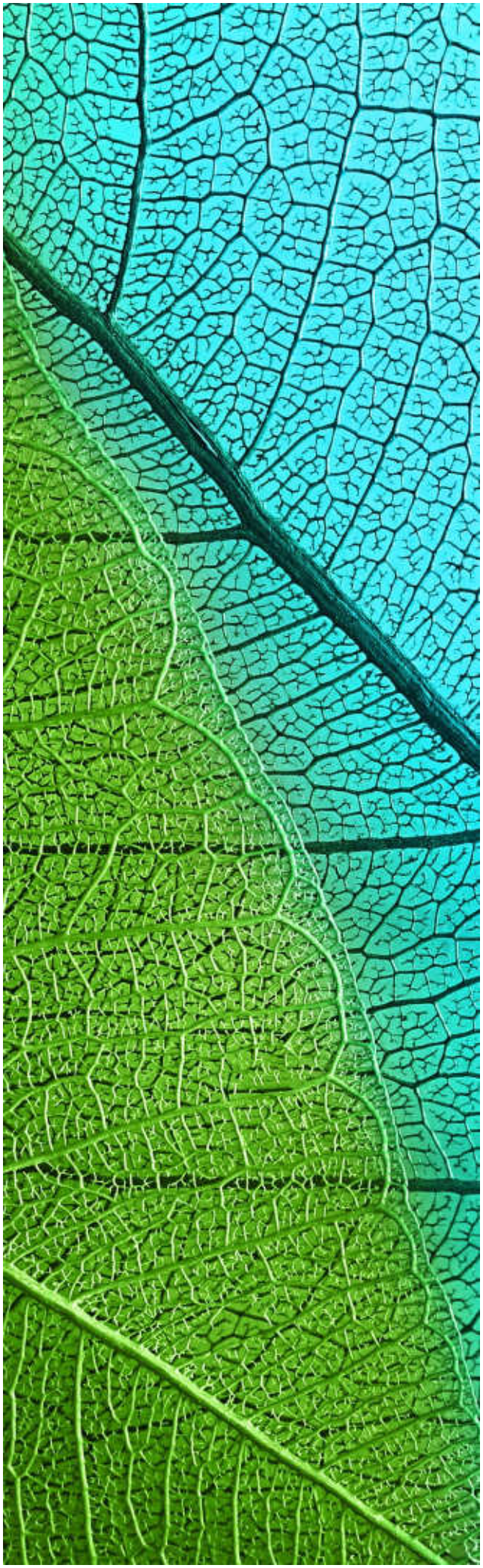

19-23 Horswood Rd, Narre Warren North

Flora and Fauna Assessment

Prepared for Pared Victoria Limited

February 2024
Report No. 19120.02 (1.4)

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1. Executive summary

Nature Advisory Pty Ltd undertook a flora and fauna assessment of an 8.4-hectare area of land in Narre Warren North. The construction of a school and associated infrastructure is proposed for the land.

Vegetation in the study area primarily consisted of paddocks of exotic pasture species, with herbaceous weeds occasionally interspersed. Native vegetation was comparatively limited in extent and restricted to the eastern border of the study area, where it occurred in damp sections of paddock adjacent to farm dams on the neighbouring property. Remnant patches were highly modified and species-poor, mostly consisting of Native Rush, Tall Spike-rush and Common Reed. Native herbs including Common Woodruff, Bidgee-widgee, Hairy Willow-herb and Slender Knotweed were also present. Treed vegetation bordered the northern property boundary and comprised native trees such as Lightwood and Black Wattle.

Fauna habitat within the study area comprised grazing paddocks, treed habitat, scrub and aquatic habitat.

The following native vegetation was recorded in the study area:

- Four patches of native vegetation, totalling 0.357 hectares (including no large trees in patches).

The proponent proposes to remove 0.098 hectares of native vegetation comprising:

- 0.098 hectares of native vegetation in patches (including no large trees in patches).

The application site lies within Location 1. Based on the extent of native vegetation, the number of large trees, and the location category, the proposal must be assessed under the **Basic** assessment pathway. This **would not** trigger a referral to the Department of Energy Environment and Climate Action (DEECA).

A *Native Vegetation Removal* (NVR) report for this proposal is provided in Appendix 7.

Offsets required to compensate for the proposed removal of native vegetation from the study area are:

- 0.022 general habitat units, with following offset attribute requirements:
    - A minimum strategic biodiversity value (SBV) of 0.555
    - Located within the Port Phillip and Westernport CMA boundary or the Casey municipal district.

Under the Guidelines all offsets must be secured prior to the removal of native vegetation.

The proposed school development is unlikely to result in significant impacts to any of the six EPBC Act-listed species considered likely to occur or recorded in the study area, or to threatened ecological communities, none of which occur there.

The table below summarises the compliance of the information in this report with the application requirements of the *Guidelines for the removal, destruction or lopping of native vegetation* (DELWP 2017a).

Application requirement		Response
1.	Information about the native vegetation to be removed.	See Section 6.3.2
2.	Topographic and land information relating to the native vegetation to be removed.	See Section 5.1
3.	Recent, dated photographs of the native vegetation to be removed.	See Appendix 5
4.	Details of any other native vegetation approved to be removed, or that was removed without the required approvals, on the same property or contiguous land in the same ownership as the applicant, in the five-year period before the application for a permit is lodged.	Not applicable
5.	An avoid and minimise statement.	See Section 7.3.1
6.	A copy of any Property Vegetation Plan contained within an agreement made pursuant to section 69 of the *Conservation, Forests and Lands Act 1987* that applies to the native vegetation to be removed.	Not applicable
7.	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 is not required when the creation of defendable space is in conjunction with an application under the Bushfire Management Overlay.	Not applicable
8.	If the application is under Clause 52.16, a statement that explains how the proposal responds to the Native Vegetation Precinct Plan considerations (at decision guideline 8).	Not applicable
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 in accordance with the Guidelines.	See Appendix 8

2. Introduction

Pared Victoria Limited engaged Nature Advisory Pty Ltd to conduct a flora and fauna assessment of an 8.4-hectare area of land in Narre Warren North. The specific area investigated, referred to herein as the 'study area', comprised the entire property at 19-23 Horswood Road, bordered by Horswood Road to the north, private residential property to the east and south, and Lysterfield Park to the west. The construction of a school and associated infrastructure is proposed for the study area.

This investigation was commissioned to provide information on the extent and condition of native vegetation in the study area according to Victoria's *Guidelines for the removal, destruction or lopping of native vegetation* (DELWP 2017a), herein referred to as 'the Guidelines', and any potential impacts on flora and fauna matters listed under the state *Flora and Fauna Guarantee Act 1988* (FFG Act) and the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). This report outlines any implications under relevant national, state and local legislation and policy frameworks.

Specifically, the scope of the investigation involved reviewing existing information regarding the flora, fauna and native vegetation of the study area and surrounds and included the following resources:

- *Victorian Biodiversity Atlas* administered by DEECA;
- The *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) *Protected Matters Search Tool*; and
- DEECA's *Native Vegetation Information Management system* (NVIM).

- A site survey was conducted and involved the following:
  - Characterisation and mapping of native vegetation on the site, as defined in Victoria's *Guidelines for the removal, destruction or lopping of native vegetation* (the 'Guidelines');
  - Assessment of native vegetation in accordance with the Guidelines, including habitat hectare assessment and/or scattered tree assessment;
  - Compilation of a flora species list/flora and fauna species lists for the site;
  - Assessment of the nature and quality of native fauna habitat; and
  - Assessment of the likelihood of occurrence of EPBC Act- and FFG Act- listed flora, fauna and communities on the site.

This investigation was undertaken by a team from Nature Advisory comprising Khalid Al-Dabbagh (Senior Zoologist); Merinda Day-Smith (Botanist), Emma Wagner (GIS Analyst), Jim Grant (Senior Ecologist & Project Manager), Brett Lane (Principal Consultant).

3. Planning and legislative considerations

This investigation and report address the application on the site of relevant legislation and planning policies that protect biodiversity. Local, state and Commonwealth controls are summarised below.

3.1. Local planning provisions

The study area is located within the Casey local government area and is currently zoned Green Wedge A Zone (GWAZ4) in the Casey Planning Scheme. This overlay requires the assessment of impact of the use or development on the flora and fauna on the site and its surrounds which is addressed in the current report.

The study area is located within a Bushfire-prone Area.

Local planning provisions apply under the *Victorian Planning and Environment Act 1987*.

3.1.1. Local Planning Policies

3.2. Overlays

The study area is subject to the following two overlays in the Casey Planning Scheme:

- *Bushfire Management Overlay (BMO)* – This overlay partially covering the property states defendable space requirements under a bush fire scenario as well as fulfilling bushfire management objectives with a permit application. The siting of the buildings and associated infrastructure has ensured there is no flora or fauna impacts and native vegetation removal associated with this overlay required. This overlay will not be discussed further.
- *Significant Landscape Overlay (LSO1)* – This Overlay relates to the protection and enhancement of native vegetation and remaining natural ecosystems. The application requirements of this overlay are addressed in this report, in the accompanying Vegetation Management Plan (Nature Advisory, 2024), and within the Landscape Masterplan documents (Nadia Gill Landscape Architect, 2024).

3.3. State planning provisions

State planning provisions are established under the *Victorian Planning and Environment Act 1987*.

Clause 52.17 of all Victorian Planning Schemes states the following:

A permit is required to remove, destroy or lop native vegetation, including dead native vegetation.

A permit is not required if any of the following apply:

- An exemption in Table 52.17-7 specifically states that a permit is not required.
- A native vegetation precinct plan corresponding to the land is incorporated into the planning scheme and listed in the schedule to Clause 52.16.
- The native vegetation is specified in a schedule to Clause 52.17.

3.3.1. Exemptions

Exemptions listed in Table 52.17-7 relevant to the study area include the following:

- *Planted vegetation:* Native vegetation that is to be removed, destroyed or lopped that was either planted or grown as a result of direct seeding. This exemption does not apply to native

vegetation planted or managed with public funding for the purpose of land protection or enhancing biodiversity.

- *Regrowth:* Native vegetation that is to be removed, destroyed or lopped that has been naturally established or regenerated on land lawfully cleared of naturally established native vegetation and meets the following criteria:
  - Is less than 10 years old; or
  - Is Austral Bracken (*Pteridium esculentum*); or
  - Falls within the boundary of a timber production plantation, as indicated on a Plantation Development Notice or other documented record and has become established after the plantation; or
  - Is less than 10 years old at the time of a property vegetation plan being signed by the Secretary to DEECA (as constituted under Part 2 of the *Conservation, Forests and Lands Act 1987*) and is shown on that plan as being 'certified regrowth'; and occurs on land that is to be used or maintained for cultivation or pasture during the term of that plan.

This exemption does not apply to land where native vegetation has been destroyed or otherwise damaged as a result of flood, fire or other natural disaster.

3.3.2. Application requirements

Any application to remove, destroy or lop native vegetation must comply with the application requirements specified in the Guidelines (DELWP 2017a).

When assessing an application, Responsible Authorities are also obligated to refer to Clause 12.01-2 (Native vegetation management) in the Planning Scheme that, in addition to the Guidelines, refers to the following:

- *Assessor's handbook – applications to remove, destroy or lop native vegetation* (Version 1.1) (DELWP 2018a).
- State-wide biodiversity information maintained by DEECA.

The application of the Guidelines (DELWP 2017a) is explained further in Appendix 1.

3.3.3. Referral to DEECA

Clause 66.02-2 of the planning scheme determines the role of DEECA in the assessment of native vegetation removal permit applications. If an application is referred, DEECA may make certain recommendations to the responsible authority in relation to the permit application.

Any application to remove, destroy or lop native vegetation must be referred to DEECA if any of the following apply:

- The impacts to native vegetation fall within the Detailed Assessment Pathway;
- A property vegetation plan applies to the site; or
- The native vegetation is on Crown land that is occupied or managed by the responsible authority.

3.4. EPBC Act

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) protects a number of threatened species and ecological communities that are considered to be of national

conservation significance. Any significant impacts to these species require the approval of the Australian Minister for the Environment.

If there is a possibility of a significant impact on nationally threatened species, communities or listed migratory species, a Referral under the EPBC Act should be considered. The Minister will decide whether the project will be a 'controlled action' under the EPBC Act after 20 business days, in which case the project can only be undertaken with the approval of the Minister. This approval depends on a further assessment and approval process (lasting between three and nine months, depending on the level of assessment).

Implications under the EPBC Act for the current proposal are discussed in Section 7.4.

3.5. FFG Act

The Victorian *Flora and Fauna Guarantee Act 1988* (FFG Act) lists threatened and protected species and ecological communities (DELWP 2017b, DELWP 2018b). Any removal of protected flora, including threatened flora species and plants that constitute threatened communities listed under the FFG Act from public land, requires a Protected Flora Licence or Permit under the Act that can be obtained from DEECA.

The FFG Act only applies to private land where a license is required to remove grass trees, tree ferns and sphagnum moss for sale or where an Interim Conservation Order has been made to protect critical habitat for a threatened species or community. As no such habitat has ever been declared, this mechanism under the FFG Act has never been implemented.

Implications under the FFG Act for the current proposal are discussed in Section 7.5.

3.6. EE Act

One or a combination of several criteria may trigger a requirement for a Referral to the Victorian Minister for Planning who will determine whether an Environmental Effects Statement (EES) will be required according to the *Ministerial Guidelines for Assessment of Environmental Effects under the* Environment Effects Act 1978 (DSE 2006).

The criteria related to flora, fauna and native vegetation that trigger a Referral are listed below.

<u>One or more</u> of the following would trigger a Referral:

- Potential clearing of 10 or more hectares of native vegetation from an area that meets the following criteria:
  - Is of an Ecological Vegetation Class identified as endangered by the Department of Sustainability and Environment (in accordance with Appendix 2 of Victoria's Native Vegetation Management Framework); or
  - Is, or is likely to be, of very high conservation significance (as defined in accordance with Appendix 3 of Victoria's Native Vegetation Management Framework); and
  - Is not authorised under an approved Forest Management Plan or Fire Protection Plan;
- Potential long-term loss of a significant proportion (e.g., 1 to 5 percent depending on the conservation status of the species) of known remaining habitat or population of a threatened species within Victoria;
- Potential long-term change to the ecological character of a wetland listed under the Ramsar Convention or in 'A Directory of Important Wetlands in Australia'; or

- Potential extensive or major effects on the health or biodiversity of aquatic, estuarine or marine ecosystems, over the long term.

Two or more of the following would also trigger a Referral:

- Potential clearing of 10 or more hectares of native vegetation, unless authorised under an approved Forest Management Plan or Fire Protection Plan;
- Matters listed under the Flora and Fauna Guarantee Act 1988, including the following:
  - Potential loss of a significant area of a listed ecological community; or
  - Potential loss of a genetically important population of an endangered or threatened species (listed or nominated for listing), including as a result of loss or fragmentation of habitats; or
  - Potential loss of critical habitat; or
  - Potentially significant effects on habitat values of a wetland supporting migratory bird species.

Implications under the *Environment Effects Act 1978* (EE Act) for the current proposal are discussed in Section 7.6.

3.7. CaLP Act

The *Catchment and Land Protection Act 1994* (CaLP Act) requires that landowners (or a third party to whom responsibilities have been legally transferred) must eradicate regionally prohibited weeds and prevent the growth and spread of regionally controlled weeds.

Weed species listed under the CaLP Act that have been recorded in the study area are discussed in Section 7.7.

4. Existing information and methods

4.1. Existing information

Existing information used for this investigation is described below.

4.1.1. Existing reporting and documentation

The existing documentation below, relating to the study area, was reviewed.

- Casey Planning Scheme.

4.1.2. Native vegetation

Pre-1750 (pre-European settlement) vegetation mapping administered by DEECA was reviewed to determine the type of native vegetation likely to occur in the study area and surrounds. Information on Ecological Vegetation Classes (EVCs) was obtained from published EVC benchmarks. These sources included the following:

- Relevant EVC benchmarks for the Highland – Southern Fall bioregion[1] (DSE 2004a); and
- *NatureKit* (DEECA 2023a).

4.1.3. Listed matters

Existing flora and fauna species records and information regarding the potential occurrence of listed matters were obtained from an area termed the 'search region', defined here as an area with a radius of 5 kilometres from the approximate centre point of the study area (coordinates: latitude 37° 58' 03.68" S and longitude 145° 18' 16.04" E).

A list of the flora and fauna species recorded in the search region was obtained from the *Victorian Biodiversity Atlas* (VBA), a database administered by DEECA.

The online EPBC Act *Protected Matters Search Tool* (DCCEEW 2023a) was consulted to determine whether nationally listed species or communities potentially occurred in the search region based on habitat modelling.

4.2. Field methods

The field assessment was conducted on 8th March 2023. During this assessment, areas supporting native vegetation and/or fauna habitat were inspected in detail on foot.

Sites in the study area found to support native vegetation or with potential to support listed matters were mapped through a combination of aerial photograph interpretation and ground-truthing using a hand-held GPS (accurate to approximately five metres). Species and ecological communities listed as threatened under the EPBC Act or FFG Act (where these occurred on public land) were also mapped using the same method.

[1] A bioregion is defined as "a geographic region that captures the patterns of ecological characteristics in the landscape, providing a natural framework for recognising and responding to biodiversity values". In general, bioregions reflect underlying environmental features of the landscape (DNRE 1997).

4.2.1. Native vegetation

Native vegetation is currently defined in Clause 73.01 of all Victorian planning schemes as 'plants that are indigenous to Victoria, including trees, shrubs, herbs and grasses'. The Guidelines (DELWP 2017a) further classify native vegetation as belonging to two categories:

- Patch; or
- Scattered tree.

The definitions of these categories are provided below, along with the prescribed DEECA methods of assessment. Further details on definitions of patches and scattered trees are provided in Appendix 1.

Patch

A patch of native vegetation may be defined as one of the following:

- An area of vegetation where at least 25 per cent of the total perennial understorey plant cover is native; or
- Any area with three or more native canopy trees[2] where the drip line[3] of each tree touches the drip line of at least one other tree, forming a continuous canopy; or
- Any mapped wetland included in the *Current wetlands map*, available at *MapShareVic* (DEECA 2023b).

Patch condition is assessed using the habitat hectare method (Parkes *et al.* 2003; DSE 2004b) whereby components of the patch (e.g., tree canopy, understorey and ground cover) are assessed against an EVC benchmark. The score effectively measures the percentage to which the condition of the vegetation resembles the original condition.

The *Native Vegetation Information Management* (NVIM) system (DEECA 2023c) provides modelled condition scores for native vegetation to be used in certain circumstances.

Scattered tree

A scattered tree may be defined as the following:

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

Scattered trees are counted and mapped, the species identified and the circumference at 1.3 m above the ground is recorded.

4.2.2. Flora species and habitats

Records of flora species were made in conjunction with sampling methods used to undertake habitat hectare assessments of the native vegetation described above. Specimens requiring identification using laboratory techniques were collected.

Species protected under the FFG Act were determined by crosschecking against the FFG Act *Protected Flora List* 2022).

[2] A native canopy tree is a mature tree (i.e., able to flower) that is taller 3 metres and normally found in the upper layer of the relevant vegetation type.
[3] The drip line is the outermost boundary of a tree canopy (leaves and/or branches) where the water drips onto the ground.

The potential for habitats to support listed flora species was assessed based on the following criteria:

- The presence of suitable habitat for flora species such as soil type, floristic associations and landscape context; and
- The level of disturbance of suitable habitats by anthropogenic disturbances and invasions by pest plants and animals.

Wherever appropriate, a precautionary approach was adopted in determining the likelihood of occurrence or flora listed under the EPBC Act and/or FFG Act. That is, where insufficient evidence was available regarding the potential occurrence of a listed species, the assumption was made that this could be in an area of suitable habitat.

4.2.3. Fauna species and habitats

The techniques below were used to detect fauna species utilising the study area.

- Incidental searches for mammal scats, tracks and signs (e.g., diggings, signs of feeding and nests/burrows).
- Turning over logs/rocks and other ground debris for reptiles, frogs and mammals.
- Daytime bird observations.
- General searches for reptiles and frogs, including identification of frog calls in seasonally wet areas.
- General searches for bat habitat including waterbodies and potential roosting sites such as caves, dead trees with hollows and underneath the bark of trees.

Fauna habitats are described using habitat components that include old-growth trees, fallen timber, leaf litter and surface rocks.

Habitat connectivity of the study area (i.e., degree of isolation/fragmentation), including linkages to other habitats in the region, was determined using field observations, recent aerial photography and *NatureKit* (DEECA 2023a).

Wherever appropriate, a precautionary approach was adopted in determining the likelihood of occurrence or fauna listed under the EPBC Act and FFG Act. That is, where insufficient evidence was available regarding the potential occurrence of a listed species, the assumption was made that this could be in an area of suitable habitat.

4.2.4. Threatened ecological communities

The likelihood of listed threatened ecological communities occurring in the study area was determined by checking general field observations against published descriptions of relevant listed ecological communities modelled to potentially occur in the study area.

Reviewed ecological community descriptions comprised identification criteria and condition thresholds from listing advice for EPBC Act communities and FFG Act-listed community descriptions (SAC 2015).

4.3. Desktop methods

The patch of native vegetation (Patch D) along the roadside reserve of Horswood Road was not assessed under the Guidelines during the field survey. Instead, the patch was modelled using

DEECAs strategic biodiversity value score. General field notes and photos taken of the patch were utilised to ensure the patch condition score was not being underestimated.

4.4. Limitations of field assessment

The site assessment was conducted during early autumn. The short duration and seasonal timing of field assessments can result in some species not being detected when these may occur at other times. Additionally, some flora species and lifeforms may be undetectable at the time of survey or unidentifiable due to a lack of flowers or fruit.

Difficulties in identifying flora in the observed state limited the accuracy of determining native vegetation patch extent. Timing of the survey and condition of vegetation were otherwise considered suitable to ascertain the extent and condition of native vegetation and fauna habitats.

Habitat zone D, situated along the roadside reserve of Horswood Road, was not directly assessed during the site survey. Instead, desktop methods were used, relying on DEECA's modelled mapping of habitat quality. Employing the modelled condition scoring for habitat zone D is deemed a precautionary measure and is likely an overestimate of the actual vegetation condition score, as suggested by general field observations of the area. Consequently, the modelled scoring is not considered to invalidate the removal calculations. The requirement for removing part of habitat zone D for the crossover is documented in the Arborist report and is further detailed in Section 7.3.1.

These limitations were not considered to compromise the validity of the current investigation that was designed to address the relevant policies and decision guidelines.

Determination of EVCs considers vegetation types that would have naturally occurred in the landscape prior to European impacts. Significant past alteration of the study area's landform, hydrology and soil composition, and past vegetation clearance has resulted in the emergence of an artificial site ecosystem and the establishment of vegetation that is likely to be notably different from that which would naturally have occurred in the study area. Determination of EVCs in altered areas was therefore based on consideration of the following:

- Modelled EVC mapping (DEECA 2023a);
- Observations of adjacent landforms that had not been significantly altered;
- Observations of nearby natural vegetation;
- Any observed indigenous flora species that are useful for determining EVCs; and
- Relevant published EVC benchmark descriptions.

If this information was insufficient to reasonably determine which EVC would have naturally occurred and the observed vegetation resembled an EVC that is likely to have naturally occurred in the region, EVC determination was based on the structure and floristic composition of current observed vegetation.

5. Assessment results

5.1. Site description

The study area for this investigation (Figure 1) constituted approximately 8.4 hectares of private land located at Narre Warren North, approximately 4.17 kilometres northeast of Endeavour Hills and 35.03 kilometres southeast of the Melbourne CBD. The study area was bordered by Horswood Road to the north, private residential property to the east and south, and Lysterfield Park to the west.

The study area supported chromosols with a loamy surface horizon, on an east facing slope with a low lying, drainage line on the eastern-most boundary. A dam was present on the drainage line.

The study area has been highly altered, having been previously cleared and with a history of agricultural grazing. Surrounding land supported agriculture and rural living to the south and east, Lysterfield Park to the west and north-west and Montague Orchard to the north, which has recently been renovated to encompass a market, restaurant, and café adjacent to Lysterfield Park.

Vegetation in the study area primarily consisted of paddocks of exotic pasture species, notably including Brown-top Bent, Sweet Vernal, Toowoomba Canary-grass, Kikuyu and Couch. Herbaceous weeds such as Flatweed, Ribwort, Curled Dock, Spear Thistle and Onion Grass were occasionally interspersed. There was also a notable presence of Blackberry infestations along some fence lines and amongst debris piles. Native vegetation was comparatively limited in extent and restricted to the eastern border of the study area, where it occurred adjacent to farm dams and within damp sections of paddock. Remnant patches were highly modified and species-depauperate, mostly consisting of Native Rush, Tall Spike-rush and Common Reed. Native herbs including Common Woodruff, Bidgee-widgee, Hairy Willow-herb and Slender Knotweed were also present. Treed vegetation bordered the northern property boundary and comprised native trees such as Lightwood and Black Wattle.

Fauna habitat within the study area comprised:

- Grazing paddocks: Present across the majority of the site and connected to similar habitat in paddocks to the south and east.
- Treed vegetation: Occurred on Horswood Road road reserve, beyond the northern boundary of the study area.
- Scrub: Consisted of dense Blackberry infestations, concentrated around debris piles and wetland habitat on the study area's eastern border.
- Aquatic habitat: Associated with a drainage line along the eastern boundary of the study area.

The following key fauna habitat areas occurred within the region:

- Lysterfield Park occurs directly adjacent to the western border of the study area. Native vegetation in the study area is isolated from this habitat by cleared paddocks, however, it is likely that fauna are still able to enter the study area for grazing purposes and large numbers of eastern grey Kangaroos were observed grazing exotic pasture in the study area and moving between this park and vegetation beyond the study area.
- Baluk William Nature Conservation Reserve occurs approximately 4.20 kilometres to the northeast of the study area. Native vegetation in the study area is isolated from this habitat by roads, cleared paddocks and residential properties.

- Cardinia Reservoir Park occurs approximately 6.44 kilometres to the east of the study area. Native vegetation in the study area is isolated from this habitat by roads, cleared paddocks and residential properties.

The study area lies within the Highland – Southern Fall bioregion and falls within the Port Phillip and Westernport catchment management area.

5.2. Native vegetation

5.2.1. Patches of native vegetation

Pre–European EVC mapping (DEECA 2022a) indicated that the study area and surrounds would have supported Swamp Scrub (EVC 53), Swampy Riparian Woodland (EVC 83), Grassy Forest (EVC 128), Grassy Woodland (EVC 175) and Damp Heathy Woodland (EVC 793) prior to European settlement based on modelling of factors including rainfall, aspect, soils and remaining vegetation.

Evidence on site, including floristic composition and soil characteristics, suggested that Swampy Riparian Woodland (EVC 83) was present on the eastern boundary of the study area (Figure 1). A description of this EVC is provided in the EVC benchmarks in Appendix 6.

Three patches (referred to herein as habitat zones) comprising the abovementioned EVC, were identified in the study area (Table 1). This totalled an area of 0.231 hectares of native vegetation in patches and included no large trees.

It should be noted that Habitat Zone D was scored remotely as Grassy Forest (EVC 128) using desktop methods following the field assessment, and this totalled 0.126 hectares (Table 1).

Table 1: Description of habitat zones in the study area

Habitat Zone	EVC	Description
A, B, C	Swampy Riparian Woodland (EVC 83)	These patches represent low quality Swampy Riparian Woodland due to the lack of canopy trees, depauperate understory and a high cover of high-threat weeds. All patches lacked large trees or canopy species, though Patch B supported two mature Blackwood trees. Patches B and C supported a shrub layer of scattered Sallow Wattle (a native species that is invasive to the area) on the fence line and high-threat woody weeds Blackberry, Gorse and Hawthorn were present in all patches. The understory was predominantly a mixture of natives, Green Rush, Pale Rush, Common Reed and Cumbungi, and invasive ground cover weeds including Creeping Buttercup, Annual Meadow-grass, Paspalum, Spear Thistle, Drain Flat Sedge and Couch. Patch B contained a dam that supported an aquatic Tall Spike-sedge and Common Water Ribbons. Patch C supported more native herbs and sedges such as streaked Arrowgrass, Angled Lobelia, Nodding Club-sedge and Small Loosestrife. No bryophytes or lichen present. Little to no litter cover.

Habitat Zone	EVC	Description
D	Grassy Forest (EVC 128)	This patch was in the Road Reserve of Horswood Road. It contained an overstorey of Eucalypts and middle story of Wattles. The ground layer was mainly exotic pasture grass. This patch was assessed using desktop methods, based on DEECA modelled mapping of habitat quality.

The habitat hectare assessment results for these habitat zones are provided in Table 2. More detailed habitat scoring results are presented in Appendix 2.

Table 2: Summary of habitat hectare assessment results

Habitat Zone	EVC	Area (ha)	Condition score (out of 100)	No. of large trees in HZ
A	Swampy Riparian Woodland (EVC 83)	0.028	15	0
B	Swampy Riparian Woodland (EVC 83)	0.154	13	0
C	Swampy Riparian Woodland (EVC 83)	0.049	16	0
D	Grassy Forest (EVC 128)	0.126	56 (modelled)	0
Total		**0.357**		**0**

Figure 1: Study area and Native vegetation

Project: 19-23 Horswood Road, Narre Warren North **Client**: Beacon Town Planning **Date**: 19/02/

Study area

Property boundary

Native vegetation

Swampy Riparian Woodland (EVC 83)

Grassy Forest (EVC0128)

N

Metres

0 30

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5.2.2. Scattered trees

No scattered trees were recorded in the study area.

5.3. Flora species

5.3.1. Species recorded

During the field assessment, 50 plant species were recorded, of which 17 (34%) were indigenous and 33 (66%) were introduced or non-indigenous native in origin (Appendix 3).

5.3.2. Listed species

Records from the VBA (DEECA 2022d) and Commonwealth EPBC Protected Matters Search Tool (DCCEEW 2022a) indicated that within the search region there were records of, or potential suitable habitat occurred for, 15 species listed under the Commonwealth EPBC Act and 12 listed under the state FFG Act, including 12 listed under both Acts. No flora species listed under the EPBC Act were recorded during the field survey.

The likelihood of occurrence of species listed under the EPBC Act and FFG Act in the study area is addressed in Table 3. Species considered 'likely to occur' have very high potential of occurring in the study area based on numerous records in the search region and suitable habitat in the study area. Species considered to have the 'potential to occur' are those for which suitable habitat exists, but recent records are scarce.

This analysis indicates that no listed flora species are likely to occur or have the potential to occur due to the long history of agricultural use and associated modification of the study area.

Table 3: Listed flora species and their likelihood of occurrence in the study area

Common Name	Scientific name	EPBC	FFG	Habitat	Number of records	Date of last record	Likelihood of occurrence
River Swamp Wallaby-grass	*Amphibromus fluitans*	Vulnerable		River Swamp Wallaby-grass grows mostly in permanent swamps and also lagoons, billabongs, dams and roadside ditches. The species requires moderately fertile soils with some bare ground; conditions that are caused by seasonally-fluctuating water levels (DAWE 2020).	3	1/10/1994	Habitat highly modified with minimal bare ground, high weed cover, history of stock grazing, no nearby recent records. **Unlikely to occur.**
Matted Flax-lily	*Dianella amoena*	Endangered	Critically Endangered	Lowland grassland and grassy woodlands on well-drained to seasonally waterlogged fertile sandy loams to heavy cracking soils derived from sedimentary or volcanic Geology. It is widely distributed from eastern to south-western Victoria (DAWE 2020).	None	N/A	No suitable grassland or grassy woodland habitat present, high weed cover across study area, no nearby recent records, history of stock grazing. **Unlikely to occur.**
Strzelecki Gum	*Eucalyptus strzeleckii*	Vulnerable	Critically Endangered	Apparently endemic, confined to across the western section of the Strzelecki Range, from Neerim South in the north, south to Foster. Favours ridges, slopes and streambanks and deep fertile soils (Brooker & Slee 1996).	None	N/A	Conspicuous species not identified during the site assessment, no nearby recent records. **Unlikely to occur.**
Clover Glycine	*Glycine latrobeana*	Vulnerable	Vulnerable	Found across south-eastern Australia in native grasslands, dry sclerophyll forests, woodlands and low open woodlands with a grassy ground layer. In Victoria, populations occur in lowland grasslands, grassy woodlands and sometimes in grassy heath (DAWE 2020).	None	N/A	No suitable grassland or grassy woodland habitat present, high weed cover across study area, no nearby recent records, history of stock grazing. **Unlikely to occur.**

Common Name	Scientific name	EPBC	FFG	Habitat	Number of records	Date of last record	Likelihood of occurrence
Spiny Peppercress	*Lepidium aschersonii*	Vulnerable	Endangered	The Spiny Peppercress occurs in periodically wet sites such as gilgai depressions and the margins of freshwater and saline marshes and shallow lakes, usually on heavy clay soil. Almost all sites receive some degree of soil waterlogging or seasonal flooding.	None	N/A	Habitat highly modified, favoured soil substrate absent, high weed cover present across study area, history of stock grazing, no nearby recent records. **Unlikely to occur.**
Round-leaf Pomaderris	*Pomaderris vacciniifolia*	Critically Endangered	Critically Endangered	Occurs in damp forest and herb-rich foothill forest north-east of Melbourne in the upper catchments of the Yarra, Plenty and Yea rivers (DAWE 2020).	None	N/A	No suitable forest habitat present, no nearby recent records. **Unlikely to occur.**
Maroon Leek-orchid	*Prasophyllum frenchii*	Endangered	Endangered	Grows mainly in open sedge swampland or in wet grassland and wet heathland generally bordering swampy regions. Sites are generally low altitude, flat and moist. Soils are generally moderately rich damp sandy or black clay loams. Climate is mild, with an annual rainfall of 600–1100 mm, occurring predominantly in winter and spring (DAWE 2020).	1	1/06/1984	Habitat highly modified, high weed cover present across study area, history of stock grazing, no nearby recent records. **Unlikely to occur.**
Dense Leek-orchid	*Prasophyllum spicatum*	Vulnerable	Critically Endangered	Occurs in coastal and near-coastal heathland and heathy woodland. Soils are generally sandy, with some sites seasonally waterlogged (Duncan 2010).	None	N/A	Site is inland, sandy soils absent, high weed cover present across study area, no nearby recent records, history of stock grazing. **Unlikely to occur.**
Green-striped Greenhood	*Pterostylis chlorogramma*	Vulnerable	Endangered	Occurs in mixed Box-Stringybark forest with a shrubby understorey, often with Pteridium esculentum as a major component on sandy or clay loam soils (Duncan et al. 2009).	None	N/A	No suitable forest habitat present, high weed cover present across study area, no nearby recent records, history of stock grazing. **Unlikely to occur.**
Leafy Greenhood	*Pterostylis cucullata*	Vulnerable		Tea-tree scrubs on tall sandy and calcareous dunes, in moist, open or even deep shaded locations (Jones 1994).	None	N/A	Site is inland, sandy soils absent, high weed cover present across study area, no nearby recent records, history of stock grazing. **Unlikely to occur.**

Common Name	Scientific name	EPBC	FFG	Habitat	Number of records	Date of last record	Likelihood of occurrence
Large-headed Fireweed	*Senecio macrocarpus*	Vulnerable	Critically Endangered	Victoria, occurs most commonly in grasslands on red-brown earth soils; may also occur in grassy woodlands and open woodlands predominantly in the Western (Basalt) Plains grassland on red brown earth soils found on recent Quaternary (basalt) deposits (DAWE 2020).	None	N/A	No suitable native grassland habitat present, characteristic red-brown clays absent, outside typical range, no nearby recent records. **Unlikely to occur.**
Swamp Fireweed	*Senecio psilocarpus*	Vulnerable		Herb-rich winter-wet swamps on volcanic clays or peaty soils (Walsh 1999). Known from approximately 10 sites between Wallan, about 45 km north of Melbourne, and Honans Scrub in south-eastern South Australia (TSSC 2008).	1	18/11/1982	Swamp habitat highly modified, favoured soils absent, high weed cover present across study area, outside typical range, no nearby recent records. **Unlikely to occur.**
Metallic Sun-orchid	*Thelymitra epipactoides*	Endangered	Endangered	Grows primarily in mesic coastal heathlands, grasslands and woodlands, but is also found in drier inland heathlands, open forests and woodlands. Substrates may be moist or dry sandy loams or loamy sands. Critical habitat has not been determined but the species is likely to require open conditions, which may be created by soil disturbance or fire, for recruitment (DAWE 2020).	None	N/A	High weed cover present across study area, no nearby recent records, history of stock grazing. **Unlikely to occur.**
Austral Toad-flax	*Thesium australe*	Vulnerable	Endangered	Austral Toadflax is semi-parasitic on roots of a range of grass species, notably Kangaroo Grass (*Themeda triandra*). It occurs in subtropical, temperate and subalpine climates over a wide range of altitudes. It occurs on soils derived from sedimentary, igneous and metamorphic geology on a range of soils including black clay loams to yellow podzolics and peaty loams (DAWE 2020).	None	N/A	Characteristic host species and favoured soil substrates absent, no nearby recent records. **Unlikely to occur.**

Common Name	Scientific name	EPBC	FFG	Habitat	Number of records	Date of last record	Likelihood of occurrence
Swamp Everlasting	*Xerochrysum palustre*	Vulnerable	Critically Endangered	Grows in wetlands including sedge-swamps and shallow freshwater marshes, often on heavy black clay soils. Commonly associated genera include *Amphibromus, Baumea, Carex, Chorizandra, Craspedia, Eleocharis, Isolepis, Lachnagrostis, Lepidosperma, Myriophyllum, Phragmites australis, Themeda triandra* and *Villarsia* (DAWE 2020).	None	N/A	Swamp habitat highly modified, favoured soils absent, high weed cover present across study area, no nearby recent records. **Unlikely to occur.**

Notes: EPBC-T = threatened species status under EPBC Act; **FFG** = threatened species status under the FFG Act.

5.4. Fauna habitats

The study area supported the following four fauna habitat types:

- Exotic pasture;
- Treed habitat;
- Scrub; and
- Aquatic habitat

Exotic pasture: This habitat (Photo 1) occupied much of the study area and was primarily composed of exotic pasture grasses, notably including Brown-top Bent, Sweet Vernal, Toowoomba Canary-grass, Kikuyu and Couch. Regardless of species composition and origin, this habitat is likely to provide grazing opportunities for a range of fauna species. This habitat type was connected to adjacent paddock vegetation of comparable quality to the south and east of the study area.

Photo 1. Paddock vegetation, comprising an array of exotic pasture species.

Treed habitat: This habitat type (Photo 2) was concentrated adjacent to and over the northern boundary of the study area along Horswood Road road reserve and consisted of native eucalypts, Black Wattle and Lightwood. Treed habitat is likely to be utilised for nesting and feeding by birds, with seasonal flowering also supporting pollinators. Although an equestrian track interrupts this connection, its extent is minor and this habitat is therefore effectively linked to similar treed habitat in Lysterfield Park.

Photo 2. Lightwood and eucalypt species present on the road reserve adjacent to Horswood Road.

Scrub: Scrub habitat, (Photo 3, below) which primarily comprised Blackberry infestations, was associated with debris piles and fringed aquatic habitat in the east of the study area. This habitat type may provide shelter for small birds and mammals, as well as seasonal feeding opportunities when fruiting. However, this habitat type was very limited in extent and isolated from scrub habitat in the wider landscape.

Photo 3. Blackberry brambles and scrub fringing aquatic habitat in the east of the study area.

Aquatic habitat: Aquatic habitat (Photo 4) consisted of a farm dam and associated drainage line. The dam occurred beyond the eastern boundary of the study area on the adjacent property but it was bordered by dense rush and sedge vegetation, some of which extended across the eastern boundary into the study area. This habitat provides shelter for some native fauna, particularly birds and two individuals of the Latham's Snipe (*Gallinago hardwickii*) were seen in this habitat on the property during the site assessment. This habitat is also likely to provide a water source for fauna and limited feeding

opportunities for a small number of waterbirds. Aquatic habitat was very limited in extent and disconnected from Lysterfield Lake to the west and larger farm dams to the east.

Photo 4. Aquatic habitat, fringed by dense swathes of Tall Spike-rush.

5.5. Fauna species

5.5.1. Species recorded

The VBA listed 252 fauna species from the 5 km radius search region surrounding the study area, including 196 birds; 22 mammals, nine reptiles, twelve frogs and eight fish. The large number of fauna species is reflection of the location of the study area, adjacent to Lysterfield Park and Churchill National Park, which are regularly visited by amateur naturalists who submit observations to databases.

During the field assessment, 21 fauna species were recorded. This included 18 bird (3 introduced), one mammal, no reptile, and two frog species (Appendix 4).

5.5.2. Listed species

The review of existing information [including VBA records (DEECA 2023d) and the results of the EPBC Protected Matters Search Tool (DCCEEW 2023a)] indicated that within the search region there were records of, or potential suitable habitat occurred for, 28 fauna species listed under the Commonwealth EPBC Act and the state FFG Act (17 birds; 7 mammals, 1 frog, 2 fish, and 1 invertebrate). The likelihood of occurrence of these species in the study area was assessed and the results are presented in Table 4.

This analysis of potential occurrence of listed fauna species excludes marine fauna; including Migratory oceanic bird species (such as albatrosses and petrels) and most migratory shorebirds given that the study area is inland.

Species considered '**Likely to Occur'** are those with very high potential of occurring in the study area given the existence of numerous records in the search region and suitable habitat in the study area. Using the precautionary approach, species considered to have the '**Potential to Occur'** are those for which suitable habitat exists, but recent records are scarce. This analysis indicates that six listed fauna species have been recorded, are likely to occur or have the potential to occur. These species include the following:

- Gang Gang Cockatoo (Endangered - EPBC Act)

- Swift Parrot (Critically Endangered-EPBC Act; Critically Endangered-FFG Act)
- White-throated Needletail (Vulnerable-EPBC Act; Migratory-EPBC Act; Vulnerable-FFG Act)
- Latham's Snipe (Migratory-EPBC Act) (recorded)
- Rufous Fantail (Migratory-EPBC Act)
- Satin Flycatcher (Migratory-EPBC Act)

The susceptibility of these species to impacts from development is discussed in Section 5.5.3.

Table 4: Listed fauna species and their likelihood of occurrence in the study area

Common Name	Scientific name	EPBC-T	EPBC-M	FFG	Habitat	Number of records	Date of last record	Likelihood of occurrence
Birds								
Australasian Bittern	*Botaurus poiciloptilus*	Endangered		Critically Endangered	Terrestrial wetlands, including a range of wetland types but prefers permanent water bodies with tall dense vegetation, particularly those dominated by sedges, rush, reeds or cutting grass (Marchant & Higgins 1990).	3	22/10/2001	Few records; may use Lysterfield Lake; **unlikely to occur** in study area
Australian Painted-snipe	*Rostratula australis*	Endangered		Critically Endangered	Generally, inhabits shallow terrestrial freshwater wetlands, including temporary and permanent lakes, swamps and claypans. They also use inundated or waterlogged grassland or saltmarsh, dams, rice crops, sewage farms and bore drains. Typical sites include those with rank emergent tussocks of grass, sedges, rushes or reeds, or samphire; often with scattered clumps of *Lignum muehlenbeckia* or canegrass or sometimes tea-tree (Melaleuca). Sometimes utilises areas that are lined with trees, or that have some scattered fallen or washed-up timber (DAWE 2020).	None	N/A	Wetlands in study area not suitable; lack of records; **Unlikely to Occur**
Common Greenshank	*Tringa nebularia*		M (Bonn A2H, CAMBA, JAMBA, ROKAMBA)	Endangered	Inhabits wide range of coastal or inland wetlands with varying levels of salinity; mainly muddy margins or rocky shores of wetlands (Higgins & Davies 1996).	None	N/A	May visit Lysterfield Lake but **unlikely to Occur** in study area
Common Sandpiper	*Actitis hypoleucos*		M (Bonn A2H, CAMBA, JAMBA, ROKAMBA)	Vulnerable	Inhabits a wide range of coastal or inland wetlands with varying levels of salinity; mainly muddy margins or rocky shores of wetlands. In Victoria, mostly found Westernport and Port Phillip Bay (Higgins & Davies 1996).	None	N/A	May visit Lysterfield Lake but **unlikely to Occur** in study area
Curlew Sandpiper	*Calidris ferruginea*	Critically Endangered	M (Bonn A2H, CAMBA, JAMBA, ROKAMBA)	Critically Endangered	Inhabits wide range of coastal or inland wetlands with varying levels of salinity; mainly muddy margins or rocky shores of wetlands (Higgins & Davies 1996).	None	N/A	May visit Lysterfield Lake but **unlikely to Occur** in study area
Fork-tailed Swift	*Apus pacificus*		M (CAMBA, JAMBA, ROKAMBA)		The species can occur in wet sclerophyll forest but mainly prefers open forest or plains. It is almost exclusively aerial and feeds up to hundreds on metres above the ground, but can feed among open forest canopy. The species breeds internationally and seldom roosts in trees (Higgins 1999).	4	14/03/2008	Aerial species; may fly over study area; **Potential to Occur**
Gang-gang Cockatoo	*Callocephalon fimbriatum*	Endangered			In summer generally in tall mountain forests and woodlands, particularly in heavily timbered, mature wet sclerophyll forests and woodlands. Prefer Eucalyptus dominated assemblages. Also occurs in subalpine snow gum woodlands and occasionally in temperate rainforests and regenerating forests. In winter occur at lower altitudes in drier, more open Eucalyptus woodland (Higgins 1999).	26	16/05/2019	Likely to visit neighbouring Lysterfield or Churchill Parks; **Likely to Occur**
Grey Falcon	*Falco hypoleucos*	Vulnerable		Vulnerable	Inhabits arid and semi-arid zones; mainly on sandy and stony plains of inland drainage systems, lightly timbered with acacia. Hunt far into open areas, over spinifex, tussock grasslands and low shrublands. In Victoria, few records mostly in north and north-western regions (Marchant & Higgins 1993).	None	N/A	No suitable habitat; **Unlikely to Occur**
Latham's Snipe	*Gallinago hardwickii*		M (Bonn A2H, JAMBA, ROKAMBA)		Occurs in wide variety of permanent and ephemeral wetlands; it prefers open freshwater wetlands with dense cover nearby, such as the edges of rivers and creeks, bogs, swamps, waterholes. The species is widespread in southeast Australia and most of its population occurs in Victoria, except in the northwest of the state (Naarding 1983; Higgins & Davies 1996).	18	21/02/2019	Recorded on site**; Likely to occur**

Common Name	Scientific name	EPBC-T	EPBC-M	FFG	Habitat	Number of records	Date of last record	Likelihood of occurrence
Painted Honeyeater	*Grantiella picta*	Vulnerable		Vulnerable	Inhabits box-ironbark forests and woodlands and mainly feeds on the fruits of mistletoe. Strongly associated with mistletoe around the margins of open forests and woodlands. Can also be found in farmland containing remnant treed vegetation. Occurs at few localities. Uncommon breeding migrant from further north, arriving in October and leaving in February (Higgins et al. 2001; Tzaros 2005).	None	N/A	No suitable habitat; no records for the region; **Unlikely to Occur**
Pilotbird	*Pycnoptilus floccosus*	Vulnerable			Occurs in wet sclerophyll forests, occasionally in dry sclerophyll forests and woodlands. Usually inhabits moist gullies but also dry slopes and ridges with dense undergrowth (Higgins & Peter 2002).	None	N/A	My visit neighbouring Lysterfield or Churchill Parks; but no record; **Unlikely to Occur**
Regent Honeyeater	*Anthochaera phrygia*	Critically Endangered		Critically Endangered	Inhabits dry box-ironbark eucalypt forests near rivers and creeks on inland slopes of the Great Dividing Range. Can also occur in small remnant patches or in mature trees in farmland or partly cleared agricultural land (Higgins et al. 2001).	None	N/A	No recent records in region; **Unlikely to Occur**
Rufous Fantail	*Rhipidura rufifrons*		M (Bonn A2H)		In east and south-east Australia, mainly inhabits tall wet sclerophyll forests, often in gullies. When on passage in warmer months, they are sometimes recorded in drier sclerophyll forests and woodlands, as well as parks and gardens (Higgins et al. 2006). Virtually absent from south-eastern Australia during winter (Higgins et al. 2006).	30	29/11/2018	My visit study area from neighbouring Parks; **Potential to Occur**
Satin Flycatcher	*Myiagra cyanoleuca*		M (Bonn A2H)		Mostly found in eucalypt forest, particularly tall wet forests and woodland within gullies (Higgins et al. 2006). Also inhabits eucalypt woodland comprising an open understorey and a grassy ground layer (Higgins et al. 2006). Generally, absent from rainforest (Higgins et al. 2006).	28	28/12/2020	My visit study area from neighbouring Parks; **Potential to Occur**
Sharp-tailed Sandpiper	*Calidris acuminata*		M (Bonn A2H, CAMBA, JAMBA, ROKAMBA)		Inhabit shallow fresh to saline wetlands, usually coastal to near-coastal, but occasionally farther inland. Wetlands often have open fringing mudflats and low emergent or fringing vegetation (Higgins & Davies 1996).	None	N/A	May visit Lysterfield Lake but **unlikely to Occur** in study area
Swift Parrot	*Lathamus discolor*	Critically Endangered		Critically Endangered	Prefers a select range of eucalypts in Victoria, including Yellow Gum, Grey Box, White Box, Red Ironbark and Yellow Box, as well as River Red-gum when this species supports abundant 'lerp' (Saunders & Tzaros 2011). The species is also known to forage within planted stands of Spotted Gum and Sugar Gum (Nature Advisory; unpublished data). Breeds in Tasmania and migrates to the mainland of Australia for the autumn, winter and early spring months. It lives mostly north of the Great Dividing Range, passing through two areas of Victoria on migration: the Port Phillip district and Gippsland (Emison et al. 1987; Higgins 1999; Kennedy & Tzaros 2005). Though it is also not uncommonly sighted in urban areas (Nature Advisory; unpublished data). Occurrence of this species on the mainland can substantially change from year to year depending on food availability, giving potential for this species to occur almost anywhere throughout its range (Emison et al. 1987).	19	1/07/2021	Been recorded in neighbouring Lysterfield Park; **Potential to pass through study area**
White-throated Needletail	*Hirundapus caudacutus*	Vulnerable	M (CAMBA, JAMBA, ROKAMBA)	Vulnerable	Aerial, over all habitats, but probably more over wooded areas, including open forest and rainforest. Often over heathland and less often above treeless areas such as grassland and swamps or farmland (Higgins 1999).	22	3/02/2018	Areal species; been recorded in neighbouring Lysterfield Park; **Potential to fly over study area**

Common Name	Scientific name	EPBC-T	EPBC-M	FFG	Habitat	Number of records	Date of last record	Likelihood of occurrence
Mammals								
Grey-headed Flying-fox	*Pteropus poliocephalus*	Vulnerable		Vulnerable	Brisbane, Newcastle, Sydney and Melbourne are occupied continuously. Elsewhere, during spring, they are uncommon south of Nowra and widespread in other areas of their range. Roosts in aggregations of various sizes on exposed branches. Roost sites are typically located near water, such as lakes, rivers or the coast. Roost vegetation includes rainforest patches, stands of Melaleuca, mangroves and riparian vegetation, but colonies also use highly modified vegetation in urban and suburban areas (DAWE 2020).	1	6/04/1982	Very old record; no suitable habitat in study area; **Unlikely to Occur**
Long-nosed Potoroo	*Potorous tridactylus trisulcatus*	Vulnerable		Vulnerable	In Victoria, the species occupies a wide variety of wet forest and wet scrub, usually occurring on sandy loam soils where rainfall exceeds 750mm annually (Menkhorst 1995); In Tasmania, moist forest with dense shrub layer; in the north edge of rainforest (Menkhorst 1995). Dense understorey vegetation is an essential component for the species persistence, which can consist of grass trees, sedges, ferns, heath, tea-tree or melaleucas (Menkhorst 1995).	None	N/A	no record; no suitable habitat in study area; **Unlikely to Occur**
Smoky Mouse	*Pseudomys fumeus*	Endangered		Endangered	Smoky Mouse occurs in a wide variety of habitats, from heath to dry sclerophyll forest, especially along ridgetops with a heath understorey, and occasionally adjacent wetter habitats such as fern gullies (Menkhorst 1995). A characteristic of many localities, except those in wet gullies, is a floristically diverse shrub layer with members of the plant families *Epacridaceae, Fabaceae* and *Mimosaceae* well represented (DAWE 2020). Shrub seeds and berries are important food sources for the species, with fire frequency and intensity highly influential in the occurrence of such habitat, and ultimately the species (Menkhorst 1995).	None	N/A	no record; no suitable habitat in study area; **Unlikely to Occur**
Southern Brown Bandicoot	*Isoodon obesulus obesulus*	Endangered		Endangered	Suitable habitat for Southern Brown Bandicoots (eastern) is defined to be any patches of native or exotic vegetation, within their distribution, which contains understorey vegetation structure with 50–80% average foliage density in the 0.2–1 m height range. In areas where native habitats have been degraded or diminished, exotic vegetation, such as Blackberry (Rubus spp.), can and often does, provide important habitat (DAWE 2020).	7	1/01/1985	Very old record; no suitable habitat in study area; **Unlikely to Occur**
Southern Greater Glider	*Petauroides volans*	Endangered		Vulnerable	In Victoria, this species inhabits forest habitats dominated by peppermint, stringybark, ash and gum eucalypts (Menkhorst 1995). Restricted to the central highlands and eastern Victoria, and common in areas of high rainfall. Rare in dry stringybark-box and Snow Gum forest, and does not occur in the box-ironbark or River Red-gum dominated riverina regions (Menkhorst 1995).	None	N/A	No record; no suitable habitat in study area; **Unlikely to Occur**
Swamp Antechinus	*Antechinus minimus maritimus*	Vulnerable		Vulnerable	Dense wet heath, tussock grassland, sedgeland heathy woodland and coastal heath and scrub (Menkhorst 1995). Requires mature, dense vegetation with thick ground cover (DAWE 2020). Shelters in short burrows or underneath dense leaf litter. Rarely occurs more than 200m above sea level. Though this species has also previously been detected at sites which had experienced some structural disturbance in the South Gippsland region (Nature Advisory; unpublished data).	None	N/A	No record; no suitable habitat in study area; **Unlikely to Occur**

Common Name	Scientific name	EPBC-T	EPBC-M	FFG	Habitat	Number of records	Date of last record	Likelihood of occurrence
Yellow-bellied Glider	*Petaurus australis*	Vulnerable			Forests with a predominance of smooth-barked eucalypts, as well as a mixture of eucalypt species. Uncommon in wet forests dominated by single tree species; a mixture of tree species is preferred (Menkhorst 1995). Inhabits a range of forest types, depending on the location in Victoria – western populations use dry woodland and forest, whereas southern, eastern and north-eastern populations use a variety of wet forest types (Menkhorst 1995). Require large hollows in large, old trees. In Mountain Ash forest dependent on extensive stands of old-growth forest – rare in young forest even when scattered old trees are available (Menkhorst 1995). Will persist in corridors as narrow as 200 m (Menkhorst 1995).	None	N/A	No record; no suitable habitat in study area; **Unlikely to Occur**
Frogs								
Growling Grass Frog	*Litoria raniformis*	Vulnerable		Vulnerable	Permanent, still or slow flowing water with fringing and emergent vegetation in streams, swamps, lagoons and artificial wetlands such as farm dams and abandoned quarries (Clemann & Gillespie 2004).	4	4/11/1999	No recent records in region; no suitable wetland in study area; **Unlikely to Occur**
Fish								
Dwarf Galaxias	*Galaxiella pusilla*	Vulnerable		Endangered	Ranges from the far west of the state through to the Mitchell River basin in central Gippsland. Vegetated margins of still water, ditches, swamps and backwaters of creeks, both ephemeral and permanent (Allen et al. 2002). Some wetlands where it occurs may partially or completely dry up during summer, with such wetlands reliant on seasonal flooding plus linkages to other sites where the species occurs, for habitat and population replenishment (Saddlier, Jackson & Hammer 2010). Dwarf Galaxias is also often found in association with burrowing freshwater crayfish (*Engaeus spp.*), with the crayfish burrows reportedly providing refuge from predators and dry conditions for the species (Saddlier, Jackson & Hammer 2010).	None	N/A	No records from region; no suitable wetland; **Unlikely to Occur**
Southern Pygmy Perch (Murray-Darling lineage)	*Nannoperca australis*	Vulnerable			Only the population in the Murray-Darling lineage is listed as threatened. Southern Pygmy Perch prefer habitats in low-gradient waterways and floodplains with slow flowing or still water and aquatic macrophyte cover or wood at shallow depths, which may have little or no flow in summer (TSSC 2021).	1	1/02/1997	One old record from region; no suitable waterways; **Unlikely to Occur**
Invertebrates								
Golden Sun Moth	*Synemon plana*	Vulnerable		Vulnerable	Areas that are, or have been native grasslands or grassy woodlands. It is known to inhabit degraded grasslands with introduced grasses being dominant, with a preference for the native wallaby grass being present (DEWHA 2009). Also known to be closely associated with exotic grass species, with populations found in grassland almost entirely composed of Chilean needlegrass (Richter et al. 2013).	None	N/A	No suitable native grassland; **Unlikely to Occur**

Notes: EPBC-T = threatened species status under EPBC Act; **EPBC-M =** migratory status under the EPBC Act (M = listed migratory taxa; Bonn Convention (A2H) – Convention on the Conservation of Migratory Species of Wild Animals – listed as a member of a family; Bonn Convention (A2S) – Convention on the Conservation of Migratory Species of Wild Animals – species listed explicitly; CAMBA – China- Australia Migratory Birds Agreement; JAMBA – Japan-Australia Migratory Birds Agreement; ROKAMBA – Republic of Korea Australia Migratory Birds Agreement); **FFG** = threatened species status under the FFG Act.

5.5.3. Susceptibility of listed fauna to impacts

The following analysis identifies the susceptibility of listed fauna species that may utilise the study area to development. This analysis includes consideration of the following factors:

- Mobility of the species;
- Availability and extent of other suitable habitat in the region and degree to which each species may rely on habitat in the study area; and

Birds (non-migratory)

One listed non-migratory bird species are considered to have the potential to occur in the study area. The susceptibility of these species to possible impacts from any development in the study area is discussed below.

- **Gang Gang Cockatoo** (EPBC Act: Endangered)

This species occurs in taller forested habitats in the south eastern corner of Australia. It is widespread in low numbers and regularly occurs in forests in the outer eastern suburbs of Melbourne.

The VBA contains 26 records from the search region, including Lysterfield Lake Park. The species is likely to occur in the study area predominantly flying overhead between the park and other treed habitats nearby. There is no habitat on the site for the species so the advent of development will not compromise its status in the region at all, particularly as it is capable of flying over semi-urban and urban areas between treed habitats. A significant impact on it is not anticipated from the proposed development.

- **Swift Parrot** (EPBC Act: Critically Endangered; FFG Act: Critically endangered)

Breeds in Tasmania and migrates to the mainland of Australia for the autumn, winter and early spring months. It lives mostly north of the Great Dividing Range. It is semi-nomadic, foraging for nectar in flowering eucalypts and lerps. The nomadic movements of this species in the non-breeding months mean that it can turn up almost anywhere in its mainland range that has nectar-bearing trees or lerp.

The VBA contained six records of the parrots from Lysterfield Park in 2018. This park is the neighbouring property to the study area, but it is currently a cleared grassland with very few suitable trees to support the parrots. No impact on the Swift Parrot is anticipated, and none are likely to visit the study area. No further action is required.

Migratory species

Four listed migratory bird species (excluding oceanic species and shorebirds) have the potential to occur in the study area. The susceptibility of these species to possible impacts from any development in the study area is discussed below.

- **White-throated Needletail** (EPBC Act: Vulnerable, Migratory; FFG Act: Vulnerable)

The White-throated Needletail is an aerial bird species that spends most of its life on the wing. This species is often observed in south-eastern Australia in the summer, flying ahead of storm fronts, feeding on flying insects.

VBA listed several records of the Needletail flying over the wooded area of Lysterfield Park, however, they do not roost in the park. The study area is a cleared farmland and when the needletails are in the area, they are more likely to restrict their flights to over the wooded park and would not be impacted by any activity at the study area.

- **Latham's Snipe** (EPBC Act: Migratory)

Latham's Snipe prefers open wetlands, though is known to occasionally inhabit farm drains and ditches, similar to that in the neighbouring properties around the study area. The species has been recorded on the study area during the site assessment (two individuals), and several recent records from Lysterfield Park are listed in the VBA. The snipe visits the study area in very small numbers given the very limited extent of habitat during the period when they are in Australia (August to March).

- **Rufous Fantail** (EPBC Act: Migratory)
- **Satin Flycatcher** (EPBC Act: Migratory)

The above two migratory species have similar ecologies; they are summer visitors to the study region and mainly inhabit tall wet sclerophyll forests, often in gullies. When on passage in warmer months, they are sometimes recorded in drier sclerophyll forests and woodlands. These species are virtually absent from south-eastern Australia during winter (Higgins et al. 2006). They are present from September or October until late March or early April, after which they move to tropical Australia and southern New Guinea. The habitat in which these two species are likely to visit is part of the neighbouring wooded parks, and therefore, they are unlikely to be impacted by the proposal.

5.6. Listed ecological communities

The EPBC Protected Matters Search Tool (DCCEEW 2020a) indicated that two ecological communities listed under the EPBC Act had the potential to occur in the search region (Table 5). Occurrence of these communities in the study area was determined based on an assessment of the native vegetation present against published descriptions and condition thresholds for these communities.

Table 5: EPBC Act-listed ecological communities and likelihood of occurrence in the study area

Ecological Community	EPBC Status	Occurrence in the study area
Natural Damp Grassland of the Victorian Coastal Plains	CR	Remnant patches did not demonstrate a tussock grassland structure, key grass species Kangaroo Grass *Themeda triandra* and Common Tussock-grass *Poa labillardierei* absent from remnant patches. **Does not occur.**
White Box-Yellow Box-Blakeley's Red Gum Grassy Woodland and Derived Native Grassland	CR	Characteristic canopy species absent and unlikely to have been historically dominant in remnant patches. **Does not occur.**

Notes: EPBC = status under the EPBC Act.

6. Assessment of impacts

6.1. Proposed development

The current proposal will involve construction of a school.

To determine impacts to native vegetation, the proposed school plan was overlaid with the native vegetation mapped as part of this investigation. Native vegetation occurring in the following locations was considered to be removed based on the proposed school plan:

- Direct removal:
  - Native vegetation within all proposed building envelopes; and
  - Native vegetation within all proposed driveways
- Consequential removal:
  - Native vegetation within 10 metres of all proposed building envelopes.

6.2. Impacts of proposed development

Various design measures have been undertaken for this proposal to avoid and minimise impacts to native vegetation. These are detailed in Section 7.3.1.

6.2.1. Native vegetation

The current school footprint will result in the loss of a total extent of 0.098 hectares of native vegetation as represented in Figure 2 and documented in the *Native Vegetation Removal* (NVR) report provided by DEECA (Appendix 7).

This comprised the following:

- 0.098 hectares of native vegetation in patches (including no large trees in patches).

The native vegetation to be removed is not in an area mapped as an endangered Ecological Vegetation Class.

There is an understanding that no native vegetation has been approved for removal on the property within the last five years.

Photographs of native vegetation proposed for removal are provided in Appendix 5.

6.2.2. Modelled species important habitat

The current proposal footprint will not have a significant impact on any habitat for any rare or threatened species as determined in Appendix 7.

6.2.3. Listed flora species

The analysis of the likelihood of occurrence of listed flora species presented in Section 5.3.2 identified that no listed flora species are likely to occur or have the potential to occur in the study area. Therefore, listed flora species are not susceptible to impacts from this development.

6.2.4. Fauna habitat

Following development of the study area, all grazing paddock habitat will be lost, with a portion subsequently replaced by managed lawns. However, an abundance of comparable grazing paddocks exist in the surrounding landscape and this is likely to continue to support any species which may utilise this habitat. Treed habitat will be retained, with a net gain expected from the planting of treed vegetation, as

indicated in the development plan. Although some aquatic habitat will be cleared, the establishment of a wetland is planned alongside retention of HZA A, and most of HZ B, and this is likely to provide a net gain in the area and potentially improvement of quality of this habitat type. It should be noted that scrub habitat will be lost, however given its limited extent and poor quality, this loss is unlikely to significantly impact species which may utilise it. There is also an abundance of more suitable understorey and scrub habitat in Lysterfield Park.

6.2.5. Listed fauna species

The EPBC Act protects a number of threatened species and ecological communities that are considered to be of national conservation significance. Any significant impacts on these species require the approval of the Australian Minister for the Environment.

Based on the relevant guidelines, the proposed development is unlikely to result in a significant impact on EPBC Act-listed values presented below.

- Gang Gang Cockatoo (Endangered-EPBC Act)
- Swift Parrot (Critically Endangered-EPBC Act; Critically Endangered-FFG Act)
- White-throated Needletail (Vulnerable-EPBC Act; Migratory-EPBC Act; Vulnerable-FFG Act)
- Latham's Snipe (Migratory-EPBC Act)
- Rufous Fantail (Migratory-EPBC Act)
- Satin Flycatcher (Migratory-EPBC Act)

6.2.6. Threatened ecological communities

The proposed development footprint will not impact any threatened ecological communities as none occur in the study area.

Figure 2: Native vegetation to be removed

Project number: 19120.02 **Project**: Harswood Road, Narre Warren North **Date**: 23/02/2024

N

Metres
0 30

Study area

Property boundary

Native vegetation

Swampy Riparian Woodland (EVC 83)

Grassy Forest (EVC0128)

Native vegetation to be removed

Nature Advisory
PO Box 337, Camberwell, VIC 3124, Australia
www.natureadvisory.com.au
03 9815 2111 - info@natureadvisory.com.au

7. Implications under legislation and policy

7.1. Clause 12.01 of the of the Planning Scheme

The overarching objective of Clause 12.01 is to protect and conserve Victoria's biodiversity. The proposed school development is largely in accordance with this objective as treed vegetation will be retained and integrated into the development layout, and additional wetland habitat will be established. This will result in the protection and establishment of native habitat in an otherwise highly modified setting. It should also be noted that the native vegetation proposed for removal is considered very low quality. This is demonstrated by the species-depauperate nature of remnant patches and high weed cover noted. Furthermore, this native vegetation is very limited in extent and disconnected from larger tracts of native habitat in the landscape, such as bushland associated with Lysterfield Park. Therefore, its removal will not impact biolinks or lead to the loss of significant habitat.

7.2. Clause 52.17 of the Planning Scheme

A permit for the proposed removal of native vegetation is required under Cl. 52.17 of the State Planning Provisions.

7.2.1. Exemptions

Exemptions listed in Cl. 52.17-7 relevant to the study area are:

- *Planted vegetation:* Native vegetation that is to be removed, destroyed or lopped that was either planted or grown as a result of direct seeding. This exemption does not apply to native vegetation planted or managed with public funding for the purpose of land protection or enhancing biodiversity.
- *Regrowth:* Native vegetation that is to be removed, destroyed or lopped that has naturally established or regenerated on land lawfully cleared of naturally established native vegetation, and may be classified as one of the following:
    - Less than 10 years old; or
    - Austral Bracken (*Pteridium esculentum*); or
    - Within the boundary of a timber production plantation, as indicated on a Plantation Development Notice or other documented record and has established after the plantation; or
    - Less than ten years old at the time of a property vegetation plan being signed by the Secretary to DEECA (as constituted under Part 2 of the *Conservation, Forests and Lands Act 1987*) and is shown on that plan as being 'certified regrowth'; and on land that is to be used or maintained for cultivation or pasture during the term of that plan.

  This exemption does not apply to land where native vegetation has been destroyed or otherwise damaged as a result of flood, fire or other natural disaster.

  The native vegetation in the study area does not meet any of the above criteria and so no exemptions apply.

7.3. Implications under the Guidelines

7.3.1. Avoid and minimise statement

In accordance with the Guidelines, all applications to remove native vegetation must provide an avoid and minimise statement that describes any efforts undertaken to avoid the removal of, and minimise the impacts to biodiversity and other values of native vegetation, and how these efforts were focused on

areas of native vegetation with the highest value. Efforts to avoid and minimise impacts to native vegetation in the current application are presented as follows:

- Site level planning – Treed vegetation present along the road reserve of Horswood Road and the property boundaries will largely be retained and integrated into the development layout. This will allow for the retention of higher quality native vegetation and fauna habitat. Furthermore, a wetland will be established on the eastern border of the study area and support landscape features consistent with riparian habitat.
- Previous iterations of the design required the removal of Habitat Zones A and B. The design has now been updated to avoid impacts to Habitat Zone A, and minimise impacts to Habitat Zone B (Figure 2). Native vegetation within these patches will be retained and protected, and will be sensitively incorporated into an enhanced wetland area as described in the accompanying Vegetation Management Plan (Nature Advisory, 2024).
- The crossover drive on Horswood Road has been strategically located at a natural break in the vegetation patch to minimize impacts on the verge vegetation, limiting the removal to some understory vegetation and Tree 35 as identified in the arborist report (Green Connection, 2024).
- Furthermore, no feasible opportunities exist to further avoid and minimise impacts to native vegetation without undermining the key objectives of the proposal.

7.3.2. Assessment pathway

The assessment pathway is determined by the location category and extent of native vegetation as detailed for the study area as follows:

- **Location Category:** Location 1
- **Extent of native vegetation:** A total of 0.098 hectares of native vegetation (including no large trees).

Based on the extent of native vegetation removal being <0.5 hectares, not including any large trees, and being in Location 1, the Guidelines stipulate that the proposal is to be assessed under the **Basic** assessment pathway, as determined by the following matrix:

Table 6: Assessment pathway matrix

Extent of native vegetation	Location Category		
	Location 1	Location 2	Location 3
< 0.5 hectares and not including any large trees	**Basic**	Intermediate	Detailed
< 0.5 hectares and including one or more large trees	Intermediate	Intermediate	Detailed
≥ 0.5 hectares	Detailed	Detailed	Detailed

This proposal **would not** trigger a referral to DEECA based on the above criteria.

7.3.3. Offset requirements

Offsets required to compensate for the proposed removal of native vegetation from the study area are as follows:

- 0.022 general habitat units and must include the following offset attribute requirements:
  - Minimum strategic biodiversity value (SBV) of 0.555.
  - Occur within the Port Phillip and Westernport CMA boundary or the Casey municipal district.

Under the Guidelines all offsets must be secured prior to the removal of native vegetation.

7.3.4. Offset statement

The offset target for the current proposal will be achieved via a third-party offset.

An online search of the Native Vegetation Credit Register (NVCR) has shown that the required offset is currently available for purchase from a native vegetation credit owner (DEECA 2024e).

Evidence that the required offset is available is provided in Appendix 8. The required offset would be secured following approval of the application to remove native vegetation.

7.4. EPBC Act

The EPBC Act protects a number of threatened species and ecological communities that are considered to be of national conservation significance. Any significant impacts on these species require the approval of the Australian Minister for the Environment.

Based on the relevant guidelines, the proposed development is unlikely to result in a significant impact on EPBC Act-listed values presented below.

- Swift Parrot (Critically Endangered-EPBC Act; Critically Endangered-FFG Act)
- White-throated Needletail (Vulnerable-EPBC Act; Migratory-EPBC Act; Vulnerable-FFG Act)
- Latham's Snipe (Migratory-EPBC Act)
- Rufous Fantail (Migratory-EPBC Act)
- Satin Flycatcher (Migratory-EPBC Act)

Therefore, there are no implications under the EPBC Act.

7.5. FFG Act

The Victorian FFG Act lists threatened and protected species and ecological communities (DELWP 2018b, DELWP 2017b). Any removal of threatened flora species or communities (or protected flora) listed under the FFG Act from public land requires a Protected Flora Permit under the Act, obtained from DEECA.

The FFG Act only applies to private land in relation to the commercial collection of grasstrees, tree ferns and sphagnum moss.

No FFG Act values listed as threatened or protected are susceptible to impacts from the proposed development on public land.

The land addressed in this assessment is private land; therefore, a Protected Flora Licence or Permit under the FFG Act would not be required for the current proposal.

7.6. EE Act

The *Ministerial Guidelines for Assessment of Environmental Effects under the* Environment Effects Act 1978 (DSE 2006) identifies criteria that trigger a Referral to the State Minister for Planning.

Based on the relevant criteria, a Referral to the State Minister for Planning will not be required under the EE Act for the aspects covered by the current investigation.

7.7. CaLP Act

The *Catchment and Land Protection Act 1994* (CaLP Act) requires that landowners (or a third party to whom responsibilities have been legally transferred) must eradicate regionally prohibited weeds and prevent the growth and spread of regionally controlled weeds.

Property owners who do not eradicate Regionally prohibited weeds or prevent the growth and spread of Regionally controlled weeds for which they are responsible, may be issued with a Land Management Notice or Directions Notice that requires specific control work to be undertaken.

In accordance with the *Catchment and Land Protection Act 1994*, the noxious weed species listed below, that were recorded in the study area, must be controlled.

- Blackberry
- Boneseed
- Gorse
- Hawthorn
- Spear Thistle
- Sweet Briar

Precision control methods that minimise off-target kills (e.g., spot spraying) should be used in environmentally sensitive areas (e.g., within or near native vegetation, waterways, etc.).

8. Design and construction mitigation recommendations

The following design recommendations are provided to avoid/minimise impacts to native vegetation, and flora and fauna habitats:

- When establishing wetland habitat, aquatic and semi-aquatic indigenous species that are characteristic of Swamp Scrub (EVC 53) and/or Swampy Riparian Woodland (EVC 83) should be utilised, as these Ecological Vegetation Classes (EVCs) are modelled to occur within the study area and its immediate vicinity.
- Where feasible, indigenous trees should be established preferentially to exotic ornamental trees, given their value as fauna habitat.
- Further design recommendations are provided within the accompanying Vegetation Management Plan to respond to Schedule 1 to Clause 42.03, and encourage conservation and enhancement of existing vegetation, promote vegetation corridors, and promote landscape practices compatible with landscape conservation (Nature Advisory, 2024).
- Recommendations to mitigate impacts to native vegetation during construction, and to manage it during the operational stage of the proposal, are provided within the accompanying Vegetation Management Plan (Nature Advisory, 2024). These measures will ensure that retained native vegetation is protected and enhanced.
- Measures to protect trees on site are provided within the arboricultural impact assessment (Green Connection, 2024).

9. References

Green Connection (2024) Arboricultural Impact Assessment: 19-23 Horswood Road, Narre Warren VIC. Version 4.

DCCEEW 2023a, *EPBC Act Protected Matters Search Tool*, Department of the Environment and Energy, Canberra, https://www.environment.gov.au/epbc/pmst/index.html.

DCCEEW 2023b, *Species Profile and Threats Database*, Department of Climate Change, Energy, the Environment and Water, Canberra, https://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl.

DELWP 2017a, *Guidelines for the removal, destruction or lopping of native vegetation*-, Department of Environment, Land, Water and Planning, East Melbourne.

DELWP 2017b, *Flora and Fauna Guarantee Act 1988 – Protected Flora List, June 2017*, Department of Environment, Land, Water and Planning, East Melbourne.

DELWP 2018a, *Assessor's Handbook – Applications to remove, destroy or lop native vegetation* (Version 1.1, dated October 2018), Department of Environment, Land, Water and Planning, East Melbourne.

DELWP 2018b, *Flora and Fauna Guarantee Act 1988 – Threatened List, April 2018*, Department of Environment, Land, Water and Planning, East Melbourne.

DEECA 2023a, *NatureKit*, Department of Environment, Land, Water and Planning, East Melbourne, Victoria, https://www.environment.vic.gov.au/biodiversity/naturekit.

DEECA 2023b, *MapShareVic*, Department of Environment, Land, Water and Planning, East Melbourne, Victoria, https://www2.delwp.vic.gov.au/maps/maps-and-services/interactive-maps.

DEECA 2023c, *Native Vegetation Information Management system*, Department of Environment, Land, Water and Planning, East Melbourne, Victoria, https://nvim.delwp.vic.gov.au/.

DEECA 2023d, *Victorian Biodiversity Atlas 3.2.8*, Department of Environment, Land, Water and Planning, East Melbourne, Victoria, https://vba.dse.vic.gov.au.

DEECA 2024e, *Online Search of the Native Vegetation Credit Register,* Department of Environment, Land, Water and Planning, East Melbourne, https://nvcr.delwp.vic.gov.au.

Scoring method (Version 1.3), Department of Environment, Land, Water and Planning, East Melbourne.

Parkes D, Newell G & Cheal D 2003, Assessing the Quality of Native Vegetation: The 'habitat hectares' approach', *Ecological Management and Restoration* 4:29 – 38.

Nature Advisory (2024) 19-23 Horswood Road, Narre Warren North – Vegetation Management Plan. Melbourne

Nadia Gill Landscape Architects (2024) 19-23 Horswood Road, Narre Warren North – Landscape Masterplan.

Appendix 1: Details of the assessment process in accordance with the Guidelines for the removal, destruction or lopping of native vegetation (DELWP 2017a)

Purpose and objective

Policies and strategies relating to the protection and management of native vegetation in Victoria are defined in the State Planning Policy Framework (SPPF). The objective of all Victorian Planning Schemes, as identified in Clause 12.01, is 'To ensure that there is no net loss to biodiversity as a result of the removal, destruction or lopping of native vegetation'.

This is to be achieved through the following three-step approach, as described in the Guidelines:

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 from the removal, destruction or lopping of native vegetation.

Note: While a planning permit may still be required, if native vegetation does not meet the definition of either a patch or a scattered tree, an offset under the Guidelines is not required.

Assessment pathways

The first step in determining the type of assessment required for any site in Victoria is to determine the assessment pathway for the proposed native vegetation removal. The three possible assessment pathways for applications to remove native vegetation in Victoria are the following:

- Basic;
- Intermediate; or
- Detailed.

This assessment pathway is determined by the following two factors:

- **Location Category**, as determined using the Location Map of Victoria. The location category indicates the potential risk to biodiversity from removing a small amount of native vegetation. The three location categories are defined as follows:
  - Location 1 – shown in light blue-green on the Location Map; occurring over most of Victoria.
  - Location 2 – shown in dark blue-green on the Location Map; includes areas mapped as endangered EVCs and/or sensitive wetlands and coastal areas.
  - Location 3 – shown in brown on the Location Map; includes areas where the removal of less than 0.5 hectares of native vegetation could have a significant impact on habitat for rare and threatened species.
- **Extent of native vegetation** – The extent of any patches and scattered trees proposed to be removed (and the extent of any past native vegetation removal), with consideration as to whether the proposed removal includes any large trees. Extent of native vegetation is determined as follows:
  - **Patch** – the area of the patch in hectares.
  - **Scattered Tree** – the extent of a scattered tree is dependent on whether the scattered tree is small or large. A tree is considered to be a large tree if the DBH is greater than or equal to the large tree benchmark DBH for the relevant bioregional EVC. Any scattered tree that is not a

large tree is a small scattered tree. The extent of large and small scattered trees is determined as follows:

- **Large scattered tree** – the area of a circle with a 15 metre radius, with the trunk of the tree at the centre.
- **Small scattered tree** – the area of a circle with a ten-metre radius, with the trunk of the tree at the centre.

The assessment pathway for assessing an application to remove native vegetation is subsequently determined as shown in the following matrix table:

Extent of native vegetation	Location Category		
	Location 1	Location 2	Location 3
< 0.5 hectares and not including any large trees	Basic	Intermediate	Detailed
< 0.5 hectares and including one or more large trees	Intermediate	Intermediate	Detailed
≥ 0.5 hectares	Detailed	Detailed	Detailed

Note: If the native vegetation to be removed includes more than one location category, the higher location category is used to determine the assessment pathway.

Landscape scale information – strategic biodiversity value

The strategic biodiversity value (SBV) is a measure of a location's importance to Victoria's biodiversity, relative to other locations across the state. This is represented as a score between 0 and 1, and determined from the SBV map, available from *NVIM* (DEECA 2022c).

Landscape scale information – habitat for rare or threatened species

Habitat importance for rare or threatened species is a measure of the importance of a location in the landscape as habitat for a particular rare or threatened species, in relation to other habitat available for that species. This is represented as a score between 0 and 1 and determined from the Habitat importance maps, administered by DEECA.

This includes two groups of habitat:

- **Highly localised habitats** – Limited in area and considered to be equally important, therefore having the same habitat importance score.
- **Dispersed habitats** – Less limited in area and based on habitat distribution models.

Habitat for rare or threatened species is used to determine the type of offset required in the detailed assessment pathway.

Biodiversity value

A combination of site-based and landscape scale information is used to calculate the biodiversity value of native vegetation to be removed. Biodiversity value is represented by a general or species habitat score, as determined below.

Firstly, the extent and condition of native vegetation to be removed are combined to determine the habitat hectares as follows:

Habitat hectares = extent of native vegetation × condition score

Secondly, the habitat hectare score is combined with a landscape factor to obtain an overall measure of biodiversity value. Two landscape factors exist as follows:

- **General landscape factor** – determined using an adjusted strategic biodiversity score and relevant when no habitat importance scores are applicable;
- **Species landscape factor** – determined using an adjusted habitat importance score for each rare or threatened species habitat mapped at a site in the Habitat importance map.

These factors are subsequently used as follows to determine the biodiversity value of a site:

General habitat score = habitat hectares × general landscape factor

Species habitat score = habitat hectares × species landscape factor

Offset requirements

A native vegetation offset is required for the approved removal of native vegetation. Offsets conform to one of two types and each type incorporates a multiplier to address the risk of 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 (i.e., the proportional impact is below the species offset threshold). In this case a multiplier of 1.5 applies to determine the general offset amount.

General offset (amount of general habitat units) = general habitat score × 1.5

- A **species offset** is required when the removal of native vegetation has a significant impact on habitat for a rare or threatened species (i.e., the proportional impact is above the species offset threshold). In this case a multiplier of 2 applies to determine the species offset amount.

Species offset (amount of species habitat units) = Species habitat score × 2

Note: If native vegetation does not meet the definition of either a patch or scattered tree, an offset is not required.

Offset attributes

Offsets must meet the following attribute requirements, as relevant:

- General offsets

- **Offset amount** – general offset = general habitat score × 1.5
- **Strategic biodiversity value (SBV)** – the offset has at least 80% of the SBV of the native vegetation removed
- **Vicinity** – the offset is in the same CMA boundary or municipal district as the native vegetation removed
- Habitat for rare and threatened species – N/A
- **Large trees** – the offset includes the protection of at least one large tree for every large tree to be removed

- Species offsets
  - **Offset amount** – species offset = species habitat score × 2
  - Strategic biodiversity value (SBV): N/A
  - Vicinity: N/A
  - **Habitat for rare and threatened species** – the offset comprises mapped habitat according to the Habitat importance map for the relevant species
  - **Large trees** – the offset includes the protection of at least one large tree for every large tree to be removed

Appendix 2: Detailed habitat hectare assessment results

Habitat Zone			A	B	C
Bioregion			HSF	HSF	HSF
EVC Number			83	83	83
Total area of Habitat Zone (ha)			0.028	0.154	0.049
Site Condition	Large Old Trees	/10	0	0	0
	Tree Canopy Cover	/5	0	0	0
	Lack of Weeds	/15	6	4	6
	Understorey	/25	5	5	5
	Recruitment	/10	0	0	0
	Organic Matter	/5	0	0	0
	Logs	/5	0	0	0
Landscape Context	Patch Size	/10	1	1	1
	Neighbourhood	/10	0	0	1
	Distance to Core	/5	3	3	3
Total Condition Score		**/100**	**15**	**13**	**16**

* Modified approach to habitat scoring – refer to Table 14 of DEECA's Vegetation Quality Assessment Manual (DSE, 2004).

Appendix 3: Flora species recorded in the study area

Origin	Common name	Scientific name	FFG	EPBC	CaLP
*	Cootamundra Wattle	*Acacia baileyana*			-
	Lightwood	*Acacia implexa*			-
#	Sallow Wattle	*Acacia longifolia*	P		-
	Black Wattle	*Acacia mearnsii*	P		-
	Bidgee-widgee	*Acaena novae-zelandiae*			-
*	Sheep Sorrel	*Acetosella vulgaris*			-
*	Brown-top Bent	*Agrostis capillaris*			-
*	Sweet Vernal-grass	*Anthoxanthum odoratum*			-
	Common Woodruff	*Asperula conferta*			-
	Sedge	*Carex spp.*			-
*	Kikuyu	*Cenchrus clandestinus*			-
*	Boneseed	*Chrysanthemoides monilifera*			C
*	Spear Thistle	*Cirsium vulgare*			C
*	Hawthorn	*Crataegus monogyna*			C
	Common Water-ribbons	*Cycnogeton procerum*			-
*	Couch	*Cynodon dactylon var. dactylon*			-
*	Drain Flat-sedge	*Cyperus eragrostis*			-
*	Cocksfoot	*Dactylis glomerata*			-
	Hairy Willow-herb	*Epilobium hirtigerum*			-
	Tall Spike-rush	*Eleocharis sphacelata*			-
*	Flaxleaf Fleabane	*Erigeron bonariensis*			-
*	Sugar Gum	*Eucalyptus cladocalyx*			-
*	Yorkshire Fog	*Holcus lanatus*			-
*	Flatweed	*Hypochaeris radicata*			-
	Nodding Club-sedge	*Isolepis cernua s.s.*			-
	Green Rush	*Juncus gregiflorus*			-

	Giant Rush	*Juncus ingens*			
	Pale Rush	*Juncus pallidus*			-
*	Hairy Hawkbit	*Leontodon saxatilis subsp. saxatilis*			-
	Angled Lobelia	*Lobelia anceps*			-
	Small Loosestrife	*Lythrum hyssopifolia*			-
*	Paspalum	*Paspalum dilatatum*			-
*	Water Couch	*Paspalum distichum*			-
	Slender Knotweed	*Persicaria decipiens*			-
*	Toowoomba Canary-grass	*Phalaris aquatica*			-
	Common Reed	*Phragmites australis*			-
*	Radiata Pine	*Pinus radiata*			-
*	Ribwort	*Plantago lanceolata*			-
*	Annual Meadow-grass	*Poa annua s.l.*			-
*	Creeping Buttercup	*Ranunculus repens*			-
*	Onion Grass	*Romulea rosea*			-
*	Sweet Briar	*Rosa rubiginosa*			C
*	Blackberry	*Rubus fruticosus spp. agg.*			C
*	Curled Dock	*Rumex crispus*			-
*	Rough Sow-thistle	*Sonchus asper s.l.*			-
*	Common Sow-thistle	*Sonchus oleraceus*			-
*	White Clover	*Trifolium repens var. repens*			-
	Streaked Arrowgrass	*Triglochin striata*			-
	Narrow-leaf Cumbungi	*Typha domingensis*			-
*	Gorse	*Ulex europaeus*			C
*	Squirrel-tail Fescue	*Vulpia bromoides*			-

Notes: EPBC = Threatened species status under the EPBC Act; **FFG-T** = Threatened species status under the FFG Act; **FFG-P =** Listed as protected (P) under the FFG Act; **CaLP Act**: Declared noxious weeds under the CaLP Act (S = State Prohibited Weeds – any infestations must be reported to DEECA that is responsible for control of these; P = Regionally Prohibited Weeds –

landowners must eradicate these; C = Regionally Controlled Weeds – landowners must prevent the growth and spread of these; R = Restricted Weeds – trade in these weeds and propagules, either as plants, seeds or contaminants in other materials is prohibited).

* = introduced to Victoria

= Victorian native taxa occurring outside the natural range

† = planted

Appendix 4: Fauna species recorded in the study area

Origin	Common name	Scientific name	EPBC-T	EPBC-M	FFG
Birds					
	Australian Magpie	*Gymnorhina tibicen*			
	Australian Wood Duck	*Chenonetta jubata*			
*	Common Blackbird	*Turdus merula*			
	Dusky Woodswallow	*Artamus cyanopterus*			
*	European Starling	*Sturnus vulgaris*			
	Grey Butcherbird	*Cracticus torquatus*			
*	House Sparrow	*Passer domesticus*			
	Indian Mynah	*Acridotheres tristis*			
	Latham's Snipe	*Gallinago hardwickii*		M	
	Magpie-lark	*Grallina cyanoleuca*			
	Noisy Miner	*Manorina melanocephala*			
	Pacific Black Duck	*Anas superciliosa*			
	Purple Swamphen	*Porphyrio melanotus*			
	Rainbow Lorikeet	*Trichoglossus moluccanus*			
	Red Wattlebird	*Anthochaera carunculata*			
	Superb Fairywren	*Malurus cyaneus*			
	Welcome Swallow	*Hirundo neoxena*			
	Willy Wagtail	*Rhipidura leucophrys*			
Mammals					
	Eastern Grey Kangaroo	*Macropus giganteus*			
Amphibians					
	Common Eastern Froglet	*Crinia signifera*			
	Striped Marsh Frog	*Limnodynastes peronii*			

Notes: EPBC-T = Threatened species status under EPBC Act; **EPBC-M**: Migratory status under the EPBC Act (M = listed migratory taxa; Bonn Convention (A2H) – Convention on the Conservation of Migratory Species of Wild Animals – listed as a member of a family; Bonn Convention (A2S) – Convention on the Conservation of Migratory Species of Wild Animals – species listed explicitly; CAMBA – China-Australia Migratory Birds Agreement; JAMBA – Japan-Australia Migratory Birds Agreement; ROKAMBA – Republic of Korea Australia Migratory Birds Agreement); **FFG:** = Threatened species status under the FFG Act.

* = introduced to Victoria

Appendix 5: Photographs of native vegetation proposed for removal

All photographs were taken on 7 March 2023

Habitat Zone A dominated by Rush and Common Reed.

Habitat Zone B, supporting a dense swathe of Native Rush.

Dam in Habitat Zone B fringed by Tall Spike-rush and Blackberry infestations.

Dam in Habitat Zone C dominated by Native Rush and a dense groundcover of Kikuyu.

Habitat Zone D grassy forest in area of proposed crossover.

Appendix 6: EVC benchmarks

Swampy Riparian Woodland (EVC 83) – Highland – Southern Fall

Grassy Forest (EVC 128) – Highland – Southern Fall

Appendix 7: 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: **28/02/2024**
Time of issue: **10:30 am**

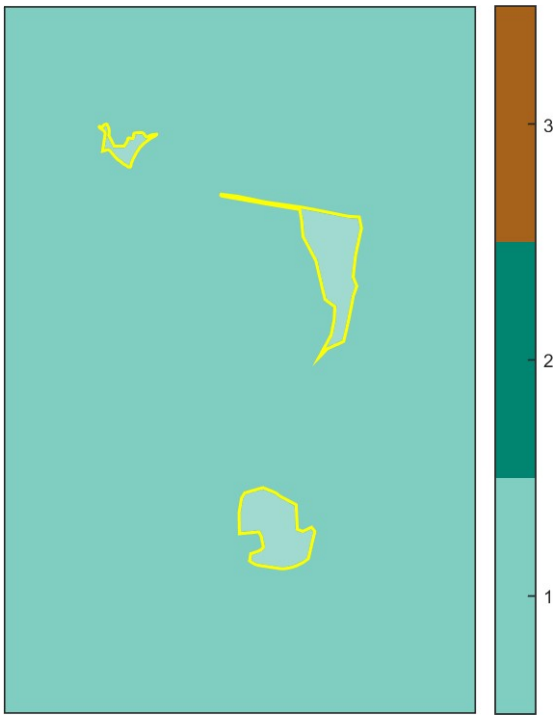
Report ID: NAA_2024_023

Project ID	19120_19_23_Horswood_Rd_removal_240223

Assessment pathway

Assessment pathway	**Basic Assessment Pathway**
Extent including past and proposed	0.098 ha
Extent of past removal	0.000 ha
Extent of proposed removal	0.098 ha
No. Large trees proposed to be removed	0
Location category of proposed removal	Location 1 The native vegetation is not in an area mapped as an endangered Ecological Vegetation Class (as per the statewide EVC map), sensitive wetland or coastal area. Removal of less than 0.5 hectares in this location will not have a significant impact on any habitat for a rare or threatened species

1. Location map



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]	0.022 general habitat units
Vicinity	Port Phillip and Westernport Catchment Management Authority (CMA) or Casey City Council
Minimum strategic biodiversity value score[2]	0.555
Large trees	0 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 Basic Assessment Pathway and it will be assessed under the Basic 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 (met unless you wish to include a site assessment)
- Maps showing the native vegetation and property
- 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
- 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

All zones require a general offset, the general habitat units each 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

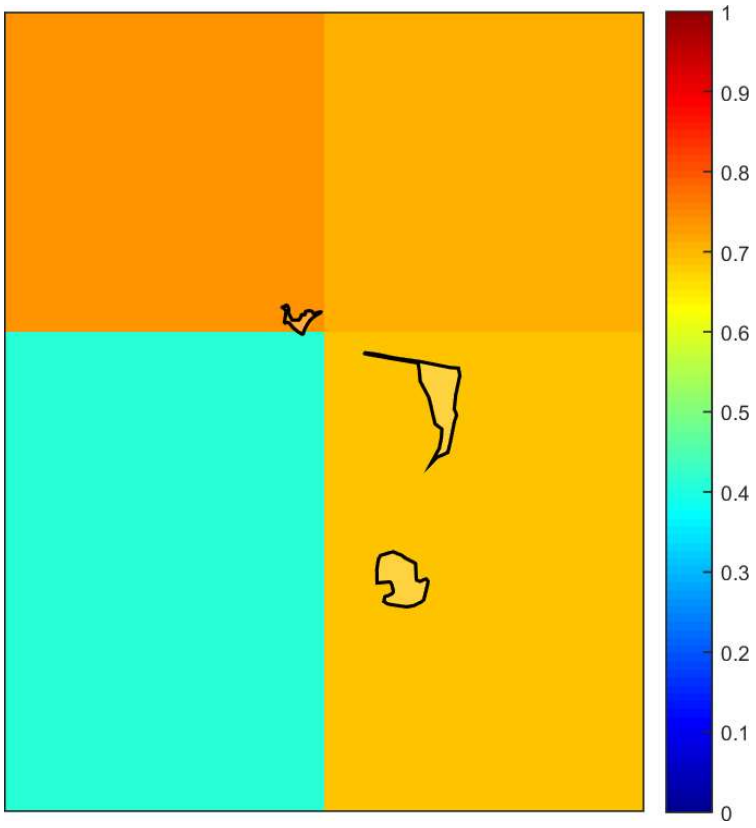
Information provided by or on behalf of the applicant in a GIS file							Information calculated by EnSym					
Zone	**Type**	**BioEVC**	**BioEVC conservation status**	**Large tree(s)**	**Partial removal**	**Condition score**	**Polygon Extent**	**Extent without overlap**	**SBV score**	**HI score**	**Habitat units**	**Offset type**
1-C	Patch	hsf_0083	Vulnerable	0	no	0.160	0.049	0.049	0.690		0.010	General
1-B	Patch	hsf_0083	Vulnerable	0	no	0.130	0.041	0.041	0.690		0.007	General
1-D	Patch	hsf_0128	Vulnerable	0	no	0.560	0.008	0.008	0.733		0.006	General

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

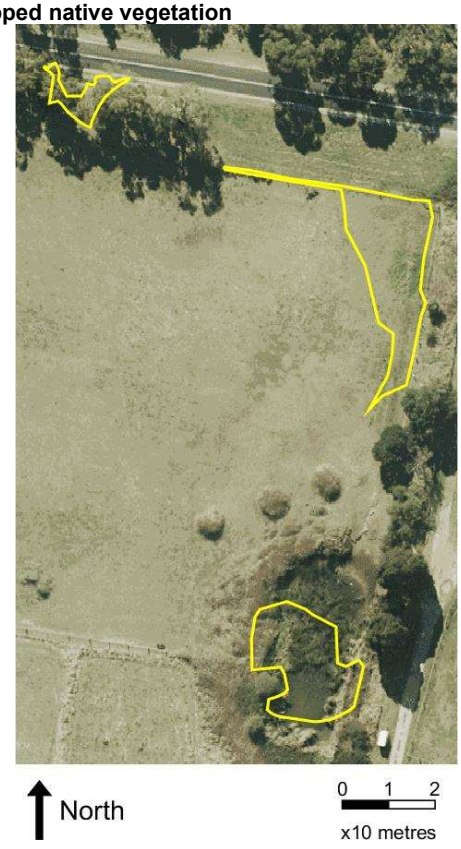
This is not applicable in the Basic Assessment Pathway.

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 8: Evidence that native vegetation offset requirement is available

Report of available native vegetation credits

This report lists native vegetation credits available to purchase through the Native Vegetation Credit Register.

This report is **not evidence** that an offset has been secured. An offset is only secured when the units have been purchased and allocated to a permit or other approval and an allocated credit extract is provided by the Native Vegetation Credit Register.

Date and time: 27/02/2024 01:48 **Report ID: 23017**

What was searched for?

General offset

General habitat units	Strategic biodiversity value	Large trees	Vicinity (Catchment Management Authority or Municipal district)	
0.022	0.555	0	CMA	Melbourne Water
			or LGA	Casey City

Details of available native vegetation credits on 27 February 2024 01:48

These sites meet your requirements for general offsets.

Credit Site ID	GHU	LT	CMA	LGA	Land owner	Trader	Fixed price	Broker(s)
BBA-0277	2.520	443	Melbourne Water	Mornington Peninsula Shire	No	Yes	No	Abezco, Ethos, VegLink
BBA-0670	16.287	107	Melbourne Water	Cardinia Shire	No	Yes	No	Abezco, VegLink
BBA-0677	9.425	1427	Melbourne Water	Whittlesea City	No	Yes	No	Abezco, VegLink
BBA-0678	43.353	2602	Melbourne Water	Nillumbik Shire	No	Yes	No	VegLink
BBA-0678_02	0.562	58	Melbourne Water	Nillumbik Shire	Yes	Yes	No	Abezco, VegLink
BBA-0931	1.258	0	Melbourne Water	Moorabool Shire	No	Yes	No	VegLink
BBA-0931	0.034	0	Melbourne Water	Moorabool Shire	Yes	Yes	No	Bio Offsets
BBA-2789	1.317	14	Melbourne Water	Baw Baw Shire	Yes	Yes	No	Contact NVOR
BBA-2790	2.911	116	Melbourne Water	Baw Baw Shire	Yes	Yes	No	Contact NVOR
BBA-2832	0.090	0	Melbourne Water	Nillumbik Shire	Yes	Yes	Yes	Nillumbik SC
BBA-2870	0.044	0	Melbourne Water	Yarra Ranges Shire	No	Yes	No	Contact NVOR
BBA-2870	2.338	398	Melbourne Water	Yarra Ranges Shire	Yes	Yes	No	VegLink
BBA-2871	15.593	1595	Melbourne Water	Yarra Ranges Shire	Yes	Yes	No	VegLink
BBA-3017_02	1.984	0	Melbourne Water	Greater Geelong City	No	Yes	No	VegLink
TFN-C1636	0.045	111	Melbourne Water	Yarra Ranges Shire	Yes	Yes	No	Yarra Ranges SC

TFN-C1664	1.205	56	Melbourne Water	Yarra Ranges Shire	Yes	Yes	No	Yarra Ranges SC
TFN-C1763_3	11.231	0	Melbourne Water	Mornington Peninsula Shire	Yes	Yes	No	Ecocentric
VC_CFL-0838_01	0.121	354	Melbourne Water	Yarra Ranges Shire	Yes	Yes	No	VegLink
VC_CFL-3016_01	0.034	22	Melbourne Water	Yarra Ranges Shire	Yes	Yes	No	VegLink
VC_CFL-3084_02	0.038	38	Melbourne Water	Cardinia Shire	Yes	Yes	No	VegLink
VC_CFL-3682_01	1.834	0	Melbourne Water	Nillumbik Shire	Yes	Yes	No	Abezco
VC_CFL-3687_01	0.278	61	Melbourne Water	Baw Baw Shire	Yes	Yes	No	Baw Baw SC
VC_CFL-3708_01	0.198	507	Melbourne Water	Yarra Ranges Shire	Yes	Yes	No	VegLink
VC_CFL-3709_01	0.139	395	Melbourne Water	Yarra Ranges Shire	Yes	Yes	No	VegLink
VC_CFL-3710_01	6.468	322	Melbourne Water	Yarra Ranges Shire	Yes	Yes	No	VegLink
VC_CFL-3740_01	0.022	57	Melbourne Water	Cardinia Shire, Yarra Ranges Shire	Yes	Yes	No	Bio Offsets
VC_CFL-3740_01	0.085	16	Melbourne Water	Yarra Ranges Shire	Yes	Yes	No	Bio Offsets
VC_CFL-3744_01	1.271	326	Melbourne Water	Macedon Ranges Shire	Yes	Yes	No	VegLink
VC_CFL-3762_01	0.047	79	Melbourne Water	Moorabool Shire	Yes	Yes	No	VegLink
VC_CFL-3764_01	5.124	0	Melbourne Water	Yarra Ranges Shire	Yes	Yes	No	VegLink
VC_CFL-3781_01	0.559	0	Melbourne Water	Moorabool Shire	Yes	Yes	Yes	VegLink

These sites meet your requirements using alternative arrangements for general offsets.

Credit Site ID	GHU	LT	CMA	LGA	Land owner	Trader	Fixed price	Broker(s)

There are no sites listed in the Native Vegetation Credit Register that meet your offset requirements when applying the alternative arrangements as listed in section 11.2 of the Guidelines for the removal, destruction or lopping of native vegetation.

These potential sites are not yet available, land owners may finalise them once a buyer is confirmed.

Credit Site ID	GHU	LT	CMA	LGA	Land owner	Trader	Fixed price	Broker(s)
VC_CFL-3746_01	4.050	467	Melbourne Water	Macedon Ranges Shire	Yes	Yes	No	VegLink

LT - Large Trees *CMA - Catchment Management Authority* *LGA - Municipal District or Local Government Authority*

Next steps

If applying for approval to remove native vegetation
Attach this report to an application to remove native vegetation as evidence that your offset requirement is currently available.

If you have approval to remove native vegetation
Below are the contact details for all brokers. Contact the broker(s) listed for the credit site(s) that meet your offset requirements. These are shown in the above tables. If more than one broker or site is listed, you should get more than one quote before deciding which offset to secure.

Broker contact details

Broker Abbreviation	Broker Name	Phone	Email	Website
Abezco	Abzeco Pty. Ltd.	(03) 9431 5444	offsets@abzeco.com.au	www.abzeco.com.au
Baw Baw SC	Baw Baw Shire Council	(03) 5624 2411	bawbaw@bawbawshire.vic.gov.au	www.bawbawshire.vic.gov.au
Bio Offsets	Biodiversity Offsets Victoria	0452 161 013	info@offsetsvictoria.com.au	www.offsetsvictoria.com.au
Contact NVOR	Native Vegetation Offset Register	136 186	nativevegetation.offsetregister@delwp.vic.gov.au	www.environment.vic.gov.au/native-vegetation
Ecocentric	Ecocentric Environmental Consulting	0410 564 139	ecocentric@me.com	Not avaliable
Ethos	Ethos NRM Pty Ltd	(03) 5153 0037	offsets@ethosnrm.com.au	www.ethosnrm.com.au
Nillumbik SC	Nillumbik Shire Council	(03) 9433 3316	offsets@nillumbik.vic.gov.au	www.nillumbik.vic.gov.au
TFN	Trust for Nature	8631 5888	offsets@tfn.org.au	www.trustfornature.org.au
VegLink	Vegetation Link Pty Ltd	(03) 8578 4250 or 1300 834 546	offsets@vegetationlink.com.au	www.vegetationlink.com.au
Yarra Ranges SC	Yarra Ranges Shire Council	1300 368 333	biodiversityoffsets@yarraranges.vic.gov.au	www.yarraranges.vic.gov.au

For more information contact the DEECA Customer Service Centre 136 186 or the Native Vegetation Credit Register at nativevegetation.offsetregister@delwp.vic.gov.au