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Biodiversity Assessment, Clarkes Lane, Wangaratta, Victoria

Version E

Prepared for:

Bislake Pty Ltd

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Cover Photograph

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

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Executive Summary

Ecolink Consulting Pty Ltd was engaged by Bislake Pty Ltd, representing their client, to undertake a Biodiversity Assessment of three properties north of Clarkes Lane, Wangaratta, Victoria (the study area). The applicant is proposing that the land be rezoned to General Residential land to facilitate future development.

The Biodiversity Assessment is required to understand the ecological values of the study area and support the rezoning of the southern portion of the study area into residential land. The southern portion of the study area will then be developed into residential housing. Patches of native vegetation, which contain indigenous trees in the south-eastern corner of the study area and are also located along One Mile Creek and the western boundary of the study area, are proposed to be retained in accordance with the latest Overall Concept Development Plan (Project M6801, Version 15).

Department of Environment, Land, Water and Planning modelling suggests that the historical vegetation within the study area would most likely have been predominantly Ecological Vegetation Class (EVC) 55: Plains Grassy Woodland, with EVC 68: Creekline Grassy Woodland located along One Mile Creek along the western boundary of the study area. The current assessment confirmed the presence of remnants of this native vegetation. Vegetation quality was generally low to moderate, with Habitat Hectare Scores ranging from 24 to 37 (out of 100).

The vegetation within the majority of the study area was generally highly modified from its pre-European state. The cover abundance of exotic Toowoomba Canary-grass *Phalaris aquatica* generally exceeded 75% of the total vegetation projective foliage cover. Other widespread species included exotic species such as Cocksfoot *Dactylis glomerata,* Perennial Rye-grass *Lolium perenne*, Prostrate Knotweed *Polygonum aviculare* and Flatweed *Hypochaeris radicata*. Indigenous species did not exceed 5% projective foliage cover across most of the study area, but included Flat Spurge *Euphorbia dallachyana*, Finger Rush *Juncus subsecundus* and Small Loosestrife *Lythrum hyssopifolia*.

Remnant vegetation was generally located in the south-eastern portion of the study area, within Targoora Reserve, in the north of the study area, and along One Mile Creek along the western boundary of the study area. Overstorey vegetation in these locations included River Red-gums *Eucalyptus camaldulensis* and Grey Box *Eucalyptus microcarpa* trees, with a sparse or absent midstorey and a generally low cover abundance of Windmill Grass *Chloris truncata*, Common Blown-grass *Lachnagrostis filiformis*, Common Wallaby-grass *Rytidosperma caespitosum* and Copper-awned Wallaby-grass *Rytidosperma fulvum* in the understorey of some locations. Within the One Mile Creek area, aquatic and semi-aquatic vegetation included indigenous Slender Knotweed *Persicaria decipiens*, Common Bog-sedge *Schoenus apogon*, Poong'ort *Carex tereticaulis*, Common Spike-sedge *Eleocharis acuta*, and Gold Rush *Juncus flavidus,* as well as exotic Water Couch *Paspalum distichum*, Drain Flat-sedge *Cyperus eragrostis* and Buttercup *Ranunculus* sp.

Fifteen fauna species were recorded within the study area during the current assessment. The habitats for native wildlife are generally highly modified outside the areas of remnant vegetation. These areas contain open exotic grasslands, with occasional indigenous scattered trees (including many dead trees) throughout the paddocks. Open exotic grasslands provide limited fauna habitat, but are expected to provide foraging habitat for a range of birds. Higher quality habitats include areas of remnant vegetation that support mature trees, which were generally located within the

south-eastern portion of the study area, One Mile Creek, and as scattered trees throughout the remainder of the study area, including the road reserves. Trees provide roosting and nesting opportunities for birds, arboreal mammals and bats, with many of the trees providing tree hollows. This habitat supports species such Striated Pardalote *Pardalotus striatus,* and Red-rumped Parrot *Psephotus haematonotus,* which were recorded during the current assessment. One Mile Creek forms a contiguous habitat corridor, which extends beyond the study area to the north, and south of Clarkes Lane towards the Hume Freeway. This corridor of remnant vegetation provides opportunities for animals to move across the landscape. Fish and frog species would also utilise the aquatic habitats located along One Mile Creek, although none were recorded during the current assessment.

No threatened flora or fauna species were recorded during the current site assessment. However, there is a low to moderate likelihood that threatened flora and fauna species may occur within native vegetation located in the south-eastern corner of the study area, the Targoora Reserve, and the One Mile Creek.

The previous iteration of this report recommended the retention of native vegetation, where practicable, through appropriate development design, including:

- Retaining indigenous trees, inclusive of their Tree Protection Zone (TPZ), wherever safe and practicable;
- Retaining patches of native vegetation, noting that TPZs of trees within patches can extend beyond patch boundaries;
- Prioritising the retention of Large Trees, where deemed to have a Fair, Moderate or High arboricultural rating by the arborists' assessment that was prepared for the study area, as well as the highest quality native vegetation as assessed during the current assessment;
- Retaining or avoiding, minimising and ultimately mitigating impacts to areas of suitable habitat for threatened species where feasible. This includes the habitats for threatened species in areas of remnant and planted native vegetation associated with One Mile Creek, Targoora Reserve and the south-eastern corner of the study area;
- Protecting vegetation, which is to be retained, from construction activities in accordance with a Construction Environment Management Plan. This should include fencing exclusion areas; and,
- Incorporating sediment, erosion and pollution control measures in accordance with the EPA Guidelines.

These recommendations were followed in preparing the latest Development Plan. In this context, and based on the relevant legislation and policies, the following recommendations are made:

- Obtain a permit to remove native vegetation pursuant to Clause 52.17 of the planning scheme for residual, unavoidable, impacts to native vegetation;
- Once the development plan has been finalised and the rezoning has been approved, based on the current development plan, an offset is likely to be required. This offset comprises:
    - 0.056 General Habitat Units;
        - With a minimum Strategic Biodiversity Value Score of 0.400; and,

        - Located with the North East Catchment Management Authority (CMA) area or the Rural City of Wangaratta municipality; and
    - Two Large Trees;
- If impacts to native vegetation in One Mile Creek, the Targoora Reserve and the south-eastern corner of the study area are proposed, targeted flora and fauna surveys may be recommended to meet regulatory approvals (although each of these areas are proposed for retention in the current development plan);
- Explore opportunities to improve habitats within the study area by creating habitat connectivity from Targoora Reserve to One Mile Creek. This may include supplementary planting with native vegetation in the north-western corner of the study area and vegetation improvement in areas of retained vegetation;
- Improve vegetation quality through improved vegetation management and supplementary planting in accordance with a Restoration Plan (or equivalent);
- Undertake a survey of public land (Targoora Reserve or road reserves) where impacted by future development, to obtain a *Permit to Take Protected Flora* for impacts to protected species listed under the *Flora and Fauna Guarantee Act 1988* (Vic);
- Prepare a Construction Environmental Management Plan that recommends (as a minimum):
    - Animal welfare protocols, including to salvage fauna from trees prior to their removal;
    - Fencing and designation of no-go areas in locations where vegetation is to be protected;
    - Undertaking weed management prior to, during and post-construction. Target noxious weeds such as:
        - Blackberry *Rubus fruticosus* spp. agg;
        - Spear Thistle *Cirsium vulgare;* and
        - Willows *Salix* sp.
    - Maintenance of vehicle hygiene of vehicles entering and leaving the study area to avoid the introduction of weed or weed pathogens into the study area;
    - Implementation of sediment and erosion control prior to and during construction in accordance with the EPA Guidelines; and
    - Using locally indigenous species within the plant palette for future landscaping of the site, as appropriate.

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Introduction

Ecolink Consulting Pty Ltd was engaged by Bislake Pty Ltd, representing their client, to undertake a Biodiversity Assessment of three properties north of Clarkes Lane, Wangaratta, Victoria. The three properties comprising the study area included:

- Agricultural land in the southern portion of the study area, which was bounded by Clarkes Lane in the south, One Mile Creek in the west, Laceby-Targoora Road in the east and the Cathedral College in the north;
- The western portion of Cathedral College, which includes sporting ovals located in the central portion of the study area; and,
- Council land, including Targoora Reserve, in the northern portion of the study area (Figure 1).

The Biodiversity Assessment is required to determine the ecological values of the study area to support rezoning of the southern portion of the study area into General Residential land. The land is then proposed to be subdivided into 233 lots, including three super-lots. Patches of native vegetation, which contain indigenous trees in the south-eastern corner of the study area and area also located along One Mile Creek, in the western boundary of the study area, are proposed to be retained.

The assessment addresses the requirements of Clause 52.17 of the Rural City of Wangaratta planning scheme by mapping and assessing the location, extent and quality of native vegetation, in accordance with the *Guidelines for the Removal, Destruction or Lopping of Native Vegetation* (Department of Environment Land Water and Planning 2017). The Biodiversity Assessment also recommends mitigation measures and offset requirements based on relevant legislation and policies, where appropriate.

Therefore, the purpose of the Biodiversity Assessment is to:

- Determine the ecological values of the study area;
- Identify ecological values which might preclude rezoning or which should be considered for the subsequent development of the southern portion of the study area;
- Evaluate 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);
- Evaluate any impacts that are likely to occur to any ecological values as a result of the potential loss of vegetation at the study area; and,
- Make 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 2022d) to identify the planning zones and overlays relating to environmental matters e.g. Vegetation Protection Overlays, or Environmental Significance Overlays;
- The NatureKit webpage (Department of Environment Land Water and Planning 2022c)from the Department of Environment, Land, Water and Planning (DELWP) to identify the historic and current Ecological Vegetation Classes (EVCs) ;
- The Victorian Biodiversity Atlas (Department of Environment Land Water and Planning 2022f) for records of threatened[1] flora and fauna within three kilometres of the study area;
- The Native Vegetation Information Management System (NVIM) to determine biodiversity offset requirements (Department of Environment Land Water and Planning 2022b);
- The 'Weeds of National Significance' database (Department of Agriculture Water and the Environment 2022b);
- The Protected Matters Search Tool from the Department of Agriculture, Water and the Environment (Department of Agriculture Water and the Environment 2022a) to identify Matters of National Environmental Significance that may occur within three kilometres of the study area;
- Arboricultural assessment data provided prepared by Oldmeadow Arboriculture Pty Ltd (Oldmeadow Arboriculture Pty Ltd 2022); and,
- Relevant legislation and policies (as required).

In addition, we contacted Tina Whately, NRM and Sustainability Coordinator, City of Wangaratta, to understand the constraints associated with Targoora Reserve.

Site Assessment

A site assessment was undertaken on 14 January 2022 by Principal Ecologist, Simon Scott. Simon is suitably qualified and experienced to undertake such assessments and holds a current Vegetation Quality Assessments (Habitat Hectares) Accreditation with DELWP (Department of Environment Land Water and Planning 2022e).

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,

[1] Threatened flora and fauna includes species listed under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999 (Cth)*, and the *Flora and Fauna Guarantee Act 1988 (Vic*)

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.

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 species, size (Diameter and Breast Height and Tree Protection Zone) and location of all 'scattered' indigenous trees was recorded using an iPad mini tablet that has an internal Global Positioning System (GPS) and the GIS Pro application (accuracy +/- 5 metres). The presence of hollows and birds' nests was also noted.

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 fauna habitats (e.g. trees, water bodies, crevices or under ground debris) during the assessment.

Guidelines for the Removal, Destruction or Lopping of Native Vegetation

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 was measured or observed at a site, including:
    - Extent of native vegetation patches;
    - 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. It was not possible to determine the risk-based pathway for the loss of native vegetation, and we therefore opted to complete the Habitat Hectare assessment 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[2] of vegetation. All indigenous vegetation was assessed, and then assigned a quality rating based on the Habitat Hectare score (Department of Sustainability and Environment 2004).

To determine offsets, the location and species of indigenous 'scattered trees'[3], and any 'large trees'[4] within patches were mapped. Details of the location, extent of native vegetation (patches, scattered trees and large trees) that are proposed for removal was provided to DELWP who produced a Native Vegetation Removal report which details the required offsets for impacts to native vegetation patches, Large Trees and scattered trees.

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. These databases all have internal vetting procedures, however the accuracy of these historical data and some of the results provided within these reports cannot be verified. The desktop assessment does, however, rely on the most accurate data available.
- Not all trees within groups were assessed by the arborist. Large Trees within patches were estimated by the assessor to the nearest 5 centimetres Diameter at Breast Height (DBH).
- Where Tree Numbers were assigned by the arborist, they have been used within this report. Where trees were not individually assessed by the arborist they have been assigned a "letter value" i.e. A, B, C … etc.
- 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 within this report, depending on the implications of relevant policies and legislation.
- Summer is generally not the preferred time of year for ecological assessments. 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, and an understanding of the ecological values of the local area.

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

[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

Results

Study Area

The study area is located near the southern boundary of the City of Wangaratta, approximately 3.4 kilometres south-east of the Wangaratta Railway Station. The study area includes:

- Agricultural land in the southern portion of the study area (Plate 1). It is currently grazed by cattle and dominated by exotic pasture grasses. Access by the cattle is excluded into the neighbouring school and Council reserves through fencing. Cattle are also fenced off from the majority of One Mile Creek, although cattle can access the eastern portion of the creek. The south-eastern portion of the study area is densely treed, with remnant indigenous trees. This area is used by cattle as a "camp" area, where they were sheltering from sun and rain during the current assessment. Remnant vegetation extended into the adjoining road reserves and occasional scattered indigenous trees were present within the agricultural land and road reserves;
- The eastern side of One Mile Creek. This area comprised remnant River Red-gum *Eucalyptus camaldulensis* trees and some indigenous aquatic and semi aquatic native vegetation along the creekline (Plate 2).
- The western portion of Cathedral College. This area includes some new sporting facilities, including a multi-purpose netball field, hockey field and football oval. No remnant vegetation was present in this location (Plate 3). A plantation of native shrubs and trees surrounds the boundary of the college.
- The Council land, including the Targoora Reserve, which forms the northern portion of the study area. This area is located west of the Wangaratta Baseball and Softball Sports Club and east of existing residential development. The vegetation present in this area includes:
    - Targoora Reserve, which is actively managed by the City of Wangaratta. Vegetation in this location includes:
        - Remnant patches of native vegetation and some scattered remnant trees (Plate 4);
        - Some areas of revegetation and supplementary planting, which are required as offsets for losses of native vegetation approved elsewhere (Plate 5);
    - A tree plantation comprising planted Grey Box *Eucalyptus microcarpa* and Yellow Box *Eucalyptus melliodora* trees (Plate 6) (Tina Whatley, NRM and Sustainability Coordinator, City of Wangaratta *in litt*. 7 February 2022) (Figure 1).

No buildings were recorded within the study area. No dams or waterbodies were recorded within the study area, other than One Mile Creek along the study area's western boundary.

Flora

Flora Species

A total of 82 flora species were recorded during the current assessment. This comprised 32 indigenous species and 50 exotic species (Table A1).

The vegetation within the pasture area was generally highly modified from its pre-European state. The cover abundance of exotic Toowoomba Canary-grass *Phalaris aquatica* generally exceeded 75%

of the total vegetation projective foliage cover. Other widespread species included exotic species such as Cocksfoot *Dactylis glomerata,* Perennial Rye-grass *Lolium perenne*, Prostrate Knotweed *Polygonum aviculare* and Flatweed *Hypochaeris radicata*. Indigenous species did not exceed 5% projective foliage cover across most of the study area, but included Flat Spurge *Euphorbia dallachyana*, Finger Rush *Juncus subsecundus* and Small Loosestrife *Lythrum hyssopifolia*. Overstorey vegetation was generally sparse but included River Red-gums and Grey Box. These trees were generally concentrated in the south-eastern corner of the study area and extended into the adjoining road reserves. No remnant native understorey vegetation was observed in the south-eastern corner of the study area, however, Windmill Grass *Chloris truncata*, Common Blown-grass *Lachnagrostis filiformis*, Common Wallaby-grass *Rytidosperma caespitosum* and Copper-awned Wallaby-grass *Rytidosperma fulvum* were present in some parts of the Clarkes Lane and Laceby-Targoora Road road reserves.

Remnant River Red-gums were also dominant in the overstorey along One Mile Creek. Occasional Silver Wattle *Acacia dealbata* and Blackwood *Acacia melanoxylon* were also present in the midstorey. Aquatic and semi-aquatic vegetation included indigenous Slender Knotweed *Persicaria decipiens*, Common Bog-sedge *Schoenus apogon*, Poong'ort *Carex tereticaulis*, Common Spike-sedge *Eleocharis acuta*, and Gold Rush *Juncus flavidus,* as well as exotic Water Couch *Paspalum distichum*, Drain Flat-sedge *Cyperus eragrostis* and Buttercup *Ranunculus* sp.

The school land contained sporting courts devoid of native vegetation, surrounded by exotic vegetation, including Paspalum *Paspalum dilatatum*, Prickly Lettuce *Lactuca serriola* and Flaxleaf Fleabane *Erigeron bonariensis*. The indigenous Hairy Willow-herb *Epilobium hirtigerum* was also recorded near the courts. The football oval was covered with Rye Grass *Lolium* sp. and Couch *Cynodon* sp. The plantation surrounding the school boundary included planted Australian native Banksia *Banksia* sp., Bottlebrushes *Callistemon* sp., Wattle *Acacia* sp., Paperbarks *Melaleuca* sp. and Gums *Eucalyptus* sp.

The Council land, Targoora Reserve, contains small areas of indigenous remnant vegetation with an overstorey of Grey Box and an exotic understorey of Prairie Grass *Bromus catharticus*, Toowoomba Canary-grass and Perennial Rye-grass. it also supports a timber plantation of native trees, including Yellow Box, over the above-mentioned exotic species and an area of revegetation. The species used for the revegetation include the indigenous species Hedge Wattle *Acacia paradoxa*, Totem Poles *Melaleuca decussata*, Silver Wattle *Acacia dealbata*, Gold-dust Wattle *Acacia acinacea* and Golden Wattle *Acacia pycnantha* (note that planted species, which were not spreading are not show in in Table A1). The City of Wangaratta have advised that the areas of revegetation were used as an offset site for the removal of native vegetation elsewhere and should not be removed. The removal of some trees in the wood plantation may be permitted, subject to further Council consideration (Tina Whatley, NRM and Sustainability Coordinator, City of Wangaratta *pers comm*. 3 February 2022). Further information has been sought from Council in relation to the native vegetation on Council land.

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 Rural City of Wangaratta Planning Scheme (Department of Environment Land Water and Planning 2022d);
- *State* – Which includes DELWP's EVC mapping of vegetation communities 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 southern portion of the study area, incorporating the agricultural land and the school site, is zoned Low Density Residential Zone (Department of Environment Land Water and Planning 2022d). The agricultural portion of the study area is proposed to be rezoned to General Residential land to facilitate future development. The Council reserves in the northern portion of the study area are zoned Public Park and Recreation Zone.

No overlays, such as Environmental Significance Overlays, Vegetation Protection Overlays or Significant Landscape Overlays, that are relevant to this report, cover the study area (Department of Environment Land Water and Planning 2022d).

A Vegetation Protection Overlay – Schedule 2 covers vegetation associated with the Wangaratta Whitfield Road located to the east of the school property, however this is beyond the study area for the current assessment, and vegetation at this location would only be impacted if road upgrades were required to facilitate the proposed development (Department of Environment Land Water and Planning 2022d).

State

The study area is located within the Victorian Riverina bioregion and the North East Catchment Management Authority Area. DELWP modelling of the vegetation within the study area suggests that it was generally covered by EVC 55: Plains Grassy Woodland, with EVC 68: Creekline Grassy Woodland located along One Mile Creek, along the western boundary of the study area. These EVCs are described as follows:

- EVC 55_61: Plains Grassy Woodland is '*an open, eucalypt woodland to 15 m tall.* [It] *occupies well drained, fertile soils on flat or gently undulating plains at low elevations in areas with >600 mm annual rainfall. The understorey consists of a few sparse shrubs over a species-rich grassy and herbaceous ground layer characterised by summer-growing grasses*'.
- EVC 55_62: *Riverina* Plains Grassy Woodland is '*an open, eucalypt woodland to 15 m tall occurring on a number of geologies and soil types*. [It] *occupies fertile clays and clay loam soils on flat or gently undulating plains at low elevations in areas with 600 mm annual rainfall. The understorey consists of a few sparse shrubs over a species-rich grassy and herbaceous ground layer and chenopods are often present*'.
- EVC 68: Creekline Grassy Woodland is a '*Eucalypt-dominated woodland to 15 m tall with occasional scattered shrub layer over a mostly grassy/sedgy to herbaceous ground-layer. Occurs on low-gradient ephemeral to intermittent drainage lines, typically on fertile*

colluvial/alluvial soils, on a wide range of suitably fertile geological substrates. These minor drainage lines can include a range of graminoid and herbaceous species tolerant of waterlogged soils, and are presumed to have sometimes resembled a linear wetland or system of interconnected small ponds' (Department of Environment Land Water and Planning 2022a).

DELWP model remnant patches of native vegetation along the southern and south-eastern boundaries of the study area, near Clarkes Lane and Laceby-Targoora Road, as well as scattered through the Targoora Reserve in the northern portions of the study area. One Mile Creek is also modelled to contain remnants of EVC 68: Creekline Grassy Woodland along its entire length.

The current assessment confirmed the presence of both EVCs in the same approximate location as the DELWP modelling (Figure 1).

Commonwealth

The modelling used by the Protected Matters Search Tool (PMST) suggests that three threatened ecological communities, listed under the EPBC Act, may occur within three kilometres of the study area (Department of Agriculture Water and the Environment 2022a). These include:

- Buloke Woodlands of the Riverina and Murray-Darling Depression Bioregions (Endangered);
- White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland (Critically Endangered); and
- Grey Box (Eucalyptus microcarpa) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia (Endangered).

The vegetation observed was not representative of the former two threatened ecological communities as it lacked the characteristic species of these communities.

The vegetation was assessed against the thresholds Grey Box (Eucalyptus microcarpa) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia. To classify as the federally listed community it should have either:

- At least 50% of the plant cover in the ground layer made up of perennial native species; OR
- At least 10% of plant cover in ground layer made up of perennial native grass species; AND
- Be at least 0.5 hectares in size (SEWPaC 2012).

None of the vegetation within the study area is of sufficient quality and extent to meet these thresholds, and qualify as the Grey Box (Eucalyptus microcarpa) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia ecological community.

Vegetation Quality Assessment

Seven patches of native vegetation were recorded within the study area during the current assessment (Table 1; Figure 1). Patch 5 was representative of EVC 68: Creekline Grassy Woodland whereas all other patches were representative of EVC 55: Plains Grassy Woodland.

The patches were of moderate quality:

- Patch 1 is located in the south-eastern portion of the study area and included a portion of the Clarkes Lane and Laceby-Targoora Road road reserve (Plate 7). It had a Habitat Hectare Score of 26 (out of 100);
- Patch 2 includes vegetation within the Laceby-Targoora Road road reserve in the eastern portion of the study area. It had a Habitat Hectare Score of 26 (out of 100);
- Patches 3 and 4 were small groups of trees located near the southern boundary of the study area (Plate 8). They had Habitat Hectare Scores of 24 and 26 (out of 100) respectively;
- Patch 5 was the patch of riparian vegetation associated with One Mile Creek. It had the highest Habitat Hectare Score of 37 (out 100) (Table 2);
- Patch 6 was the northern-most patch of remnant native vegetation and extended further west beyond the study area (Plate 4), located along One Mile Creek. It had a Habitat Hectare Score of 26 (out 100); and
- Patch 7 was located just south of Patch 6, but was separated by a pedestrian track. It also had a Habitat Hectare Score of 26 (out 100) (Table 2).

Table 1. Habitat Hectare assessment results.

Patch			1	2	3	4	5	6	7
Bioregion			Victorian Riverina	Victorian Riverina	Victorian Riverina	Victorian Riverina	Victorian Riverina	Victorian Riverina	Victorian Riverina
EVC name			Riverina Plains Grassy Woodland	Riverina Plains Grassy Woodland	Riverina Plains Grassy Woodland	Riverina Plains Grassy Woodland	Creekline Grassy Woodland	Riverina Plains Grassy Woodland	Riverina Plains Grassy Woodland
EVC number			55_62	55_62	55_62	55_62	68	55_62	55_62
Conservation rating within bioregion			Endangered	Endangered	Endangered	Endangered	Endangered	Endangered	Endangered
Assessment Criteria		**Maximum Score**	**Patch Score**	**Patch Score**	**Patch Score**	**Patch Score**	**Patch Score**	**Patch Score**	**Patch Score**
Site Condition	a. Large old trees	10	9	9	7	9	7	9	9
	b. Canopy cover	5	4	4	4	4	4	4	4
	c. Understorey	25	5	5	5	5	10	5	5
	d. Lack of weeds	15	2	2	2	2	2	2	2
	e. Recruitment	10	0	0	0	0	1	0	0
	f. Organic litter	5	3	3	3	3	3	3	3
	g. Logs	5	0	0	0	0	2	0	0
	h. Total (sum of a-g)	75	23	23	21	23	29	23	23
Landscape Value	j. Patch size	10	1	1	1	1	6	1	1
	k. Neighbourhood	10	1	1	1	1	1	1	1
	l. Distance to core	5	1	1	1	1	1	1	1
m. Habitat Score (sum of h-l)		100	26	26	24	26	37	26	26
n. Habitat score out of 1 (m÷100)			**0.26**	**0.26**	**0.24**	**0.26**	**0.37**	**0.26**	**0.26**
Large Old Trees (LOTs)*			**16**	**2**	**2**	**3**	**31****	**5****	**2**

* Large Old Tree (LOT) size for *Eucalyptus* spp. in EVC 55_62: Plains Grassy Woodland >70 centimetres, EVC 68: Creekline Grassy Woodland >80cm DBH.

** LOTs counted within the study area only. Data extrapolated to estimate LOTs within the entire patch when determining the LOT Score.

Scattered Tree Assessment

Ten scattered indigenous trees were recorded during the current assessment. This included six trees assessed by the arborist (Tree 10, 11, 17, 18, 20 and 39), as well as four trees which were not assessed by the arborist (Tree AV, AW, AX and AY).

Of these, four were living (Tree 11, 17, 18 and 20) and six were dead (Tree 10, 39, AV AW, AX and AY). Six of the trees are classified as Large (Trees 11, 18, 20, 39, AV and AW) and the remainder are Small (Table 2).

Table 2. Scattered indigenous trees

Label	Common Name	Species Name	DBH	Size Class	Latitude	Longitude
10	Dead	Dead	35	Small	146.3255	-36.3892
11	River Red-gum	*Eucalyptus camaldulensis*	163	Large	146.3263	-36.3893
17	Grey Box	*Eucalyptus microcarpa*	50	Small	146.3294	-36.3897
18	River Red-gum	*Eucalyptus camaldulensis*	110	Large	146.3297	-36.3897
20	River Red-gum	*Eucalyptus camaldulensis*	155	Large	146.3304	-36.3894
39	Dead	Dead	80	Large	146.3244	-36.3845
AV*	Dead	Dead	130	Large	146.3279	-36.3894
AW*	Dead	Dead	95	Large	146.3279	-36.3894
AX*	Dead	Dead	65	Small	146.3278	-36.3894
AY*	Dead	Dead	55	Small	146.3209	-36.3858

* not recorded by the arborist

Threatened Flora Species

Five threatened flora species have previously been recorded within three kilometres of the study area (Department of Environment Land Water and Planning 2022f). A further eight threatened flora species are predicted to occur within the study area based on the Protected Matters Search Tool (Department of Agriculture Water and the Environment 2022a). A consolidated list of these threatened flora species as well as their conservation status under the EPBC Act, the FFG Act Threatened List: October 2021 (Department of Environment Land Water and Planning 2021a), their preferred habitats and the likelihood of occurrence for each species is provided in Table A3.

There are no historical records of threatened flora species within the study area, and no threatened flora species were recorded during the current assessment (Figure 1).

One species, River Swamp Wallaby-grass *Amphibromus fluitans,* has a low likelihood of occurrence near the One Mile Creek. This area is unlikely to be impacted by the future rezoning and subsequent development. Given the low likelihood of occurrence, and that One Mile Creek is beyond the area to be rezoned, targeted surveys for this species are not recommended.

Other species listed in Table A3 are considered unlikely to occur within the study area on the basis that their habitat requirements are not met, or due to the high level of modification of habitats (Table A3).

Fauna

Fauna Species

Fifteen fauna species were recorded within the study area during the current assessment. The recorded species comprised 13 birds (11 native and two introduced) and two mammals (both introduced). All of these species are common to the area. No reptiles were recorded during the assessment, although it is likely that skinks and snakes would utilise the study area on occasion. The trees are also likely to provide habitat to arboreal mammals, including possums and bats, which were not recorded during the current assessment. Further discussion of fauna species encountered is included below.

Fauna Habitats

The habitats for native wildlife are generally modified throughout much of the study area. The study area contains open exotic grasslands, with occasional mature, indigenous, scattered trees (including many dead trees) throughout the paddocks. Open exotic grasslands provide limited fauna habitat but are expected to provide foraging habitat for a range of birds. Australia Magpie *Cracticus tibicen,* Australian Raven *Corvus coronoides* and Magpie-lark *Grallina cyanoleuca* were recorded in these areas. Ground-dwelling fauna may move across the paddocks when moving to higher quality habitats.

Mature trees were also generally located within the south-eastern portion of the study area, One Mile Creek, and a sparse coverage throughout the remainder of the study area, including the road reserves. Trees provide roosting and nesting opportunities for birds and bats, with many of the trees providing tree hollows. This habitat supports species such Striated Pardalote *Pardalotus striatus,* Red-rumped Parrot *Psephotus haematonotus,* Sulphur-crested Cockatoo *Cacatua galerita* and Galah *Eolophus roseicapilla,* which were observed during the current assessment. Mammals such as Common Brushtail Possum *Trichosurus vulpecula* and Common Ringtail Possums *Pseudocheirus peregrinus* also likely to reside and forage in the canopy of these trees, whilst micro-bats may use the fissures and flaking bark as diurnal roosting locations on occasion.

Small bird species were generally not observed during the assessment. This is probably due to a general absence of midstorey and understorey vegetation, which would provide refuge from larger more aggressive birds. Nevertheless, the trees within One Mile Creek form a contiguous habitat corridor which extends beyond the study area to the north, and south of Clarkes Lane, towards the Hume Freeway. This corridor of remnant vegetation provides opportunities for animals to move across the landscape.

The wetland habitats provided by One Mile Creek provided habitats for waterfowl such as Australian Wood Duck *Chenonetta jubata* and White-faced Heron *Egretta novaehollandiae,* which were recorded in inundated areas with semi aquatic vegetation. Fish and frog species would also utilise the aquatic habitats located along One Mile Creek, although none were recorded during the current assessment.

The Rural City of Wangaratta have recommended that fauna habitat connectivity from the Targoora Reserve to One Mile Creek be explored as open space in the future development of the study area (Tina Whatley, NRM and Sustainability Coordinator, Rural City of Wangaratta *in litt*. 7 February 2022).

Threatened Fauna Species and Communities

Thirty-four threatened fauna species have previously been recorded within three kilometres of the study area (Department of Environment Land Water and Planning 2022f) (Figure 2). A further 15 threatened fauna species are predicted to occur within the study area, based on the PMST (Department of Agriculture Water and the Environment 2022a). A consolidated list of these threatened flora species as well as their conservation status under the EPBC Act and the FFG Act Threatened List: October 2021 (Department of Environment Land Water and Planning 2021a), their preferred habitats and the likelihood of occurrence for each species is provided in Table A4.

No threatened species were recorded within the study area during the current assessment. The majority of the historical observations of threatened species are from higher quality fauna habitats beyond the study area, including:

- The Wangaratta Common Nature Conservation Reserve approximately two kilometres north-west of the study area, which contains woodland habitats for Sloane's Froglet *Crinia sloanei*;
- The King River, approximately 750 metres east of the study area, at its nearest point, which provides:
    - Riparian woodland vegetation, with recent records of Barking Owl *Ninox connivens*;
    - Aquatic habitats, potentially supporting Murray Cod *Maccullochella peelii,* Trout Cod *Maccullochella macquariensis,* Macquarie Perch *Macquaria australasica* and Sloane's Froglet;
- The Ovens River and Maloney's Creek tributary which supports:
    - Riparian woodland vegetation, with recent records of Barking Owl;
    - Aquatic habitats, potentially supporting Marray Cod, Trout Cod, Macquarie Perch and Sloane's Froglet;
- The upper and lower portions of One Mile Creek which include isolated records of;
    - Riparian woodland vegetation, with recent records of Little Eagle *Hieraaetus morphnoides*, Regent Honeyeater *Anthochaera phrygia,* Turquoise Parrot *Neophema pulchella* and Carpet Python *Morelia spilota metcalfei;* and
    - Aquatic habitats for Platypus *Ornithorhynchus anatinus* (Figure 2).

While most of the study area is highly modified and unlikely to provide important habitat to any threatened fauna species, the woodland habitats, including the riparian vegetation along One Mile Creek, the stand of indigenous trees in the south-eastern portion of the study area, and the Targoora Reserve adjoining the study area, as well as the aquatic habitats associated with One Mile Creek may provide habitat for resident threatened fauna species that use the area for foraging habitat, as a movement or dispersal corridor, or as breeding habitat. These fauna species may include:

- Platypus (Vulnerable: FFG Act);
- Squirrel Glider *Petaurus norfolcensis* (Vulnerable: FFG Act)
- Brush-tailed Phascogale *Phascogale tapoatafa* (Vulnerable: FFG Act);
- Grey-headed flying fox *Pteropus poliocephalus* (Vulnerable: EPBC Act, Vulnerable: FFG Act);
- Growling Grass Frog *Litoria raniformis* (Vulnerable: EPBC Act, Vulnerable: FFG Act);
- Sloane's Froglet (Endangered: EPBC Act, Endangered: FFG Act);

- Flat-headed Galaxias *Galaxias rostratus* (Critically Endangered: EPBC Act, Vulnerable: FFG Act);
- Murray Cod (Vulnerable: EPBC Act, Endangered: FFG Act);
- Trout Cod (Endangered: EPBC Act, Endangered: FFG Act); and
- Macquarie Perch (Endangered: EPBC Act, Endangered: FFG Act).

Note that Brush-tailed Phascogale was not recorded during the desktop assessment, but the habitat is suitable, and the study area is within the known distribution for this species.

In addition, non-resident and mobile fauna that may utilise the woodland habitats opportunistically, or include the study area within their home range, include:

- White-throated Needletail *Hirundapus caudacutus* (Vulnerable: EPBC Act, Vulnerable: FFG Act);
- Diamond Dove *Geopelia cuneata* (Vulnerable: FFG Act);
- Barking Owl (Critically Endangered: FFG Act);
- Grey Falcon *Falco hypoleucos* (Vulnerable: FFG Act);
- Eastern Great Egret *Ardea alba modesta* (Vulnerable: FFG Act);
- Swift Parrot *Lathamus discolor* (Critically Endangered: EPBC Act, Critically Endangered: FFG Act);
- Turquoise Parrot (Vulnerable: FFG Act); and
- Regent Honeyeater (Critically Endangered: EPBC Act, Critically Endangered: FFG Act).

The study area is also likely to support a number of bird species that are representative of the 'Victorian Temperate Woodland Bird Community', which is listed as threatened under the FFG Act. The 'Victorian Temperate Woodland Bird Community' describes a group of woodland dependent bird species that occupy the slopes and plains of the Great Dividing Range. These species have declined in recent years and are likely to be in low numbers within the study area. The group includes a number of species with historic records from within and near the study area, including Brown Treecreeper *Climacteris picumnus,* Rufous Whistler *Pachycephala rufiventris,* Dusky Woodswallow *Artamus cyanopterus,* Eastern Yellow Robin *Eopsaltria australis* and Barking Owl, all of which are likely to occur within on, and within the vicinity of, the study area.

The rezoning application does not propose or require the removal of the vegetation along One Mile Creek or within the south-eastern corner of the study area, which provides the highest quality habitat for these species, and therefore, further surveys for these species are not recommended at this stage. Recommendations to retain and enhance habitat for these species are provided within this report.

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 reiterate 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 flora and 22 fauna species, as well as three threatened ecological communities, listed under the EPBC Act, which may occur within the study area.

Most of the threatened flora and fauna species listed on the EPBC Act that are predicted to occur within the vicinity study area are, in fact, unlikely to occur due to the absence of suitable habitats or the degraded nature of habitats within the study area.

One Mile Creek and remnant woodlands may provide habitat to one flora species and up to eight fauna species listed under the EPBC Act (discussed above). No threatened ecological communities persist within the study area. It is recommended that impacts to EPBC Act-listed species be avoided through appropriate design and mitigation of indirect impacts to these habitats.

Targeted surveys will be recommended where habitats for these species are proposed to be impacted by the rezoning and future development of the study area (One Mile Creek and remnant woodlands within the study area). If a population of these species is recorded, a referral to the Commonwealth Department of Agriculture, Water and the Environment is likely to be recommended.

Flora and Fauna Guarantee Act 1988 (Vic)

The desktop assessment identified nine flora species and 34 fauna species listed under the FFG Act that may occur within the study area (Tables A3 and A4). There is a low to moderate likelihood that up to 16 fauna species, listed on the FFG Act (discussed above), may utilise the remnant vegetation within the stud area.

The Rural City of Wangaratta have advised that the applicant should avoid impacts to the native vegetation within the Targoora Reserve and the tree plantation. They have also asked that the applicant explore the opportunity to create a fauna habitat linkage between the Targoora Reserve and the One Mile Creek by vegetation the north-western portion of the study area in open space (Tina Whatley, NRM and Sustainability Coordinator, City of Wangaratta *in litt*. 7 February 2022).

The FFG Act also lists species as 'protected flora' on public land. Protected flora includes whole families or genera (as well as species), such as daisies, heaths, orchids, and most Acacias. These species and genera are not necessarily regarded as threatened, but require an approved *Permit to Take Protected Flora* from DELWP prior to their removal when located on public land. Road upgrades and crossovers may impact flora species listed as protected under the Act. A spring flora survey is recommended in these areas and a *Permit to Take Protected Flora* is recommended if impacts to road reserves or the Targoora Reserve are proposed.

Planning and Environment Act 1987 (Vic)

The proposed rezoning and development would require planning permit approval from the Rural City of Wangaratta council prior to the removal, destruction or lopping of native vegetation, pursuant to Clause 52.17 of the Wangaratta Planning Scheme (Department of Environment Land Water and Planning 2022d). The applicant is required to demonstrate how it will apply (or has applied) the three-step approach to avoid, minimise and offset impacts to native vegetation (discussed 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 three weed species that are listed as 'noxious' within the North East Catchment Management Authority Area: Blackberry *Rubus fruticosus* spp. agg. and Spear Thistle *Cirsium vulgare* which are listed as 'Regionally Controlled', and Willows *Salix* sp. (located at One Mile Creek only), which is listed as 'Restricted'. The proponent is required to 'control the spread' of all 'Regionally Controlled' species from their property, and there are limitations on the collection and trade of 'Restricted' species.

In addition, Blackberry and Willows are listed under Weeds of National Significance (Department of Agriculture Water and the Environment 2022b), although there are no additional legislative obligations to manage weeds under this listing.

The proposed development should aim to remove these plants when construction commences, and ensure they are removed during the future landscaping and maintenance of the study area. It is expected that weed management would form part of a Construction Environment Management Plan (or equivalent). As a minimum, this should include:

- Maintenance of vehicle hygiene and vehicle wash-down areas;
- Using clean fill (if required);
- Sediment and erosion control measures; and
- Managing noxious weeds that may establish post-construction through appropriate management techniques.

It is also recommended that locally indigenous species be considered within the plant palette for future landscaping of the site, as appropriate.

Wildlife Act 1975 (Vic)

It is likely that some locally common species of fauna will be displaced by the proposed development. Furthermore, there remains a low likelihood that animals may be accidentally injured when disturbing soil and removing vegetation. All native vertebrate wildlife is protected under the *Wildlife Act 1975* (Vic), and therefore contractors must use due care when removing vegetation from the study area. It is recommended that a zoologist or wildlife handler salvage any wildlife from trees prior to their removal. It is also recommended that fauna management protocols be included in the Construction Environment Management Plan recommended above.

Guidelines for the Removal, Destruction or Lopping of Native Vegetation

The Three-step Approach

Applicants who wish to remove native vegetation must generally demonstrate how the application meets the three-step approach to:

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 (Department of Environment Land Water and Planning 2017).

Avoidance and Minimisation Statement

The previous iteration of this report recommended that:

- The development design is considerate of retaining the native vegetation within the study area and that roads, building envelopes and infrastructure be sited away from native vegetation;
- Indigenous trees, inclusive of their Tree Protection Zone, be avoided wherever safe and practicable as recommended by the arborist report;
- When considering the removal of native vegetation, priority is given to:
    - The retention of vegetation along waterways, which is unlikely to be developed in any case;
    - The retention of patches of native vegetation;
    - Vegetation which has the highest quality native vegetation; and,
    - Retention of the Targoora Reserve and tree plantation area, consistent with the Rural City of Wangaratta advice (Tina Whatley, NRM and Sustainability Coordinator, Rural City of Wangaratta *in litt*. 7 February 2022).
- Retained trees include protection of the Tree Protection Zone identified within the arborist's report and the *Australian Standards for the Protection of Trees on Development Sites* (Standards Australia 2009);
- Habitats for threatened species are retained, impacts minimised and mitigated. This includes the retention of trees within patches of native vegetation, particularly along One Mile Creek, the south-eastern portion of the study area and at Targoora Reserve. Where impacts are unavoidable, targeted surveys for threatened flora and fauna species are recommended;
- The applicant explore opportunities to improve habitats by creating habitat connectivity from Targoora Reserve to One Mile Creek. This may include supplementary planting with native vegetation in the north-western corner of the study area and vegetation improvement in areas of retained vegetation;
- Vegetation proposed to be retained is protected from construction activities, in accordance with a Construction Environment Management Plan. This should include fencing exclusion areas;

- Sediment, erosion and pollution control measures, in accordance with the EPA Guidelines (EPA Victoria 1991; EPA Victoria 1996), are incorporated in the Construction Environment Management Plan;
- Areas of retained native vegetation and flora and fauna habitats, along the creekline, are improved in accordance within Restoration Plan (or equivalent); and
- Offsets are provided for all vegetation deemed lost, including all vegetation retained on lots smaller than 4000 m^2.

Following these recommendations, a Development Plan has been prepared (Overall Concept Development Plan Project M6801, Version 15), which retains:

- All native vegetation associated with One Mile Creek (Patch 5);
- All native vegetation associated with Targoora Reserve and its surroundings, including remnant native vegetation, a timber plantation and an actively managed offset area (Patches 6 and 7). Note that water storage and treatment plants have been sited away from remnant and planted native vegetation;
- Trees 10, 11, 17 and 18 within the Clarkes Lane road reserve, although Tree 10 is already dead;
- All of Patch 3 and most of Patch 4 in a park connected to the reserve containing Patch 1 in the south-eastern corner of the study area. The avoided area includes all the Large Trees in these patches, inclusive of their Tree Protection Zones;
- Patch 2, by moving works away from the study area boundary, to ensure both the dripline of Patch 2, and a distance of 15 metres, to cover all Tree Protection Zones that may extend into the study area; and,
- The majority of the remnant native vegetation in the south-eastern corner of the study area (Patch 1), although there is a Council requirement for a through road from the Wangaratta-Whitfield Road to Clarkes Lane and this design will necessitate the loss of some native vegetation along the western edge of Patch 1, however two Large Trees (Tree AR and Tree AQ) previously identified for removal have now been retained (Figure 3).

The applicant also proposed a vegetation reserve in the north-western corner of the development, to allow for an area of tree plantings along the nature strip which was intended to improve wildlife movement opportunities between Targoora Reserve and One Mile Creek (consistent with the advice from Tina Whatley NRM and Sustainability Coordinator, City of Wangaratta). However, specialist fire consultants have advised that revegetation cannot occur within the defendable space area of the existing native vegetation within Targoora Reserve, and this has resulted in a reduced nature strip area, and wider connecting road in this location.

Residual losses include:

- Some losses to native vegetation within Patch 1 for the creation of the entrance into the estate from Wangaratta-Whitfield Road, and the requirement for the road to be roughly perpendicular to the Highway. We have been advised that Council will require this road to consider a future connection to Clarkes Lane and therefore the location and design of the road is constrained;
- Small impacts to Patch 4, but the retention of the Large Trees within that patch; and
- The dead scattered trees (Trees AV, AW and AX).

Offsets

Offsets for the residual impacts to native vegetation have been calculated. Data relating to the location of the impacted native vegetation was issued to DELWP, who generated a Native Vegetation Removal report (Appendix 3). This report uses the native vegetation polygons collected during the current assessment and modelled vegetation quality scores to determine offset requirements. The Native Vegetation Removal report includes the species specific offset test, which determines if the proposed vegetation removal will have a proportional impact on any Victorian rare or threatened species habitat above a specific offset threshold, which is set at 0.005 per cent of total habitat for each species. This test was applied to current proposal, and it was determined that species specific offsets would not be required. The results of the Native Vegetation Removal report are summarised below (Table 3).

Table 3. Offset requirements for impacted native vegetation within the study area.

Offset Parameter	Result
Location Category	Location 2
Assessment Pathway	Intermediate
Total Extent Removed	0.179 hectares (including three Scattered Trees)
General Offset Requirements	0.056 General Habitat Units
Minimum Strategic Biodiversity Score	0.400
Offset Location	North East CMA or within the Wangaratta Rural City Council municipality
Tree Offset	Two Large Trees

It is expected that offsets will be achieved through a third-party offset, through a vegetation broker, as securing the offsets on site is not practicable. Based on recent trades with brokers within the Port Phillip and Western Port Catchment Management Authority, the cost to offset this vegetation will be in the order of approximately $10,560.00[5] (excluding GST), although offset trades are based on a market based system, trades within the North East CMA may be cheaper than trades closer to Melbourne, and this price is subject to approval and a quotation from a vegetation broker. We have confirmed that these offsets are available at one site in the Native Vegetation Credit Register (Appendix 3).

[5] At the time of writing, an allowance of approximately $135,000.00 per General Habitat Unit, plus $1,000.00 per large tree, should be made to achieve these offsets, plus approximately $1,000.00 in brokerage fees (plus GST for all values provided).

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Plates

Plate 1. The study area is generally dominated by exotic grasses

Plate 2. One Mile Creek is located along the western boundary of the study area. Remnant River Red-gums and some native understorey species are present.

Plate 3. Sporting field located in the western portion of Cathedral College. Remnant native vegetation was absent in this area.

Plate 4. Remnant Grey Box trees in the Targoora Reserve in the northern portion of the study area

Plate 5. Offset planting has been undertaken within the Targoora Reserve

Plate 6. A tree plantation, comprising mostly Grey Box trees, located within the Targoora Reserve

Plate 7. Patch 1, located within the south-eastern portion of the study area. The understorey was highly degraded, and dominated by exotic species. It was used as a "camp" area by cattle.

Plate 8. Some patches of native vegetation and dead trees north of Clarkes Lane.

Figures

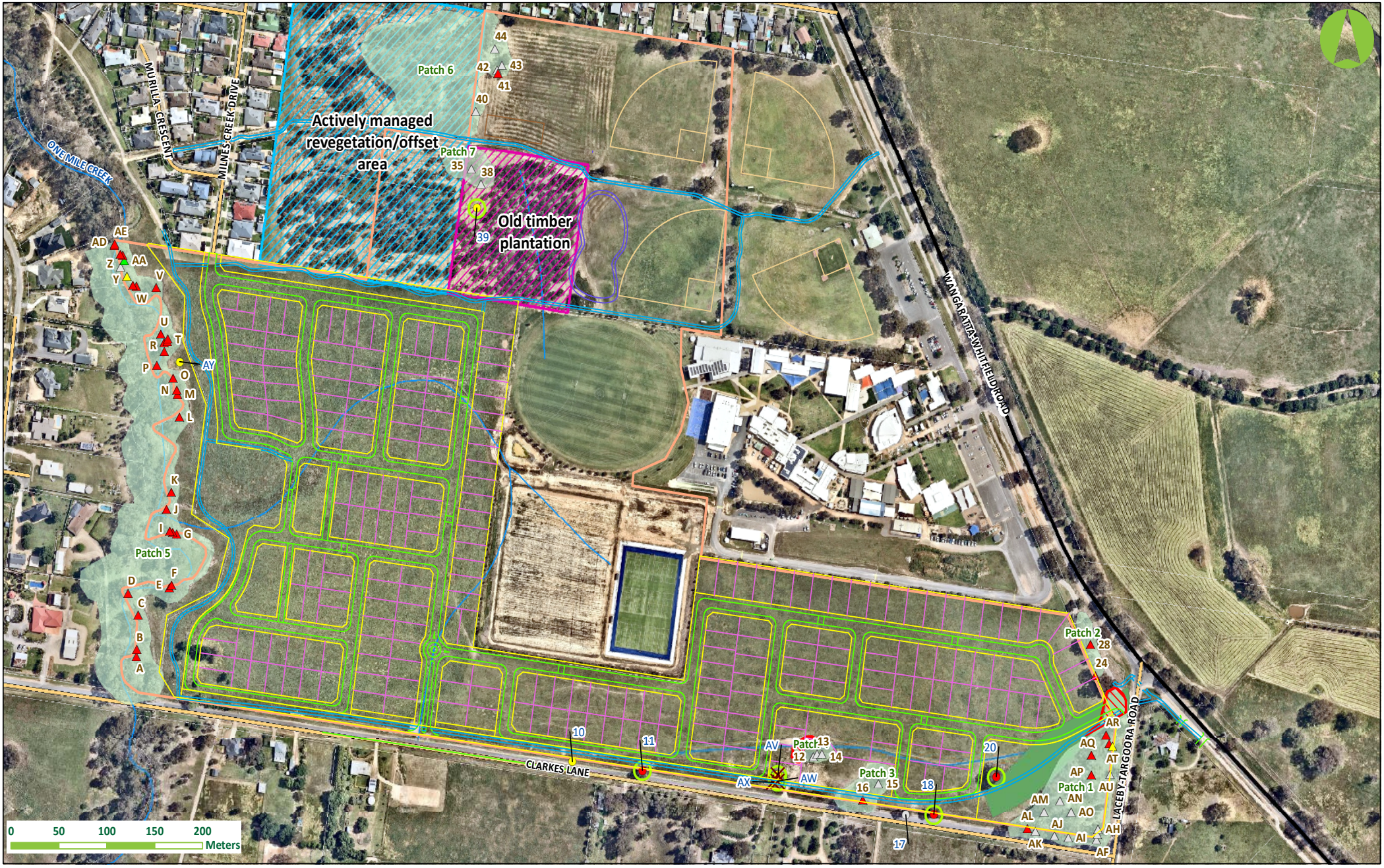


Figure 1: Results of the current assessment.

Clarkes Lane, Wangaratta, Victoria.

Legend

- Study Area
- Patches of Native Vegetation

Large Trees In Patches

- Dead
- Grey Box
- River Red-gum
- Swamp Gum

Scattered Trees

- Dead
- Grey Box
- River Red-gum
- Large Scattered Trees
- Impacted Vegetation
- Impacted Large Trees

ecolink consulting

P/N 2124 Figure 1. January 2022. Aerial Photography: Nearmap 11 November 2021.

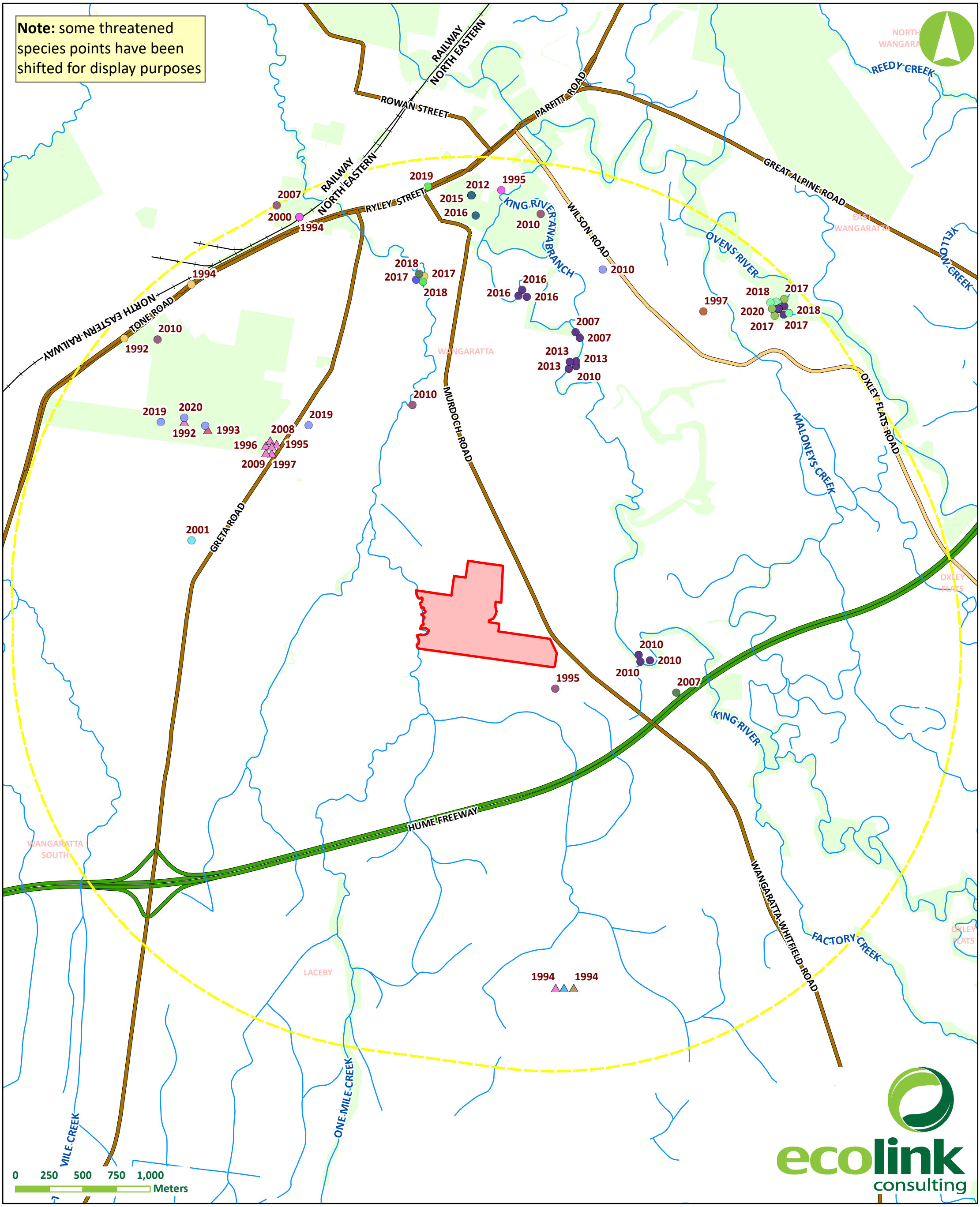


Figure 2: Threatened flora and fauna within 3kms of the study area, in the last 30 years.

Clarkes Lane, Wangaratta, Victoria

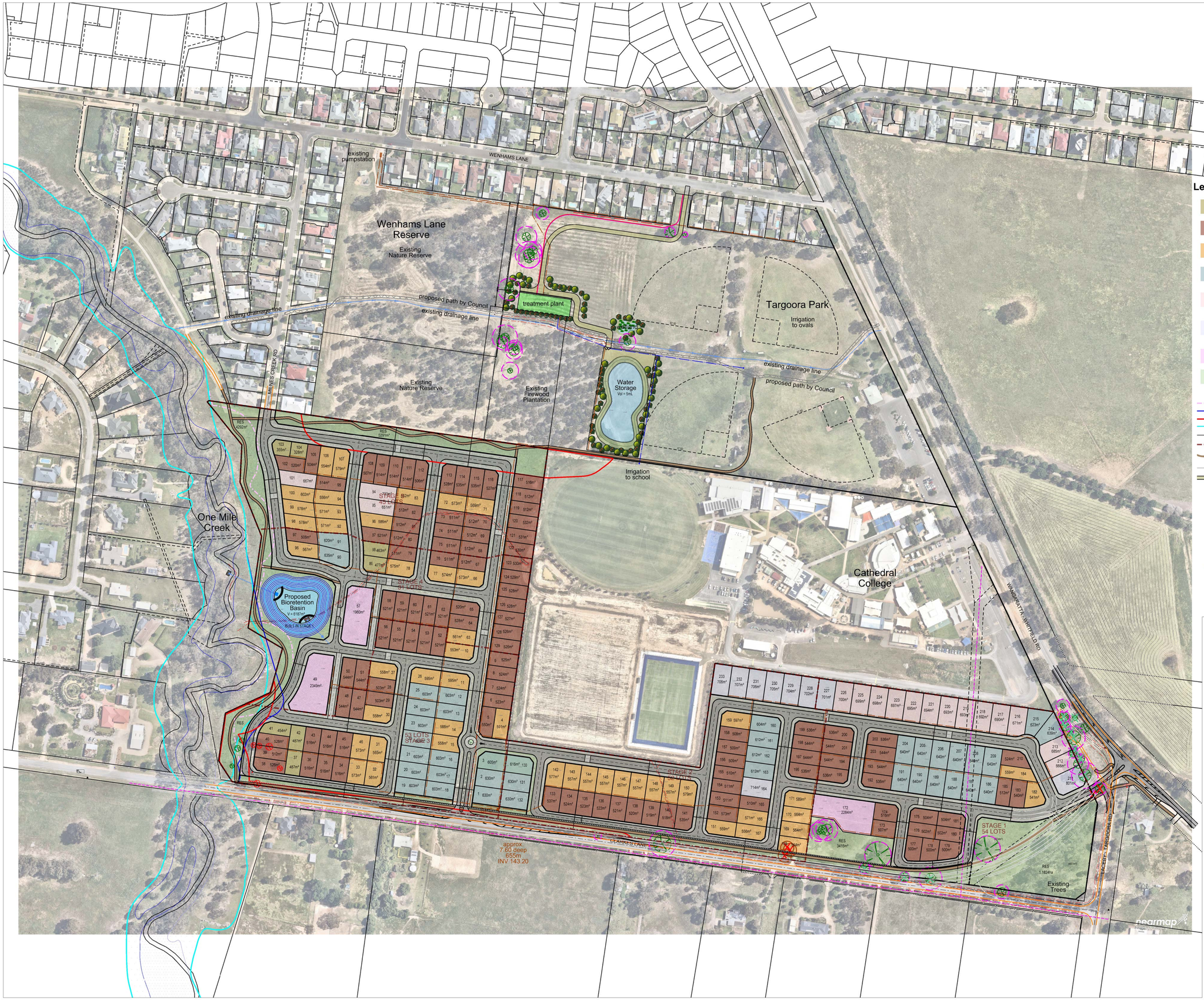
Legend

- Study Area
- 3km Study Area Buffer

Common Name

- Barking Owl
- Eastern Great Egret
- Little Eagle
- Regent Honeyeater
- Turquoise Parrot
- White-throated Needletail
- Platypus
- Squirrel Glider
- Carpet Python
- Sloane's Froglet
- Macquarie Perch
- Murray Cod
- Trout Cod
- Cut-leaf Burr-daisy
- Narrow Goodenia
- Plains Billy-buttons
- Purple Diuris
- Public Land

OVERALL CONCEPT DEVELOPMENT PLAN



Legend

- **Residential lots (7)** — Typically 300 - 499m² small residential lots
- **Residential lots (112)** — Typically 500 - 549m² small residential lots
- **Residential lots (48)** — 550 - 599m² standard residential lots
- **Residential lots (38)** — 600 - 649m² large residential lots (some with potential for further subdivision)
- **Residential lots (16)** — 650 - 700m² large residential lots (some with potential for further subdivision)
- **Residential lots (9)** — > 700m² large residential lots (some with potential for further subdivision)
- **Medium density housing lots (3)** — > 700m² large residential lots (some with potential for further subdivision)
- **Unencumbered Open Space** — POS = 2.47 ha (10%) (excludes flood encumbered land)
  ROAD ACQUISITION = 0.462 ha (1.88%)
  Total = 24.58 ha
- 30m setback
- 1% AEP FLOOD LEVEL
- BAL12.5 SETBACK
- LSIO
- Existing title boundaries
- Stage boundaries
- Shared path
- Footpath
- Gravel Access
- Indigenous trees
- Indigenous trees to be retained but considered lost
- Indigenous trees to be removed
- Dead tree to be removed
- Non Indigenous trees to be removed
- Tree Protection Zone Indigenous Trees (TPZ)
- Proposed location of storm water detention and WSUD treatment basin landscaped to form a feature of the site
  Encumbered Total = 0.44 ha

Total Site Area = 24.58ha

Total yield 233 lots (ave 586m²)

Note: All dimensions and areas shown on this plan are subject to Council approval and survey

DATE	DESCRIPTION	VERSION
24-08-23	For Planning	15
05-06-23	For Planning	14
26-05-23	For Planning	13
23-05-23	For Planning	12
19-09-22	For Planning	11
09-09-22	For Planning	10
29-7-22	For Planning	9
25-5-22	For Planning	8
04-5-22	For Planning	7
13-4-22	For Planning	6
7-4-22	For Comment	5
4-4-22	For Comment	4
17-2-22	For Comment	3
15-2-22	For Approval	2
28-1-22	For Approval	1

REVISION STATUS

NORTH EAST SURVEY DESIGN
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For: BISLAKE PTY LTD

At: CLARKES LANE WANGARATTA

CONCEPT DEVELOPMENT PLAN

Project No: M6801 Version: 15

Drawn by: MS Checked/Signed By: MB

50 0 50 100

Scale: 1:4000 @ A3 / 1:2000 @ A1

Status: FOR COMMENT

Print Date: $DATE$

Drawing Name: $MODEL$

File Name: $FILE$

Appendices

Appendix 1. Flora and Fauna Tables.

Table A1. Flora recorded within the study area

Origin	Common Name	Scientific Name	Weeds of National Significance	Noxious Weeds Classification
	Annual Buttercup	*Ranunculus sessiliflorus*	-	-
*	Ash	*Fraxinus* spp.	-	-
*	Barley Grass	*Hordeum leporinum*	-	-
*	Barley Grass	*Hordeum* spp.	-	-
*	Big Heron's-bill	*Erodium botrys*	-	-
*	Blackberry	*Rubus fruticosus* spp. agg.	-	Controlled
	Bristly Wallaby-grass	*Rytidosperma setaceum*	-	-
	Broad-leaf Cumbungi	*Typha orientalis*	-	-
	Brown-back Wallaby-grass	*Rytidosperma duttonianum*	-	-
*	Burr Medic	*Medicago polymorpha*	-	-
*	Buttercup	*Ranunculus sp.*	-	-
*	Cape Weed	*Arctotheca calendula*	-	-
*	Chickweed	*Stellaria media*	-	-
*	Cleavers	*Galium aparine*	-	-
*	Cocksfoot	*Dactylis glomerata*	-	-
	Common Blown-grass	*Lachnagrostis filiformis*	-	-
	Common Bog-sedge	*Schoenus apogon*	-	-
*	Common Purslane	*Portulaca oleracea*	-	-
	Common Reed	*Phragmites australis*	-	-
*	Common Sow-thistle	*Sonchus oleraceus*	-	-
	Common Spike-sedge	*Eleocharis acuta*	-	-
	Common Wallaby-grass	*Rytidosperma caespitosum*	-	-
	Copper-awned Wallaby-grass	*Rytidosperma fulvum*	-	-
	Cotton Fireweed	*Senecio quadridentatus*	-	-
*	Couch	*Cynodon dactylon* var. *dactylon*	-	-
	Crane's Bill	*Geranium* spp.	-	-
*	Curled Dock	*Rumex crispus*	-	-
*	Delicate Hair-grass	*Aira elegantissima*	-	-
*	Drain Flat-sedge	*Cyperus eragrostis*	-	-
	Finger Rush	*Juncus subsecundus*	-	-
	Flat Spurge	*Euphorbia dallachyana*	-	-
*	Flatweed	*Hypochaeris radicata*	-	-
*	Flaxleaf Fleabane	*Erigeron bonariensis*	-	-
	Gold Rush	*Juncus flavidus*	-	-

Origin	Common Name	Scientific Name	Weeds of National Significance	Noxious Weeds Classification
	Grassland Wood-sorrel	*Oxalis perennans*	-	-
*	Great Brome	*Bromus diandrus*	-	-
	Grey Box	*Eucalyptus microcarpa*	-	-
	Hairy Willow-herb	*Epilobium hirtigerum*	-	-
*	Hop Clover	*Trifolium campestre* var. *campestre*	-	-
	Jersey Cudweed	*Laphangium luteoalbum*	-	-
*	Kikuyu	*Cenchrus clandestinus*	-	-
	Knob Sedge	*Carex inversa*	-	-
*	Lesser Quaking-grass	*Briza minor*	-	-
	Love Grass	*Eragrostis* spp.	-	-
*	Mint	*Mentha* sp.	-	-
*	Paddy Melon	*Cucumis myriocarpus*	-	-
*	Panic Veldt-grass	*Ehrharta erecta*	-	-
*	Paspalum	*Paspalum dilatatum*	-	-
*	Perennial Rye-grass	*Lolium perenne*	-	-
*	Pimpernel	*Lysimachia arvensis*	-	-
	Poong'ort	*Carex tereticaulis*	-	-
*	Prairie Grass	*Bromus catharticus*	-	-
*	Prickly Lettuce	*Lactuca serriola*	-	-
*	Prostrate Knotweed	*Polygonum aviculare*	-	-
*	Red-flowered Mallow	*Modiola Carolina*	-	-
	Reed Bent-grass	*Deyeuxia quadriseta*	-	-
*	Ribwort	*Plantago lanceolata*	-	-
*	Rice Millet	*Piptatherum miliaceum*	-	-
	River Red-gum	*Eucalyptus camaldulensis*	-	-
*	Rough Sow-thistle	*Sonchus asper*	-	-
	Rush	*Juncus* spp.	-	-
*	Sheep Sorrel	*Acetosella vulgaris*	-	-
	Silver Wattle	*Acacia dealbata*	-	-
	Slender Knotweed	*Persicaria decipiens*	-	-
	Small Loosestrife	*Lythrum hyssopifolia*	-	-
*	Small Nettle	*Urtica urens*	-	-
*	Small-flowered Mallow	*Malva parviflora*	-	-
*	Soft Brome	*Bromus hordeaceus*	-	-
*	Spear Thistle	*Cirsium vulgare*	-	Controlled
*	Squirrel-tail Fescue	*Vulpia bromoides*	-	-
*	Subterranean Clover	*Trifolium subterraneum*	-	-
*	Sweet Vernal-grass	*Anthoxanthum odoratum*	-	-
	Tall Sedge	*Carex appressa*	-	-
*	Toowoomba Canary-grass	*Phalaris aquatica*	-	-

Origin	Common Name	Scientific Name	Weeds of National Significance	Noxious Weeds Classification
*	Water Couch	*Paspalum distichum*	-	-
	Water Plantain	*Alisma plantago-aquatica*	-	-
	Weeping Grass	*Microlaena stipoides* var. *stipoides*	-	-
*	Wild Oat	*Avena fatua*	-	-
*	Willow	*Salix* spp.	Yes	Restricted
*	Wimmera Rye-grass	*Lolium rigidum*	-	-
	Windmill Grass	*Chloris truncata*	-	-
*	Yorkshire Fog	*Holcus lanatus*	-	-

Table Notes:

* – Exotic

– Non-indigenous native

en – endangered in Victoria

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

Table A2. Fauna species recorded within the study area

Origin	Common Name	Scientific Name
Birds		
	Australian Magpie	*Cracticus tibicen*
	Australian Raven	*Corvus coronoides*
	Australian Wood Duck	*Chenonetta jubata*
*	Common Myna	*Acridotheres tristis*
	Galah	*Eolophus roseicapilla*
	Noisy Miner	*Manorina melanocephala*
	Pacific Black Duck	*Anas superciliosa*
	Red-rumped Parrot	*Psephotus haematonotus*
*	Spotted Dove	*Spilopelia chinensis*
	Striated Pardalote	*Pardalotus striatus*
	Sulphur-crested Cockatoo	*Cacatua galerita*
	Wedge-tailed Eagle	*Aquila audax*
	White-faced heron	*Egretta novaehollandiae*
Mammals		
*	European Hare	*Lepus europeaus*
*	European Rabbit	*Oryctolagus cuniculus*

Definitions

* - Introduced species

Table A3. Threatened flora species that have previously been recorded within, or within 3 kilometres of the study area (Department of Environment Land Water and Planning 2022f), or that has habitat that may occur within the vicinity of the study area (Department of Agriculture Water and the Environment 2022a).

Common Name	Species Name	National Status	FFG Act Status	Habitat Preferences	Most Recent Record	Habitat Present on Site	Likelihood of Presence*
Cut-leaf Burr-daisy	*Calotis anthemoides*	-	Critically Endangered	Heavy soils prone to waterlogging north and west of Melbourne	1994 (1)	No	Unlikely
Large-headed Fireweed	*Senecio macrocarpus*	Vulnerable	Critically Endangered	Largely confined to remnant Themeda grasslands on loamy clay soils derived from basalt from near Melbourne west to Skipton. Also known from auriferous ground near Stawell.	NPR	No	Unlikely
Mountain Swainson-pea	*Swainsona recta*	Endangered	Critically Endangered	Low hill country in north and north-east but known only from 1 recent (1995) collection near Glenrowan	NPR	No	Unlikely
Narrow Goodenia	*Goodenia macbarronii*	-	Endangered	Confined to forests and grassy areas between Wedderburn and Moyhu in the north-east and north to the Murray River, usually in damp sandy or silty soils. Sometimes recorded from seepage areas below farm dams.	1993 (1)	No	Unlikely
Plains Billy-buttons	*Craspedia haplorrhiza*	-	Endangered	Usually on heavy soils or loamy sands, particularly on floodplains and seasonally wet depressions.	1994 (1)	No	Unlikely
Purple Diuris	*Diuris punctata var. punctata*	-	Endangered	Moist soils in woodlands and grassy low open forests	2010 (40)	No	Unlikely
River Swamp Wallaby-grass	*Amphibromus fluitans*	Vulnerable	-	Beside swamps in grassy low open forest, riparian scrub. Required moist soils, tolerates inundation.	1985 (1)	Yes	Low. One Mile Creek only
Warby Range Swamp-gum	*Eucalyptus cadens*	Vulnerable	Endangered	Occurs in almost pure stands on seasonally waterlogged sites.	NPR	No	Unlikely

Common Name	Species Name	National Status	FFG Act Status	Habitat Preferences	Most Recent Record	Habitat Present on Site	Likelihood of Presence*
Winged Peppercress	*Lepidium monoplocoides*	Endangered	Endangered	Uncommon in north-western quarter of State, mostly on heavy soils near lakes and watercourses	NPR	No	Unlikely

Table Notes:

NPR – Not previously recorded

*** 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.

Threatened status based on the *Flora and Fauna Guarantee Act 1988* - Threatened List: June 2021 (Department of Environment Land Water and Planning 2021a).

Table A4. Threatened fauna species that have previously been recorded within, or within 3 kilometres of the study site (Department of Environment Land Water and Planning 2022f), or that has habitat that may occur within the vicinity of the site (Department of Agriculture Water and the Environment 2022a).

Common Name	Species Name	National Status	Victorian Status	Habitat Preferences	Most Recent Record	Habitat Present on Site	Likelihood of Presence*
Birds							
White-throated Needletail	*Hirundapus caudacutus*	Vulnerable	Vulnerable	Aerial insectivore that rarely lands to perch, often sleeping on the wing	2018 (55)	Yes	Low
Diamond Dove	*Geopelia cuneata*	-	Vulnerable	Drier grassy woodlands, scrub near water and wooded watercourses	1985 (6)	Yes	Low
Australian Painted-snipe	*Rostratula australis*	Endangered	Critically Endangered	Uncommon summer migrant to Victoria. Lowlands on shallow freshwater swamps with emergent vegetation, and flooded salt marshes.	NPR	No	Unlikely
Plains-wanderer	*Pedionomus torquatus*	Critically Endangered	Critically Endangered	Sparse, treeless, lightly grazed native grasslands/herbfields with bare ground, old cereal crops, low shrubland.	NPR	No	Unlikely
Eastern Curlew	*Numenius madagascariensis*	Critically Endangered	Critically Endangered	Estuaries, tidal mudflats, mangroves, shallow river margins, coastal or inland	NPR	No	Unlikely
Curlew Sandpiper	*Calidris ferruginea*	Critically Endangered	Critically Endangered	Estuaries, tidal mudflats, mangroves, shallow river margins, coastal or inland	NPR	No	Unlikely
Australasian Bittern	*Botaurus poiciloptilus*	Endangered	Critically Endangered	Reed beds, dense vegetation of freshwater swamps and creeks.	1982 (1)	No	Unlikely
Eastern Great Egret	*Ardea alba modesta*	-	Vulnerable	Floodwaters, rivers and shallows of wetlands, intertidal mud flats.	1997 (9)	Yes	Moderate
Plumed Egret	*Ardea intermedia plumifera*	-	Critically Endangered	Freshwater wetlands, pastures and croplands, tidal mudflats and floodplains.	1913 (10)	No	Unlikely
Little Eagle	*Hieraaetus morphnoides*	-	Vulnerable	Woodlands, Forests	2001 (1)	Yes	Low

Common Name	Species Name	National Status	Victorian Status	Habitat Preferences	Most Recent Record	Habitat Present on Site	Likelihood of Presence*
Barking Owl	*Ninox connivens*	-	Critically Endangered	Forest and woodland.	2015 (17)	Yes	Low
Grey Falcon	*Falco hypoleucos*	-	Vulnerable	Shrubland, grassland and wooded watercourses of arid and semi-arid regions, although it is occasionally found in open woodlands near the coast	NPR	Yes	Low
Glossy Black-Cockatoo	*Calyptorhynchus lathami*	-	Critically Endangered	Typically found in eucalypt forests and woodlands containing a high density of their main food source, the Black She-oak Allocasuarina littoralis	1921 (1)	No	Unlikely
Superb Parrot	*Polytelis swainsonii*	Vulnerable	Endangered	Woodlands near rivers, also gardens and pastures in core range of NSW Riverina.	NPR	No	Unlikely
Swift Parrot	*Lathamus discolor*	Critically Endangered	Critically Endangered	Winter migrant from Tasmania. Generally prefers Box-Ironbark forests and woodlands inland of the Great Dividing Range during winter.	NPR	Yes	Low
Turquoise Parrot	*Neophema pulchella*	-	Vulnerable	Open grassy woodland, often with dead trees near permanent water. Forests, coastal heaths, and disturbed areas near woodlands	2017 (2)	Yes	Low
Painted Honeyeater	*Grantiella picta*	Vulnerable	Vulnerable	Open box-ironbark forests and woodlands, particularly where trees are infested with mistletoe.	NPR	No	Unlikely
Regent Honeyeater	*Anthochaera phrygia*	Critically Endangered	Critically Endangered	Depends on nectar and insects from Box-Ironbark Eucalypt forests. Only breeding habitat lies in Northeast Victoria and central coast of NSW	2017 (13)	Yes	Low
Mammals							

Common Name	Species Name	National Status	Victorian Status	Habitat Preferences	Most Recent Record	Habitat Present on Site	Likelihood of Presence*
Platypus	*Ornithorhynchus anatinus*	-	Vulnerable	Freshwater rivers and streams.	2000 (21)	Yes	Low
Spot-tailed Quoll	*Dasyurus maculatus maculatus*	Endangered	Endangered	Forests including large intact areas of vegetation for foraging.	NPR	No	Unlikely
Squirrel Glider	*Petaurus norfolcensis*	-	Vulnerable	Dry sclerophyll forest and woodland, usually on inland slopes and nearby riverine corridors	2016 (2)	Yes	Low
Grey-headed Flying-fox	*Pteropus poliocephalus*	Vulnerable	Vulnerable	Roost sites commonly occur in gullies, in vegetation with dense canopy cover and close to water.	1962 (1)	Yes	Low
Frogs							
Sloane's Froglet	*Crinia sloanei*	Endangered	Endangered	Temporary and permanent waterbodies including oxbows off creeks and rivers, farm dams, large and small natural wetlands, constructed frog ponds and temporary puddles. It prefers wetlands that contain riparian and aquatic vegetation	2020 (12)	Yes	Moderate
Growling Grass Frog	*Litoria raniformis*	Vulnerable	Vulnerable	Permanent lakes, swamps, dams and lagoons.	1900 (1)	Yes	Low
Reptiles							
Pink-tailed Worm-Lizard	*Aprasia parapulchella*	Vulnerable	Endangered	Favours areas with native grasses and partially buried rock. Shelters beneath rocks and in tunnels. Isolated population near Bendigo.	NPR	No	Unlikely
Striped Legless Lizard	*Delma impar*	Vulnerable	Endangered	Lowland native grasslands, typically dominated by native tussock forming grasses. Typically occurs on deep cracking clay soils.	NPR	No	Unlikely

Common Name	Species Name	National Status	Victorian Status	Habitat Preferences	Most Recent Record	Habitat Present on Site	Likelihood of Presence*
Carpet Python	*Morelia spilota metcalfei*	-	Endangered	Woodlands of the Murray–Darling Basin	1997 (1)	No	Unlikely
Fish							
Flat-headed Galaxias	*Galaxias rostratus*	Critically Endangered	Vulnerable	Still or slow moving water bodies such as wetlands and lowland streams. They have been associated with a range of habitats including rock and sandy bottoms and aquatic vegetation.	NPR	Yes	Low
Macquarie Perch	*Macquaria australasica*	Endangered	Endangered	Deep, rocky holes with considerable cover and flowing water over unsilted cobble and gravel substrate.	2020 (11)	Yes	Low
Murray Cod	*Maccullochella peelii*	Vulnerable	Endangered	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.	2020 (162)	Yes	Low
Silver Perch	*Bidyanus bidyanus*	Critically Endangered	Endangered	Preference for faster-flowing water, including rapids and races, and more open sections of river, throughout the Murray-Darling Basin	NPR	No	Unlikely
Southern Pygmy Perch (Murray-Darling lineage)	*Nannoperca australis (Murray-Darling lineage)*	-	Vulnerable	Low-gradient waterways and floodplains with slow-flowing or still water, and aquatic macrophyte cover or wood at shallow depths, with little or no flow in summer.	NPR	No	Unlikely

Common Name	Species Name	National Status	Victorian Status	Habitat Preferences	Most Recent Record	Habitat Present on Site	Likelihood of Presence*
Trout Cod	*Maccullochella macquariensis*	Endangered	Endangered	The Trout Cod is a riverine species, inhabiting a variety of flowing waters with cover in the form of woody debris in the mid to upper reaches of rivers and streams in north eastern Victoria, south eastern NSW and the ACT.	2020 (26)	Yes	Low
Invertebrates							
Golden Sun Moth	*Synemon plana*	Critically Endangered	Vulnerable	Tussock grasslands preferably dominated by Wallaby Grasses and Spear Grasses.	NPR	No	Unlikely

Table Notes:

This table excludes species listed exclusively as 'migratory' or 'marine' under the EPBC Protected Matters Search results.

NPR – Not previously recorded

*** 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.

Threatened status based on the *Flora and Fauna Guarantee Act 1988* - Threatened List: June 2021 (Department of Environment Land Water and Planning 2021a).

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 eight 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; and,
- Nuclear actions.

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

Environmental Effects Act

The *Environment Effects Act 1978* (Vic) provides for assessment of proposed projects (works) that are capable of having a significant effect on the environment. The Act does this by enabling the Minister administering the Environment Effects Act to decide that an Environment Effects Statement (EES) should be prepared.

The Minister might typically require a proponent to prepare an EES when:

- There is a likelihood of regionally or State significant adverse effects on the environment
- There is a need for integrated assessment of potential environmental effects (including economic and social effects) of a project and relevant alternatives, and
- Normal statutory processes would not provide a sufficiently comprehensive, integrated and transparent assessment (Department of Sustainability and Environment 2007).

Referral criteria: individual potential environmental effects

- Individual types of potential effects on the environment that might be of regional or State significance, and therefore warrant referral of a project, are:
- Potential clearing of 10 ha or more of native vegetation from an area that:
    - is of an Ecological Vegetation Class identified 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'
- Potential extensive or major effects on the health or biodiversity of aquatic, estuarine or marine ecosystems, over the long term
- Potential extensive or major effects on the health, safety or well-being of a human community, due to emissions to air or water or chemical hazards or displacement of residences
- Potential greenhouse gas emissions exceeding 200,000 tonnes of carbon dioxide equivalent per annum, directly attributable to the operation of the facility (Department of Sustainability and Environment 2007).

***Flora and Fauna Guarantee Act 1988* (Vic)**

The *Flora and Fauna Guarantee Act 1998* (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.

The FFG Act was amended in 2021 and now contains an obligation or duty on public authorities and ministers to consider potential biodiversity impacts when exercising their functions. The FFG Act requires ministers and public authorities (including Councils) reasonably consider the objectives of the Act where projects may impact upon biodiversity, so far as is consistent with the proper exercising of their functions.

The types of potential impacts on biodiversity that should be considered include:

- Long and short term impacts;
- Detrimental and beneficial impacts;
- Direct and indirect impacts;
- Cumulative impacts; and,
- Potentially threatening processes (Department of Environment Land Water and Planning 2021b).

It is therefore anticipated that regulators will give due consideration to the FFG Act when considering the approval for the project.

In additional, a 'Permit to Take Protected Flora' 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. On public land the permit is issued by DELWP.

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 2022d).*

***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 species[6] (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.

6 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.

- 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. This map shows whether native vegetation is classified as Location 1, 2 or 3.

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 defendable 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 defendable 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 Specifies 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

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: **06/06/2023**
Time of issue: **12:12 pm**

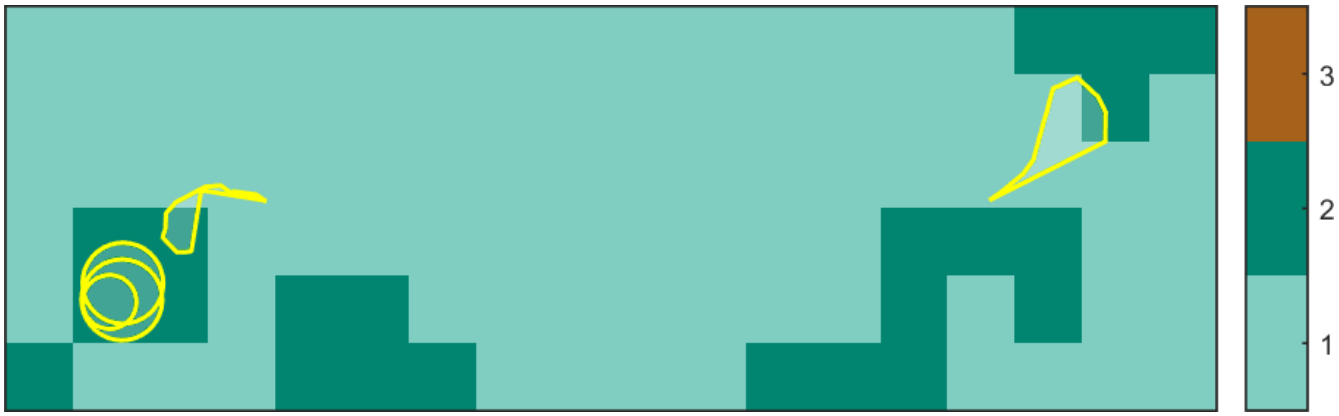
Report ID: ECL_2023_042

Project ID	2124_Wangaratta_EnSym_10102022

Assessment pathway

Assessment pathway	**Intermediate Assessment Pathway**
Extent including past and proposed	0.179 ha
Extent of past removal	0.000 ha
Extent of proposed removal	0.179 ha
No. Large trees proposed to be removed	2
Location category of proposed removal	Location 2 The native vegetation is in an area mapped as an endangered Ecological Vegetation Class (as per the statewide EVC map). Removal of less than 0.5 hectares of native vegetation in this location will not have a significant impact on any habitat for a rare or threatened species.

1. Location map



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]	0.056 general habitat units
Vicinity	North East Catchment Management Authority (CMA) or Wangaratta Rural City Council
Minimum strategic biodiversity value score[2]	0.400
Large trees	2 large trees

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

Appendix 1 includes information about the native vegetation to be removed

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

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

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

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

Next steps

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

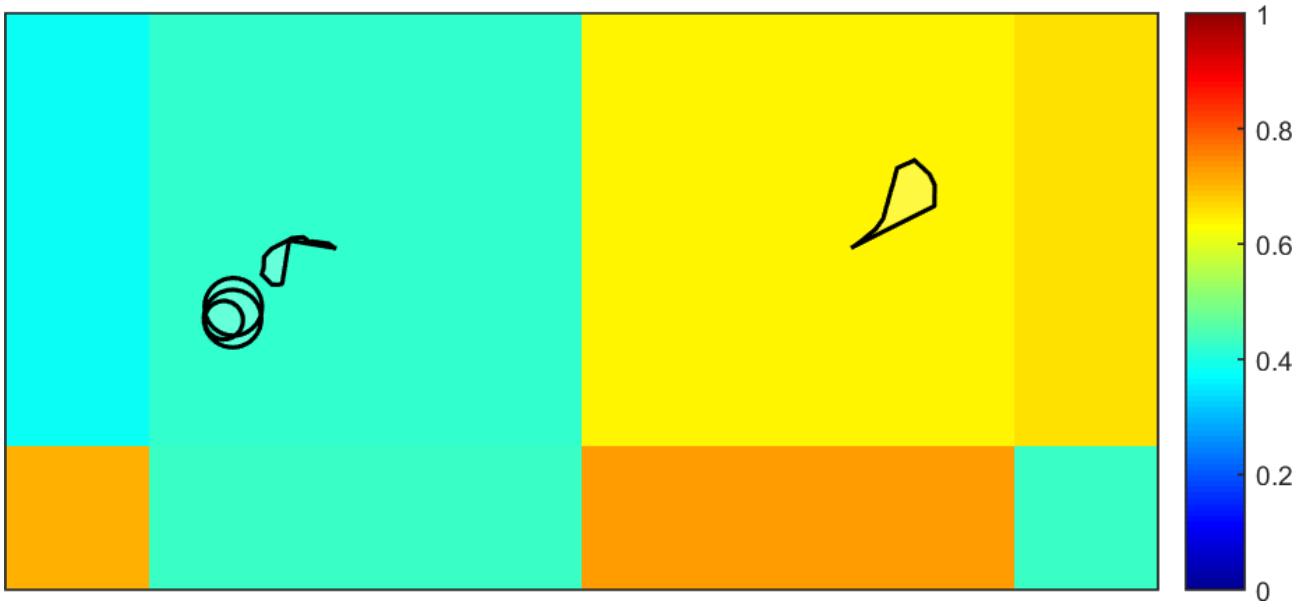
Information provided by or on behalf of the applicant in a GIS file							Information calculated by EnSym					
Zone	**Type**	**BioEVC**	**BioEVC conservation status**	**Large tree(s)**	**Partial removal**	**Condition score**	**Polygon Extent**	**Extent without overlap**	**SBV score**	**HI score**	**Habitat units**	**Offset type**
0-D	Patch	vriv0055_62	Endangered	0	no	0.260	0.025	0.025	0.420		0.007	General
0-A	Patch	vriv0055_62	Endangered	0	no	0.370	0.066	0.066	0.640		0.030	General
0-I	Scattered Tree	vriv0055_62	Endangered	0	no	0.200	0.031	0.000			0.000	
0-H	Scattered Tree	vriv0055_62	Endangered	1	no	0.200	0.070	0.044	0.420		0.009	General
0-G	Scattered Tree	vriv0055_62	Endangered	1	no	0.200	0.070	0.044	0.420		0.009	General

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

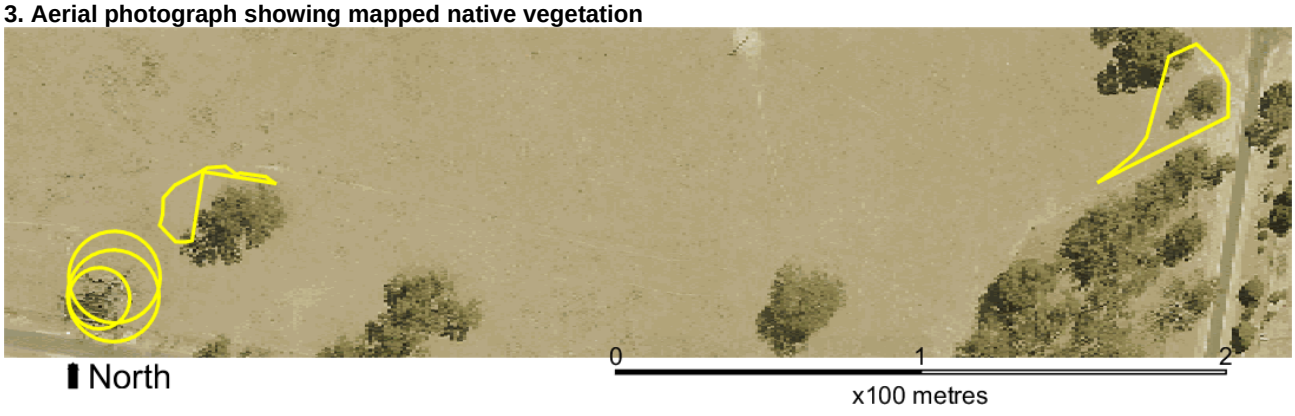
This is not applicable in the Intermediate Assessment Pathway.

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 4. Native Vegetation Credit Register Results

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: 06/06/2023 02:15 **Report ID: 19293**

What was searched for?

General offset

General habitat units	Strategic biodiversity value	Large trees	Vicinity (Catchment Management Authority or Municipal district)	
0.056	0.4	2	CMA	North East
			or LGA	Wangaratta Rural City

Details of available native vegetation credits on 06 June 2023 02:15

These sites meet your requirements for general offsets.

Credit Site ID	GHU	LT	CMA	LGA	Land owner	Trader	Fixed price	Broker(s)
VC_CFL-3074_01	16.296	2896	North East	Towong Shire	Yes	Yes	No	VegLink
VC_CFL-3789_01	16.169	620	North East	Towong Shire	Yes	Yes	No	

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)

There are no potential sites listed in the Native Vegetation Credit Register that meet your offset requirements.

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 DELWP Customer Service Centre 136 186 or the Native Vegetation Credit Register at nativevegetation.offsetregister@delwp.vic.gov.au