the Bruces Creek riparian corridor is proposed to be retained.

The total extent of native vegetation proposed to be removed is 0.092 ha (one patch and one small scattered tree).

An application to remove one scattered tree and one patch of native vegetation is proposed. The remaining areas of native vegetation on private land are intended to be retained and given appropriate protection measures. An application to remove this one scattered tree and one patch of native vegetation would be classified a intermediate risk-based application.

Should a permit to remove this native vegetation be granted the vegetation offset requirements would be to generate:

- 0.068 general biodiversity equivalence units
- to be achieved within the Corangamite CMA area
- with a minimum strategic biodiversity score of 0.464.

Refer to Appendix 2 for the Native vegetation removal report.

Refer to Figure 4 for the location of native vegetation. Refer to Figure 5 for the location of native vegetation proposed to be removed. Refer to Plates 1-7 for photographs of vegetation existing conditions.

Figure 4 Location of native vegetation

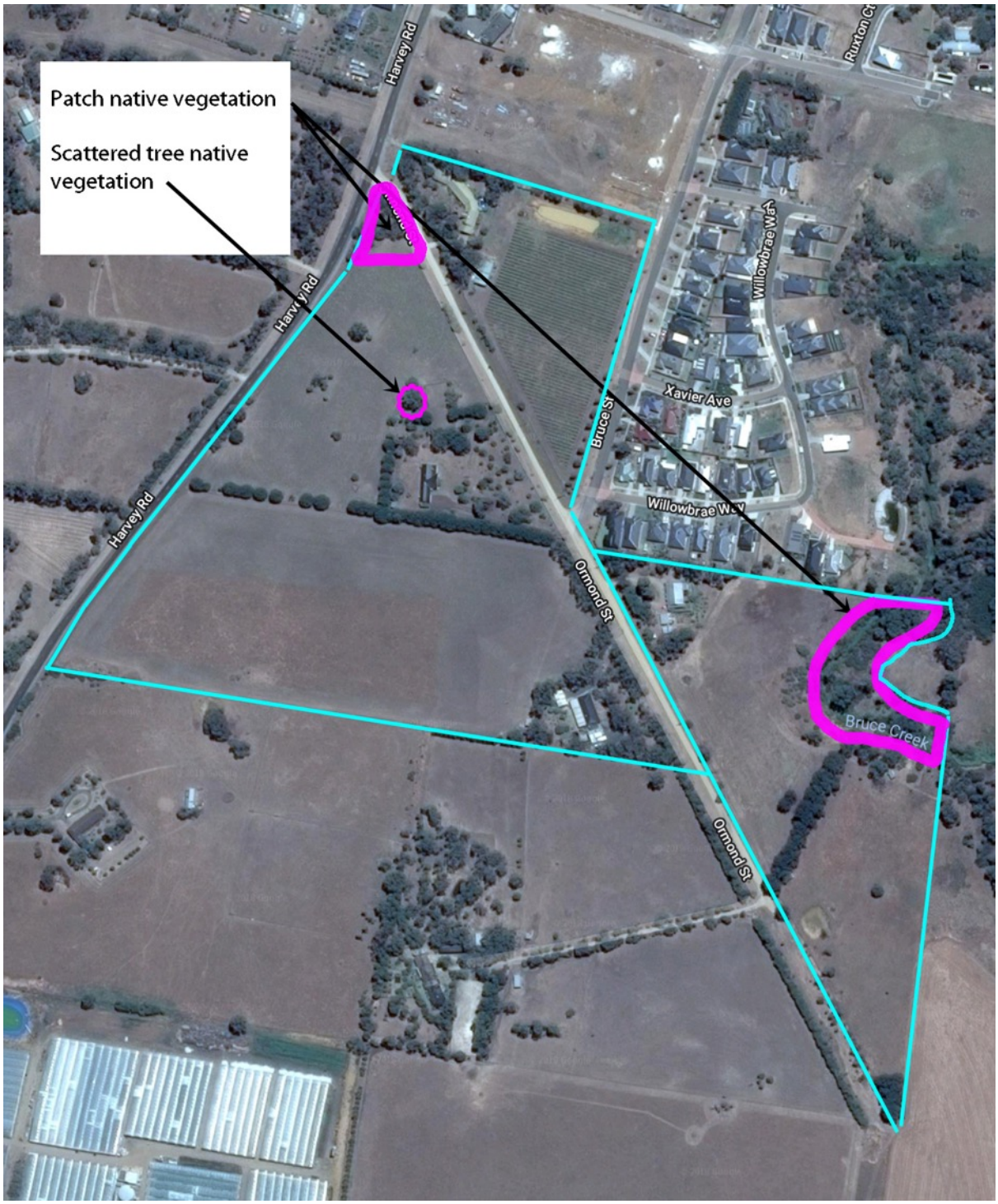


Figure 4. Location of recorded patch and scattered tree native vegetation.

Figure 5 Location of native vegetation proposed to be removed

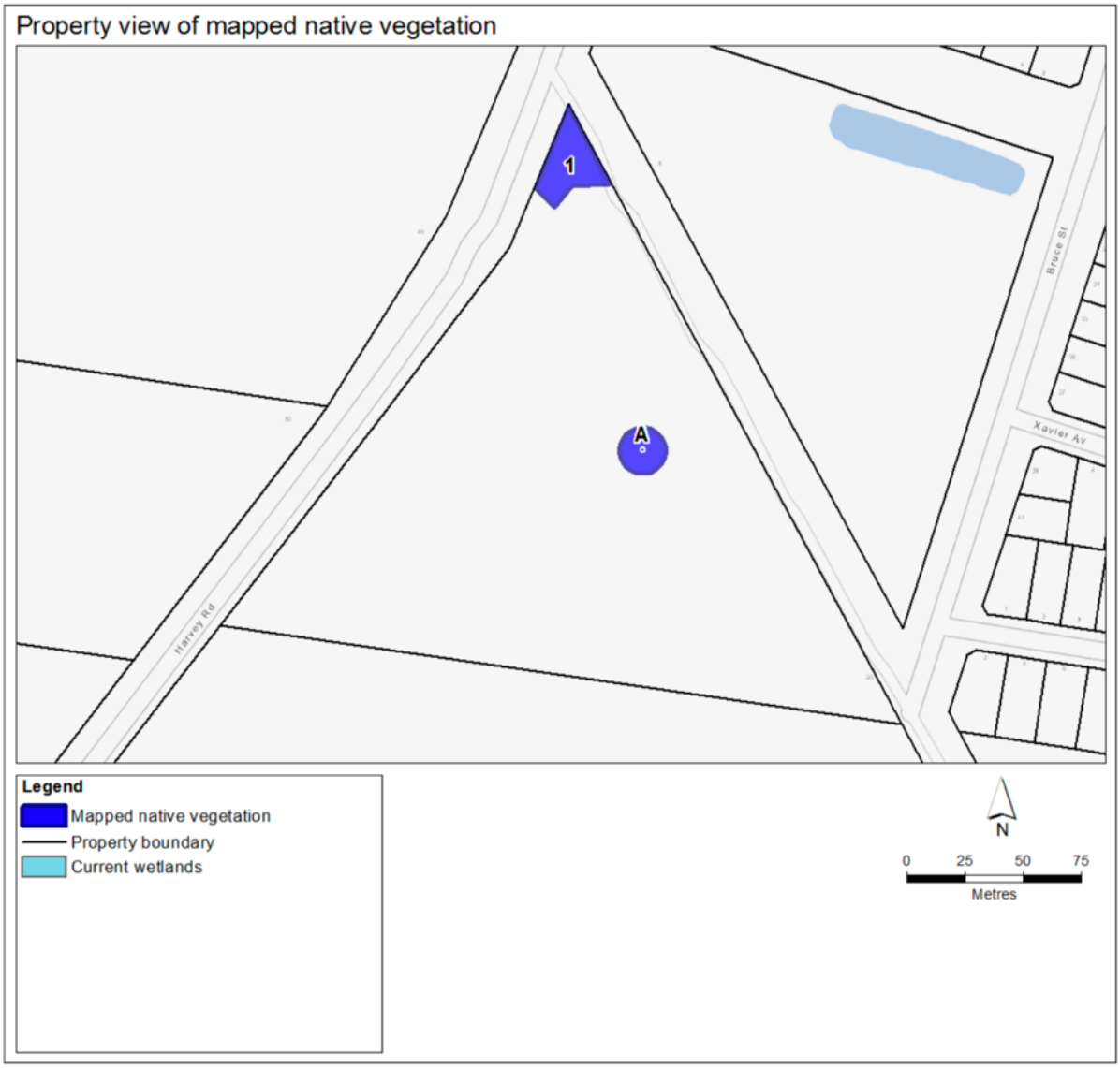


Figure 5. Location of the patch and scattered tree native vegetation proposed to be removed.

5 CONCLUSIONS

Description

The privately owned land of approximately 19 ha of land at Bruce Street, Harvey Road and Ormond Road Bannockburn, that is the subject of this report, is proposed to be rezoned for residential sub-division. It is anticipated that the majority of the site will be impacted upon.

Results

The majority of the site carries exotic vegetation.

Small areas of native vegetation were recorded. The native vegetation is assessed as follows:

- Partially intact riparian patch vegetation, dominated by River Red Gum located along Bruces Creek corridor, proposed to be retained.
- One scattered River Red Gum tree, proposed to be removed.
- One patch dominated by Manna Gum, proposed to be removed.

A total of 12 indigenous locally significant vascular plant species was recorded from the study area.

The current study records native vegetation that accords with EVC 55 Plains Grassy Woodland and EVC 68 Creekline Grassy Woodland. EVC 55 Plains Grassy Woodland and EVC 68 Creekline Grassy Woodland are both listed as 'Endangered' in the Victorian Volcanic Plain bioregion.

Faunal habitat values are of local significance.

Due to the relatively small and degraded nature of the native vegetation of the study area there are not likely to be any implications for the Grassy Eucalypt Woodland of the Victorian Volcanic Plain community for the current proposal under the EPBC Act.

If, under Clause 52.17, a permit was sought to remove the single scattered tree and patch native vegetation as described, the application would be assessed as a intermediate assessment pathway application.

Should a permit to remove a single dead scattered tree be granted the vegetation offset requirements would be to generate 0.068 general biodiversity equivalence units, to be achieved within the Corangamite CMA area, with a minimum strategic biodiversity score of 0.464.

Limitations

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

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 at national to local scales are presented below for botanical 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.

Appendix 2 Native Vegetation Removal Report

Native vegetation removal report

A report to support an application to remove, destroy or lop native vegetation in the **Intermediate** Assessment Pathway using the modelled condition score

This report provides information to support an application to remove native vegetation in accordance with the *Guidelines for the removal, destruction or lopping of native vegetation*. The report is not an assessment by DELWP or local council of the proposed native vegetation removal. Biodiversity information and offset requirements have been calculated using modelled condition scores contained in the *Native vegetation condition map*.

Date and time: **17 July 2018 14:21 PM**

Lat./Long.: -38.0545190178997,144.1579249582

Address: 20 ORMOND STREET BANNOCKBURN 3331

Native vegetation report ID: 324-20180717-016

Assessment pathway

The assessment pathway and reason for the assessment pathway

Assessment pathway	**Intermediate Assessment Pathway**
Extent of past plus proposed native vegetation removal	0.092 hectares
No. large trees	0 large tree(s)
Location category	Location 2 The native vegetation is in an area mapped as an Endangered Ecological Vegetation Class. Removal of less than 0.5 hectares of native vegetation will not have a significant impact on any habitat for a rare or threatened species.

Offset requirement

The offset requirement that will apply if the native vegetation is approved to be removed

Offset type	General offset
Offset amount	0.068 general habitat units
Offset attributes	
Vicinity	Corangamite Catchment Management Authority (CMA) or Golden Plains Shire Council
Minimum strategic biodiversity value score	0.464
Large trees	0 large tree(s)

Native vegetation removal report – report ID 324-20180717-016

Native vegetation removal report

Biodiversity information about the native vegetation

Description of any past native vegetation removal

Any native vegetation that was approved to be removed, or was removed without the required approvals, on the same property or on contiguous land in the same ownership, in the five year period before the application to remove native vegetation is lodged is detailed below.

Permit/PIN number	Extent of native vegetation (hectares)
None entered	0 hectares

Description of the native vegetation proposed to be removed

Extent of all mapped native vegetation	0.092 hectares
Condition score of all mapped native vegetation	0.623
Strategic biodiversity value score of all mapped native vegetation	0.580
Extent of patches native vegetation	0.061 hectares
1	0.061 hectares
Extent of scattered trees	0.031 hectares
No. large trees within patches	0 large tree(s)
No. large scattered trees	0 large tree(s)
No. small scattered trees	1 small tree(s)

Additional information about trees to be removed, shown in Figure 1

Tree ID	Tree circumference (cm)	Benchmark circumference (cm)	Scattered / Patch	Tree size
A	140	251	Scattered	Small

Native vegetation removal report – report ID 324-20180717-016

Other information

Applications to remove, destroy or lop native vegetation must include all the below information. If an appropriate response has not been provided the application is not complete.

Photographs of the native vegetation to be removed

Recent, dated photographs of the native vegetation to be removed must be provided with the application. All photographs must be clear, show whether the vegetation is a patch of native vegetation or scattered trees, and identify any large trees. If the area of native vegetation to be removed is large, provide photos that are indicative of the native vegetation.

Ensure photographs are attached to the application. If appropriate photographs have not been provided the application is not complete.

Topographical and land information

Description of the topographic and land information relating to the native vegetation to be removed, including any ridges, crests and hilltops, wetlands and waterways, slopes of more than 20 percent, drainage lines, low lying areas, saline discharge areas, and areas of existing erosion, as appropriate. This may be represented in a map or plan. **This is an application requirement and your application will be incomplete without it.**

Study area includes relatively flat land and one drainage line, Bruces Creek.

Avoid and minimise statement

This statement describes what has been done to avoid the removal of, and minimise impacts on the biodiversity and other values of native vegetation. **This is an application requirement and your application will be incomplete without it.**

The majority of native vegetation, is to be retained, some removal may be required , subject to permit conditions.

Defendable space statement

Where the removal of native vegetation is to create defendable space, a written statement explaining why the removal of native vegetation is necessary. This statement must have regard to other available bushfire risk mitigation measures. This statement is not required if your application also includes an application under the Bushfire Management Overlay.

Not applicable.

Offset statement

An offset statement that demonstrates that an offset is available and describes how the required offset will be secured. **This is an application requirement and your application will be incomplete without it.**

Offset to be secured by appropriate 3rd party purchase, there is reasonable assurance that offsets will be available.

Next steps

Applications to remove, destroy or lop native vegetation must address all the application requirements specified in *Guidelines for the removal, destruction or lopping of native vegetation.*If you wish to remove the mapped native vegetation you are required to apply for a permit from your local council. This *Native vegetation removal report*must be submitted with your application and meets most of the application requirements. The following needs to be added as applicable.

Property Vegetation Plan

Landowners can manage native vegetation on their property in the longer term by developing a Property Vegetation Plan (PVP) and entering in to an agreement with DELWP.

If an approved PVP applies to the land, ensure the PVP is attached to the application.

Applications under Clause 52.16

An application to remove, destroy or lop native vegetation is under Clause 52.16 if a Native Vegetation Precinct Plan (NVPP) applies to the land, and the proposed native vegetation removal is not in accordance with the relevant NVPP. If this is the case, a statement that explains how the proposal responds to the NVPP considerations must be provided.

If the application is under Clause 52.16, ensure a statement that explains how the proposal responds to the NVPP considerations is attached to the application.

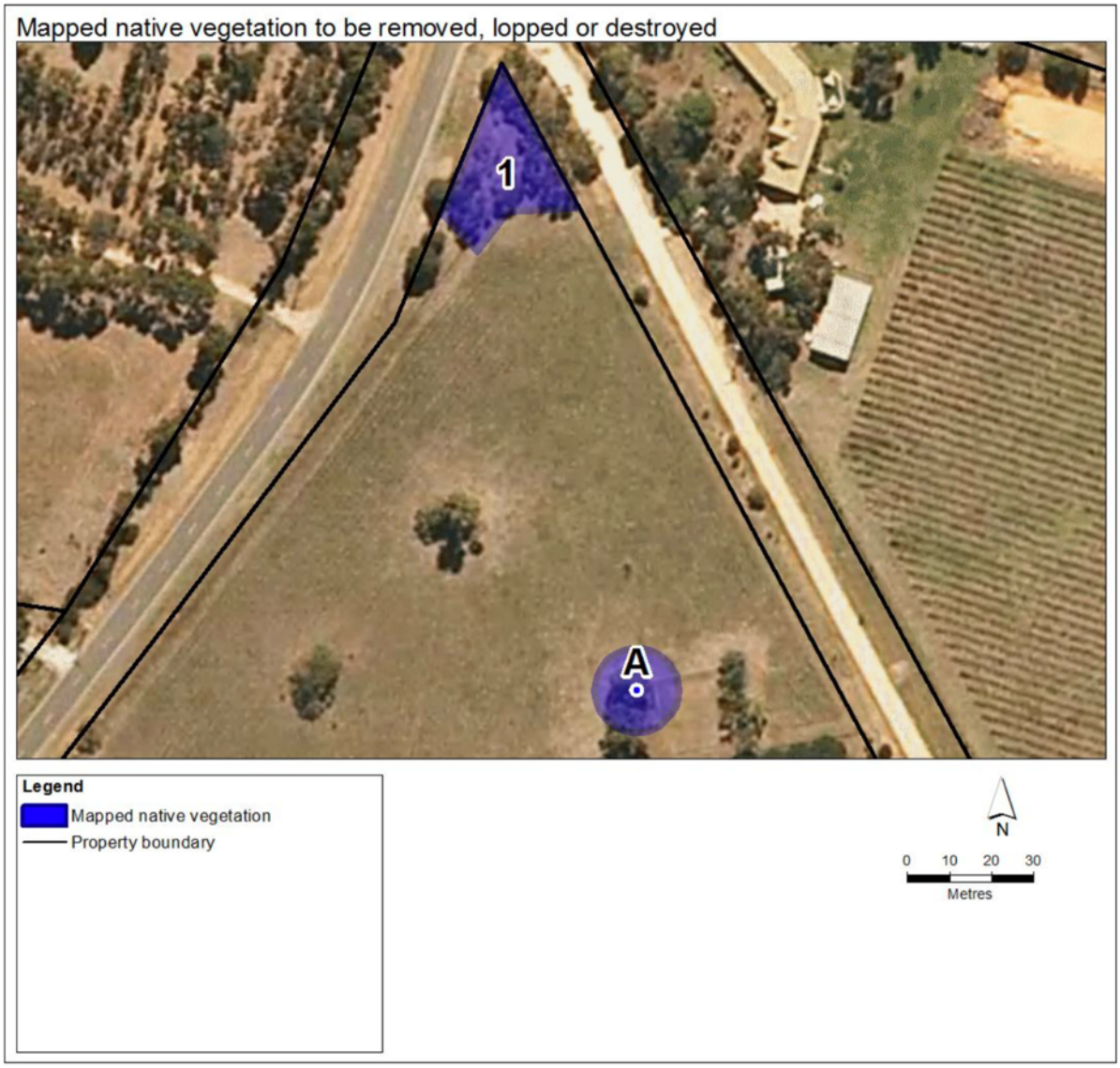
Authorised by the Victorian Government, 8 Nicholson Street, East Melbourne.

For more information contact the DELWP Customer Service Centre 136 186

www.delwp.vic.gov.au

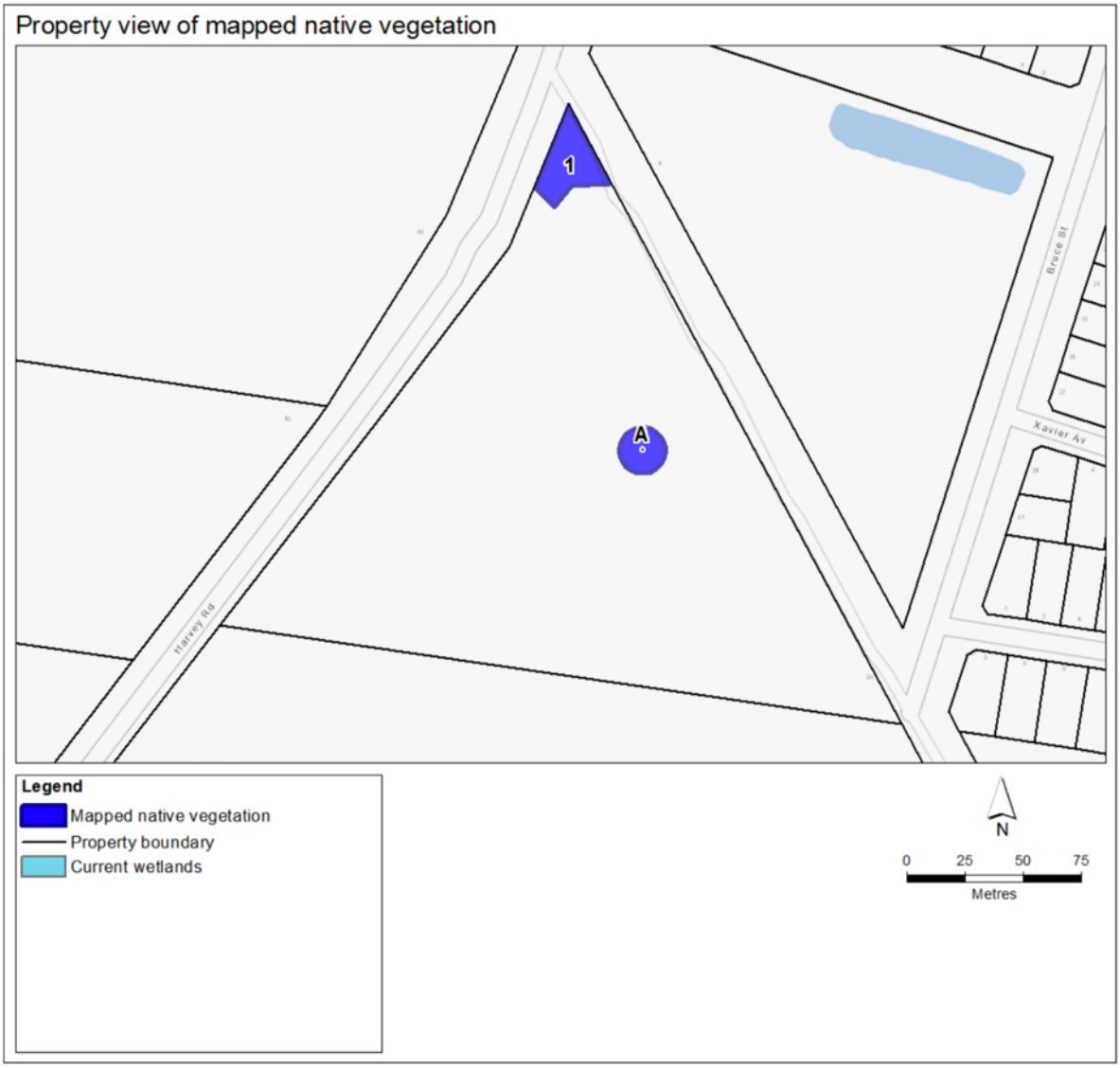
Native vegetation removal report

Figure 1 – Map of native vegetation to be removed, destroyed or lopped



Native vegetation removal report – report ID 324-20180717-016

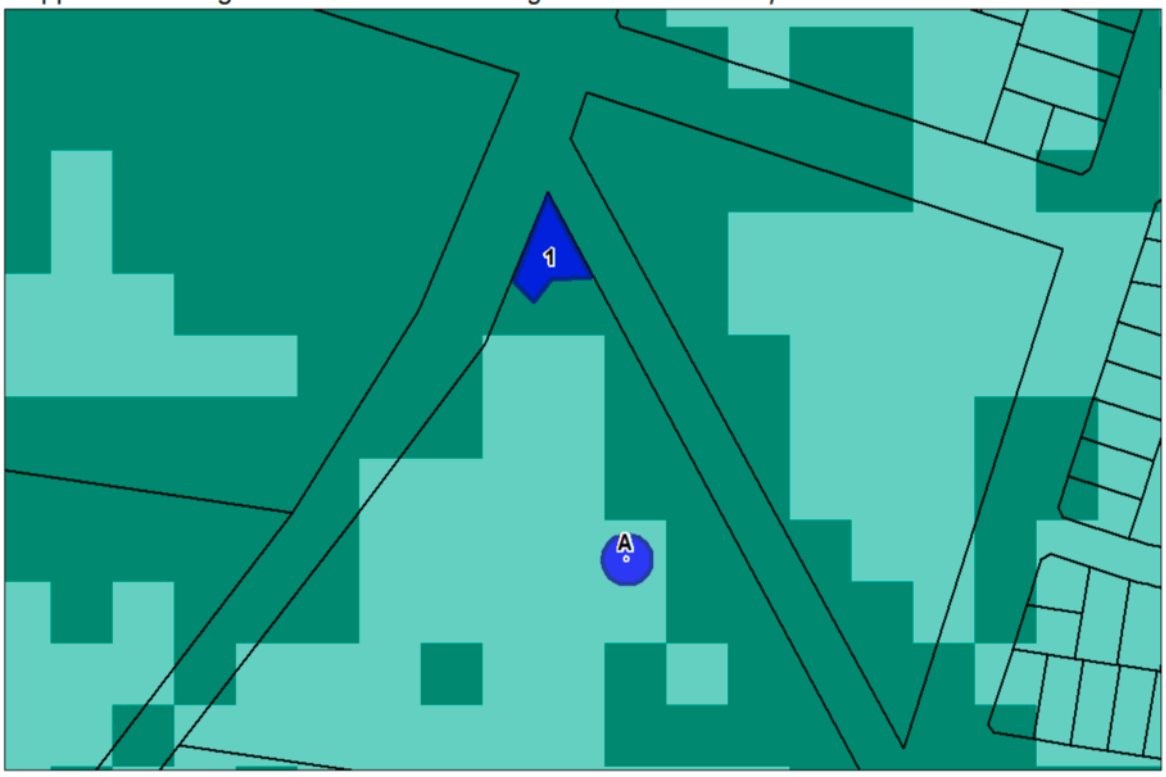
Figure 2 – Map of property in context



Native vegetation removal report – report ID 324-20180717-016

Figure 3 – Biodiversity information maps

Mapped native vegetation and the *Native vegetation location map*

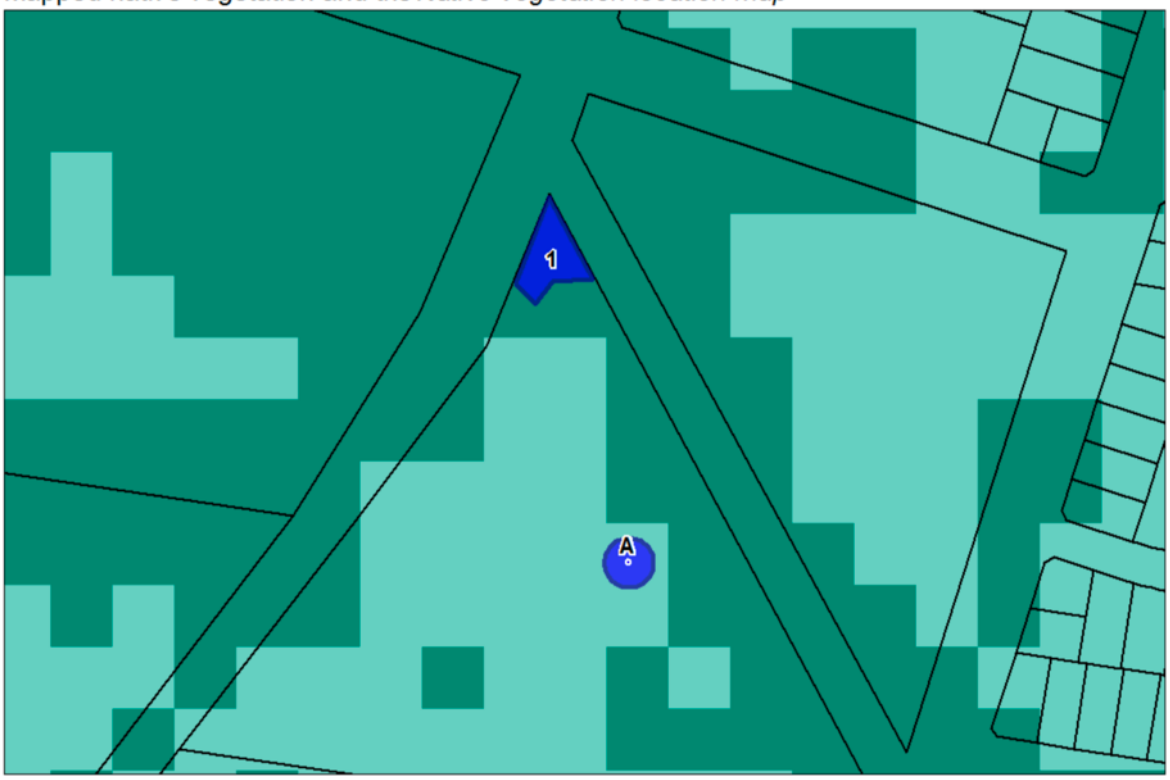


Native vegetation removal report – report ID 324-20180717-016

Native vegetation removal report

Figure 3 – Biodiversity information maps

Mapped native vegetation and the *Native vegetation location map*



Legend

Mapped native vegetation

Property boundary

Native vegetation location category

Location 3

Location 2

Location 1

N

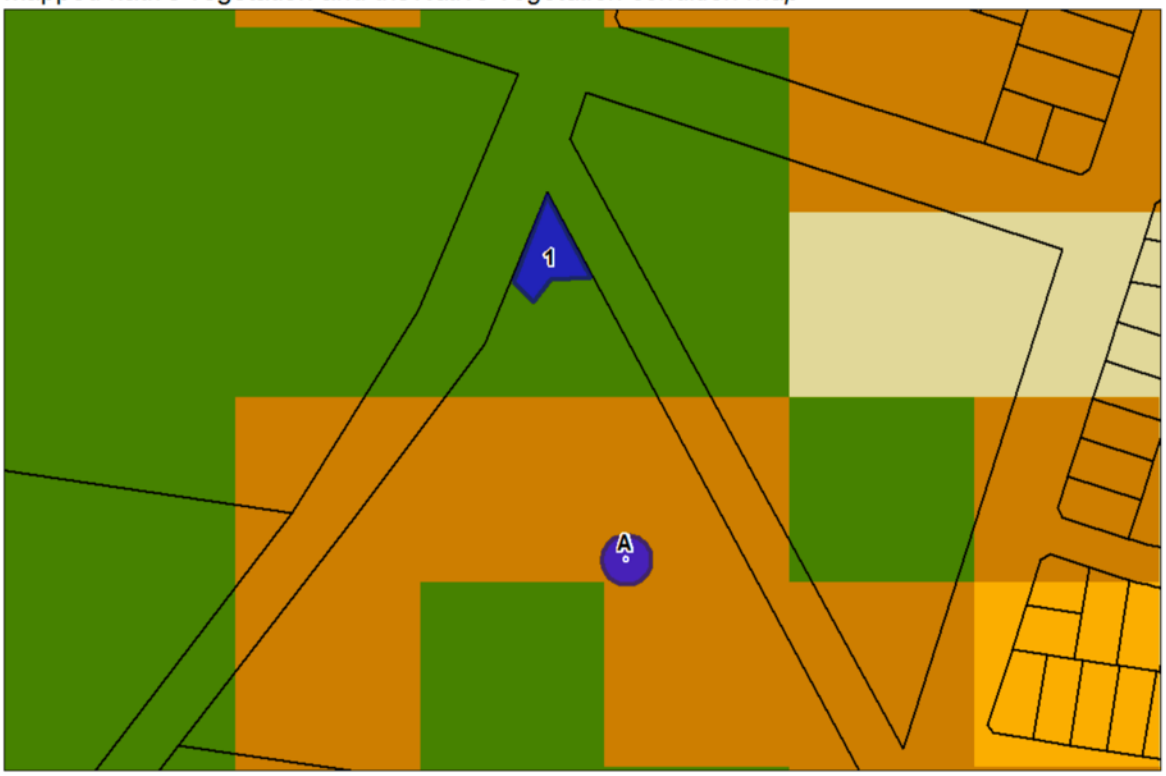
0 25 50 75

Metres

Native vegetation removal report – report ID 324-20180717-016

Native vegetation removal report

Mapped native vegetation and the *Native vegetation condition map*



Legend

Mapped native vegetation

Property boundary

Native vegetation condition*

0.81 - 1.00

0.61 - 0.80

0.41 - 0.60

0.21 - 0.40

0.00 - 0.20

* These classes are for display purposes only

N

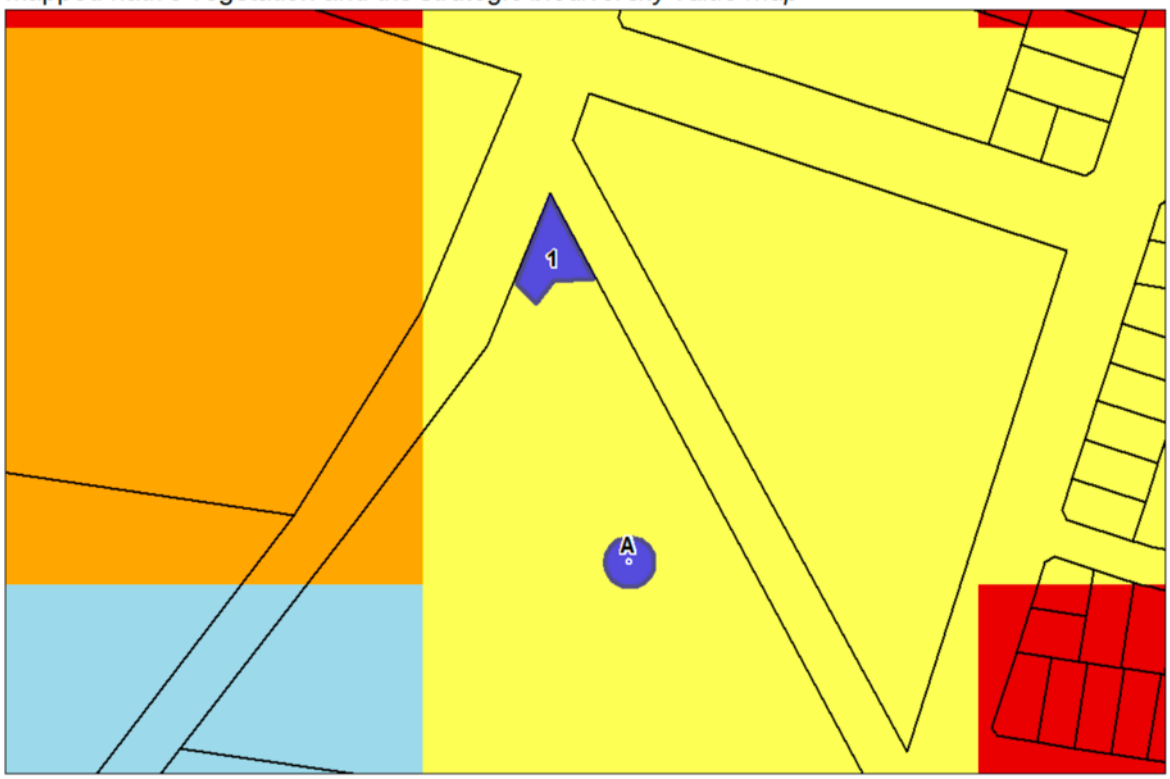
0 25 50 75

Metres

Native vegetation removal report – report ID 324-20180717-016

Native vegetation removal report

Mapped native vegetation and the *Strategic biodiversity value map*



Native vegetation removal report – report ID 324-20180717-016

Appendix 1 - Details of offset requirements

Native vegetation to be removed

Extent of all mapped native vegetation (for calculating habitat hectares)	0.092	The area of land covered by a patch of native vegetation and/or a scattered tree, measured in hectares. Where the mapped native vegetation includes scattered trees, each tree is assigned a standard extent and converted to hectares. A small scattered tree is assigned a standard extent defined by a circle with a 10 metre radius and a large scattered tree a circle with a 15 metre radius. The extent of all mapped native vegetation is an input to calculating the habitat hectares.
Condition score*	0.623	The condition score of native vegetation is a site-based measure that describes how close native vegetation is to its mature natural state. The condition score is the weighted average condition score of the mapped native vegetation calculated using the *Native vegetation condition map*.
Habitat hectares	0.057	Habitat hectares is a site-based measure that combines extent and condition of native vegetation. It is calculated by multiplying the extent of native vegetation by the condition score: ***Habitat hectares = extent x condition score***
Strategic biodiversity value score	0.580	The strategic biodiversity value score represents the complementary contribution to Victoria's biodiversity of a location, relative to other locations across the state. This score is the weighted average strategic biodiversity value score of the mapped native vegetation calculated using the *Strategic biodiversity value map*.
General landscape factor	0.790	The general landscape factor is an adjusted strategic biodiversity value score. It has been adjusted to reduce the influence of landscape scale information on the general habitat score.
General habitat score	0.045	The general habitat score combines site-based and landscape scale information to obtain an overall measure of the biodiversity value of the native vegetation. The general habitat score is calculated as follows: ***General habitat score = habitat hectares x general landscape factor***

* **Offset requirements for partial removal:** If your proposal is to remove parts of the native vegetation in a patch (for example only understorey plants) the condition score must be adjusted. This will require manual editing of the condition score and an update to the calculations that the native vegetation removal tool has provided: habitat hectares, general habitat score and offset amount.

Offset requirements

Offset type	General offset	A general offset is required when the removal of native vegetation does not have a significant impact on any habitat for rare or threatened species. All proposals in the Basic and Intermediate assessment pathways will only require a general offset.
Offset multiplier	1.5	This multiplier is used to address the risk that the predicted outcomes for gain will not be achieved, and therefore will not adequately compensate the biodiversity loss from the removal of native vegetation.
Offset amount (general habitat units)	0.068	The general habitat units are the amount of offset that must be secured if the application is approved. This offset requirement will be a condition to any permit or approval for the removal of native vegetation. ***General habitat units required = general habitat score x 1.5***
Minimum strategic biodiversity value score	0.464	The offset site must have a strategic biodiversity value score of at least 80 per cent of the strategic biodiversity value score of the native vegetation to be removed. This is to ensure offsets are located in areas with a strategic biodiversity value that is comparable to the native vegetation to be removed.
Vicinity	Corangamite CMA or Golden Plains Shire Council	The offset site must be located within the same Catchment Management Authority boundary or municipal district as the native vegetation to be removed.
Large trees	0 large tree (s)	The offset site must protect at least one large tree for every large tree removed. A large tree is a native canopy tree with a Diameter at Breast Height greater than or equal to the large tree benchmark for the local Ecological Vegetation Class. A large tree can be either a large scattered tree or a large patch tree.

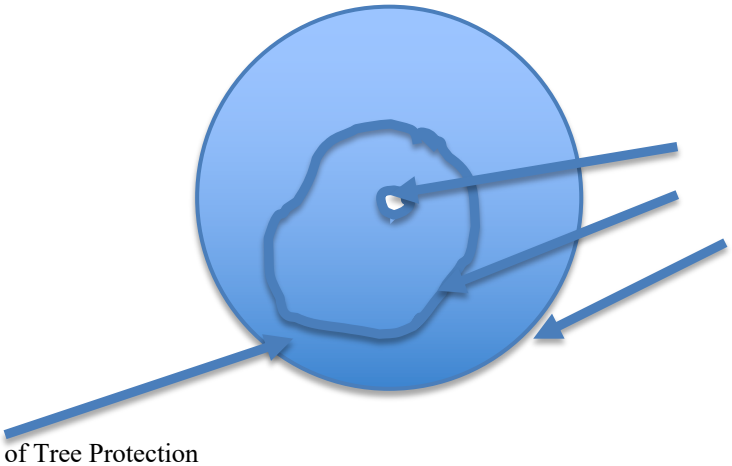
Appendix 3 Determining the Tree Protection Zone

Determining the Tree Protection Zone (TPZ)
The radium of the TPZ is calculated for each tree by multiplying its DBH x 12. TPZ = DBH x 12 (Australian Standard AS4970-2009 *Protection of trees on development sites)*
Where
DBH = trunk diameter measured at 1.4 metres above ground Radius is measured from the centre of the stem at ground level.

A TPZ should not be less than 2 metres no greater than 15 metres (except where crown protection is required.). Some instances may require variations to the TPZ.

A tree is deemed to be impacted upon if greater than 10% of the TPZ area is to be disturbed.

Indicative Size of Tree Protection Zone



6 REFERENCES

Conn, B J (1993). Natural regions and vegetation of Victoria. Pp. 79-158 In Foreman, D B and Walsh, G (eds.) 'Flora of Victoria Volume 1: Introduction.' Inkata Press, Melbourne.

Corangamite Catchment Management Authority (2005). 'Corangamite Native Vegetation Plan' CCMA, Colac, Victoria.

DELWP website i.
https://www.environment.vic.gov.au/native-vegetation/native-vegetation

DELWP website ii..
http://maps.biodiversity.vic.gov.au/viewer/?viewer=NatureKit

DELWP website iii. EVC Benchmarks.
http://www.depi.vic.gov.au/environment-and-wildlife/biodiversity/evc-benchmarks

DELWP website iv. Native Vegetation Information Management tool.
https://nvim.delwp.vic.gov.au/.

DPCD website i. Planning Maps Online.
http://planningschemes.dpcd.vic.gov.au/schemes/goldenplains

Flora of Victoria Royal Botanic Gardens Melbourne
https://vicflora.rbg.vic.gov.au

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.

Standards Australia (2009). *Protection of trees on development sites.* AS4970-2009. Standards Australia Ltd Sydney.

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

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/cgi-bin/sprat/public/publicspecies.pl?taxon_id=744

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

Plates 1-7 Vegetation existing conditions

Plate 1. Degraded Farmed land, Ormond Street, typical conditions.

Plate 2. Degraded Farmed land, Harveys Road, typical conditions.

Plate 3. Ormond Street roadside reserve, patch native vegetation.

Plate 4. Riparian patch native vegetation dominated by River Red Gum, Bruces Creek.

Plate 5. Scattered tree native vegetation, River Red Gum.

Plate 6. Patch native vegetation dominated by Manna Gum.

Plate 7. Non-indigenous native planted native trees (non-native vegetation per Clause 52.17).