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**Biodiversity Assessment,
2 Tootle Street, Kilmore, Victoria**



Revision B

Prepared for:

Urbis Pty Ltd

Ecolink Consulting Pty Ltd

PO Box 356, Northcote VIC 3070 | www.ecolinkconsulting.com.au | info@ecolinkconsulting.com.au

ABN: 80 646 930 817 | ACN: 159 690 472

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A photograph of the study area taken during the current assessment.

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Executive Summary

Ecolink Consulting Pty Ltd (Ecolink) was commissioned to undertake a Biodiversity Assessment to support the residential development of a portion of 2 Tootle Street, Kilmore (the study area).

The study area appears to have a long history of disturbance associated with agricultural use. The majority of the study area is cleared of its original native vegetation and is now dominated by exotic pasture grasses. The most widespread indigenous flora species observed included recolonising grass species such as Common Wallaby-grass *Rytidosperma caespitosum* and Slender Wallaby-grass *Rytidosperma racemosum* subsp. *racemosum*. The cover abundance of this vegetation was generally low (~5%) throughout the property, although there was a higher cover abundance of these recolonising grasses adjacent to the Kilmore Creek, which qualified these area as native vegetation patches (i.e. >25% perennial grass cover).

Kilmore Creek was largely degraded, with a range of exotic species dominating the vegetation. Cattle hoof prints were also noted, but were much less common than observed in the creek line of the adjacent paddock to the north. Whilst the creek line is generally degraded, three remnant Swamp Gums *Eucalyptus ovata* were also recorded along the creek line, along with a number of aquatic and semi-aquatic indigenous species. The presence of these species, particularly Common Spike-sedge *Eleocharis acuta*, meant that small linear patches of native vegetation were recorded within the Kilmore Creek. A small patch of recruiting indigenous Blackwoods *Acacia melanoxylon* was also recorded along the Northern Highway road reserve.

Four patches of native vegetation were present. All patches were low quality with Habitat Scores ranging from 11 to 24 (out of 100). Patch 1 was of the highest quality and this was mainly attributed to the presence of overstorey trees (i.e. Swamp Gums), including one Large Tree. One other scattered Swamp Gum was recorded, and this was also a Large Tree.

Fauna species recorded within the study area comprised species common to disturbed landscapes in southern Victoria. No threatened flora or fauna species were recorded during the current assessment and it is unlikely that the study area provides significant habitat to any threatened species.

In this context, and based on the relevant legislation and policies, the following recommendations are made:

- Obtain a Planning Permit from Mitchell Shire Council for the removal of native vegetation under Clause 52.17 of the Planning Scheme;
- Offsets have previously been provided for a development north of the study area which has largely been completed. Offsets are required for the removal of native vegetation within the study area including:
 - 0.087 General Habitat Units;
 - With a Minimum Strategic Biodiversity Score of 0.333;
 - Located within the Goulburn Broken Catchment Management Authority area, or the Mitchell Shire Council; and
 - 2 Large Trees;

- Kilmore Creek and proposed wetlands should be improved through revegetation works using indigenous aquatic and semi-aquatic plants of local provenance. This should be detailed in a Landscape Management Plan;
- Prepare a Construction Environmental Management Plan that includes:
 - Fencing to limit works to the nominated construction footprint, and retain native vegetation including Tree Protection Zones;
 - Vehicle hygiene maintenance and vehicle wash-down areas;
 - Using clean fill (if required);
 - Managing noxious that may establish during and post-construction through spraying with herbicide or hand-removal;
 - Erosion and sediment control measures to Environment Protection Authority Standards in order to avoid impacts to waterbodies that contain native vegetation; and
 - Animal welfare protocols.
- Obtain a Protected Flora Licence from the Department of the Environment, Land, Water and Planning prior to the removal of Black Wattle *Acacia mearnsii* from within the road reserve;
- Ensure that there is a commitment to retaining native vegetation along the Kilmore Creek which includes a number of aquatic flora species as well as large remnant Swamp Gums;
- If retained, implementation of Tree Protection Zones for those Swamp Gums which are to be retained within the study area, during construction, using suitable fencing;
- Water Sensitive Urban Design should be used within the development wherever possible to maintain the natural hydrology of the Kilmore Creek.

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Introduction

Background

Ecolink Consulting Pty Ltd (Ecolink) was engaged to complete a Biodiversity Assessment for a portion of 2 Tootle Street, Kilmore, Victoria (the study area). It follows an assessment of the same area by Ecolink, in 2015 to support the rezoning of the land at that time. The area was subsequently rezoned to General Residential land. The purpose of the current Biodiversity (Flora and Fauna) Assessment report is to update the findings of the previous assessment to reflect current legislation and policies. It has been informed by a site assessment and updated desktop assessment to ensure its accuracy, and is guided by a Conceptual Layout (Drawing No. 17059/1, Revision 5, dated July 2018) prepared by Chris Smith and Associates.

Purpose

To this end, the Biodiversity Assessment report:

- Determines the ecological values of the study area;
- Evaluates any impacts that are likely to occur to any ecological values as a result of the potential loss of vegetation at the study area;
- Evaluates the extent and quality of native vegetation within the study area, required under the *Guidelines for the removal, destruction or lopping of native vegetation* (Department of Environment Land Water and Planning 2017); and,
- Makes recommendations to minimise or mitigate impacts to these ecological values, based on relevant legislation and policies.

Methods

Desktop Assessment

In order to determine the ecological values that have previously been recorded within the study area, and its vicinity, the following databases and literature were consulted:

- Planning Schemes Online (Department of Environment Land Water and Planning 2019d) to identify the planning zones and overlays relating to environmental matters e.g. Vegetation Protection Overlays, or Environmental Significance Overlays;
- The NatureKit webpage from DELWP to identify the historic and current Ecological Vegetation Classes (EVCs) (Department of Environment Land Water and Planning 2019c);
- The Victorian Biodiversity Atlas (Department of Environment Land Water and Planning 2019e) for records of threatened¹ flora and fauna species within three kilometres of the study area in the past 30 years;
- The Native Vegetation Information Management System (NVIM) to determine biodiversity offset requirements (Department of Environment Land Water and Planning 2019b) ;
- The 'Weeds of National Significance' database (Department of the Environment and Energy 2019b);
- The Protected Matters Search Tool from the Department of the Environment and Energy (DOEE) (Department of the Environment and Energy 2018) to identify Matters of National Environmental Significance that may occur within five kilometres of the study area; and,
- Relevant legislation and policies (as required).

Field Assessment

A field assessment was undertaken by Principal Ecologists, Simon Scott and Stuart Cooney, on 28 February 2019. Both assessors are suitably experienced at undertaking flora and fauna assessments and Simon holds a Vegetation Quality Assessors Accreditation from DELWP (No. 0015).

Flora and Fauna Assessment

All flora species observed within the study area were recorded, with the exception of planted vegetation that was not considered a 'weed' (i.e. planted vegetation that was not spreading or reproducing). Where a species was not able to be confidently identified in the field, a sample was collected and later identified. Plants were identified to species level wherever possible, however, some plants that were planted, cultivars, hybrids, or plants that did not contain suitable fertile material used for identification were recorded to genus level.

Vegetation communities such as EVCs and nationally significant vegetation communities were recorded (if observed) and compared with their corresponding benchmarks or thresholds to ensure that they were accurately assigned.

¹ Threatened flora and fauna includes species listed under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*, the Victorian *Flora and Fauna Guarantee Act 1988* and the DSE Advisory Lists (Department of Environment and Primary Industries (2009; 2013; 2014a).

A list of all fauna species observed within, and immediately surrounding, the study area was produced. This list consists of species seen, heard, or identified by other evidence of their presence (e.g. feathers, scats). Leica 12 X 50 binoculars and call mimicry/playback were used to assist in the identification species.

The presence of fauna habitat was noted, particularly in relation to potential habitats for threatened species. The greatest amount of time was spent surveying the highest quality habitats for native fauna (e.g. trees, water bodies, crevices or under ground debris) during the assessment.

Biological features such as threatened flora and fauna species, vegetation communities, scattered indigenous trees, fauna habitats, or threatened species habitats were recorded onto an iPad mini tablet that has an internal Global Positioning System (GPS) and the GIS Pro application (accuracy +/- five metres).

Guidelines for the removal, destruction or lopping of native vegetation

Within the road reserve, the *Guidelines for the removal, destruction or lopping of native vegetation* (the Guidelines) (Department of Environment Land Water and Planning 2017) are required to be addressed under Clause 52.17 of the Planning Scheme. The Guidelines require that information regarding the biodiversity values of the site were obtained through:

- Site-based information that can be measured or observed at a site, including:
 - Extent of native vegetation patches²;
 - Large trees;
 - Native vegetation condition assessed in accordance with the *Vegetation Quality Assessment Manual – Guidelines for Applying the Habitat Hectares Scoring Method* (Department of Sustainability and Environment 2004);
 - Ecological Vegetation Classes (EVC); and
 - Sensitive wetlands and coastal areas.
- Landscape scale information that cannot be measured or observed at the site and includes maps and models procured from DELWP.

The Guidelines require a Habitat Hectare assessment in instances where the impact is to be assessed under the Detailed Assessment Pathway. Where required, the Habitat Hectare assessment is to be undertaken in accordance with the methodology prescribed within the *Vegetation Quality Assessment Manual – Guidelines for Applying the Habitat Hectares Scoring Method* (Department of Sustainability and Environment 2004) at patches of vegetation. In this case, the result of the previous Habitat Hectare Assessment was verified.

In addition, the location and species of indigenous 'scattered trees'³, and any 'large trees'⁴ that are proposed to be removed must also be mapped. The location, extent of native vegetation (patches, scattered trees and large trees) that is proposed for removal was provided to DELWP who produced

² A 'patch' is defined as an area with at least 25% cover abundance of perennial native vegetation, or a group (i.e. three or more) trees forming a continuous canopy.

³ Scattered trees are defined as a native canopy tree that does not form a patch

⁴ Large trees are defined as meeting the size threshold specified in the bioregional EVC Benchmark

a Native Vegetation Removal report that provides details of the required offsets for impacts that vegetation.

Limitations and Qualifications

The following limitations and qualifications apply to this report:

- The results of the desktop assessment are reliant on data obtained from various databases and other reports. The accuracy of these historical data and some of the results provided within these reports cannot be verified.
- Some plants may only be visible during certain time (e.g. geophytes, orchids), and the plants have generally finished flowering or seeding. This fertile material is used for identification purposes, and without it, the identification of some plants is difficult or impossible.
- Some flora and fauna species may only be recorded during certain times or seasons (e.g. plants that only contain above-ground biomass and are only visible annually, nocturnal mammals and birds, migratory birds, or fauna identified through seasonal breeding calls such as some frog species). The author has made an informed decision about the likely presence of threatened species that may be present, or that may utilise habitats within the study area, based on a detailed desktop assessment, a review of the species' biology, an understanding of the ecological values of the local area, and an assessment of flora and fauna as well as their habitats.
- As with all ecological assessments, a greater survey effort is likely to yield additional flora and fauna records. Where these additional flora and fauna records may alter the recommendations made within this report, (e.g. where additional threatened species may utilise habitats within the study area, or where threatened species may be impacted by the proposed development), further assessment has been recommended, depending on the implications of relevant policies and legislation.

Despite these limitations to the assessment, the results gained by both a desktop and a field assessments are adequate to address the purpose of this report.

Results

Study Area

The study area is located within the Mitchell Shire Council municipality, south of the Kilmore town centre. It is an irregular, shape that that is roughly bordered by Tootle Street in the north, the Northern Highway to the west, a disused railway easement to the east and private property to the south (which was also covered in exotic pasture grasses).

The study area itself appears to have a long history of disturbance associated with agricultural use, with the majority of the study area cleared of its original native vegetation and now dominated by exotic pasture grasses. The remnant Swamp Gums *Eucalyptus ovata* recorded in the Kilmore Creek are probably the only true remnants of the vegetation that existed within the study area prior to European settlement.

The Kilmore Creek runs through the approximate middle of the study area which, apart from small pools of water, was largely dry at the time of the current assessment. This section of the Kilmore Creek appeared to be disturbed by long term pressures associated with agricultural use. Recent cattle grazing of the property was apparent, with cow pats present, and pugging of the creek bed apparent. Two artificial dams were also located on the western side of the property, however these were dry at the time of the current assessment.

Flora

Flora Species

A total of 64 plant and tree species were recorded in the study area during the current assessment. This comprised 21 indigenous species and 43 exotic plant species (Table A1 and A2).

Overall the study area was heavily modified through previous clearing and agricultural uses (i.e. grazing) with the vegetation generally dominated by exotic pasture species such as Brown-top Bent *Agrostis capillaris*, Sweet Vernal-grass *Anthoxanthum odoratum*, Perennial Rye-grass *Lolium perenne*, Cocksfoot *Dactylis glomerata*, Yorkshire Fog *Holcus lanatus*, as well as a mix of other exotic species such as Ribwort *Plantago lanceolata* and Cat's Ear *Hypochoeris radicata* (see front cover). Noxious species such as Spear Thistle *Cirsium vulgare* and Gorse *Ulex europaeus* were also recorded. Scattered exotic trees such as Cypress *Cupressus* spp. and Radiata Pine *Pinus radiata* were also recorded, primarily along shelter belts or as scattered paddock trees to provide shelter to stock.

Indigenous flora species observed included recolonising grass species such as Common Wallaby-grass *Rytidosperma caespitosum*, Slender Wallaby-grass *Rytidosperma racemosum* subsp. *racemosum* and Windmill Grass *Chloris truncata*. The cover abundance of this vegetation was generally low (<1% cover abundance) throughout the property, although there was a higher cover abundance of these recolonising grasses adjacent to the Kilmore Creek where some small areas qualified as native vegetation patches (i.e. >25% perennial grass cover) (Plate 1)

Kilmore Creek, which runs through the property, was largely degraded, with a range of exotic species such as Toowoomba Canary-grass *Phalaris aquatica*, Jointed Rush *Juncus articulatus* and Hawthorn *Crataegus monogyna* dominating the vegetation (Plate 2). The creek is likely to enable the spread of

weeds and result in damage to native vegetation, but these weeds were much less common within the study area, than in the creekline in the adjacent property to the north.

Three Swamp Gums were recorded within the Kilmore Creek, two of which have a contiguous canopy with the Swamp Gum recorded in the in the adjacent paddock to the north (Plate 3). Whilst degraded, the creek line did contain a number of aquatic or semi-aquatic indigenous species such as Common Spike-sedge *Eleocharis acuta*, Australian Sweet-grass *Glyceria australis*, Grassy Club-sedge *Isolepis hookeriana*, Joint-leaf Rush *Juncus holoschoenus* and Finger Rush *Juncus subsecundus*. The presence of these species, particularly Common Spike-sedge, meant that small linear patches of native vegetation were recorded within the Kilmore Creek.

Whilst outside of the current study area, the Northern Highway roadside reserve was assessed as street access may be required for future residential development that may occur within the study area. Whilst the Northern Highway was largely dominated by exotic pasture grasses, which appear to be regularly slashed by VicRoads, a small patch of recruiting indigenous Blackwoods *Acacia melanoxylon* were recorded (Plate 4, Figure 1).

Flora Habitat/Vegetation Communities

The vegetation within the study area was required to be assessed and classified against the policy and legislation stipulated by three tiers of government:

- *Local* – where various overlays and policies may apply pursuant to the Mitchell Shire Council Planning Scheme (Department of Environment Land Water and Planning 2019d);
- *State* – which includes DELWP’s EVC mapping of vegetation communities (Department of Environment Land Water and Planning 2018a) and consideration under the *Guidelines for the Removal, Destruction or Lopping of Native Vegetation* (Department of Environment Land Water and Planning 2017); and,
- *Commonwealth* – where vegetation may meet ‘thresholds’ to be classified as a federally listed community under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Local

The study area is located within the Mitchell Shire Council. It is zoned General Residential – Schedule 1. It is not covered by any Overlays such as Environmental Significance or Vegetation Protection Overlays, relevant to this report.

State

The study area is located within the Highlands – Northern Fall bioregion of Victoria, and the Goulburn Broken Catchment Management Authority area.

Investigation of DELWP’s EVC mapping confirmed that the historic vegetation within and around the study area is likely to have been dominated by EVC 23: Herb-rich Foothill Forest, which is considered ‘Least Concern’ within this bioregion. Herb-rich Foothill Forest is a medium to tall open forest or woodland which occurs on a range of geological types, with a generally sparse shrub layer and a high

cover and diversity of herbs and grasses (Department of Environment Land Water and Planning 2019a). One patch of this vegetation was recorded along the western boundary of the study area.

DELWP mapping of extant native vegetation suggests that the study area still contains small remnant patches of native vegetation, particularly in the north-west corner of the property where there are a number of planted exotic trees (particularly Pines *Pinus radiata*) (Department of Environment Land Water and Planning 2019c). However, the site assessment differed from the DELWP modelled mapping, with the only native vegetation remnants recorded along Kilmore Creek (Figure 1).

The assessor has judged the native vegetation recorded along the Kilmore Creek to be more closely associated with EVC 18: Riparian Forest than the modelled EVC23: Herb-rich Foothill community. Riparian Forest EVC 18 (Least Concern) is a 'forest to 30 metres tall along river banks and associated alluvial terraces with the soil fertile and regularly inundated or permanently moist. The secondary tree layer is made up of wattles with a dense patch of shrubs, ferns, grasses and herbs in the understorey' (Department of Environment Land Water and Planning 2019a). This EVC has been modelled by DELWP along the Kilmore Creek further downstream of the study area (Department of Environment Land Water and Planning 2019c).

Whilst in this instance the EVC 18: Riparian Forest was chosen to classify the native vegetation identified along the Kilmore Creek, it should be noted that site was heavily modified and did not easily 'fit' into any described EVC. In the assessor's experience it is not unusual for on-site assessments to differ from DELWP's EVC mapping, as the models are prepared on a broad scale, for the entire state.

Commonwealth

DoEE (2019a) modelling suggests that that four nationally significant vegetation communities may also occur within the study area:

- Grassy Eucalypt Woodland of the Victorian Volcanic Plain;
- Grey Box (*Eucalyptus microcarpa*) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia;
- Natural Temperate Grassland of the Victorian Volcanic Plain; and,
- White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland.

The site assessment confirmed that the study area does not include remnant patches of native vegetation that contain the suite of species required to meet the thresholds for these vegetation communities.

Threatened Flora Species

Seven threatened flora species have previously been recorded within 3 kilometres of the study area (Figure 2). A further four species are predicted to occur within the study area based on the Protected Matters Search Tool (Department of the Environment and Energy 2019a). A consolidated list of these threatened flora species, as well as their conservation status, preferred habitats and likelihood of occurrence for each species is provided in Table A3.

No flora species listed were recorded within the study area and none are expected to occur due to the highly modified nature of the study area as a result of historical land uses (i.e. agriculture). The potential habitats for threatened species are therefore highly modified and it is unlikely that any threatened species remain within the study area.

Habitat Hectare Assessment

The location of patches of native vegetation is the same, or imperceptibly changed, since the previous assessment undertaken by Ecolink in 2015.

Vegetation quality of native vegetation recorded on the private property was low, with Habitat Scores ranging from 11 to 24 (out of 100). Patch 1 was of the highest quality and this was mainly attributed to the presence of overstorey trees (i.e. Swamp Gums), including one Large Tree (Table 1).

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Table 1. Habitat Hectare Score for the patches of native vegetation within the study area.

Remnant patch		P1	P2	P3	P4	
Bioregion		HNF	HNF	HNF	HNF	
EVC name		Riparian Forest	Riparian Forest	Riparian Forest	Herb-rich Foothill Forest	
EVC number		18	18	18	23	
Conservation rating within bioregion		Least Concern	Least Concern	Least Concern	Least Concern	
Assessment Criteria		Maximum Score	Patch Score	Patch Score	Patch Score	Patch Score
Site Condition	a. Large old trees	10	9	0	0	0
	b. Canopy cover	5	4	0	0	0
	c. Understorey	25	5	5	5	5
	d. Lack of weeds	15	2	2	6	2
	e. Recruitment	10	0	0	0	0
	f. Organic litter	5	2	2	2	2
	g. Logs	5	0	0	0	0
	h. Total (sum of a-e)	75	22	9	13	9
Landscape valve	j. Patch size	10	1	1	1	1
	k. Neighbourhood	10	0	0	0	0
	l. Distance to core	5	1	1	1	1
m. Habitat Score (sum of i-l)		100	24	11	15	11
n. Habitat score out of 1 (m ÷ 100)			0.24	0.11	0.15	0.11
o. Total area of HZ in study area (ha)			0.055	0.120	0.011	0.020
p. Total habitat hectares in study area (o × n)			0.01	0.01	0.00*	0.00*
Large Trees (No.)			1	0	0	0

Table Notes

HNF = Highland Northern Fall. * Habitat hectares are rounded to two decimal places.

Scattered Tree Assessment

In addition to the patches, one scattered indigenous tree was recorded in the approximate centre of the study area. This is an indigenous Swamp Gum that is 109cm Diameter at Breast Height, which qualifies as a Large Tree within this EVC (Department of Environment Land Water and Planning 2019a).

Other trees observed within the study area were non-indigenous planted trees are therefore not classified as 'scattered trees', and do not require biodiversity offsets for their removal (Department of Environment Land Water and Planning 2017; Department of Sustainability and Environment 2004).

Fauna

Fauna Species

Fourteen fauna species were recorded within the study area (Table A2, Appendix A). This included eleven native bird species, two introduced bird species, and one frog. All of these species are common to the local area. No reptiles were recorded during the assessment, possibly due to the weather conditions during the survey. It is likely that some common reptiles, known to occur within urban and peri-urban areas, would utilise the habitats within the site. This is likely to include species such as skinks and dispersing snakes. Further discussion on species that may occur within the various fauna habitats is provided below.

Fauna Habitats

The study area supports three habitat types:

- Grasslands;
- Mature trees; and
- A degraded creekline.

Grasslands

The majority of the study area provides grassland habitat to fauna species adapted to these types of habitats. This was exemplified by the flock of approximately 20 Straw-necked Ibis *Threskiornis spinicollis* that were observed foraging during the field assessment. Many such species, especially species that are now common within farmlands, can adapt to the lack of native vegetation and exploit the pasture grasses and the invertebrates that live within them.

Mature Trees

The mature Swamp Gums within the study area and adjoining the creekline in neighbouring properties is likely to provide foraging and roosting habitat for a range of birds and arboreal mammals, such as possums and micro-bats. This is likely to include gregarious bird species such as Rainbow Lorikeets *Trichoglossus haematodus*, Sulphur-crested Cockatoos *Cacatua galerita* and Noisy Miners *Manorina melanocephala*. Mammals such as Common Ringtail Possums *Pseudocheirus peregrinus* and Common Brushtail Possums *Trichosurus vulpecula* are also likely to forage in the

canopy of these trees, whilst micro-bats are likely to use the fissures and flaking bark as diurnal roosting locations.

Creepline

The creepline is degraded, largely dominated by introduced plants and negatively impacted by cattle access. At the time of the assessment it was largely dry. Nonetheless it may provide dispersal habitat, at times of inundation, for a range of frog and fish species.

Threatened Fauna Species and Communities

A consolidated list of the 11 threatened fauna species previously recorded on, or within the vicinity of, the study area, as well as a further 13 species that may occur within the study area is provided in Table A5 (see also Figure 3). The conservation status, preferred habitats and likelihood of occurrence for each species is provided within this table.

Growling Grass Frogs *Litoria raniformis* are predicted to occur by the Protected Matters Search Tool, however a nearby assessment for this species undertaken for the Kilmore Bypass, failed to find any records of this species or Striped Legless Lizards *Delma impar* within 10kms of the study area (Ecology and Heritage Partners Pty Ltd 2013). That study did record Golden Sun Moth *Synemon plana* habitat, both potential and actual, near the study area, however none were found within the study area, despite being part of the earlier assessment's area of investigation (Ecology and Heritage Partners Pty Ltd 2013).

Therefore, the study area is unlikely to provide important resources to any of the threatened species listed in Table A5.

No fauna communities listed under the Victorian *Flora and Fauna Guarantee Act 1988* were recorded within the study area.

Discussion

A detailed summary of the legislation that was considered when preparing this report is provided in Appendix 2. The discussion presented in this section of the report does not re-iterate information provided in Appendix 2, but summarises the results and recommendations arising from the interpretation of this legislation.

Environment Protection and Biodiversity Conservation Act 1999 (Cth)

The desktop assessment identified five threatened flora, 13 threatened fauna species and four threatened ecological communities, listed under the EPBC Act that may occur within the study area. The site assessment, however, confirmed that it is unlikely that any EPBC Act-listed flora or fauna species, or ecological communities, occur within the study area.

A referral to the Commonwealth Department of Energy and the Environment is not recommended for the proposed development of the study area, as it is unlikely that there will be any significant impacts on any MNES.

Flora and Fauna Guarantee Act 1988 (Vic)

The desktop assessment identified seven flora and 15 fauna species listed under the *Flora and Fauna Guarantee Act 1988* (FFG Act) that may occur within the study area (Tables A4 and A5). None of the species listed as threatened under the FFG Act were recorded within the study area.

In addition, the FFG Act also lists 'protected flora'. Protected flora includes whole families or genera, not just plant species, such as daisies, heaths, orchids, and most Acacias. These species and genera are not necessarily regarded as threatened, but require an approved 'protected flora licence or permit' from DELWP prior to their removal from *public* land.

As the study area is on private land, the FFG Act *does not apply* and a 'Protected Flora Licence' is not required. However the Black Wattles will require a Protected Flora Licence issued by DELWP prior to their removal from the road reserve.

Planning and Environment Act 1987 (Vic)

The proposed development will require a planning permit from the Mitchell Shire Council. Native vegetation removal should follow the *Biodiversity guidelines for the prior to the removal, destruction or lopping of native vegetation* referenced in Clause 52.17 of the planning scheme (Department of Environment Land Water and Planning 2018c). This includes the requirement to demonstrate the iterative three-step approach to the removal of native vegetation, discussed further below.

Catchment and Land Protection Act 1994 (Vic)

Primary considerations of the Catchment and Land Protection Act 1994 (Vic) relate to soil and water conservation, as well as the management of pest plants and animals.

The study area contains four weed species that are listed as 'noxious' within the Goulburn Broken Catchment Management Area (Table A1). These include Blackberry *Rubus fruticosus* spp. agg.,

Hawthorn and Gorse which are listed as 'Regionally Controlled', and Spear Thistle which is listed as 'Restricted'. The landowner is required to control the spread of Regionally Controlled weeds, and 'Restricted' cannot be taken or traded. Of these, Blackberry and Gorse are also listed as Weeds of National Significance (Australian Weeds Committee 2013).

The proposed development should aim to remove these plants when construction commences, and ensure they are removed during the future the landscaping of the study area. The Construction Environment Management Plan should also manage the downstream impacts to Kilmore Creek. As a minimum, this should include:

- Fencing to limit works to the nominated construction footprint, and avoid impacts to nearby indigenous trees and patches of native vegetation;
- Maintain vehicle hygiene and vehicle wash-down areas;
- Using clean fill (if required); and
- Erosion and sediment control to EPA Standards in order to avoid impacts to retained waterbodies and nearby creek lines.

Wildlife Act 1975 (Vic)

It is likely that some locally common species of fauna will be displaced by the proposed development. All native vertebrate wildlife is protected under the *Wildlife Act 1975 (Vic)*, and therefore it is recommended that fauna be salvaged and relocated prior to the removal of trees. Animal welfare remains a priority and injured wildlife that is accidentally should be taken to a qualified veterinarian for treatment.

Guidelines for the removal, destruction or lopping of native vegetation

Clause 52.17 of the planning scheme references the *Biodiversity guidelines for the prior to the removal, destruction or lopping of native vegetation*. These Guidelines state that the removal of native vegetation should aim to meet the iterative three-step approach:

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; and
3. Provide an offset to compensate for the biodiversity impact from the removal, destruction or lopping of native vegetation.

The proposed development will retain all indigenous trees associated with Kilmore Creek. It is likely that the development will also retain the majority of patches of native vegetation associated with the Creek in accordance with the Conceptual Layout (Drawing No. 17059/1, Revision 5, dated July 2018) prepared by Chris Smith and Associates. However, there are some new settling ponds, and wetlands proposed, and some road crossings required, and we would expect alterations to hydrology. For these reasons, we have assumed the loss of native vegetation along the creek, although in reality it may be retained.

The patch of native vegetation on the western boundary of the study area, Patch 4, will also require removal.

It is concluded that the Conceptual Layout appropriately addressed the three step approach, as the retention of all native vegetation is not practical where the development requires creek crossings and the vegetation along the western boundary would encroach upon roads and residential lots. The minor loss of native vegetation is expected to be offset by the creation of a wetland along the Creek and within associated waterbodies.

To further mitigate impacts to biodiversity values, and improve the quality of vegetation into the long term, it is further recommended:

- The development incorporates Water Sensitive Urban Design Principles;
- Wetlands are revegetated with locally indigenous vegetation in accordance with a Landscape Management Plan;
- Retained vegetation is fenced from indirect or unintentional impacts through delineating exclusion areas. Fencing should include temporary high visibility fencing, staked out with star pickets, prior to the commencement of construction works. Fencing should also be placed around the Tree Protection Zones of retained trees.

Nevertheless, the applicant has assumed that all native vegetation will be lost, on the basis that the hydrology may change in future, and adversely impact retained native vegetation over time.

Offsets have previously been provided for a development north of the study area which has largely already been completed, evidenced by Allocated Credit Extract Credit ID 2018-0788. Offsets are required for the removal of native vegetation within the study area including:

- 0.087 General Habitat Units;
- With a Minimum Strategic Biodiversity Score of 0.333;
- Located within the Goulburn Broken Catchment Management Authority area, or the Mitchell Shire Council; and
- 2 Large Trees (Appendix 3).

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Figures

DRAFT

Figure 1: Results of the current assessment

2 Tootle Road, Kilmore, Victoria

Legend

- Study Area
- Patches of vegetation**
- Herb-rich Foothill Forest
- Riparian Forest
- Large Tree
- Scattered Trees**
- Swamp Gum



Figure 2: Threatened flora and fauna species recorded within 3kms of the study area

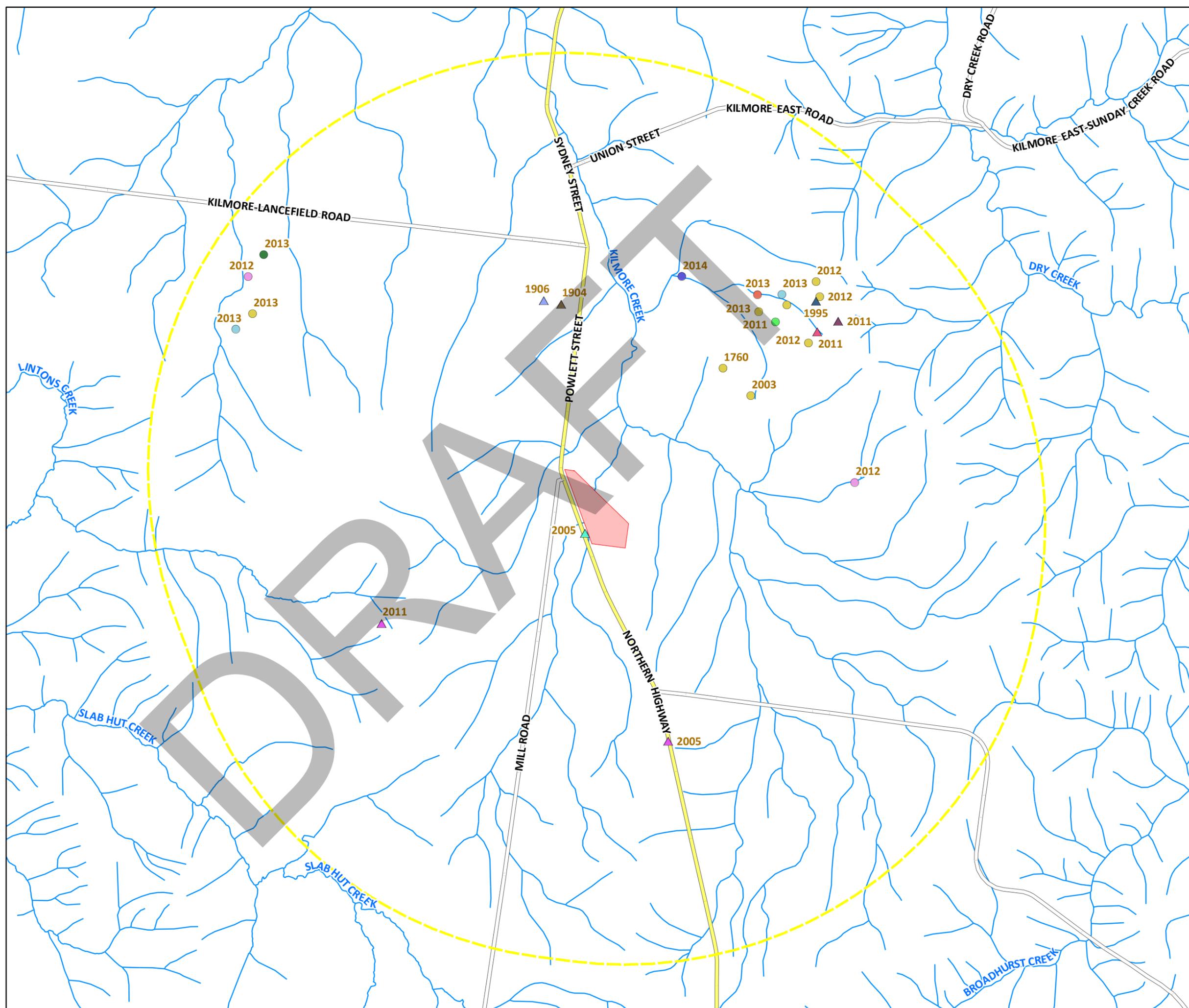
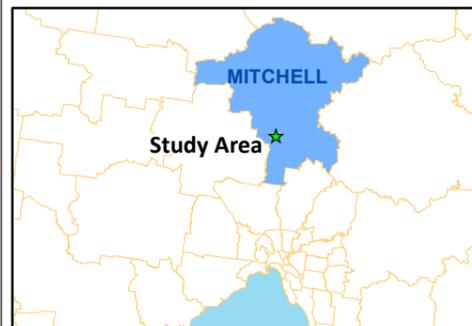
2 Tootle Road, Kilmore, Victoria

Legend

-  3km study area buffer
-  Study area

Common Name

-  Barking Owl
-  Brown Treecreeper
-  Nankeen Night Heron
-  Powerful Owl
-  Brush-tailed Phascogale
-  Eastern Snake-necked Turtle
-  Golden Sun Moth
-  Brittle Greenhood
-  Fringed Sun-orchid
-  Giant Honey-myrtle
-  Matted Flax-lily
-  Small Milkwort
-  Velvet Apple-berry
-  Yarra Gum



Plates



Plate 1. Patches of native vegetation generally limited to the Kilmore Creek



Plate 2. Hawthorn and Gorse within the creekline. Native vegetation also present.



Plate 3. Mature trees, including one Large Tree, located within Patch 1.



Plate 4. Patch 4 on the western boundary of the study area. Black Wattles (shown) will require a Protected Flora Licence if they are proposed to be removed from the road reserve

Appendices

Appendix 1. Flora and Fauna Tables.

Table A1. Flora recorded within the study area

Origin	Common Name	Scientific Name	Weed of National Significance	Noxious Weed Classification
	Australian Sweet-grass	<i>Glyceria australis</i>		
*	Barley-grass	<i>Hordeum</i> spp.	-	-
*	Bearded Oat	<i>Avena barbata</i>	-	-
	Black Wattle	<i>Acacia mearnsii</i>		
*	Blackberry	<i>Rubus fruticosus</i> spp. agg.	Yes	Regionally Controlled
	Bristly Wallaby-grass	<i>Rytidosperma setaceum</i>		
*	Brown-top Bent	<i>Agrostis capillaris</i>	-	-
*	Buck's-horn Plantain	<i>Plantago coronopus</i>	-	-
*	Cocksfoot	<i>Dactylis glomerata</i>	-	-
	Common Bog-sedge	<i>Schoenus apogon</i>		
*	Common Centaury	<i>Centaurium erythraea</i>	-	-
	Common Cudweed	<i>Euchiton involucratus</i> s.l.		
*	Common Heron's-bill	<i>Erodium cicutarium</i>	-	-
*	Common Peppercross	<i>Lepidium africanum</i>	-	-
*	Common Sow-thistle	<i>Sonchus oleraceus</i>	-	-
	Common Spike-sedge	<i>Eleocharis acuta</i>		
	Common Swamp Wallaby-grass	<i>Amphibromus nervosus</i>		
	Common Wheat-grass	<i>Anthosachne scabra</i> s.l.		
*	Couch	<i>Cynodon dactylon</i> var. <i>dactylon</i>	-	-
*	Curled Dock	<i>Rumex crispus</i>	-	-
*	Cut-leaf Crane's-bill	<i>Geranium dissectum</i>	-	-
*	Cypress	<i>Cupressus</i> spp.	-	-
*	Drain Flat-sedge	<i>Cyperus eragrostis</i>	-	-
	Finger Rush	<i>Juncus subsecundus</i>		
*	Flatweed	<i>Hypochoeris radicata</i>	-	-
*	Gorse	<i>Ulex europaeus</i>	Yes	Regionally Controlled
	Grassland Crane's-bill	<i>Geranium retrorsum</i> s.l.		
	Grassland Wood-sorrel	<i>Oxalis perennans</i>		

Origin	Common Name	Scientific Name	Weed of National Significance	Noxious Weed Classification
	Grassy Club-sedge	<i>Isolepis hookeriana</i>		
*	Great Brome	<i>Bromus diandrus</i>	-	-
*	Hawthorn	<i>Crataegus monogyna</i>	-	Regionally Controlled
*	Hogweed	<i>Polygonum aviculare</i> s.s.	-	-
*	Jointed Rush	<i>Juncus articulatus</i> subsp. <i>articulatus</i>	-	-
	Joint-leaf Rush	<i>Juncus holoschoenus</i>		
	Kangaroo Grass	<i>Themeda triandra</i>		
	Kidney-weed	<i>Dichondra repens</i>		
	Knob Sedge	<i>Carex inversa</i>		
*	Narrow-leaf Clover	<i>Trifolium angustifolium</i> var. <i>angustifolium</i>	-	-
*	Onion Grass	<i>Romulea rosea</i>	-	-
*	Panic Veldt-grass	<i>Ehrharta erecta</i> var. <i>erecta</i>	-	-
*	Paradoxical Canary-grass	<i>Phalaris paradoxa</i>	-	-
*	Paspalum	<i>Paspalum dilatatum</i>	-	-
*	Perennial Rye-grass	<i>Lolium perenne</i>	-	-
*	Pimpernel	<i>Lysimachia arvensis</i>	-	-
*	Prunus	<i>Prunus</i> spp.	-	-
*	Radiata Pine	<i>Pinus radiata</i>	-	-
*	Ribwort	<i>Plantago lanceolata</i>	-	-
	Rush	<i>Juncus</i> spp.		
*	Sheep Sorrel	<i>Acetosella vulgaris</i>	-	-
	Slender Dock	<i>Rumex brownii</i>		
	Slender Wallaby-grass	<i>Rytidosperma racemosum</i> var. <i>racemosum</i>		
	Small Loosestrife	<i>Lythrum hyssopifolia</i>		
*	Soft Brome	<i>Bromus hordeaceus</i> subsp. <i>hordeaceus</i>	-	-
*	Spear Thistle	<i>Cirsium vulgare</i>	-	Restricted
*	Squirrel-tail Fescue	<i>Vulpia bromoides</i>	-	-
	Swamp Gum	<i>Eucalyptus ovata</i>		
*	Sweet Vernal-grass	<i>Anthoxanthum odoratum</i>	-	-
*	Tall Fescue	<i>Festuca arundinacea</i>	-	-
*	Toowoomba Canary-grass	<i>Phalaris aquatica</i>	-	-

Origin	Common Name	Scientific Name	Weed of National Significance	Noxious Weed Classification
*	Twiggy Turnip	<i>Brassica fruticulosa</i>	-	-
	Variable Willow-herb	<i>Epilobium billardierianum</i>		
	Wallaby-grass	<i>Rytidosperma</i> spp.		
*	Wheat	<i>Triticum aestivum</i>	-	-
*	White Clover	<i>Trifolium repens</i> var. <i>repens</i>	-	-
*	Wild Teasel	<i>Dipsacus fullonum</i> subsp. <i>fullonum</i>	-	-
*	Wimmera Rye-grass	<i>Lolium rigidum</i>	-	-
*	Yorkshire Fog	<i>Holcus lanatus</i>	-	-

Table Notes:

* Exotic # Naturalised

This table does not include ornamental plants, trees or shrubs that were not spreading or reproducing beyond where they were planted.

Table A2. Fauna recorded within the study area

Origin	Common Name	Scientific Name
Birds		
	Australian Magpie	<i>Cracticus tibicen</i>
*	Common Blackbird	<i>Turdus merula</i>
	Common Bronzewing	<i>Phaps chalcoptera</i>
*	Common Myna	<i>Acridotheres tristis</i>
	Crested Pigeon	<i>Ocyphaps lophotes</i>
	Little Raven	<i>Corvus mellori</i>
	Magpie-lark	<i>Grallina cyanoleuca</i>
	Noisy Miner	<i>Manorina melanocephala</i>
	Pacific Black Duck	<i>Anas superciliosa</i>
	Rainbow Lorikeet	<i>Trichoglossus haematodus</i>
	Straw-necked Ibis	<i>Threskiornis spinicollis</i>
	Welcome Swallow	<i>Hirundo neoxena</i>
	White-Faced Heron	<i>Egretta novaehollandiae</i>
Frogs		
	Common Froglet	<i>Crinia signifera</i>

Table Notes:

Excludes domestic animals. * - Introduced species

Table A3. Threatened flora that has previously been recorded within, or in the vicinity of the study area (Department of Environment Land Water and Planning 2019e), or that has habitat that may occur within the vicinity of the study area (Department of the Environment and Energy 2019a)

Common Name	Species Name	National Status	Victorian Status	Habitat Preferences (Source: Walsh and Entwistle 1994; Walsh and Entwistle 1996; Walsh and Entwistle 1999)	Most Recent Record	Habitat Present on Site	Likelihood of Presence*
Brittle Greenhood	<i>Pterostylis truncata</i>	-	Endangered FFG Listed	Rocky or grassy sites in plains grasslands	1904	No	Unlikely
Clover Glycine	<i>Glycine latrobeana</i>	Vulnerable	Vulnerable FFG Listed	Grassy woodland; plains grassland; box woodland; dry sclerophyll forest.	NPR	No	Unlikely
Dwarf Silver Wattle	<i>Acacia nano-dealbata</i>	-	Rare	Open woodlands, dry sclerophyll forests and wet forests in deep gullies, on slopes, on high plateaus, on creekbanks and near swamp margins	1988	No	Unlikely
Fringed Sun-orchid	<i>Thelymitra luteocilium</i>	-	Rare	Moist depressions in wet valley sclerophyll forest	1995	No	Unlikely
Giant Honey-myrtle	<i>Melaleuca armillaris subsp. armillaris</i>	-	Rare	Mainly confined to near-coastal sandy heaths, scrubs slightly raised above saltmarsh, riparian scrubs, rocky coastlines and foothill outcrops eastwards from about Marlo. Occurrences to the west are naturalised.	2005	No	Unlikely
Maroon Leek-orchid	<i>Prasophyllum frenchii</i>	Endangered	Endangered FFG Listed	Tea-tree heath; wattle tea-tree scrub; valley sclerophyll forest. Predominantly in or near coastal swamps. Rarely occupies sites more than 10 km inland	NPR	No	Unlikely
Matted Flax-lily	<i>Dianella amoena</i>	Endangered	Endangered FFG Listed	Grassy Wetland; Red Gum woodland; plains grassland; grassy woodlands.	2005	No	Unlikely
Slender Bitter-cress	<i>Cardamine tenuifolia</i>	-	Endangered	Scattered throughout southern Victoria in swamps or streams.	1988	No	Unlikely

Common Name	Species Name	National Status	Victorian Status	Habitat Preferences (Source: Walsh and Entwistle 1994; Walsh and Entwistle 1996; Walsh and Entwistle 1999)	Most Recent Record	Habitat Present on Site	Likelihood of Presence*
Small Milkwort	<i>Cladium procerum</i>	-	Vulnerable FFG Listed	Native grasslands are dominated by Kangaroo Grass <i>Themeda triandra</i> and Silver Tussock <i>Poa labillardierei</i>	2011	No	Unlikely
Spiny Rice-flower	<i>Pimelea spinescens</i> subsp. <i>spinescens</i>	Critically Endangered	Vulnerable FFG Listed	Grassland or open shrubland on basalt-derived soils west of Melbourne.	NPR	No	Unlikely
Spiral Sun-orchid	<i>Thelymitra matthewsii</i>	Vulnerable	Vulnerable FFG Listed	Open forests and woodlands in well-drained sand and clay loams	NPR	No	Unlikely
Velvet Apple-berry	<i>Billardiera scandens</i>	-	Rare	Dry open forests and woodlands primarily in the Victoria's north-east	2011	No	Unlikely

*** Likelihood of Presence Definitions:**

Unlikely – Site does not contain habitat and/or it is outside the species' known, current distribution.

Low – Site contains some marginal habitat, but the species was not observed and has not been recently recorded in previous surveys in the area.

Moderate – Site contains preferred habitat that may support a population of the species. However, other factors, such as fragmentation, disturbance or predators may be impacting any local population.

High - Site contains the preferred habitat which is likely to support the species.

Present – Preferred habitat is present on the site, and the species was observed on the site, or recently recorded at the site.

NPR – No previous record, modelled presence only under the EPBC Protected Matters Search results (Department of the Environment and Energy 2018).

Threatened status based on the Advisory List of Rare or Threatened Plants in Victoria (Department of Environment and Primary Industries 2014).

Table A4. Threatened fauna that has previously been recorded within, or in the vicinity of the study site (Department of Environment Land Water and Planning 2019e), or that has habitat that may occur within the vicinity of the site (Department of the Environment and Energy 2019a), excluding Marine and Migratory species exclusively listed under the EPBC Act and will not occur within the study area

Common Name	Species Name	National Status	Victorian Status	Habitat Preferences (Source: Churchill 1998; Hero <i>et al.</i> 1991; Menkhorst 2001; Pizey and Knight 2012; Wilson and Swan 2010)	Most Recent Record	Habitat Present on Site	Likelihood of Presence *
Birds							
Australasian Bittern	<i>Botaurus poiciloptilus</i>	Endangered	Endangered	Reed beds, dense vegetation of freshwater swamps and creeks.	NPR	No	Unlikely
Australian Painted-Snipe	<i>Rostratula australis</i>	Vulnerable	Critically Endangered, FFG Listed	Uncommon summer migrant to Victoria. Lowlands on shallow freshwater swamps with emergent vegetation, and flooded salt marshes.	NPR	No	Unlikely
Swift Parrot	<i>Lathamus discolor</i>	Endangered	Endangered, FFG Listed	Winter migrant from Tasmania. Generally prefers Box-Ironbark forests and woodlands inland of the Great Dividing Range during winter.	NPR	No	Unlikely
Brown Treecreeper	<i>Climacteris picumnus victoriae</i>	-	Near Threatened	Dry woodland; forest clearings, eucalypts along streams.	2011	No	Unlikely
Regent Honeyeater	<i>Anthochaera phrygia</i>	Endangered	Critically Endangered, FFG Listed	Depends on nectar and insects from Box-Ironbark Eucalypt forests. Only breeding habitat lies in Northeast Victoria and central coast of NSW.	NPR	No	Unlikely
Barking Owl	<i>Ninox connivens connivens</i>	-	Endangered, FFG Listed	Forest and woodland.	2013	No	Unlikely
Powerful Owl	<i>Ninox strenua</i>	-	Vulnerable, FFG Listed	Tall open forest and woodland.	2013	No	Unlikely
Nankeen Night Heron	<i>Nycticorax caledonicus</i>	-	Near Threatened	Tidal mudflats, saltmarshes, mangroves, freshwater wetlands	2014	Yes	Low

Common Name	Species Name	National Status	Victorian Status	Habitat Preferences (Source: Churchill 1998; Hero <i>et al.</i> 1991; Menkhorst 2001; Pizzey and Knight 2012; Wilson and Swan 2010)	Most Recent Record	Habitat Present on Site	Likelihood of Presence *
Mammals							
Brush-tailed Phascogale	<i>Phascogale tapoatafa</i>	-	Vulnerable, FFG Listed	Dry sclerophyll forest and woodland.	2013	No	Unlikely
Grey-headed Flying-fox	<i>Pteropus poliocephalus</i>	Vulnerable	Vulnerable, FFG Listed	Roost sites commonly occur in gullies, in vegetation with dense canopy cover and close to water.	NPR	No	Unlikely
Smoky Mouse	<i>Pseudomys fumeus</i>	Endangered	Endangered, FFG Listed	Dry sclerophyll forests with tussocky understorey	NPR	No	Unlikely
Amphibians							
Growling Grass Frog	<i>Litoria raniformis</i>	Vulnerable	Endangered, FFG Listed	Permanent lakes, swamps, dams and lagoons.	NPR	No	Unlikely
Reptiles							
Striped Legless Lizard	<i>Delma impar</i>	Vulnerable	Endangered, FFG Listed	Lowland native grasslands, typically dominated by native tussock forming grasses. Typically occurs on deep cracking clay soils.	NPR	No	Unlikely
Eastern Snake-necked Turtle	<i>Chelodina longicollis</i>		Data Deficient		2012	No	Unlikely
Pink-tailed Worm-lizard	<i>Aprasia parapulchella</i>	Vulnerable	Endangered, FFG Listed	Favours areas with native grasses and partially buried rock. Shelters beneath rocks and in tunnels. Isolated population near Bendigo.	NPR	No	Unlikely
Fish							
Dwarf Galaxias	<i>Galaxiella pusilla</i>	Vulnerable	Vulnerable, FFG Listed	Slow moving waters, including ephemeral drains.	NPR	No	Unlikely

Common Name	Species Name	National Status	Victorian Status	Habitat Preferences (Source: Churchill 1998; Hero <i>et al.</i> 1991; Menkhorst 2001; Pizzey and Knight 2012; Wilson and Swan 2010)	Most Recent Record	Habitat Present on Site	Likelihood of Presence *
Murray Cod	<i>Maccullochella peelii peelii</i>	Vulnerable	Endangered, FFG Listed	Small clear, rocky, upland streams with riffle and pool structure on the upper western slopes of the Great Dividing Range to large, meandering, slow-flowing, often silty rivers in the alluvial lowland reaches of the Murray-Darling Basin.	NPR	No	Unlikely
Macquarie Perch	<i>Macquaria australasica</i>	Endangered	Endangered, FFG Listed	Deep, rocky holes with considerable cover and flowing water over unsilted cobble and gravel substrate.	NPR	No	Unlikely
Invertebrates							
Golden Sun Moth	<i>Synemon plana</i>	Critically Endangered	Endangered, FFG Listed	Tussock grasslands preferably dominated by Wallaby Grasses and Spear Grasses.	2013	No	Unlikely

Table Notes:

This table excludes species listed exclusively as ‘migratory’ or ‘marine’ under the EPBC Protected Matters Search results (Department of the Environment and Energy 2018).

*** Likelihood of Presence Definitions:**

Unlikely – Site does not contain habitat and/or it is outside the species’ known, current distribution. Birds and bats may fly over.

Low –Site contains some marginal habitat, but the species was not observed and has not been recorded in previous recent surveys in the area. Birds and bats may fly over.

Moderate – Site contains preferred habitat that may support a population of the species. Birds and bats may opportunistically or seasonally forage at the site.

High – Site contains preferred habitat which is likely to support the species. Birds and bats are likely to regularly (at least seasonally) forage or roost at the site.

Present – Preferred habitat is present on the site, and the species was observed on the site, or recently recorded on the site.

NPR – No previous record, modelled presence only under the EPBC Protected Matters Search results (Department of the Environment and Energy 2018).

Threatened status based on the Advisory List of Threatened Vertebrate Fauna in Victoria (Department of Sustainability and Environment 2013) and the Advisory List of Threatened Invertebrate Fauna in Victoria (Department of Sustainability and Environment 2009).

Appendix 2. Legislation

Commonwealth Legislation

Environment Protection and Biodiversity Conservation Act 1999 (Cth)

The *Environment Protection and Biodiversity Conservation Act 1999 (Cth)* (EPBC Act) is to provide for the conservation of 'Matters of National Environmental Significance'. The Act defines nine Matters of National Environmental Significance:

- World Heritage properties;
- National Heritage Places;
- Ramsar wetlands of international significance;
- Nationally listed threatened species and ecological communities;
- Listed migratory species;
- Commonwealth marine areas;
- The Great Barrier Reef Marine Park;
- Nuclear actions; and
- A water resource, in relation to coal seam gas development and large coal mining development.

Under the Act, actions that are likely to have a significant impact upon Matters of National Environmental Significance require approval from the Federal Environment Minister. This approval is sought through a referral process for a particular action. An action includes any project, development, undertaking, activity or series of activities. Consideration of the requirement for an 'EPBC Referral' to the Minister has been made within this report.

State Legislation

Flora and Fauna Guarantee Act 1988 (Vic)

The *Flora and Fauna Guarantee Act 1988 (Vic)* (FFG Act) provides a legal framework for enabling and promoting the conservation of all Victoria's native flora and fauna, and to enable management of potentially threatening processes on public land. The Act lists native species, communities, and processes that threaten native flora and fauna, under Schedules of the Act. This enables the assessor and regulators to establish management measures to mitigate impacts on listed values within Victoria.

A 'Protected Flora and Fauna Licence or Permit' from DSE is required to 'take' listed flora species that are members of listed communities or protected flora from public land. 'Taking' flora is defined as any action which results in the removal or death of a native plant. A permit is not required under the FFG Act for private land, unless listed species are present and the land is declared 'critical habitat' for the species.

An evaluation of the likelihood of the presence of significant flora and fauna species on the subject site, including those listed under the FFG Act that have previously been recorded in the vicinity of the site, has been undertaken.

Planning and Environment Act 1987 (Vic)

The *Planning and Environment Act 1987 (Vic)* (P&E Act), later amended by the *Planning and Environment (Planning Schemes) Act 1996 (Vic)* provides the foundation of planning schemes in Victoria. Planning schemes set out policies and provisions for the development and protection of land within each municipality in Victoria.

The *Planning and Environment (Planning Schemes) Act 1996* provides for the Minister for Planning to prepare a set of standard provisions for planning schemes called the Victoria Planning Provisions (VPP). The VPP is a state-wide reference document or template from which planning schemes are sourced and constructed. Incorporation of references such as the *Guidelines For the Removal, Destruction or Lopping of native vegetation* into Section 12 of the VPP ensures that all municipalities must consider this policy. Local zones and overlays, such as Environmental Significance Overlays, may be incorporated into Section 30 and 40 of the planning provisions by each Council, but only remain relevant within that municipality.

The objectives of the P&E Act are to integrate local land use, development planning and development policy with environmental, social, economic, conservation and resource management policies at State, regional and municipal levels through a set of planning schemes. The Act also establishes a clear procedure for public participation in decision making in amending planning schemes.

Some important sections of the planning scheme, in relation to the ecological values of a site, include:

- Section 12 of the State Planning Policy Framework, which identifies, and aims to protect, key biodiversity assets from inappropriate development;
- Clause 52.17 which identifies where native vegetation removal is exempt from requiring a planning permit; and
- Clause 66 which identifies all of the mandatory referral authorities. In particular, the Victorian Department of Environment, Land Water and Planning is identified as the recommending referral authority if a proponent proposes:
 - *'To remove, destroy or lop native vegetation in the Detailed Assessment Pathway as defined in the Guidelines for the removal, destruction or lopping of native vegetation;*
 - *To remove, destroy or lop native vegetation if a property vegetation plan applies to the site; and*
 - *To remove, destroy or lop native vegetation on Crown land which is occupied or managed by the responsible authority'* (Department of Environment Land Water and Planning 2018c).

Catchment and Land Protection Act 1994 (Vic)

The *Catchment and Land Protection Act 1994 (Vic)* (CALP Act) is the principle legislation relating to the management of pest plants and animals in Victoria. Under this Act, landowners have a responsibility to avoid causing or contributing to land degradation. Where possible, landowners are required to conserve soil, protect water resources, eradicate 'regionally prohibited' weeds, prevent

the growth and spread of 'regionally controlled' weeds and control pest animals. The CALP Act lists the species that are considered weeds and pest animals.

Wildlife Act 1975 (Vic)

Victoria's *Wildlife Act 1975 (Vic)* and the *Wildlife Regulations 2002 (Vic)* protect all indigenous vertebrate fauna, some non-indigenous vertebrate fauna, and some invertebrate fauna listed as 'threatened' under the FFG Act. The *Wildlife Act 1975 (Vic)* prevents intentional injury to wildlife, and stipulates that a licence should be granted where there is a possibility that wildlife are injured, or where wildlife is to be kept, relocated or traded.

In most cases, where the proponent is planning to develop a site, a planning permit approval provides this licencing approval, however, this report advises if an additional permit is required. Circumstances where this legislation may not be relevant is where fish are involved, on public land where additional regulatory approval is required, or where other permits are required (such as where fauna are required to undergo invasive procedures or installation of telemetry systems).

Fisheries Act 1995 (Vic)

The *Fisheries Act 1995 (Vic)* provides the legislative framework for the regulation, management conservation of Victorian fish species and their habitats. As with the Victorian *Wildlife Act 1975* described above, the key method to ensure compliance is through licencing. Where fish, or their habitats, are likely to be impacted, this report will identify additional requirements.

Other relevant policy

Guidelines for the removal, destruction or lopping of native vegetation (Department of Environment Land Water and Planning 2017c)

The *Guidelines for the removal, destruction or lopping of native vegetation (Department of Environment Land Water and Planning 2017)* were released by DELWP in December 2017. These guidelines supersede the Biodiversity Assessment Guidelines (Department of Environment and Primary Industries 2013).

A permit to remove native vegetation under clause 52.16 and 52.17 of the Victoria Planning Provisions is required unless:

- The table of exemptions to this clause specifically states that a permit is not required;
- It is native vegetation or an area specified in the schedule to the clause;
- A Native Vegetation Precinct Plan corresponding to the land is incorporated into the relevant planning scheme; or
- Bushfire exemptions apply in bushfire prone areas (Department of Environment Land Water and Planning 2017).

The Guidelines describe the permitting process for applications to remove native vegetation on private and public property within Victoria. A key strategy of the State Planning Policy Framework, relating to biodiversity, 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 achieved through iteratively applying the three-step approach:

1. Avoiding the removal, destruction or lopping of native vegetation.
2. Minimising impacts from the removal, destruction or lopping of native vegetation that cannot be avoided.
3. Providing an offset to compensate for the biodiversity impact from the removal, destruction or lopping of native vegetation (Department of Environment Land Water and Planning 2017; p. 4).

Native vegetation is defined in the Victoria Planning Provisions as ‘plants that are indigenous to Victoria, including trees, shrubs, herbs and grasses’ (Department of Environment Land Water and Planning 2017).

Native vegetation is further classified into two categories (Department of Environment Land Water and Planning 2017):

- A remnant patch of native vegetation (measured in hectares) is either:
 - 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 where the drip line 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 in DELWP systems and tools.

OR

- A scattered tree (measured in number of trees), is a native canopy tree that does not form a patch (Department of Environment Land Water and Planning 2017).

In addition, a canopy tree with a Diameter at Breast Height (DBH) greater than or equal to the large tree benchmark for the relevant bioregional EVC is defined as a large tree. Large trees can be either a large scattered tree or a large tree within a patch.

The contribution that is made by native vegetation to the biodiversity values of Victoria is determined through an assessment of both site-based information and landscape scale information.

At a site-based level, the contribution is determined through an assessment of:

- The extent of native vegetation;
- The number of large trees (either within a patch or scattered trees), relative to the appropriate EVC benchmark;
- The native vegetation condition, which is determined through a Habitat Hectare assessment
- The conservation status of the Ecological Vegetation Class (EVC) to which the vegetation can be classified; and,
- The presence of sensitive wetlands and coastal areas.

At a landscape scale, the value of the vegetation is determined with reference to its strategic context in the Victorian landscape (Department of Environment and Primary Industries 2013). This is determined by the vegetation’s ‘Strategic Biodiversity Score’ (SBS) and its ‘Habitat Importance Score’

(HIS) for its value to rare and threatened species (Department of Environment Land Water and Planning 2017).

All native vegetation within Victoria has a SBS that has been determined through spatial modelling, based on its rarity, level of depletion, species habitats, and condition and connectivity (Department of Environment Land Water and Planning 2017). SBS scores are between 0 and 1 and are used to determine the offset required for the loss of that vegetation. Native vegetation only has a HIS score if it is habitat for a particular rare or threatened species⁵ (Department of Environment Land Water and Planning 2017). There are two types of rare or threatened species habitats that may be provided by native vegetation:

- **Highly localised habitats for rare or threatened species** – where impact to this particular patch of native vegetation could result in a significant biodiversity impact, such as a breeding colony or species with a limited geographic extent.
- **Dispersed rare or threatened species habitats** – where habitat for the threatened species has become depleted or fragmented over time (Department of Environment Land Water and Planning 2017).

The HIS is used to apply the decision guidelines in relation to the removal of a patch of native vegetation and to determine offset requirements (Department of Environment Land Water and Planning 2017).

Applications to remove native vegetation are categorised against one of three assessment pathways. These pathways are categorised as:

- Basic – limited impacts on biodiversity.
- Intermediate – could impact on large trees, endangered EVCs, and sensitive wetlands and coastal areas.
- Detailed – could impact on large trees, endangered EVCs, sensitive wetlands and coastal areas, and could significantly impact on habitat for rare or threatened species (Department of Environment Land Water and Planning 2017).

This is initially determined in two ways, based on the 'location map' and the extent risk of the vegetation proposed to be removed. The location risk is determined with reference to the *Native Vegetation Location Risk* map available on DELWP's website (Department of Environment Land Water and Planning 2018b). This map shows whether native vegetation is classified as Location 1, 2 or 3.

⁵ Rare or threatened species are species listed in:

- DELWP's Advisory List of Rare or Threatened Plants in Victoria (DEPI 2014a) as 'endangered', 'vulnerable', or 'rare', but does not include the 'poorly known' category.
- DELWP's Advisory List of Threatened Vertebrate Fauna in Victoria (DEPI 2013) as 'critically endangered', 'endangered' or 'vulnerable', but does not include 'near threatened' or 'data deficient' categories
- DELWP's Advisory List of Threatened Invertebrate Fauna in Victoria (DEPI 2009) as 'critically endangered', 'endangered' or 'vulnerable', but does not include 'near threatened' or 'data deficient' categories.

The extent risk is determined based on the amount of native vegetation that is proposed for removal and includes the area (in hectares) of impact to native vegetation, the number of scattered trees, and the number of large trees (Table A5).

Table A5. Assessment pathways for removal of remnant patches of native vegetation (Department of Environment Land Water and Planning 2017).

Extent	Location		
	Location 1	Location 2	Location 3
Less than 0.5 hectares and not including any large trees	Basic	Intermediate	Detailed
Less than 0.5 hectares and including one or more large trees	Intermediate	Intermediate	Detailed
0.5 hectares or more	Detailed	Detailed	Detailed

All applications to remove native vegetation must include the following information:

1. Information about the native vegetation to be removed, including:
 - a. The assessment pathway and reason for the assessment pathway;
 - b. A description of the native vegetation to be removed;
 - c. Maps showing the native vegetation and property in context;
 - d. The offset requirement, determined in accordance with section 5 of the Guidelines that will apply if the native vegetation is approved to be removed.
2. Topographic and land information relating to the native vegetation to be removed;
3. Recent, dated photographs of the native vegetation to be removed;
4. Details of any other native vegetation approved to be removed, or that was removed without the required approvals, on the same property or on contiguous land in the same ownership as the applicant, in the five year period before the application for a permit is lodged;
5. An 'Avoid and Minimise' statement;
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* (Vic) that applies to the native vegetation to be removed;
7. Where the removal of native vegetation is to create defensible space, a written statement explaining why the removal of native vegetation is necessary;
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, and
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 (Department of Environment Land Water and Planning 2017; p. 20-21).

If the application will be assessed under the Detailed Assessment Methodology, the following additional requirements apply:

10. A site assessment report of the native vegetation to be removed, including:
 - a. A habitat hectare assessment of any patches of native vegetation, including the condition, extent (in hectares), Ecological Vegetation Class and bioregional conservation status.
 - b. The location, number, circumference (in centimetres measured at 1.3 metres above ground level) and species of any large trees within patches.
 - c. The location, number, circumference (in centimetres measured at 1.3 metres above ground level) and species of any scattered trees, and whether each tree is small or large.
11. Information about impacts on rare or threatened species habitat, including:
 - a. The relevant section of the Habitat importance map for each rare or threatened species requiring a species offset.
 - b. For each rare or threatened species that the native vegetation to be removed is habitat for, according to the Habitat importance maps: - the species' conservation status - the proportional impact of the removal of native vegetation on the total habitat for that species - whether their habitats are highly localised habitats, dispersed habitats, or important areas of habitat within a dispersed species habitat (Department of Environment Land Water and Planning 2017; p. 22).

Ten decisions guidelines are identified within the Guidelines that the responsible or referral authority must consider when deciding on an application to remove native vegetation. These are summarised as follows:

1. The degree to which the application avoids and minimises impacts to native vegetation, and where vegetation is proposed to be removed, the highest quality vegetation is avoided;
2. The role that the vegetation to be removed has in relation to landscape services such as erosion control, ground-water quality, waterway quality;
3. The role of the vegetation in the preservation of landscape features;
4. Whether any part of the native vegetation to be removed, destroyed or lopped is protected under the *Aboriginal Heritage Act 2006* (Vic);
5. The need to remove, destroy or lop native vegetation to create defensible space to reduce the risk of bushfire to life and property, having regard to other available bushfire risk mitigation measures;
6. Whether the native vegetation to be removed is in accordance with any Property Vegetation Plan that applies to the site;
7. Whether 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;
8. Whether the application is consistent with a Native Vegetation Precinct Plan (where relevant);
9. For applications in both the Intermediate and Detailed Assessment Pathway only, the impacts on biodiversity values that would occur as a result of vegetation removal; and,
10. For applications in the Detailed Assessment Pathway only, the impacts on habitat for rare or threatened species (Department of Environment Land Water and Planning 2017).

Offset requirements

In all cases where native vegetation is approved for removal, the proponent is liable for the security of an offset site that meets the requirements under the Guidelines. An offset can be either a:

- First party offset – on the same property as the proposed removal of native vegetation, or on another property owned or managed (in the case of Crown land) by the party requiring the offset, or
- Third party offset – on another party's property. Third party offsets are traded as native vegetation credits.

In most cases a third party offset is the simplest and most cost effective means of securing the required offset.

There are three components to offset requirements:

1. Offset type (general or species).
2. Offset amount (measured in general or species habitat units).
3. Offset attributes.

Two types of offset are identified: General Offsets and Specific Offsets. Specific Offsets may only be required if the native vegetation to be removed is habitat for rare or threatened species that are identified in an Intermediate or Detailed Assessment Pathway application (Department of Environment Land Water and Planning 2017). To determine this, a 'Specific Biodiversity Equivalence Score' is calculated by multiplying the habitat hectares with the HIS for each species that may be impacted. For each of the species, this figure is divided by the sum of all the Specific Biodiversity Value Scores calculated for the remaining vegetation under investigation to give a specific offset threshold for each species. If the amount of vegetation removed exceeds this threshold, then a Specific Offset is required. If it does not exceed the threshold, then only a General Habitat Offset is required (Table A6)(Department of Environment Land Water and Planning 2017).

Table A6 summarises the offset requirements for each of the Assessment Pathways and offset types.

Table A6. Offset requirements for the removal of native vegetation

Assessment Pathway	Offset Type	Offset amount		Offset attributes	
		Risk Adjusted Biodiversity Equivalence	Species Habitat Requirement	Vicinity	Strategic Biodiversity Score
Basic Assessment Pathway	General offset	1.5 times the general biodiversity equivalence score ¹ of the native vegetation to be removed.	No restrictions.	In the same Catchment Management Authority boundary as the native vegetation to be removed.	At least 80 per cent of the SBS of the native vegetation to be removed.
Intermediate or Detailed Assessment Pathway	General offset	1.5 times the general biodiversity equivalence score of the native vegetation to be removed.	No restrictions.	In the same Catchment Management Authority boundary as the native vegetation to be removed.	At least 80 per cent of the SBS of the native vegetation to be removed.
	Specific offset	For each species impacted, 2 times the specific biodiversity equivalence score of the native vegetation to be removed.	Likely habitat for each rare or threatened species that a specific offset is required for, according to the specific-general offset test.	No restrictions.	No restrictions.

¹ The general biodiversity equivalence score is determined by multiplying the vegetation's habitat hectare score by its SBS.

Appendix 3. Native Vegetation Removal Report

DRAFT

Native vegetation removal report

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

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

Date and time: 05 March 2019 16:01 PM

Lat./Long.: -37.3129156612156,144.951729905996

Address: 2 TOOTLE STREET KILMORE 3764

Native vegetation report ID:

346-20190305-005

Assessment pathway

The assessment pathway and reason for the assessment pathway

Assessment pathway	Intermediate Assessment Pathway
Extent of past plus proposed native vegetation removal	0.246 hectares
No. large trees	2 large tree(s)
Location category	Location 1 The native vegetation is not in an area mapped as an endangered Ecological Vegetation Class, sensitive wetland or coastal area. Removal of less than 0.5 hectares will not have a significant impact on any habitat for a rare or threatened species.

Offset requirement

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

Offset type	General offset
Offset amount	0.087 general habitat units
Offset attributes	
Vicinity	Goulburn Broken Catchment Management Authority (CMA) or Mitchell Shire Council
Minimum strategic biodiversity value score	0.333
Large trees	2 large tree(s)

Biodiversity information about the native vegetation

Description of any past native vegetation removal

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

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

Description of the native vegetation proposed to be removed

Extent of all mapped native vegetation	0.246 hectares
Condition score of all mapped native vegetation	0.332
Strategic biodiversity value score of all mapped native vegetation	0.416
Extent of patches native vegetation	0.190 hectares
1	0.158 hectares
2	0.005 hectares
3	0.003 hectares
4	0.003 hectares
5	0.021 hectares
Extent of scattered trees	0.056 hectares
No. large trees within patches	1 large tree(s)
No. large scattered trees	1 large tree(s)
No. small scattered trees	0 small tree(s)

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

Tree ID	Tree circumference (cm)	Benchmark circumference (cm)	Scattered / Patch	Tree size
B	342	220	Scattered	Large
A	301	220	Patch	Large

Other information

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

Photographs of the native vegetation to be removed

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

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

Topographical and land information

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

Avoid and minimise statement

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

Defendable space statement

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

Offset statement

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

Next steps

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

Property Vegetation Plan

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

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

Applications under Clause 52.16

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

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

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

For more information contact the DELWP Customer Service Centre 136 186

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Disclaimer

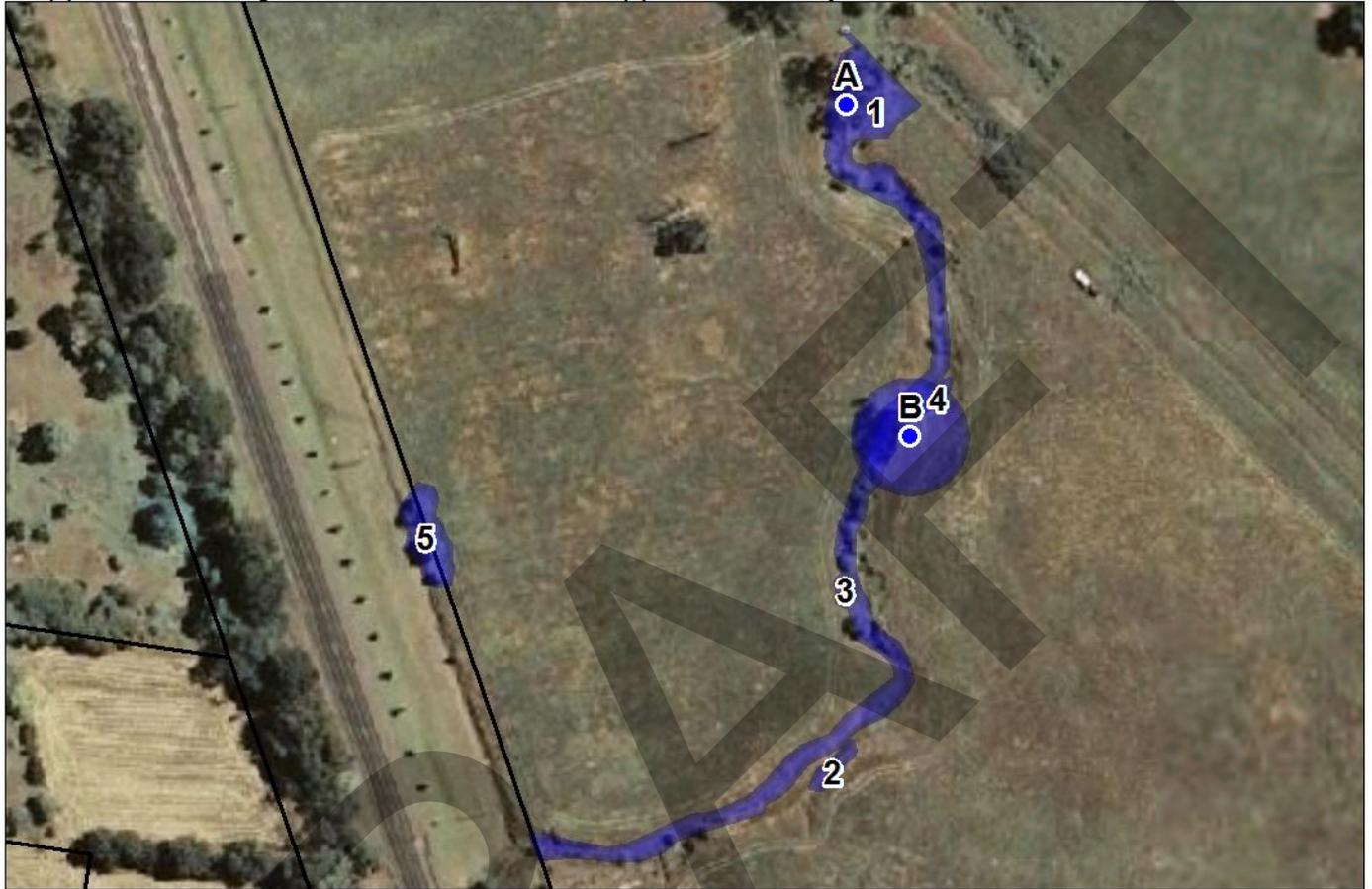
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Obtaining this publication does not guarantee that an application will meet the requirements of Clauses 52.16 or 52.17 of planning schemes in Victoria or that a permit to remove native vegetation will be granted.

Notwithstanding anything else contained in this publication, you must ensure that you comply with all relevant laws, legislation, awards or orders and that you obtain and comply with all permits, approvals and the like that affect, are applicable or are necessary to undertake any action to remove, lop or destroy or otherwise deal with any native vegetation or that apply to matters within the scope of Clauses 52.16 or 52.17 of planning schemes in Victoria.

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

Mapped native vegetation to be removed, lopped or destroyed



Legend

-  Mapped native vegetation
-  Property boundary

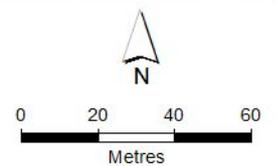


Figure 2 – Map of property in context

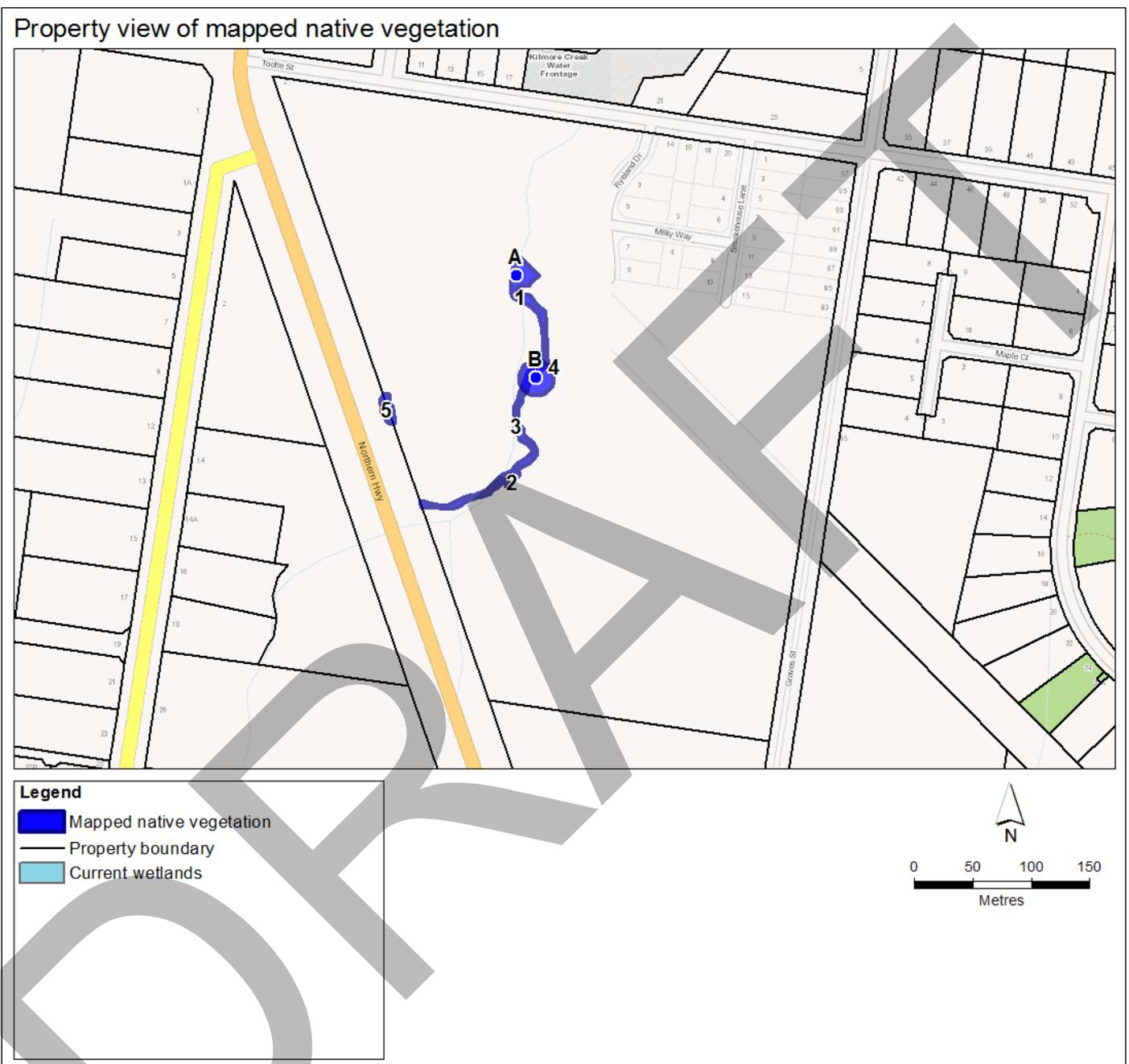


Figure 3 – Biodiversity information maps



Native vegetation removal report

Mapped native vegetation and the *Native vegetation condition map*



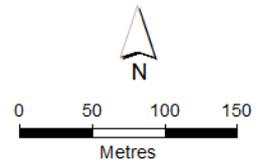
Legend

-  Mapped native vegetation
-  Property boundary

Native vegetation condition*

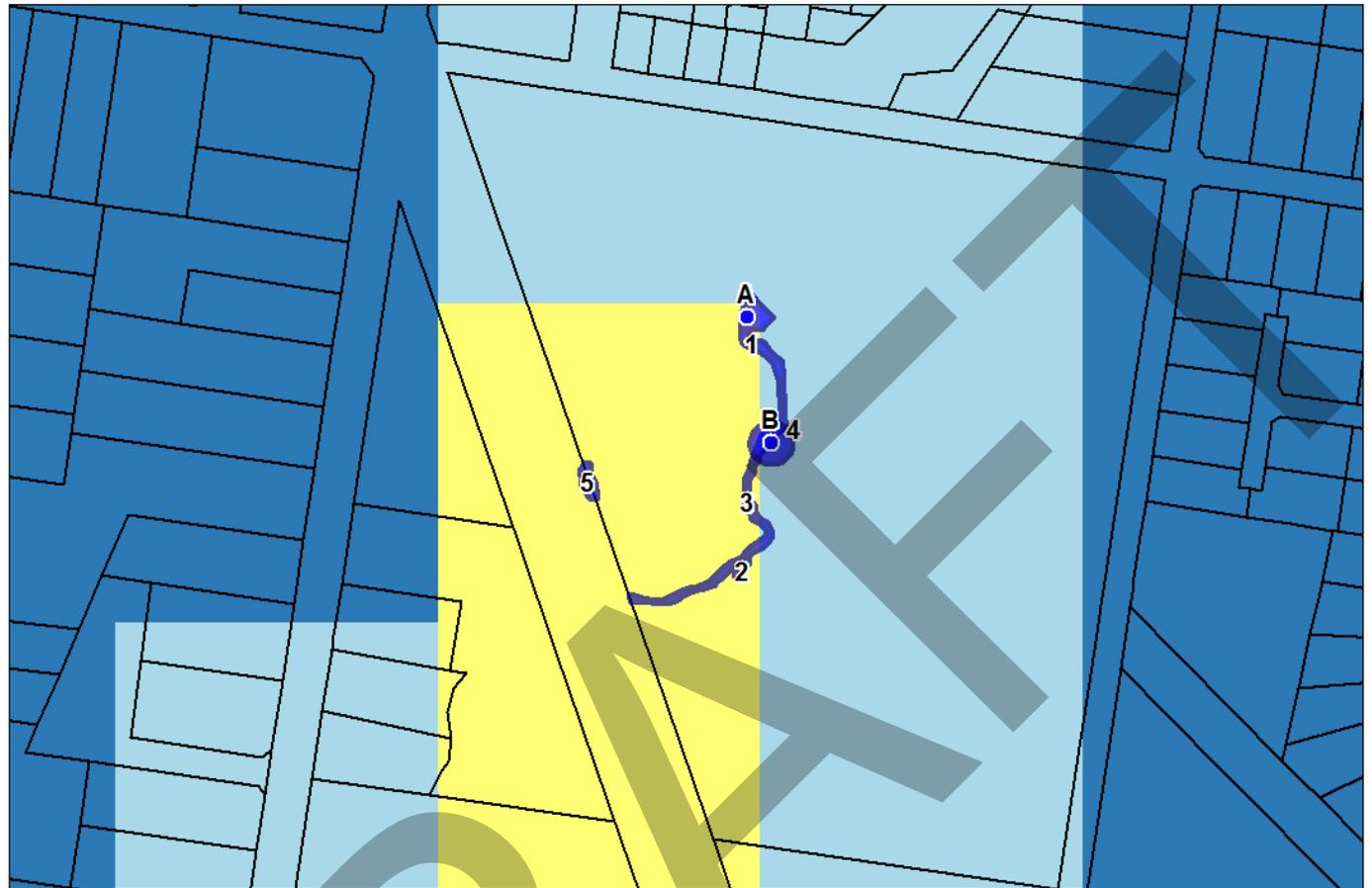
-  0.81 - 1.00
-  0.61 - 0.80
-  0.41 - 0.60
-  0.21 - 0.40
-  0.00 - 0.20

* These classes are for display purposes only



Native vegetation removal report

Mapped native vegetation and the *Strategic biodiversity value map*



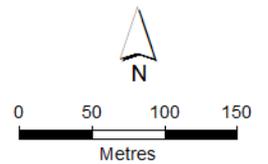
Legend

-  Mapped native vegetation
-  Property boundary

Strategic biodiversity value*

-  0.81 - 1.00
-  0.61 - 0.80
-  0.41 - 0.60
-  0.21 - 0.40
-  0.00 - 0.20

* These classes are for display purposes only



Appendix 1 - Details of offset requirements

Native vegetation to be removed

Extent of all mapped native vegetation (for calculating habitat hectares)	0.246	The area of land covered by a patch of native vegetation and/or a scattered tree, measured in hectares. Where the mapped native vegetation includes scattered trees, each tree is assigned a standard extent and converted to hectares. A small scattered tree is assigned a standard extent defined by a circle with a 10 metre radius and a large scattered tree a circle with a 15 metre radius. The extent of all mapped native vegetation is an input to calculating the habitat hectares.
Condition score*	0.332	The condition score of native vegetation is a site-based measure that describes how close native vegetation is to its mature natural state. The condition score is the weighted average condition score of the mapped native vegetation calculated using the <i>Native vegetation condition map</i> .
Habitat hectares	0.082	Habitat hectares is a site-based measure that combines extent and condition of native vegetation. It is calculated by multiplying the extent of native vegetation by the condition score: Habitat hectares = extent x condition score
Strategic biodiversity value score	0.416	The strategic biodiversity value score represents the complementary contribution to Victoria's biodiversity of a location, relative to other locations across the state. This score is the weighted average strategic biodiversity value score of the mapped native vegetation calculated using the <i>Strategic biodiversity value map</i> .
General landscape factor	0.708	The general landscape factor is an adjusted strategic biodiversity value score. It has been adjusted to reduce the influence of landscape scale information on the general habitat score.
General habitat score	0.058	The general habitat score combines site-based and landscape scale information to obtain an overall measure of the biodiversity value of the native vegetation. The general habitat score is calculated as follows: General habitat score = habitat hectares x general landscape factor

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

Offset requirements

Offset type	General offset	A general offset is required when the removal of native vegetation does not have a significant impact on any habitat for rare or threatened species. All proposals in the Basic and Intermediate assessment pathways will only require a general offset.
Offset multiplier	1.5	This multiplier is used to address the risk that the predicted outcomes for gain will not be achieved, and therefore will not adequately compensate the biodiversity loss from the removal of native vegetation.
Offset amount (general habitat units)	0.087	The general habitat units are the amount of offset that must be secured if the application is approved. This offset requirement will be a condition to any permit or approval for the removal of native vegetation. General habitat units required = general habitat score x 1.5
Minimum strategic biodiversity value score	0.333	The offset site must have a strategic biodiversity value score of at least 80 per cent of the strategic biodiversity value score of the native vegetation to be removed. This is to ensure offsets are located in areas with a strategic biodiversity value that is comparable to the native vegetation to be removed.
Vicinity	Goulburn Broken CMA or Mitchell Shire Council	The offset site must be located within the same Catchment Management Authority boundary or municipal district as the native vegetation to be removed.
Large trees	2 large tree (s)	The offset site must protect at least one large tree for every large tree removed. A large tree is a native canopy tree with a Diameter at Breast Height greater than or equal to the large tree benchmark for the local Ecological Vegetation Class. A large tree can be either a large scattered tree or a large patch tree.