10 ST VINCENTS ROAD JUNORTOUN 3551

Lot 1 PS803219

(**Council):** Greater Bendigo

Council Property Number: 215733

Directory Reference: VicRoads 608 J8

CUMBRE

ECOLOGICAL ASSESSMENT

13 April 2021

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CONTENTS

Table of Contents

1 INTRODUCTION

1.1 Project Background

Cumbre Consulting was commissioned by Catherine McAuley College to assess the environmental value of vegetation at 10 St Vincents Road Junortoun 3551, Lot 1 PS803219, Greater Bendigo in relation to the proposed sports infrastructure development. See Figures 1 Location of Study Area and Figure 2 Overall Development Design and Figure 3 Arborist impact capture.

The full detailed plans for Stage 1 & 2 can be found at this link

https://www.dropbox.com/sh/rdbiptqi9atxsyz/AAAJ5_Ss8BBg9Qaka6w_Hn3Ra?dl=0

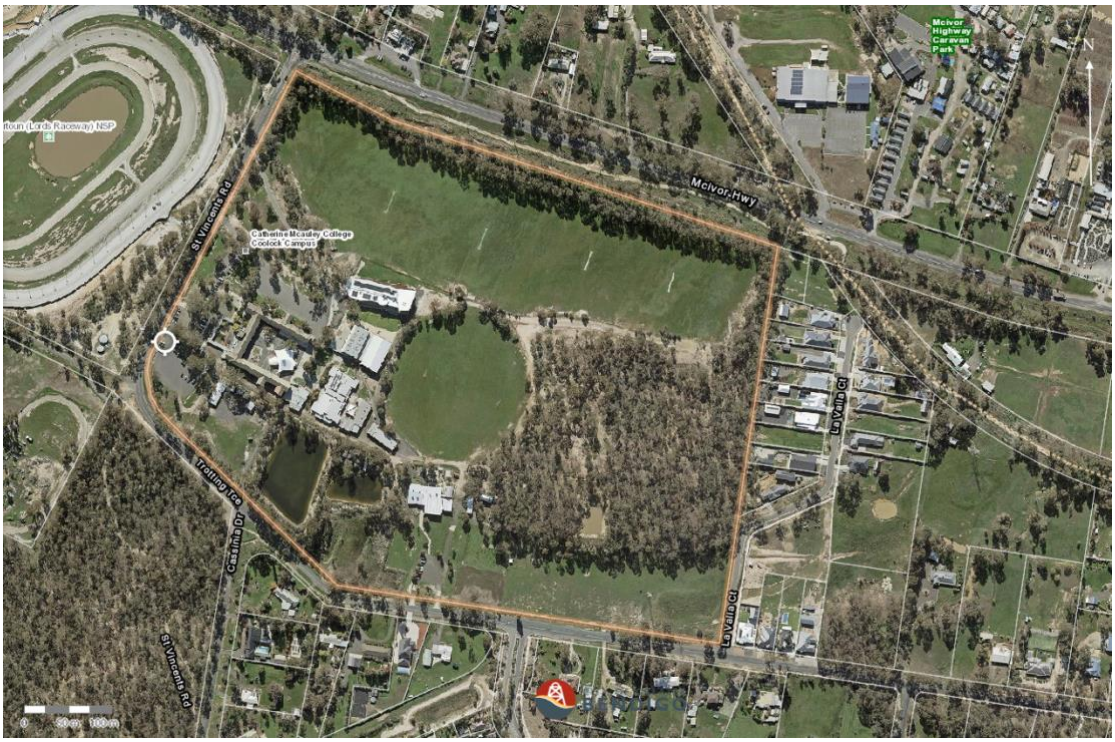

Figure 1: Location of Study Area

Figure 2: Overall Development Design.

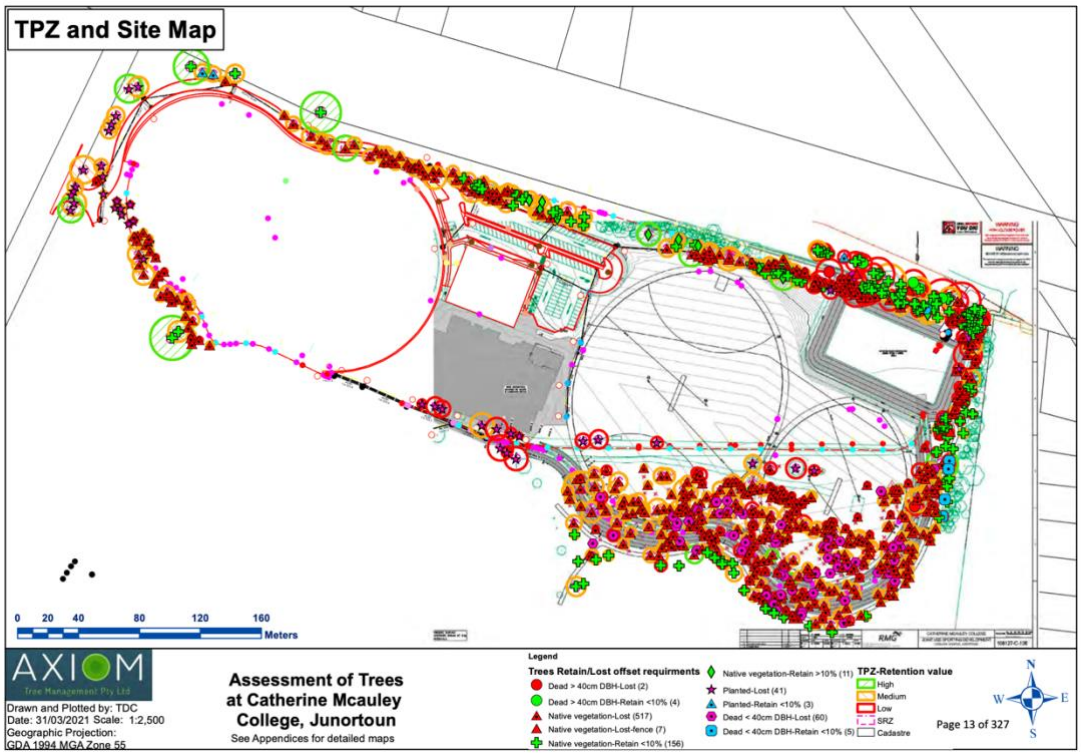

Figure 3: Arborist assessment – Impact capture[1]

[1] Axiom Tree Management P/L 31/3/2021. Development Impact Report, Assessment of Trees at Catherine McAuley College Joint Use Sports Development Stage 1 & 2.

1.2 Objectives

The objectives of this assessment are:

- Assess the conservation significance of the habitat
- Map the extent, type and condition of the native vegetation
- Assess potential impacts of the proposed development on ecological values
- Consider measures that could avoid or reduce any impacts
- Assess and quantify measures to offset impacts and achieve a Net Gain

1.3 Study Area

The property is located at 10 St Vincents Road Junortoun 3551 within the municipality of the Greater Bendigo Council, and is zoned Special Use Zone (SUZ).The following Planning Scheme Overlays pertain to this project:

Table 1 Planning Scheme Overlays

Clause Number	Name	Associated Schedules
35.07T	Special Use Zone (SUZ)	Schedule 1 (SUZ1)
44.06	Bushfire Management (BMO)	Schedule
42.01	Environmental Significance Overlay (ESO)	Schedule 1 (ESO1)
44.04	Land Subject to Inundation Overlay (LSIO)	Schedule 1 (LSIO1) Schedule 2 (LSIO2)
42.02	Vegetation Protection Overlay (VPO)	Schedule 2 (VPO2)

Other overlays in the vicinity not directly affecting this land include; Airport Environs Overlay (AEO), Design and Development Overlay (DDO) and the Development Plan Overlay (DPO).

The property falls into the Goldfields (Gold) Bioregion and Greater Bendigo City Council Catchment Management Authority. The Department of Environment, Land, Water and Planning (DELWP) Native Vegetation Information 175 Grassy Woodland, See EVC Figure 4.

2 DESCRIPTION OF METHODS

2.1 Field Survey

The EVC was identified using state-wide EVC mapping and then ground truthed originally on 22 July 2019, 26 August 2019 and 11 of October 2019, and again on 18 October 2020. The areas proposed for developments were traversed by foot. Records were taken of all indigenous vascular plant species. Native vegetation areas were recorded and mapped.

2.2 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 dripline of at least one other tree, forming a continuous canopy, or
- any mapped wetland included in the Current wetlands map, available in DELWP systems and tools.

SCATTERED TREE

A scattered tree is:

- a native canopy tree that does not form part of a remnant patch. [2]

HABITAT HECTARE

Habitat hectare (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 hectare assessment takes the following features into account: large trees; tree canopy cover; under-storey; cover of weeds; regeneration; organic litter; logs (condition score); patch size; neighbourhood; distance to core area (viability score)

The habitat hectares of native vegetation are calculated by multiplying the current condition of the vegetation (condition score) by the extent of native vegetation.

2.3 Special Considerations

The surveys were done in late winter and spring, with 4 site visits over a 15-month period. Small & medium herbs were identifiable and recorded in this assessment, however the ground is very modified due to school play areas with lots of human traffic. There is not considered to be any significant limitations to this study.

This assessment has been updated to align with the Axiom Tree Management P/L impact assessment of 31/3/2021. Please note that Arborists determine Diameter a Breast Height (DBH) for Tree protection Zone (TPZ) impact calculation differently to the Vegetation Quality Assessment procedure which can result in the number of trees considered large not aligning between these assessments.

The arborist methodology is different. Arborists measure trees at 1.4m and includes multiple trunks in calculation of the Tree Protection Zone (TPZ) & Structural Root zone (SRZ). Where there is a fork at 1.4m Arborists choose the smallest circumference between 1.4m and the ground level. Where there are multiple trunks at 1.4m arborists use more than one trunk to calculate the DBH.

[2] DELWP 2017. Guidelines for the removal, destruction or lopping of native vegetation
https://www.environment.vic.gov.au/native-vegetation/native-vegetation

3 FLORA

The following Ecological Vegetation Classes (EVC's) from the Goldfields Bioregion were identified in this study using the DELWP Native Vegetation Information Management tool and field assessment:

3.1 Pre-European Settlement – 1750 Map of Victorian Goldfields EVCs Present in Study Area

3.1.1 Ecological Vegetation Class: Low Rises Grassy Woodlands (LRGW) 175_61

A variable open eucalypt woodland to 15 m tall over a diverse ground layer of grasses and herbs. The shrub component is usually diverse but sparse in cover. In the Goldfields bioregion, Grassy Woodland occurs on sedimentary soils on the lowest slopes at the interface between the plains and the infertile woodlands of the sedimentary hills.

Figure 4: Pre-1750 Ecological Vegetation Class(es) modelled for the study area

4 FAUNA

4.1 Species found by survey

No threatened fauna species were recorded through field work on site as part of this study.

5 RESULTS

5.1 Habitat Hectare Calculations and Quantification of Losses in Patches of Native Vegetation

Four patches of vegetation were assessed. Patch 2 had multiple zones with planted natives and exotic trees interspersed between them. . See Figures 5 for the assessed zones and results Appendix 1, Native vegetation removal (NVR) report. The following table depicts; Habitat Hectare Calculations and size in Ha for quantification of Losses of the patches assessed for development/impact. See Table 2 below.

Table 2 Habitat Hectare Calculations

Habitat Site (Patch)			1	2	2	2	2	9	10
Site & Habitat Zone			1A	2A	2B	2C	2D	9A	10A
EVC Name (initials)			GW	GW	GW	GW	GW	GW	GW
EVC Number			175	175	175	175	175	175	175
		Max Score	Score	Score	Score	Score	Score	Score	Score
Site Condition	Large Old Trees	10	0	0	0	0	0	0	2
	Tree Canopy Cover	5	5	5	5	5	5	5	5
	Lack of Weeds	25	7	9	9	9	9	9	9
	Understory	15	10	15	15	15	15	15	15
	Recruitment	10	10	10	10	10	10	6	6
	Organic Litter	5	3	3	3	3	3	3	5
	Logs	5	0	0	0	0	0	0	4
Landscape value	Patch Size	10	1	4	4	4	4	4	4
	Neighbourhood	10	1	1	1	1	1	2	3
	Distance to Core	5	3	3	3	3	3	3	2
Habitat points out of 100		100	40	50	50	50	50	50	55
Habitat Score (hab points/100)		0.##	0.40	0.5	0.5	0.5	0.5	0.47	0.55
Site size Ha			0.1068	0.0512	0.0604	0.0203	0.0316	0.4082	1.5228
Large Trees			0	0	0	0	0	0	2
Percentage of loss (%)			100	100	100	100	100	100	100

Figure 5: Assessed Vegetation: Scattered Trees and Patches (with zones)

5.2 Description of the native vegetation to be removed

The indigenous overstorey species on this site consists of Grey box *Eucalyptus microcarpa* and Yellow Gum *Eucalyptus leucoxylon*.

Patch 1A is an indigenous patch with a few planted natives in a garden bed north west of it.

Patch 2 and its zones A, B, C & D are remnant indigenous vegetation (Grey box *Eucalyptus microcarpa* and Yellow Gum *Eucalyptus leucoxylon*) interspersed with planted exotics and natives. The largest tree is a Yellow gum 60cm Diameter at Breast Height (DBH) at the eastern end of Patch 2A where the newly proposed driveway enters the proposed carpark. There are planted Ironbark's, all of the same age in a row east of 4A and within Patch 2D. Pine trees are interspersed within this patch of vegetation along the McIvor Highway.

Patch 9 is located along the north & eastern frontage of the property and is comprised of mostly remnant Grey box *Eucalyptus microcarpa,* Yellow Gum *Eucalyptus leucoxylon* and weeds along the drainage line.

In this study two trees within Patch 9A (Arborist tree 670 and 718) have Diameter at Breast Height (DBH) calculated according to the arborist methodology which is different to the Vegetation Quality Assessment (VQA) methodology used by Cumbre Consultants.

Arborists measure DBH at 1.4m height and VQA use 1.3m. Arborists calculate DBH of singular trunks but where there are multiple trunks or forks, they capture this information differently to the VQA method. For example, arborists will consider multiple trunks at 1.4m to establish DBH or when there is a fork at 1.4m the smallest circumference between 1.4m and the ground level is used. The VQA method does not use multiple trunks at 1.3m to establish DBH and if a fork occurs or multiple branches diverge at 1.3m the next largest branch/trunk above the divergence is used.

Arborist tree 670 is measured at 75cm DBH & Arborist tree 788 is measured at 70cm DBH. These trees are made up of two branch measurements at 1.4m. Tree 670 has one branch 44cm and one 61cm. Tree 788 has one branch at 49cm and one at 50cm.

Patch 10 is the larger patch with two large trees. One large tree is located at the western end of the patch 10A, (Axiom tree 190) a large Grey box 91cm DBH in poor health, the other large tree is a Yellow gum 73cm DBH (Axiom tree 572 86cm DBH) located on the north east tip.

See Photos 1 – 21 for more details on the vegetation assessed in regard to the proposed sports ground/facilities expansion.

5.3 Quantification of Losses for Scattered Trees

Six scattered trees were part of this assessment:

- ST 3A is a Yellow gum *Eucalyptus leucoxylon* 8m DBH.
- ST 4A is a Grey box *Eucalyptus microcarpa* 37cm DBH.
- ST 6A is a Grey box *Eucalyptus microcarpa* 25cm DBH.
- ST 7A is a Grey box *Eucalyptus microcarpa* 17cm DBH.
- ST 8A is a Grey box *Eucalyptus microcarpa* 19cm DBH.
- ST 11A is A Yellow gum Eucalyptus leucoxylon 32cm DBH.

See Photos 10, 11, 12 & 21.

5.4 Vegetation not included in the assessment

- *Planted natives and exotic trees were not included in this assessment*. This campus has many trees in this category. The trees along St Vincent's Road boundary inside the property where the new road is proposed is planted natives. Also, a row along the southern aspect of the newly proposed building (Figure 2) and south of the existing sports grounds are planted natives. A garden bed between Patch 1A and ST 7A also consists of planted natives. See Axiom Arborist report for more details.
- *Indigenous vegetation with TPZ ≤ 10% were not included in this assessment* . See Arborist report with calculations of TPZ.
- *Regrowth: Native vegetation that is to be removed, destroyed or lopped that has naturally established or regenerated on land lawfully cleared of native vegetation and is less than 10 years old*. There was little vegetation in this category associated with this development and regrowth was considered in patch score habitat hectare calculations.

6 IMPLICATION FOR DEVELOPMENT

6.1 Avoiding Impacts on Native Vegetation and Defendable Space

The majority of the proposed new sports developments have been placed on the already cleared currently existing sports ground. The driveway access to this new sports development has been positioned to avoid indigenous native vegetation whilst maintaining appropriate setback from the top-of-bank of the adjacent water channel. The driveway access along the first section avoids any impact to indigenous vegetation, the second section along McIvor road/north boundary has been re positioned to avoid impact to the Tree Protection Zone (TPZ) of a large tree along the boundary.

Defendable space is not a consideration

6.2 Minimising Impacts on Native Vegetation

As mentioned above the access to the newly proposed built area and the built area itself have tried to avoid loss of vegetation, particularly a large tree. The re-positioning of the access road and carpark have attempted to minimise the impact. The tree protection zones (TPZ) of trees in patch 2B & 2C are impacted by ≥10% for construction of the carpark. The arborist report further shows what can be retained and what is impacted.

No feasible opportunities exist to further avoid removal or minimise impacts without compromising the proposed development

6.3 Offset Statement

The client will purchase a third party offset from the credit register. Indications of availability of the type and amount of offset have been sought from Vegetation Link and Enviro Offset Trading. Vegetation Link have provided evidence that the offset is available, see Appendix 3.

6.4 Offsets required as per DELWP Native Vegetation Removal (NVR) report

- Offset required is 1.356 general habitat units.
- Offset vicinity is within North Central Catchment Management Authority (CMA) or Greater Bendigo City Council where the clearing takes place.
- Minimum strategic biodiversity score 0.423
- 2 Large tree(s)

See Appendix 1- DELWP Native vegetation removal report.

7 SUMMARY OF APPLICANT REQUIREMENTS/DECISION GUIDELINES

Table 3 Requirements

Number	Decision guideline to be considered	Response
1	*Information about the native vegetation to be removed, including:* • *The assessment pathway and reason for the assessment pathway^. This includes the location category of the native vegetation to be removed.* • *A description of the native vegetation to be removed.* • *Maps showing the native vegetation and property in context.*	See Section 5 This project is mapped as Location 2. The total area of removal is 2.342ha, which is a detailed pathway. See Section 5 & Appendix 2 Photos 1-21. See Figure 1 Location of Study Area, Figure 2 Development Design, Figure 3 Arborist assessment, Figure 5 Assessed zones & Appendix 1- Native vegetation removal report.

	• *The offset requirement that will apply if the native vegetation is approved to be removed^.*	See. 6.3 Offset statement and 6.4 Native vegetation removal (NVR) Report summary and Appendix 1 NVR report.
2	*Topographic and land information relating to the native vegetation to be removed, showing 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.*	The school buildings are located on the higher aspects of the property located in the western half. The land slopes gently down from the school buildings area toward the eastern boundary and south to the southern boundary. The norther third of the property is lower and slopes towards a drainage line that runs just north of the northern boundary and just south of McIvor Highway. There are some dams on site. See Contour Map in Appendix 4. There is no erosion or evidence of salinisation on site.
3	*Recent, dated photographs of the native vegetation to be removed*	See Appendix 2, Photos 1 – 21.
4	*Details of any other native vegetation approved to be removed, or that was removed without the required approvals, on the same property or on contiguous land in the same ownership as the applicant, in the five-year period before the application for a permit is lodged*	N/A
5	*An avoid and minimise statement. The statement describes any efforts to avoid the removal of and minimise the impacts on the biodiversity and other values of native vegetation, and how these efforts focussed on areas of native vegetation that have the most value.*	See 6.1 & 6.2
6	*Property Vegetation Plan applies.*	No
7	*Where the removal of native vegetation is to create defendable space, a written statement explaining why the removal of native vegetation is necessary.*	N/A.

8	*Clause 52.16 applications- Native Vegetation Precinct Plan (NVPP)*	N/A
9	*An offset statement providing evidence that an offset that meets the offset requirements for the native vegetation to be removed has been identified and can be secured.*	See Section 6.3
10	*A site assessment report of the native vegetation to be removed, completed by an accredited native vegetation assessor.*	This ecological report compiled by Heather Beever accredited native vegetation assessor.
11	*Information about impacts on rare or threatened species habitat.*	See Appendix 1 Native vegetation removal report for modelled rare & threatened species. The assessed zones are very modified utilised as play zones of a school. None identified in field assessment.

8 RECOMMENDATIONS/ CONCLUSIONS

The proposal is located in Location 2, it does not cover an endangered Ecological Vegetation Class. The proposal is for the expansion of sports ground/facility development and is a modified environment. Design has attempted to minimise impact to native vegetation on site with road placement. There are two large trees impacted by the proposed new developments in stage 2. An arborist assessment has fully considered every tree near the proposed development. Provided the offset is met and other council planning requirements are met, the proposal seems sound.

9 REFERENCES

Axiom Tree Management P/L 31/3/2021. Development Impact Report, Assessment of Trees at Catherine McAuley College Joint Use Sports Development Stage 1 & 2.

DELWP 2017. Guidelines for the removal, destruction or lopping of native vegetation https://www.environment.vic.gov.au/native-vegetation/native-vegetation

DELWP 2017. Biodiversity EVC Benchmarks Victorian Goldfields Region. Sourced at http://www.dse.vic.gov.au/__data/assets/pdf_file/0009/241947/VRiv_EVCs_combined.pdf

DELWP 2017. Native Vegetation Information Management tool. Sourced at https://nvim.delwp.vic.gov.au/Biodiversity/RiskPathway#/step-2

DELWP 2017 Planning Schemes Online. Sourced at http://planning-schemes.delwp.vic.gov.au

DELWP 2017. Applicant's guide – Applications to remove, destroy or lop native vegetation sourced 26/12/17, https://www.environment.vic.gov.au/__data/assets/pdf_file/0024/90762/Applicants-guide-applications-to-remove,-destroy-or-lop-native-vegetation.pdf

DEWLP 2017. Assessor's handbook – Applications to remove, destroy or lop native vegetation, sourced 26/12/17, https://www.environment.vic.gov.au/__data/assets/pdf_file/0022/91255/Assessors-handbook-Applications-to-remove,-lop-or-destroy-native-vegetation-V1.0.pdf

DSE 2007. EVC/Bioregional Benchmarks for Vegetation Assessment Victorian Goldfields Bioregion

DSE 2004. Native Vegetation: sustaining a living landscape. Vegetation Quality Assessment Manual-Guidelines for applying habitat hectares scoring method Version

APPENDIX 1 - DELWP Native vegetation removal (NVR) report

Native vegetation removal report

This report provides information to support an application to remove, destroy or lop native vegetation in accordance with the *Guidelines for the removal, destruction or lopping of native vegetation*. The report **is not an assessment by DELWP** of the proposed native vegetation removal. Native vegetation information and offset requirements have been determined using spatial data provided by the applicant or their consultant.

Date of issue: **07/04/2021**
Time of issue: **5:59 pm**

Report ID: CUM_2021_019

Project ID	Job12_CMC_VG94_v3

Assessment pathway

Assessment pathway	**Detailed Assessment Pathway**
Extent including past and proposed	2.342 ha
Extent of past removal	0.000 ha
Extent of proposed removal	2.342 ha
No. Large trees proposed to be removed	2
Location category of proposed removal	Location 2 The native vegetation is in an area mapped as an endangered Ecological Vegetation Class (as per the statewide EVC map). Removal of less than 0.5 hectares of native vegetation in this location will not have a significant impact on any habitat for a rare or threatened species.

1. Location map

VICTORIA State Government | Environment, Land, Water and Planning

Page 1

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Offset requirements if a permit is granted

Any approval granted will include a condition to obtain an offset that meets the following requirements:

General offset amount[1]	1.356 general habitat units
Vicinity	North Central Catchment Management Authority (CMA) or Greater Bendigo City Council
Minimum strategic biodiversity value score[2]	0.423
Large trees	2 large trees

NB: values within tables in this document may not add to the totals shown above due to rounding

Appendix 1 includes information about the native vegetation to be removed

Appendix 2 includes information about the rare or threatened species mapped at the site.

Appendix 3 includes maps showing native vegetation to be removed and extracts of relevant species habitat importance maps

1 The general offset amount required is the sum of all general habitat units in Appendix 1.

2 Minimum strategic biodiversity score is 80 per cent of the weighted average score across habitat zones where a general offset is required

Next steps

Any proposal to remove native vegetation must meet the application requirements of the Detailed Assessment Pathway and it will be assessed under the Detailed Assessment Pathway.

If you wish to remove the mapped native vegetation you are required to apply for a permit from your local council. Council will refer your application to DELWP for assessment, as required. **This report is not a referral assessment by DELWP.**

This *Native vegetation removal report* must be submitted with your application for a permit to remove, destroy or lop native vegetation.

Refer to the *Guidelines for the removal, destruction or lopping of native* vegetation (the Guidelines) for a full list of application requirements This report provides information that meets the following application requirements:

- The assessment pathway and reason for the assessment pathway
- A description of the native vegetation to be removed (partly met)
- Maps showing the native vegetation and property (partly met)
- Information about the impacts on rare or threatened species.
- The offset requirements determined in accordance with section 5 of the Guidelines that apply if approval is granted to remove native vegetation.

Additional application requirements must be met including:

- Topographical and land information
- Recent dated photographs
- Details of past native vegetation removal
- An avoid and minimise statement
- A copy of any Property Vegetation Plan that applies
- A defendable space statement as applicable
- A statement about the Native Vegetation Precinct Plan as applicable
- A site assessment report including a habitat hectare assessment of any patches of native vegetation and details of trees
- An offset statement that explains that an offset has been identified and how it will be secured.

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

Appendix 1: Description of native vegetation to be removed

The species-general offset test was applied to your proposal. This test determines if the proposed removal of native vegetation has a proportional impact on any rare or threatened species habitats above the species offset threshold. The threshold is set at 0.005 per cent of the mapped habitat value for a species. When the proportional impact is above the species offset threshold a species offset is required. This test is done for all species mapped at the site. Multiple species offsets will be required if the species offset threshold is exceeded for multiple species.

Where a zone requires species offset(s), the species habitat units for each species in that zone is calculated by the following equation in accordance with the Guidelines:

Species habitat units = extent x condition x species landscape factor x 2, where the species landscape factor = 0.5 + (habitat importance score/2)

The species offset amount(s) required is the sum of all species habitat units per zone

Where a zone does not require a species offset, the general habitat units in that zone is calculated by the following equation in accordance with the Guidelines:

General habitat units = extent x condition x general landscape factor x 1.5, where the general landscape factor = 0.5 + (strategic biodiversity value score/2)

The general offset amount required is the sum of all general habitat units per zone.

Native vegetation to be removed

Information provided by or on behalf of the applicant in a GIS file							Information calculated by EnSym					
Zone	Type	BioEVC	BioEVC conservation status	Large tree(s)	Partial removal	Condition score	Polygon Extent	Extent without overlap	SBV score	HI score	Habitat units	Offset type
4-A	Scattered Tree	gold0175_61	Vulnerable	0	no	0.200	0.031	0.023	0.500		0.005	General
2-A	Patch	gold0175_61	Vulnerable	0	no	0.500	0.051	0.051	0.500		0.029	General
2-B	Patch	gold0175_61	Vulnerable	0	no	0.500	0.060	0.060	0.500		0.034	General
2-C	Patch	gold0175_61	Vulnerable	0	no	0.500	0.020	0.020	0.500		0.011	General
6-A	Scattered Tree	gold0175_61	Vulnerable	0	no	0.200	0.031	0.031	0.510		0.007	General
7-A	Scattered Tree	gold0175_61	Vulnerable	0	no	0.200	0.031	0.017	0.510		0.004	General
1-A	Patch	gold0175_61	Vulnerable	0	no	0.400	0.107	0.107	0.510		0.048	General
8-A	Scattered Tree	gold0175_61	Vulnerable	0	no	0.200	0.031	0.024	0.502		0.005	General
9-A	Patch	gold0175_61	Vulnerable	0	no	0.470	0.408	0.408	0.537		0.221	General

Information provided by or on behalf of the applicant in a GIS file							Information calculated by EnSym					
Zone	Type	BioEVC	BioEVC conservation status	Large tree(s)	Partial removal	Condition score	Polygon Extent	Extent without overlap	SBV score	HI score	Habitat units	Offset type
10-A	Patch	gold0175_61	Vulnerable	2	no	0.550	1.523	1.523	0.532		0.963	General
11-A	Scattered Tree	gold0175_61	Vulnerable	0	no	0.200	0.031	0.028	0.530		0.006	General
2-D	Patch	gold0175_61	Vulnerable	0	no	0.500	0.032	0.032	0.500		0.018	General
3-A	Scattered Tree	gold0175_61	Vulnerable	0	no	0.200	0.031	0.017	0.510		0.004	General

Appendix 2: Information about impacts to rare or threatened species' habitats on site

This table lists all rare or threatened species' habitats mapped at the site.

Species common name	Species scientific name	Species number	Conservation status	Group	Habitat impacted	% habitat value affected
Dwarf Cassinia	*Cassinia diminuta*	507664	Rare	Dispersed	Habitat importance map	0.0005
Whirrakee Wattle	*Acacia williamsonii*	500103	Rare	Dispersed	Habitat importance map	0.0004
Jericho Wire-grass	*Aristida jerichoensis var. subspinulifera*	504631	Endangered	Dispersed	Habitat importance map	0.0004
Grey-crowned Babbler	*Pomatostomus temporalis temporalis*	10443	Endangered	Dispersed	Habitat importance map	0.0004
Woodland Leek-orchid	*Prasophyllum sp. aff. validum A*	505904	Endangered	Dispersed	Habitat importance map	0.0003
Cottony Cassinia	*Cassinia ozothamnoides*	501560	Vulnerable	Dispersed	Habitat importance map	0.0003
Cane Spear-grass	*Austrostipa breviglumis*	503268	Rare	Dispersed	Habitat importance map	0.0003
Ausfeld's Wattle	*Acacia ausfeldii*	500013	Vulnerable	Dispersed	Habitat importance map	0.0003
Swift Parrot	*Lathamus discolor*	10309	Endangered	Dispersed	Habitat importance map	0.0003
Velvet Daisy-bush	*Olearia pannosa subsp. cardiophylla*	502317	Vulnerable	Dispersed	Habitat importance map	0.0002
Bush Stone-curlew	*Burhinus grallarius*	10174	Endangered	Dispersed	Habitat importance map	0.0002
Floodplain Fireweed	*Senecio campylocarpus*	507136	Rare	Dispersed	Habitat importance map	0.0002
Arching Flax-lily	*Dianella sp. aff. longifolia (Benambra)*	505560	Vulnerable	Dispersed	Habitat importance map	0.0002
Painted Honeyeater	*Grantiella picta*	10598	Vulnerable	Dispersed	Habitat importance map	0.0002
Southern Swainson-pea	*Swainsona behriana*	504944	Rare	Dispersed	Habitat importance map	0.0002
Barking Owl	*Ninox connivens connivens*	10246	Endangered	Dispersed	Habitat importance map	0.0002
Late-flower Flax-lily	*Dianella tarda*	505085	Vulnerable	Dispersed	Habitat importance map	0.0001
Slender Club-sedge	*Isolepis congrua*	501773	Vulnerable	Dispersed	Habitat importance map	0.0001

Bearded Dragon	*Pogona barbata*	12177	Vulnerable	Dispersed	Habitat importance map	0.0001
Waterbush	*Myoporum montanum*	502240	Rare	Dispersed	Habitat importance map	0.0001
Chestnut-rumped Heathwren	*Calamanthus pyrrhopygius*	10498	Vulnerable	Dispersed	Habitat importance map	0.0001
Clover Glycine	*Glycine latrobeana*	501456	Vulnerable	Dispersed	Habitat importance map	0.0001
Half-bearded Spear-grass	*Austrostipa hemipogon*	503985	Rare	Dispersed	Habitat importance map	0.0000
Speckled Warbler	*Chthonicola sagittatus*	10504	Vulnerable	Dispersed	Habitat importance map	0.0000
Buloke	*Allocasuarina luehmannii*	500678	Endangered	Dispersed	Habitat importance map	0.0000
Lace Monitor	*Varanus varius*	12283	Endangered	Dispersed	Habitat importance map	0.0000
Slender Mint-bush	*Prostanthera saxicola var. bracteolata*	502750	Rare	Dispersed	Habitat importance map	0.0000
Brown Toadlet	*Pseudophryne bibronii*	13117	Endangered	Dispersed	Habitat importance map	0.0000
White-throated Needletail	*Hirundapus caudacutus*	10334	Vulnerable	Dispersed	Habitat importance map	0.0000
Rising Star Guinea-flower	*Hibbertia humifusa subsp. humifusa*	505082	Rare	Dispersed	Habitat importance map	0.0000
Grey Goshawk	*Accipiter novaehollandiae novaehollandiae*	10220	Vulnerable	Dispersed	Habitat importance map	0.0000
Square-tailed Kite	*Lophoictinia isura*	10230	Vulnerable	Dispersed	Habitat importance map	0.0000

Habitat group

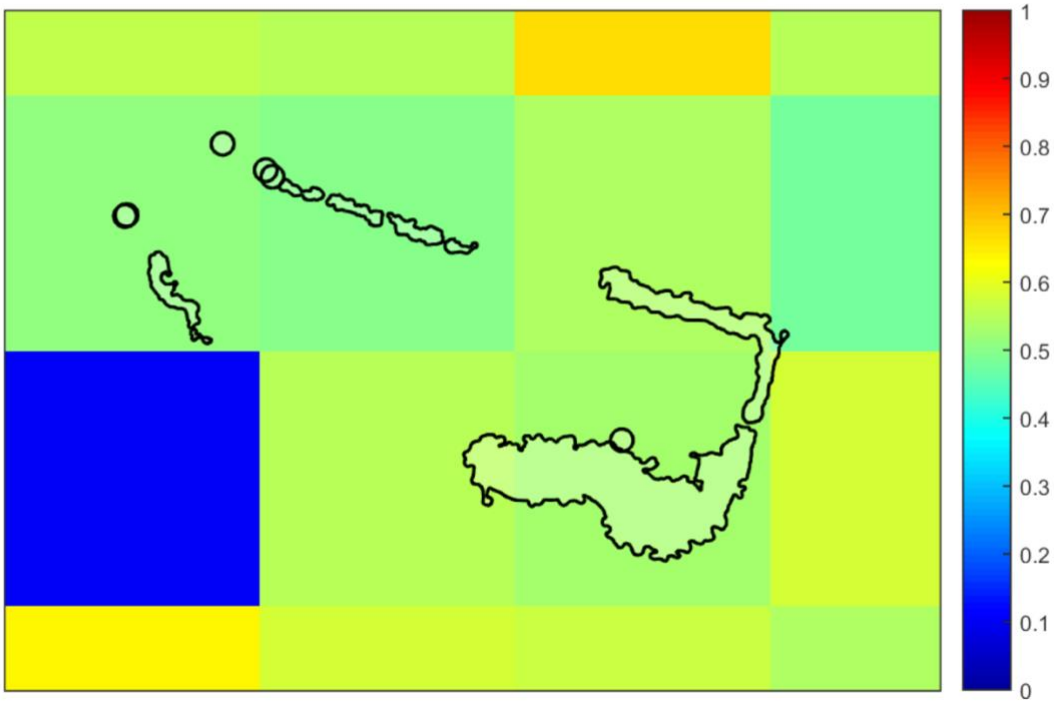
- Highly localised habitat means there is 2000 hectares or less mapped habitat for the species
- Dispersed habitat means there is more than 2000 hectares of mapped habitat for the species

Habitat impacted

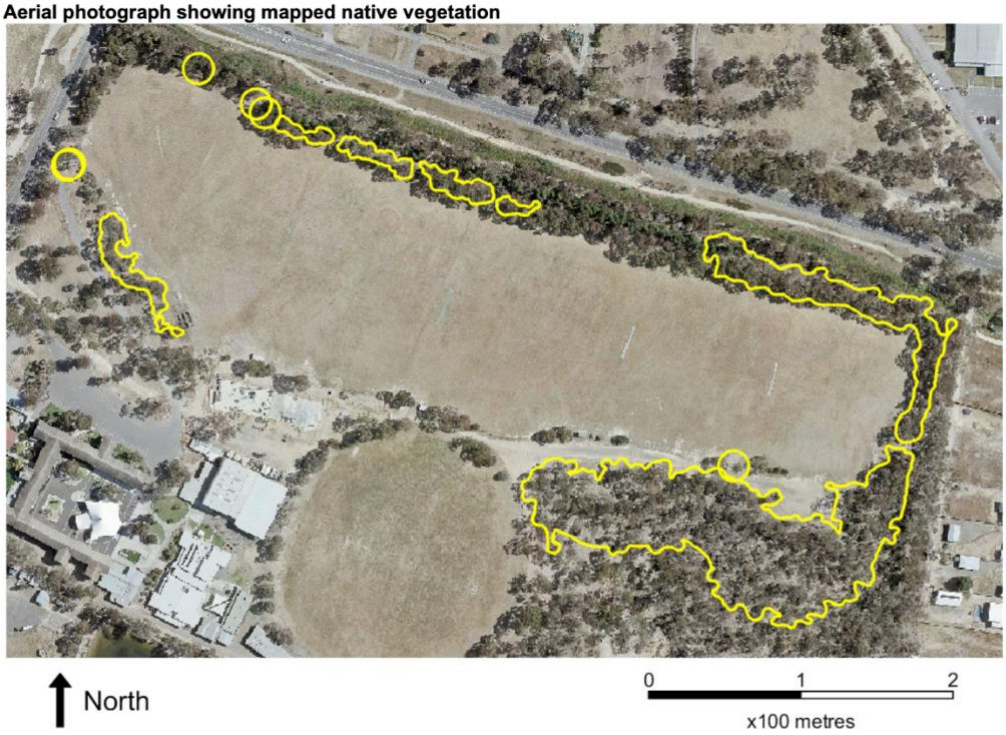
- Habitat importance maps are the maps defined in the Guidelines that include all the mapped habitat for a rare or threatened species
- Top ranking maps are the maps defined in the Guidelines that depict the important areas of a dispersed species habitat, developed from the highest habitat importance scores in dispersed species habitat maps and selected VBA records
- Selected VBA record is an area in Victoria that represents a large population, roosting or breeding site etc.

Appendix 3 – Images of mapped native vegetation

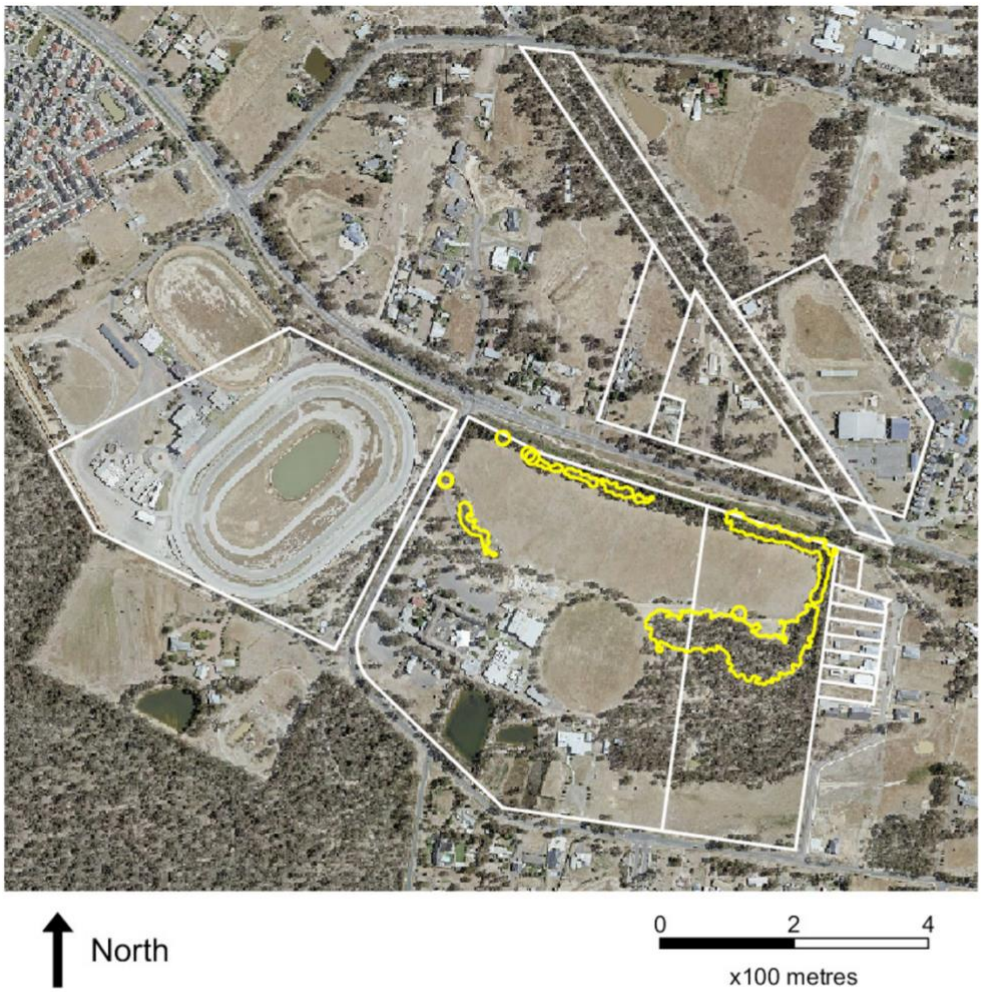
2. Strategic biodiversity values map



3. Aerial photograph showing mapped native vegetation



4. Map of the property in context



Yellow boundaries denote areas of proposed native vegetation removal.

APPENDIX 2 – Photos of Study Area

Photo 1: Patch 1A

Looking south west at patch 1A.

Photo taken: 11/10/19

Photo 2: Patch 1A

Looking west through patch 1A.

Photo taken: 11/10/19

Photo 3: Patch 1A Left of photo

Looking east at south-eastern tip of Patch 1A, Large tree avoided adjacent road.

Photo taken: 11/10/19

Photo 4: Patch 2A

Looking east through eastern section of patch 2A.

Photo taken: 11/10/19

Photo 5: Patch 2A

Yellow box 60cm DBH eastern edge of patch 2A

Photo taken: 11/10/19

Photo 6: Patch 2B

Looking west from eastern edge of Patch 2B.

Photo taken: 11/10/19

Photo 7: Patch 2B

Looking west through patch 2B from Patch 2C (foreground)

Photo taken: 11/10/19

Photo 8: Patch 2C

Looking north, north west at patch 2C.

Photo taken: 11/10/19

Photo 9: Patch 2D

Looking north east at patch 2D.

Photo taken: 13/04/2021

Photo 10: Scattered trees (ST's) 4A & 8A

Looking east at 8A Grey box 19cm DBH (foreground) & 4A Grey box 37cm DBH (centre). Patch 2D is behind ST 4A.

Photo taken: 11/10/19

Photo 11: Scattered tree 6A

Looking north, 6A 25cm DBH Grey Box (left along edge of oval)

Photo taken: 11/10/19

Photo 12: Scattered Tree 11A

Looking west along the southern border of existing sports fields. Scattered Tree 11A (foreground) is a 32cm DBH Yellow gum. The vegetation located nearby fringing the sports ovals are planted natives.

Photo taken: 18/10/2020

Photo 13: Patch 9 north east

Looking west through Patch 9 from eastern end.

Photo taken: 18/10/2020

Photo 14: Patch 9 western end

Looking east from western end of Patch 9.

Photo taken: 18/10/2020

Photo 15: Patch 9 eastern end

Looking south east at south eastern end of patch 9.

Photo taken: 13/04/2021

Photo 16: Patch 10 Western zone

Looking east through southwestern zone of patch 10.

Photo taken: 18/10/2020

Photo 17: Patch 10 Central zone

Looking east through patch 10.

Photo taken: 18/10/2020

Photo 18: Patch 10 Eastern zone

Looking north through eastern zone of patch 10.

Photo taken: 18/10/2020

Photo 19: Patch 10 Large Yellow Gum

Looking south at Large Yellow Gum 73cm DBH.

Photo taken: 18/10/2020

Photo 20: Patch 10 Large Grey Box

Looking south at Large Grey Box 91cm DBH located west of patch 10.

Photo taken: 18/10/2020

Photo 21: ST 7A & ST 3A

Looking east ST 7A & ST 3A , planted natives behind.

Photo taken: 13/04/2021

VEGETATION NOT INCLUDED IN THE ASSESSMENT

Photo 22: Garden natives between Patch 1A & ST 7A

Looking south west at planted natives in garden not included in assessment

Photo taken: 11/10/19

Photo 23: Planted native trees along south of proposed new buildings

Looking west at planted natives not included in the assessment.

Photo taken: 11/10/19

Photo 24: Planted natives bordering existing sports grounds

Looking north east at planted native vegetation not included in assessment.

Photo taken: 18/10/2020

Photo 25: Planted natives bordering existing sports grounds

Looking west at vegetation not included in assessment.

Photo taken: 18/10/2020

APPENDIX 3 – Evidence of Offset availability

vegetationlink

Our reference: VLQ-4971-D

Your reference: Catherine Macaulay College Sports Ground Expansion

9 April 2021

Heather Beever
Cumbre Consultants
heather@cumbre.com.au

Dear Heather

RE: Quotation for the supply of native vegetation credits

Vegetation Link is an accredited offset provider with the Department of Environment, Land, Water & Planning (DELWP). We offer a specialised brokerage service to enable permit holders and developers to identify suitable native vegetation credits to meet their planning permit offset requirements.

Based on the information you have provided, I understand you require the following native vegetation offset:

Offset type	Attributes	General habitat units (GHU)	Min. strategic biodiversity value (SBV)	Large trees
General	North Central CMA	1.356	0.423	2

To meet your offset requirements, you can purchase native vegetation credits from a third party as per the options quoted below[1]. This quotation is valid for 14 days, subject to credit availability and landholder pricing.

Option 1: CTA pathway – offset site located in the North Grampians Shire area (approx. 2-5 week turnaround from acceptance of quote)	
Cost of native vegetation credits – invoiced by DELWP	$110,080.00
Transaction fees – invoiced by Vegetation Link	$1,020.00
Total (ex. GST)	$111,100.00
Total (inc. GST)	$122,210.00

Option 2: CTA pathway – offset site located in the Pyrenees Shire area (approx. 2-5 week turnaround from acceptance of quote)	
Cost of native vegetation credits – invoiced by DELWP	$104,836.00
Transaction fees – invoiced by Vegetation Link	$1,020.00
Total (ex. GST)	$105,856.00
Total (inc. GST)	$116,441.60

[1] *Note that the transaction fee includes DELWP NVOR transfer and allocation fees and a Vegetation Link fee*

Vegetation Link Pty Ltd
ABN: 92 169 702 032
www.vegetationlink.com.au
1300 VEG LINK (1300 834 546) | offsets@vegetationlink.com.au | PO Box 10 Castlemaine VIC 3450

vegetationlink

Option 3: CTA pathway – offset site located in the Macedon Ranges Shire area (approx. 2-5 week turnaround from acceptance of quote)	
Cost of native vegetation credits – invoiced by Credit Owner	$75,580.00
Transaction fees – invoiced by Vegetation Link	$1,165.00
Total (ex. GST)	$76,745.00
Total (inc. GST)	$84,419.50

If you would like to purchase credits, let us know that you accept the quote and return the attached **purchaser details form** by email. If more than one quotation option is provided above, please specify which option you choose.

Upon receipt of the form, we will begin the trade process. Further details of the process for credit allocation is in the FAQ below.

Should you have any queries, please do not hesitate to contact us on 1300 VEG LINK (1300 834 546) or email offsets@vegetationlink.com.au.

Sincerely,

Lisa Gormley
Biodiversity Offset Broker

APPENDIX 4 – Contour Map of property