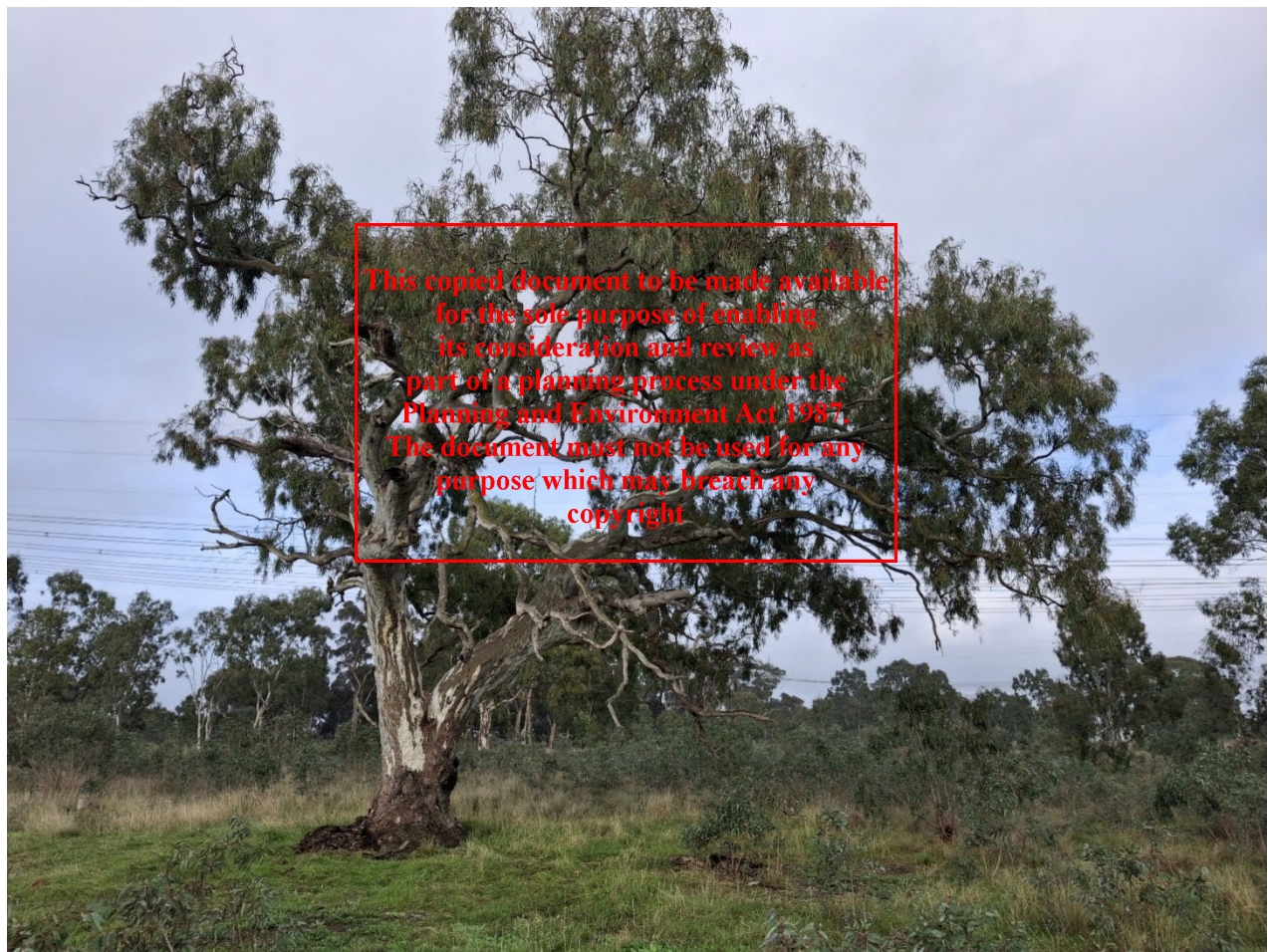


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Biodiversity Assessment Report: 165 Williamsons Road, South Morang



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Prepared for Legacy Project Management
Report 20065, Version 4.0
August 2026

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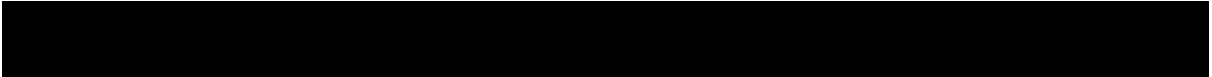
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Front cover image: Large hollow-bearing River Red-gum #43 in the north-east portion of the study area (Abzeco 13/11/2025).

Acknowledgements

Abzeco staff acknowledge the following people for their assistance with this assessment:

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1 Introduction

Abzeco was commissioned by Legacy Project Management to conduct a Biodiversity Assessment at 165 Williamsons Road, South Morang, Victoria (Lot 1 PS822500) (Figure 1). The Biodiversity Assessment was required to inform a planning permit application with the City of Whittlesea for the proposed commercial development of the land for a new Data Centre and associated infrastructure. The assessment was based on the most recent development plans (Ewert Leaf, Project No. M24062, Rev. C, dated 28/07/2026; Attachment 1a & 1b). An updated Arboricultural Assessment Report for the property has also been provided (TMC Reports, Version 3, 2026) and the identifiers utilised by the arborist have been adopted in this report. A revised landscape Concept Plan (Greenjoy 2026, Revision E) has also been provided and used to inform this assessment.

The purpose of the Biodiversity Assessment was to identify native vegetation (patches and/or scattered trees), listed ecological communities and threatened species, habitat for threatened flora and fauna species and to recommend further investigations if required in order to inform the ecological impacts of the proposed works.

This report (Version 3) also specifically responds to pre-application comments from both the City of Whittlesea (dated 03 October 2025) and the Department of Energy, Environment and Climate Action (DEECA) (Ref: 00012074, dated 15/01/2026 & Ref: 00014276, dated 07/07/2026) which require:

- Preparation of an up-to-date Biodiversity Assessment Report that shows all impacts relevant to the current design.
- A revised avoid and minimise statement demonstrating that all reasonable opportunities to reduce impacts have been considered including deferrals to building setbacks, access arrangements, crossover location and service connections.
- Further detail regarding the constraints posed by the powerline easement to the long-term viability of native vegetation and maintenance actions.
- Consideration of impacts resulting from the connection of all services.
- Review of all works proposed within the Findon Road reserve and public land, including potential impacts to FFG Act listed species.
- Clarifications of any adjustments to the Landscape Plan and associated impacts to existing vegetation.
- Further detail about all activities and potential impacts within the 'construction buffer', as well as any protections intended to be provided for existing native vegetation.
- Further consideration of the EPBC Act-listed Victorian Grassland Earless Dragon (VGED) *Tympanocryptis pinguicolla*.
- Further details regarding likelihood of occurrence for threatened species and those with Habitat Importance Models that overlap with the study area.
- Further details regarding the presence of the FFG Act-listed Tussock Skink *Pseudemoia pagenstecheri*.
- Further details regarding the presence of the EPBC Act-listed Matted Flax-lily *Dianella amoena*.

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- Further details regarding the likelihood of the EPBC Act-listed ecological community *Seasonal Herbaceous Wetlands (Freshwater) of the Temperate Lowland Plains*.
- Further details regarding the potential for listed orchids.

The following report presents the results of the biodiversity field assessment, discusses potential impacts associated with the proposed works and details relevant Commonwealth, State and local legislative implications and approvals required as part of the project. In particular, the report is intended to inform the planning process, providing an assessment of implications in accordance with the *Guidelines for the removal, destruction and lopping of native vegetation* (the Guidelines, DEECA 2025a). Other relevant legislation requiring consideration is the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), State *Flora and Fauna Guarantee Amendment Act 1988* (FFG Act) and *Catchment and Land Protection Act 1994* (CaLP Act).

1.1 Study Area, Development Proposal and Background

The study area for the proposed development is effectively the entire 8.638 hectare land parcel at 165 Williamsons Road, South Morang (Figure 1). The study area is bound by the South Morang terminal station to the west, a smaller private land parcel to the north (130 Williamsons Road which is currently under development), Findon Road to the north-east, the Yan Yean Pipe Track aqueduct to the east, and a small section of the Mernda rail extension defines the southern boundary. Two high voltage powerline easements intersect directly with the study area, crossing through the central portion and the south-west corner of the site (Figure 2).

The entire study area is effectively flat and supports no ridges, crests, hilltops or slopes greater than 20%, nor does the site support any water bodies, wetlands, drainage lines or saline discharge areas. However, the southern end and eastern edge of the study area can become very wet and occasionally may support small areas of standing water.

Although scattered and embedded rock persists throughout parts of the site indicating that the land has not previously been ploughed, the land has a long history of disturbance from grazing and slashing, and many trees have previously been felled and removed from the site as evidenced by a high number of cut stumps and coppicing recruits.

A substantial amount of surface erosion is present along the south-eastern boundary of the site associated with a former access track that ran beside the aqueduct prior to the development of Findon Road, and deeply eroded ruts are present in association with internal access tracks that follow the alignment of the high voltage power easements through both the centre of the site and into the south-west corner. A substantial amount of rubbish has also been dumped throughout parts of the site (Images 1 & 2).

Based on the DEECA Native Vegetation Removal (NVR) tool (DEECA 2026a), the study area occurs within the Victorian Volcanic Plain bioregion, the Melbourne Water Catchment Management Authority (MWCMA) and the municipality of the City of Whittlesea within Wurundjeri Woi Wurrung country. The land is Scheduled to the Commercial 2 Zone (C2Z) and is covered by the Development Plan Overlay – Schedule 7 (DPO7) and the Vegetation Protection Overlay – Schedule 1 (VPO1) (DTP 2026a).

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Images 1 & 2. Dumped rubbish & building materials in the south-east and north (Abzeco 13/11/2025).

Vehicle access to the site is currently gained via a new concrete and asphalt crossover from Findon Road in the north-east that proceeds to a cyclone fence and double gate, however, does not connect with any existing internal tracks (Image 3) and is not proposed as the future access point from Findon Road (Attachment 1). Secure fencing is in place along the southern and western boundaries to the rail corridor and power substation respectively, however, the old post and wire farm fencing to the north is now derelict and pedestrian access is not restricted from the aqueduct shared-pathway to the east, hence there is much rubbish and disturbance in the eastern section.



Image 3. Current cross-over and access point from Findon Road in the north-east (Abzeco 20/11/2025).

The most recent development plans (Ewert Leaf, Project No. M24062, Rev. C, dated 28/07/2026; Attachment 1a & 1b) shows provision for a large Data Centre with a total floor area of approximately 18,081 m², which encompasses most of the northern portion of the landholding beyond the central easement (Figure 2). A new double-laned crossover is proposed from Findon Road in the north-east, as well as the creation of internal sealed roads that will service approximately 230 carparking spaces beneath most of the central easement. The north-east section is also proposed to support fire safety infrastructure such as pumps, storage and water tanks, as well as stormwater and sewerage connection points. The south-east section is proposed to support an electrical power substation. The south-west section of the site is not proposed to be

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developed, however, will be subject of active management to remove high threat weeds and potentially some minor revegetation.

The landholding at 165 Williamsons Road has previously been subject of several Biodiversity Assessments including Brett Lane & Associates (2013) and EcoLink (2014). The latter assessment also informed an EPBC Act referral for the site in 2014 (Ref: 2014/7287), which we understand has since lapsed and been withdrawn. Abzeco also have a long association with the site, having first assessed the property in 2006 and on many subsequent occasions, as well as to inform the closely associated Findon Road Extension project. As a result of our long association with the site, we are acutely aware that the vegetation composition throughout the property displays a high degree of variation in time and space, whereby vegetation quality and condition can vary considerably depending on the seasonality of surveys and long-range weather patterns. However, given our long association with land and numerous opportunities to survey the site over many years and different seasons, we are confident that the census of species provided as part of this report is comprehensive and few if any additional species are likely to be relevant to the site.

2 Methods

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2.1 Literature Review

Relevant literature and online databases were reviewed prior to the field assessment to obtain information on known ecological values associated with the study area, including the following:

- The Victorian Department of Energy, Environment and Climate Action (DEECA) Native Vegetation Removal (NVR) Tool (DEECA 2026a) and NatureKit (DEECA 2026b) for modelled data for Location categories (1, 2 and 3) habitat importance mapping for threatened flora and fauna and the modelled extent for any Vegetation Classes (EVCs).
- EVC benchmarks for descriptions and characteristics of each bioregion (DEECA 2026c).
- The Victorian Biodiversity Atlas (VBA) for previously documented records of flora and fauna in the locality (DEECA 2026d).
- The Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW) Protected Matters Search Tool (PMST) for matters of National Environmental Significance (NES) listed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act; DCCEEW 2026).
- Relevant literature, including the following:
 - The *Guidelines* (DEECA 2025a) and other explanatory documents relating to measuring value of native vegetation (DELWP 2017a), the Assessor's Handbook (DEECA 2025b), Applicant's Guide (DEECA 2023) and relevant planning permit exemptions (DELWP 2017a).
- The VicPlan Maps Online (DTP 2026a) and Vicplan (DTP 2026b) for the zoning and overlays relevant to the study area.
- The latest Threatened List (DEECA 2026e) and Potentially Threatening Process List (DEECA 2026f) under the *Victorian Flora and Fauna Guarantee Act 1988* (FFG Act) and
- Aerial photography of the study area.

2.2 Nomenclature and Taxonomy

Scientific and common names of plants follow the determinations of Walsh and Stajsic (2007), the Flora of Victoria Online (VicFlora 2026) and the VBA (DEECA 2026d). Names of plants are generally introduced in-text by use of the common name followed by the scientific name, and subsequently only refer to the common name.

Where an asterisk (*) appears in-text as a prefix to all scientific names (flora and fauna), this indicates the entity to be exotic to Victoria or Australia. A hash (#) prior to a plant scientific name denotes those species native to Australia or Victoria but non-indigenous to the study area or to the relevant vegetation type.

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2.3 Field Assessment

The primary field assessment was conducted on 13 November 2025, however, findings are also informed by additional assessments of the land in November 2024, eight site visits between March and May 2026 for targeted fauna surveys, as well as autumn and winter botanical surveys on 26 May and 4 August 2026.

The Diameter at Breast Height (DBH) of all trees was measured at 1.3 metres above ground height in accordance with Clause 52.17 of the Victorian Planning Provisions and the *Guidelines* (DEECA 2025a), and a list of observed vascular flora species and fauna was compiled, with notes made of any incidental observations of threatened species or their habitat.

Ecological Vegetation Classes (EVCs) were determined using modelled pre-1750s and extant EVC mapping and published descriptions (DEECA 2026b, 2026c). The extent of native vegetation within the study area was mapped using ArcGIS version 10 and FieldMaps™ software, with GPS accuracy of +/-3 metres.

Where a patch of native vegetation was present, a habitat hectare assessment was conducted in accordance with the *Vegetation Quality Assessment Manual: Guidelines for applying the habitat hectares scoring method, Version 1.3* (DSE 2004).

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2.4 Biodiversity Assessments Under the Guidelines 2025

Clause 52.17 of the Victorian Planning Provisions and the Victorian *Guidelines for the removal, destruction and lopping of native vegetation* (the Guidelines) are publicly available documents covering regulatory and technical requirements of assessing applications that propose to impact native vegetation. Guidelines for the determination of assessment pathways (DEECA 2025a) and the NVR tool (DEECA 2026a) provide additional supporting information to assess applications that may impact native vegetation.

In accordance with the Guidelines (DEECA 2025a), native vegetation is defined by two categories (patches and scattered trees) as outlined below.

Patch

A patch of native vegetation is either:

- An area of vegetation where at least 25% of the total perennial understory plant cover is native;
- Any area with three (3) 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.

The extent of patches (in hectares) is determined during a field assessment.

Scattered Trees

A native canopy tree that does not form part of a patch.

Scattered trees are assigned to two size classes (Large or Small) based on the Diameter at Breast Height (DBH) benchmark in the applicable EVC. Trees greater than or equal to the Large tree benchmark DBH are considered Large, while trees below the Large tree benchmark DBH are classified as Small.

A Large tree is assigned a default extent of 0.070 hectares (15 metre radius), while a Small tree has a default extent of 0.031 hectares (10 metre radius).

2.4.1 Assessment Pathways

An application to remove, destroy or lop native vegetation must be classified as being in the Basic, Intermediate or Detailed assessment pathway, as defined in the *Guidelines* (DEECA 2025a). The assessment pathway is determined by the modelled Location category (1, 2 or 3) and extent of native vegetation proposed for removal. The total extent is the combined area in hectares of patches and any scattered trees. The applicable assessment pathway is used to determine the level of information required to adequately inform the biodiversity and planning application assessment process.

Determination of the assessment pathway based on relevant criteria is summarized in Table 1.

Table 1. Assessment pathway matrix (DELWP 2025e)

Extent of native vegetation	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 any large trees	Intermediate	Intermediate	Detailed
0.5 hectares or more	Detailed	Detailed	Detailed

Note: *The determination of the assessment pathway includes any other native vegetation that was 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 (DEECA 2025a).

The three assessment pathways are defined according to the potential impact on biodiversity in Victoria (DEECA 2025a):

- **Basic** – limited impacts on biodiversity;
- **Intermediate** – could impact on large trees, endangered EVCs, and sensitive wetlands and coastal areas; and,
- **Detailed** – could impact on large trees, endangered EVCs, sensitive wetlands and coastal areas and could significantly impact on habitat for threatened species.

The three Location categories are shown on the NVR tool (DEECA 2026a) and indicate the potential risk to biodiversity from removing a small amount of native vegetation. The Location categories have the following attributes:

- **Location 3** – includes locations where the removal of less than 0.5 hectares of native vegetation could have a significant impact on habitat for threatened species;
- **Location 2** – includes locations that are mapped as endangered EVCs and/or sensitive wetlands and coastal areas (section 3.2.1) and are not included in Location 3; and,
- **Location 1** – includes all remaining locations in Victoria not included within Location categories 2 or 3.

2.4.2 Native Vegetation Offsets

Offsets are required for any approved removal of native vegetation and are stipulated as a condition on the relevant planning permit. The Guidelines define two types of offsets, General and Species. General offsets are required for all approved removal of native vegetation. Species offsets apply under circumstances where there is proportional impact of the removal of native vegetation or modelled habitat for threatened species (DEECA 2025a). Where both General and Species offsets are specified, both must be sourced to meet offset requirements.

In addition to General and Species offsets, the offset requirement includes the protection of at least one Large tree for every Large tree being removed. The requirement applies to Large trees in patches as well as scattered trees.

DEECA calculate the offset requirements based on the native vegetation condition scores (from the field-based habitat hectare assessment or the NVR tool) and modelled biodiversity information. The results are summarised in the Native Vegetation Removal Report (NVRr) generated from the NVR tool (Attachment 2).

An application to remove native vegetation must include an offset strategy that identifies the required offset is available and how the offset will be secured if a permit is granted. Offsets can be secured by obtaining a credit extract from the Native Vegetation Credit Register or establishing and registering a new offset site (first or third party).

2.5 Avoid and Minimise Statement

An avoid and minimise statement is required for all applications under the *Guidelines* (DEECA 2025a). The statement should describe any actions taken to avoid and minimise impacts on the biodiversity and other values of native vegetation.

Emphasis is placed on the avoidance and minimisation of impacts to areas of native vegetation that have the most value (DEECA 2025a, DELWP 2017a). Areas of higher value are generally those containing large, intact or high-quality native vegetation (have a high condition score [0.60 or above] and Strategic Biodiversity Value score), areas supporting endangered EVCs, sensitive wetlands or coastal areas, have large and hollow-bearing trees and/or are designated by modelled Location categories 2 or 3 (DEECA 2025a).

Other values include the role of native vegetation in ensuring land and water protection, protection of landscape values Aboriginal cultural heritage values (DELWP 2017a).

The following information should be provided in the statement where relevant:

- Strategic level planning – any regional or landscape scale strategic planning process that the site has been subject to that avoided and minimised impacts on native vegetation across a region or landscape;
- Site level planning – how the proposed use or development has been sited or designed to avoid and minimise impacts on native vegetation; and,
- That no feasible opportunities exist to further avoid and minimise impacts on native vegetation without undermining the key objectives of the proposal.

There are also instances where a statement outlining consideration of avoidance and minimisation of impacts on ecological values is required, such as under various Environmental Significance Overlays and Significant Landscape Overlays.

2.6 Survey Limitations

Biodiversity assessments generally do not capture all flora and fauna species present in the study area. Time and seasonal constraints, the lack of diagnostic features, especially when flora species are not flowering, or transient fauna, can result in some species being absent or overlooked in short-term studies. For example, some threatened orchids only flower intermittently and when not in flower may be very inconspicuous. Observations of fauna species are likewise limited by weather conditions, seasonality and the cryptic nature of some species.

The primary flora survey was conducted in late spring (November), which is an optimal period for the identification of most species, particularly spring-flowering herbs and all lifeforms encountered were identifiable to species level. Detailed zoological surveys were not conducted during 2025, however, have since been completed for threatened species such as Victorian Grassland Earless Dragon (see Section 5).

Reference site checks for the EPBC Act-listed Matted Flax-lily *Dianella amoena* were undertaken of a known population at 135 Williamsons Road South Morang (on the opposite side of Findon Road to the study area) to see if the species was in flower on 21 October 2025, as well as 6, 13 and 20 November 2025. No MFL specimens were found to be flowering, therefore targeted surveys for the spring/summer 2025 period were entirely based on searching for above-ground leaves. Known locations were further checked in late January 2026 and also briefly during targeted surveys for threatened fauna between March and May 2026. Numerous Matted Flax-lily specimens were located on each occasion, however, none were flowering, therefore the data provided is a composite of several years of targeted surveys over different seasons.

Site surveys have been completed over several years and different seasons (including two winter surveys in 2026 during wet conditions) and adequate material was available for positive identification of all species encountered. The overall results of the assessment are considered sufficient to inform the relevant State planning requirements associated with the proposed development.

Please note: Abzeco has a long association with the study area, having first assessed it in 2006 and on many subsequent occasions. As a result of our long association with the site, we are acutely aware that the vegetation composition throughout the property displays a high degree of variation in space and time. The assessment has therefore adopted a precautionary approach, especially with cover assessments as they can be very subjective and somewhat inaccurate, and we have also ensured that surveys were completed at an appropriate time of the year to accurately gauge the extent of indigenous perennial species across the site.

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3 Flora

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3.1 Survey Methods

Preliminary reference site checks for Matted Flax-lily were conducted on 21 October and 6, 13 and 20 November to determine if the species was flowering. Targeted surveys for threatened flora including Matted Flax-lily and Austral Crane's-bill *Geranium solanderi* var. *solanderi*, as well as mapping of native vegetation and significant species was conducted on 20 November 2025. Further detailed mapping of trees, vegetation composition within the construction buffer areas and threatened species was conducted on 26 May 2026 and again on 04 August 2026 with the revision of the access design. The purpose of the field assessments was to gather information regarding the biodiversity values supported by the land, in particular the extent of native vegetation and listed ecological communities, as well as the distribution and abundance of any threatened species and suitable habitat for threatened species.

A list of observed vascular flora species was compiled, with additional notes made of any observations of threatened flora species or their habitat. Note: the provided flora list (Appendix 1) is a composite that includes species recorded from 2006 onwards, therefore not all species were relocated during the 2025/2026 survey events.

Where relevant, EVCs were determined using modelled pre-1750s and extant EVC mapping along with published descriptions (DEECA 2026b; 2026c). The extent of native vegetation within the study area was mapped using ArcGIS and Field Maps™ with accuracy of +/-2 metres. Matters listed under the Commonwealth EPBC Act, in particular flora species and ecological communities, were also determined during the field assessment.

Targeted surveys for Matted Flax-lily included two botanists walking transect lines spaced approximately 1-2 m apart throughout the project area. Note: although surveys were targeted to Matted Flax-lily, the assessors were also looking for any other incidental spring flowering species, especially orchids.

Where a patch of native vegetation was present, a habitat hectare assessment was conducted in accordance with the *Vegetation Quality Assessment Manual: Guidelines for applying the habitat hectares scoring method*, Version 1.3 (DSE 2004).

3.2 Flora Results

3.2.1 Species Observed

A total of 102 vascular plant species were recorded within the study area, comprising 42 indigenous species and 60 introduced species (Appendix 1).

3.2.2 Vegetation Assessment

The study area is highly modified from a pre-1750 condition and is dominated by a wide range of exotic species. Much of the site is derived grassland due to historical clearing, especially beneath the powerline easements, however, several sections of the property in the north and east are also characterised by a moderate cover of River Red-gum *Eucalyptus camaldulensis* canopy trees (Images 4 & 5). A small number of the trees are large (Image 6) and support hollows and spouts, although many trees appear to have been subject of repeat disturbance over time as they are multi-trunked or heavily coppicing and there are also many residual (dead) cut stumps

throughout the site. Canopy trees characterise most of the northern and south-east sections of the site, however, are absent in the central portion and also in the south in association with the overhead high voltage power easement. Shrubs are effectively absent from the site, although the lack of slashing and reduced grazing in recent years has resulted in the recruitment of several Blackwood *Acacia melanoxylon* saplings and mass recruitment of River Red-gum in parts (see Image 6).

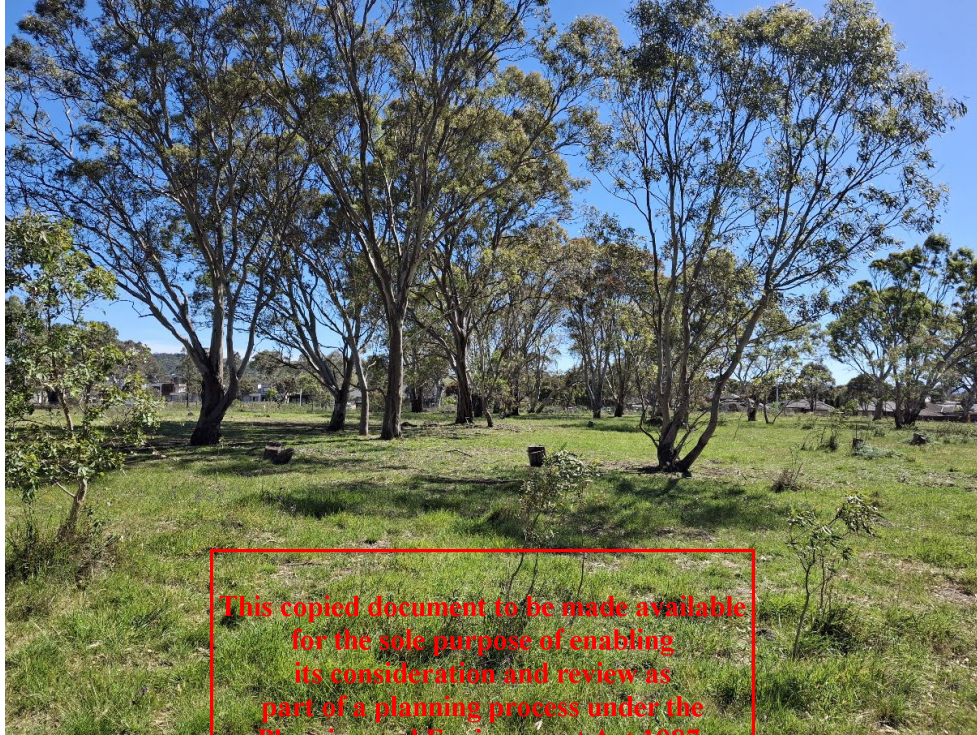


Image 4. Facing north - River Red-gums characterise much of the study area (Abzeco 20/11/2025).



Image 5. River Red-gums in the south-east – many of which are coppicing from the base from previous clearance events (Abzeco 20/11/2025).



Image 6. Large River Red-gum on the north-east boundary surrounded by new recruits (Abzeco 20/11/2025).

Kangaroo Grass *Themeda triandra* is the dominant grass species throughout most of the site, however, the southern end is dominated by Common Tussock-grass *Poa labillardierei* var. *labillardierei* as soils are wetter. A wide range of additional indigenous grasses and herbaceous species persist throughout parts of the site, including Slender Wallaby-grass *Rytidosperma racemosum* var. *racemosum*, Bristly Wallaby-grass *R. setaceum* var. *setaceum*, , Long-hair Plume-grass *Dichelachne crinita*, Soft Tussock-grass *Poa morrisii*, Common Wheat-grass *Anthosacne scabra*, Weeping Grass *Microlaena stipoides* var. *stipoides*, Nodding Saltbush *Einadia nutans* subsp. *nutans*, Common Woodruff *Asperula conferta*, Chocolate Lily *Arthropodium strictum*, Bulbine Lily *Bulbine bulbosa*, Sheep's Burr *Acaena echinata*, Austral Crane's-bill *Geranium solanderi* var. *solanderi* s.s. and Tiny Star *Pauridia glabella* subsp. *glabella* (Image 7; Appendix 1).



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Image 7. Indigenous Tiny Star within the study area (Abzeco 20/4/2026)

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Note: the flora species list contains some taxa associated with wet environs, which have been collected on site in previous surveys. For example, as a result of above average rainfall over the 2019-2020 summer and also regular rainfall throughout 2020, parts of the site were unusually wet for several months and supported standing water. Under such conditions, an ephemeral area in the east supported additional indigenous species with aquatic affinities including Brown-back Wallaby-grass *Rytidosperma duttonianum*, Swamp Crassula *Crassula helmsii*, Naked Crane's-bill *Geranium* sp. 5, Hollow Rush *Juncus amabilis*, Common Bog-sedge *Schoenus apogon* and Common Swamp Wallaby-grass *Amphibromus nervosus*. However, none of these species were recorded in subsequent surveys.

As a result of previous disturbance and a lack of ecological management such as biomass and weed control, the entire site is infested by a wide range of introduced species. This is particularly evident in the central west and north-west sections, as well as parts of each easement where weeds effectively represent 100% of the vegetation cover (Images 8 & 9). Many of the exotics are considered high-threat and noxious, including Chilean Needle-grass *Nassella neesiana*, which is ubiquitous. Additional noxious weed species in high abundance include Paterson's Curse *Echium plantagineum*, Spear Thistle *Cirsium vulgare*, Artichoke Thistle *Cynara cardunculus* subsp. *flavescens*, Sweet Briar *Rosa rubiginosa*, Bridal Creeper *Asparagus asparagoides*, Gorse *Ulex europaeus* and Common Blackberry *Rubus anglocandicans* (Image 10). Some of these species such as Common Blackberry now occur in large thickets. A wide range of additional exotic grasses and herbaceous weeds are also present such as Sweet Vernal-grass *Anthoxanthum odoratum*, Soft Brome *Bromus hordeaceus*, Toowoomba Canary-grass *Phalaris aquatica*, Yorkshire Fog *Holcus lanatus*, Ribwort *Plantago lanceolata*, Cat's Ear *Hypochaeris radicata*, Twiggy Turnip *Brassica fruticosa*, Quicksilver Grass *Aira cupaniana* and Squirrel-tail Fescue *Vulpia bromoides*.



Image 8. Exotic Toowoomba Canary-grass, Paterson's Curse and Chilean Needle-grass are dominant in the north-west section of the study area (Abzeco 20/11/2025)



Image 9. Exotic Artichoke Thistle, Sweet Briar and Chilean Needle-grass are dominant in the central-west section of the study area (Abzeco 20/11/2025)

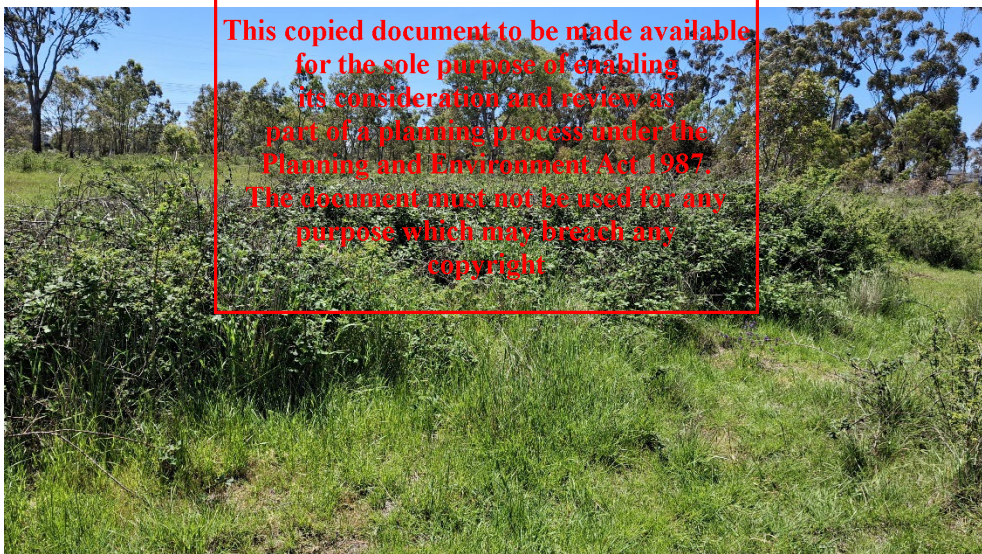


Image 10. Blackberry is scattered throughout the landholding including large infestations such as this example in the south-west (Abzeco 20/11/2025)

3.2.3 Patches of Native Vegetation

Vegetation throughout most of the study area, is considered representative of either moderate quality Plains Grassy Woodland (EVC 55_61) with an intact canopy layer, or modified Plains Grassy Woodland with previously removed canopy (i.e. derived grassland). The presence of Plains Grassy Woodland is in accordance with historical EVC modelling for the site (DEECA 2026a). The vegetation is also characteristic of the EPBC Act listed *Grassy Eucalypt Woodland of the Victorian Volcanic Plain* (GEWVVP). Five patches of Plains Grassy Woodland (EVC 55_61) were mapped throughout the study area (Figure 2).

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The largest patch **Habitat Zone 1** (HZ1) occurs north of the central powerline easement and covers approximately 2.2408 ha. The patch supports two large trees (in accordance with the Large Old Tree 80cm diameter at breast height [DBH] benchmark for Plains Grassy Woodland) and is characterised by mature and coppicing River Red-gum trees over an understorey of mixed indigenous and introduced species (Images 11 & 12). One of the large trees (#43) is present midway along the northern interface of the patch and the buffer to Findon Road (Figure 2).



Image 11. Habitat Zone 1 - Plains Grassy Woodland northern end (Abzeco 20/11/2025)



Image 12. Habitat Zone 1 - Plains Grassy Woodland, showing dead stumps and coppicing River Red-gum trees (Abzeco 20/11/2025)

Habitat Zone 2 is located between the two high voltage powerline easements in the south-east and covers approximately 0.7975 hectare (Figure 2). This patch supports three large River Red-gum trees and is characterised by mixed age and coppicing canopy trees over poor to moderate quality understorey (Image 13). Many cut stumps are present within this zone as evidence of

previous disturbance and weeds are dominant where there has been previous soil disturbance or dumping of fill and other rubbish (see Image 1).



Image 13. Habitat Zone 2 – modified Plains Grassy Woodland in the south-east (Abzeco 20/10/2025)

The cover of indigenous understorey species within the northern portion of the patch is relatively low (<30% increasing to around 50% in the best sections) and is represented by Kangaroo Grass and Slender Wallaby-grass with small sections of Soft Tussock-grass *Poa morrisii* and scattered Common Wheat-grass *Anthosacne scabra*. However, the understorey composition grades into a relatively dense sward of Kangaroo Grass at the southern end of the zone, with some Common Tussock-grass where soils are wetter. One Matted Flax-lily specimen is present on the western interface of the patch and additional indigenous herbs include Common Woodruff, Chocolate Lily, Nodding Saltbush, Sheep's Burp, Small St John's Wort *Hypericum gramineum* and Grassland Wood-sorrel *Oxalis perennans*.

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Habitat Zone 3 occurs in the south-west corner of the study area and covers approximately 1.0437 hectares (Figure 2). Although weed cover is high in parts, with several outbreaks of Blackberry, Sweet Briar and a matrix of exotic Chilean Needle-grass, the patch is primarily characterised by a high cover of Kangaroo Grass (approximately 50-60%) (Images 14 & 15). Understorey composition grades into a relatively dense cover of Common Tussock-grass (approximately 40-50%) in the south where conditions can become very wet.



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Image 14. Kangaroo Grass within Habitat Zone 3 (Abzeco 20/11/2025)



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Image 15. Despite the presence of high-threat weeds, most of Habitat Zone 3 is dominated by Kangaroo Grass (Abzeco 20/11/2025)

Habitat Zone 3 also includes a cluster of approximately 20 young River Red-gum trees in the south-west corner (Image 16). This area is slightly more elevated and supports a higher cover of Slender Wallaby-grass due to the open shade.



Image 16. HZ3 supports a cluster of young River Red-gums in the south-west corner (Abzeco 20/11/2025)

Habitat Zone 4 is located in the central east section of the study area effectively beneath the central power easement and covers approximately 0.4320 ha (Figure 2). The topography of the zone grades gently downslope to the east and has been observed on one occasion in 2020 to support standing water on the eastern margin bordering the aqueduct and shared trail. Kangaroo Grass is dominant in the more elevated western portion of the zone (Image 17) grading into a mix of Common Tussock-grass and on one occasion Common Swamp Wallaby-grass in the east when wet. Under prolonged flooding, the eastern portion of the zone, can share affinities with the nationally listed ecological community *Seasonal Herbaceous Wetlands (Freshwater) of the Temperate Lowland Plains* (SHWFTLP), however, the vegetation has not been observed to meet all of the key

diagnostic characteristics or condition thresholds and no flora species with aquatic affinities were identified as part of the current (2025-2026) assessment. Furthermore, it is uncertain as to whether this area can still retain water or receive the same level of irregular flooding following the recent construction of Findon Road and associated new drainage infrastructure.

Nevertheless, the extent of previously observed vegetation characteristic of 'SHWFTLP' and associated with Habitat Zone 4 is shown on Figure 4, along with a precautionary buffer zone that covers areas of shallower topography, which should be avoided and treated as a no-go-zone.

Mapping of this section of the study area includes several areas of significant erosion caused by previous vehicle movements. The origin of this disturbance is unknown although is likely a result of rubbish dumping and unauthorised access (see Section 3.4).



Image 17. Despite a high cover of exotic Chilean Needle-grass, a matrix of Kangaroo grass is present throughout most of Habitat Zone 4 (Abzeco 13/11/2025)

Habitat Zone 5 is small (0.0553 ha) and consists exclusively of young self-recruited River Red-gum saplings south of large scattered trees #25 & #26 in the north-west (Image 18; Figure 2). The understorey appears to be almost entirely dominated by exotic Chilean Needle-grass although several Austral Crane's-bill specimens were recorded along the northern edge (Figure 2).



Image 18. Facing south-east over Habitat Zone 5 showing dense young saplings to the right of image and scattered tree #26 to the left of image (Abzeco 20/04/2026)

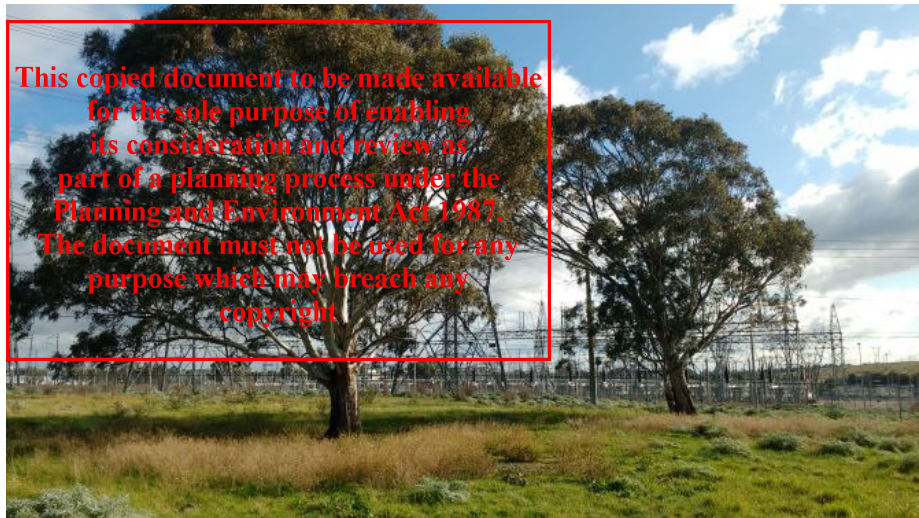
3.2.4 Scattered Trees

Eight scattered indigenous trees (e.g. Images 19 & 20) were mapped throughout the study area, two of which meet the Plains Grassy Woodland benchmark DBH (80 cm) to be considered as Large Trees (Figure 2). Further details for each scattered tree are provided in Table 2. Five of the trees occur within the development footprint and are proposed for removal, while the remaining three trees are outside building and construction buffer areas and can be retained (see Section 5.5; Table 4).

Table 2. Scattered trees within the study area

Tree ID.	Scientific Name	Common Name	DBH (cm)	Size Class	Location
4	<i>Eucalyptus camaldulensis</i>	River Red-gum	46	ST	Building footprint
25	<i>Eucalyptus camaldulensis</i>	River Red-gum	83	LOT	Building footprint
26	<i>Eucalyptus camaldulensis</i>	River Red-gum	86	LOT	Building footprint
47	<i>Eucalyptus camaldulensis</i>	River Red-gum	20	ST	Outside footprint
50	<i>Eucalyptus camaldulensis</i>	River Red-gum	30	ST	Outside footprint
128	<i>Eucalyptus camaldulensis</i>	River Red-gum	<10	ST	Outside footprint
203	<i>Eucalyptus camaldulensis</i>	River Red-gum	10	ST	Building footprint
204	<i>Eucalyptus camaldulensis</i>	River Red-gum	10	ST	Building footprint

Notes: DBH = Diameter at Breast Height, LOT = Large Old Tree, ST = Small Tree



Images 19 & 20. Scattered tree #4 on the northern boundary (left) and two large scattered trees (#25 & 26) associated with the western boundary (Abzeco 13/11/2025)

3.3 Threatened Flora Species

The EPBC Act listed (Endangered) Matted Flax-lily *Dianella amoena* is present within the study area (Figure 2). Preliminary reference site checks of known Matted Flax-lily (MFL) specimens were conducted at 135 Williamsons Road (directly opposite Findon Road to the north-east) on 21 October and 6, 13 and 20 November 2025 to determine if the species was flowering. Targeted surveys for MFL and mapping of native vegetation was conducted on 20 November 2025.

All known MFL clones within the reference site were readily identifiable as they are large (several metres diameter) with hundreds of mature ramets (Images 21 & 22). However, despite being an optimal period for reproduction, no flower stems or other flowering material was identified during any of the reference checks, therefore 2025 targeted surveys relied on observation of above ground leaves, and only two plants were located within the study area

(Figure 3). Previous targeted surveys for Matted Flax-lily in early December 2022 identified at least 12 MFL plants within the study area, therefore the lack of flowering during the 2025-2026 targeted survey effort is somewhat of a limitation. However, despite being a sub-optimal survey period, further targeted surveys conducted on 26 May 2026 managed to relocate seven of the 12 MFL plants recorded in 2022 (Image 23) as well as one new plant (Figure 3). All but two of the MFL plants recorded in 2025-2026 have also been previously identified during targeted surveys in 2018 and 2019 as part of the Findon Road Extension project and again in 2022 as part of different investigations. On this basis it must be assumed that the study area supports at least 14 MFL plants (see Figure 3). Based on the current development plan at least nine of these plants fall within the proposed building footprint or construction buffers.

Targeted surveys were conducted by walking parallel transects approximately 1-2 m apart across the entire site (Figure 2). The word ‘plant’ with reference to MFL in this report refers to a single clone, or genet, made up of two or more genetically identical ramets connected in close association to one another (i.e. typically < 5-20 cm apart). We acknowledge that it is possible that closely associated ramets may represent genetically unique individuals rather than the same clone, however, all plants identified in 2025-2026 targeted surveys are highly isolated in space, hence they are assumed to be separate clones. Should salvage of these plants be endorsed as part of any future approvals, each ‘clump’ or ‘patch’ will be carefully examined to determine how many individuals or clones are present, prior to labelling, nursery cultivation and translocation.

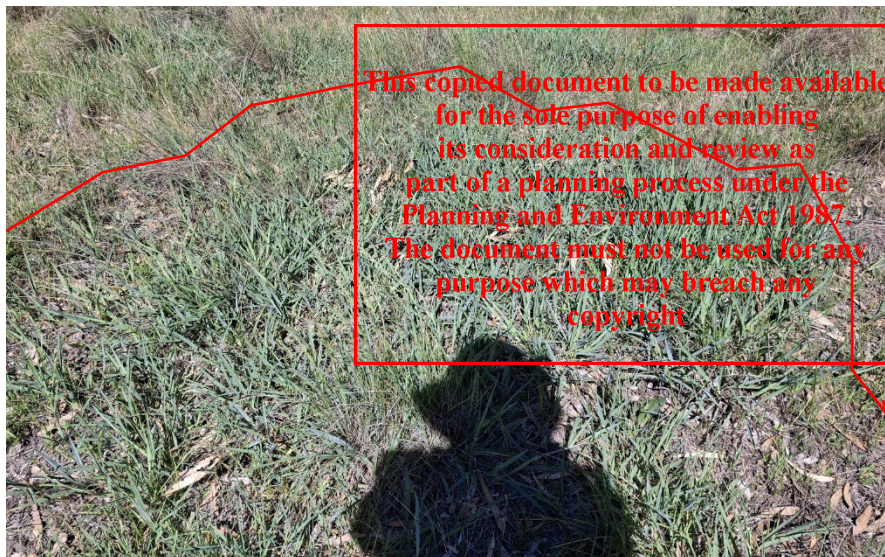


Image 21. Large non-flowering Matted Flax-lily clone within the reference site (Abzeco 20/11/2025)



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Image 22. Close up of large non-flowering Matted Flax-lily clone within the reference site (Abzeco 20/11/2025)



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Image 23. Relocated Matted Flax-lily clone within the study area (Abzeco 26/05/2026)

Please note: given the lack of flowering MFL plants identified during the 2025-2026 season further targeted MFL surveys are proposed for the 2026-2027 spring / summer period to ensure that all specimens relevant to the study area are captured to inform both state and federal referrals. A MFL Salvage & Translocation Plan will also be prepared for approval by both referral authorities.

Many (likely 200+) specimens of the FFG Act-listed Austral Crane's-bill *Geranium solanderi* var. *solanderi* s.s. are scattered throughout the study area, particularly along the northern boundary (Image 24). This species is listed as Endangered under the FFG Act and is worthy of salvage and translocation into retained areas of Plains Grassy Woodland within the study area.



Image 24. State significant Austral Crane's-bill *Geranium solanderi* var. *solanderi* s.s (Abzeco 20/11/2025)

A list of previous threatened flora records within the local area is presented in Appendix 2 and the results of the PMST search for nationally-listed species is presented in Appendix 3.

The VBA contains previous records for five EPBC Act-listed species and an additional 24 FFG Act-listed flora species within a five-kilometre radius of the study area (DEECA 2026d) (Appendix 2). Recent (post-2000) records include Matted Flax-lily, Pale Swamp Everlasting *Coronidium gunnianum*, Melbourne Yellow Gum *Eucalyptus leucoxylon* subsp. *connata*, Pale-flower Crane's-bill *Geranium* sp. 3, White Sunray *Leucochrysum albicans* subsp. *tricolor*, Plains Yam-daisy *Microseris scapigera* and Rye Beetle-grass *Tripogonella loliiformis*. The PMST search contains an

additional nine EPBC Act-listed species that have not been previously recorded but are considered to have the potential to occur in the local area, including Button Wrinklewort *Rutidosis letorrhynchoides*, Maroon Leek-orchid *Prasophyllum frenchii*, Spiral Sun-orchid *Thelymitra matthewsii* and Swamp Everlasting *Xerochrysum palustre* (DCCEEW 2026) (Appendix 3).

With exception of Matted Flax-lily and Austral Crane's-bill, none of the previous records pertain to the immediate study area and surrounds, with most associated with Plenty Gorge Parklands and the Plenty River corridor several kilometres to the south, as well as discrete sites such as Epping Cemetery and Quarry Hills Reserve in the broader landscape.

Almost all threatened flora species are therefore considered unlikely to occur as the study area has been highly isolated for many decades, has a history of disturbance, is dominated by weeds and is subjected to grazing by a mob of 30-50 kangaroos. Orchid species such as Charming Spider-orchid *Caladenia amoena*, Wine-lipped Spider-orchid *C. oenochila* and Emerald-lip Greenhood *Pterostylis smaragdyna* are therefore considered unlikely to occur as no orchid species have been recorded by Abzeco over 20 years of site reconnaissance across different seasons. For example, Abzeco have traversed the entire site systematically (using 1-2 transect lines) on at least four occasions while conducting targeted surveying for Matted Flax-lily in spring, which coincides with the flowering period for Charming Spider-orchid and Wine-lipped Spider-orchid. Further targeted MFL surveys were recently conducted during May 2026 and the ground layer was also inspected at a very fine scale over an eight-week period during late autumn searching for natural spider burrows and soil cracks, which overlaps with the flowering period for Fringed Helmet-orchid *Corybas fimbriatum*. Targeted surveys during winter have been limited and unlikely to coincide with the peak flowering period for Emerald-lip Greenhood *Pterostylis smaragdyna* (June-August), however, if this species was present, previous spring surveys are expected to at worst identify spent flower stalks as they are readily identifiable as belonging to the genus *Pterostylis*. Further justification regarding likelihood of occurrence conclusions is provided in Appendix 2.

Woody species such as Melbourne Yellow-gum *Eucalyptus lecuoxylon* subsp. *connata* and Yarra Gum *Eucalyptus yarraensis* are readily identifiable and can be discounted from the assessment.

Suitable (near-permanent) aquatic habitat for species such as Leafy Twig-sedge *Cladium procerum* and Swamp Flax-lily *Dianella callicarpa* is considered absent. The small area of 'ephemeral wetland' identified in 2020 at the eastern edge of Habitat Zone 4 has some potential to provide temporary habitat for River Swamp Wallaby-grass *Amphibromus fluitans* as Common Swamp Wallaby-grass *Amphibromus nervosus* was previously identified in this location when under prolonged flooding. This same area could also be suitable for Pale Swamp Everlasting *Coronidium gunnianum* with an appropriate water regime. However, the hydrodynamics of this area is irregular and has been substantially altered via the recent development of the Findon Road extension and new drainage channels. It is therefore somewhat uncertain as to whether the subject area is still capable of adequately flooding and holding surface water.

The nearest records for River Swamp Wallaby-grass are located approximately 2.8 km north-east associated with Rivulet Reserve and the Morang Wetlands, which are separated from the study area by major roads and residential development. A single record for Pale Swamp Everlasting is also attributable to Rivulet Reserve and two more records are associated with the Lakes Boulevard Drain approximately 1.4 km to the north, where water sources are more reliable. Both River Swamp Wallaby-grass and Pale Swamp Everlasting flower in spring and are easily identified yet have never been observed over the past 20 years, despite many surveys conducted during optimal flowering periods. Given the lack of connectivity to these sites, irregular and

uncertain hydrology and limited habitat, both River Swamp Wallaby-grass and Pale Swamp Everlasting are considered unlikely to occur in the study area.

With specific reference to Condition 4 of the recent DEECA RFI, we note that the Habitat Distribution Modelling for the EPBC Act-listed Swamp Everlasting *Xerochrysum palustre* includes two pixels over the study area, one of which is roughly aligned with the area of 'ephemeral wetland' observed in 2020 (Capture 1). Interestingly, no VBA records are available for this species within a 5 km radius search (see Appendix 2), however, we note that two records are displayed in the Atlas of Living Australia (ALA) derived from iNaturalist© and located at Rivulet Reserve and Lakes Boulevard Drain several kilometres to the north. Given the inconsistency of habitat and the fact that this species is readily identifiable, yet has never been observed over 20 years, Swamp Everlasting is considered unlikely to occur.



Capture 1. Habitat Distribution Modelling for Swamp Everlasting *Xerochrysum palustre* in relation to the study area (red outline).

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Of the remaining threatened flora species, suitable habitat is present within areas supporting low weed cover for two FFG Act-listed flora including Large-flower Crane's-bill *Geranium* sp. 1 and Pale-flower Crane's-bill *Geranium* sp. 3, however, neither species has previously been detected within the study area, therefore the likelihood of occurrence is considered low.

Targeted spring surveys for significant flora species have been conducted across this land parcel on previous occasions as part of former investigations and the closely associated Findon Road extension project (including 2006, 2013, 2016-2019 & 2022), therefore it is considered unlikely that the study area supports additional threatened flora species.

3.4 Determination of Listed Vegetation Communities

The EPBC Act Protected Matters Search Tool notes five threatened ecological communities as having the potential to occur within a 5 km radius search of the study area (DCCEEW 2026). These communities include:

- 1) *Grassy Eucalypt Woodland of the Victorian Volcanic Plain* (listed as Critically Endangered)
- 2) *Natural Temperate Grassland of the Victorian Volcanic Plain* (listed as Critically Endangered)
- 3) *Seasonal Herbaceous Wetlands (Freshwater) of the Temperate Lowland Plains* (listed as Critically Endangered)
- 4) *White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland* (listed as Critically Endangered)
- 5) *Natural Damp Grassland of the Victorian Coastal Plains* (listed as Critically Endangered)

All mapped areas of Plains Grassy Woodland (EVC 55_61) vegetation within the study area have strong affinities with the critically endangered ecological community *Grassy Eucalypt Woodland of the Victorian Volcanic Plain* (GEWVVP). In accordance with the listing advice for GEWVVP, all mapped habitat zones (other than HZ5 which is composed of saplings) currently meet the

description thresholds for GEWVVP as they contain an adequate cover of native perennial grasses (50% or greater) and a species diverse herbaceous layer (>10 perennial groundstorey species), however, they do not support the typical threshold number of large old trees (DSEWPac 2011). Habitat Zones 3 & 4 support very few trees that are all young, however, the vegetation also has strong affinities with GEWVVP, as it was historically known to be woodland prior to disturbance and currently supports greater than 50% cover of perennial indigenous grasses, as well as adequate diversity of perennial herbaceous species. As a precautionary measure all zones (other than HZ5) are considered as part of the EPBC Act-listed *Grassy Eucalypt Woodland of the Victorian Volcanic Plain* (GEWVVP) community. On this basis, the total area of GEWVVP associated with the study area is estimated at 4.514 hectares (Figure 5).

Note: in accordance with Section 2.6 (Survey Limitations), mapping of the extent of GEWVVP within this site is a complex task as vegetation can differ in space and time depending on seasonality and prevailing conditions. As a means of illustration, Figure 5 shows overlapping GEWVVP mapping from the 2024 and 2025 survey periods. As a further precautionary measure, the greater outline of both mapping extents has been utilised for the purposes of this report to ensure it captures minor fluctuations in recent times.

On irregular occasions, the eastern end of Habitat Zone 4 can also share affinities with the ecological community *Seasonal Herbaceous Wetlands (Freshwater) of the Temperate Lowland Plains* (SHWFTLP) (DSEWPac 2012). Topography is slightly lower in this section and previous works such as the historical installation of the aqueduct and movement of heavy vehicles through to Mernda Rail has liberated then compacted clay soils, altering hydrology and drainage. Many deep, long wheel ruts are also present in this area. During periods of high rainfall standing water can form within the depressions and ruts.

Under such conditions, a variety of semi-aquatic species can emerge including Common Swamp wallaby-grass, Common Tussock-grass and Brown-back Wallaby-grass (Image 25). Importantly, species composition does not include taller native graminoids such as Cumbungi *Typha* spp., Common Reed *Phragmites australis*, Cane Grasses *Eragrostis* spp. and Tall Spike-sedge *Eleocharis sphacelata*, which would disqualify the area as listed community (DSEWPac 2012). At the time of assessment, the zone also did not support any native wetland forb species or apparent algae (see breakdown of diagnostic characteristics and condition thresholds below – section 3.4.1). It should also be noted that 2020 is the only year Abzeco has recorded substantial and prolonged standing water in this section of the site in almost 20 years of irregular surveys. Nevertheless, the emergence of previously undetected species such as Common Swamp Wallaby-grass in relatively high abundance indicate that the site has an appropriate seed bank and history of (irregular) flooding required to potentially qualify as the EPBC listed community.

Although the area of potential or ephemeral SHWFTLP could not be explicitly mapped as part of this assessment (as no characteristic species were present), Abzeco acknowledges that this community could briefly reappear with appropriate hydrology and is not entirely ruling it out from the site, hence we have applied a precautionary approach and have captured the key area within the mapping extent of modified Plains Grassy Woodland (EVC 55) and or the EPBC Act-listed *Grassy Eucalypt Woodland of the Victorian Volcanic Plain* community. The overlap of both communities is shown on Figures 5 and the consolidated area shown on Figures 2 and 4. As a further precautionary approach, the potential area of SHWFTLP has been enlarged along with a buffer zone that covers areas of shallower topography and deep wheel ruts. Despite being dominated by weeds, the inclusion and practical application of a buffer zone is in accordance with recommendations in the approved Conservation Advice for SHWFTLP (DSEWPac 2012). Importantly, under the current development plan, none of the potential area of SHWFTLP is

proposed to be impacted and there is a reasonable buffer to any proposed activities, nevertheless, the entire area should be avoided and treated as a no-go-zone.

Further to the November 2025 assessment that underpins the bulk of this report, an additional winter survey was conducted on 4th August 2026 following relatively regular rainfall, that specifically targeted the area of potential SHWFTLP. Some standing water was located within deeper wheel ruts (Image 26), however, vegetation was entirely exotic other than surrounding Common Tussock-grass, which is a perennial species that can persist without flooding. Note: Image 26 was captured in approximately the same location and same time of year (August) as Image 25, six years later and importantly shows the Findon Road extension and underpass in the background. The presence of some standing water, albeit within wheel ruts is encouraging, however, we suspect that drainage patterns have substantially altered from those prior to the construction of Findon Road.

None of the remaining ecological communities listed above are considered present within the study area.



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Image 25. Facing north near the eastern edge of HZ2 showing potential Seasonal Herbaceous Wetland (Freshwater) of the Lowland Temperate Plains identified in 2020 (Abzeco 20/08/2020). Note: image taken prior to the construction of Findon Road.



Image 26. Facing north at the eastern edge of HZ2 showing standing water in deep wheel ruts, however no aquatic native flora (Abzeco 04/08/2026). Note: image taken after construction of Findon Road.

3.4.1 Diagnostic and Condition Thresholds for SHWFTLP

The following breakdown of diagnostic and condition thresholds for SHWFTLP is based on the Threatened Species Scientific Committee Listing Advice for the threatened ecological community (TSSC 2012):

Part A) Condition during 'typical' wet cycles.

Step A1) Is the wetland consistent with the key diagnostic characteristics: **Partly meets diagnostics**

Landscape

- Limited to the temperate zone of mainland south-eastern Australia. The ecological community occurs in south-east SA, Victoria and southern NSW. **Zone is correct.**
- On flat plains grading into slopes, below 500 m asl. **Topography and m asl are correct.**
- Associated soils are generally fertile but poorly draining clays derived from a range of geologies. **Soil type is correct.**
- Typically in rainfall zones with a Winter seasonal rainfall pattern, extending into a Uniform seasonal rainfall pattern at the edge of its range. The mean annual rainfall is usually 400 to 800 mm/year but can be lower at the northern edge of its range. **Rainfall zone is correct.**

Hydrology

- On isolated drainage lines or depressions which are seasonally inundated (typically during winter-spring) and subsequently dry (typically by late summer). **Soils are typically boggy over winter, hence the regular presence of Common Tussock-grass, however, are not consistently seasonally inundated and other relevant wetland biota have only been recorded once in 2020. Standing water is typically limited to wheel ruts from previous disturbance and there is some doubt as to whether the current site hydrology is appropriate following the recent completion of the Findon Road extension.**
- Rainfall is the main water source. These wetlands are not dependent on overbank flooding from riverine systems. **Rainfall is the only water source as the site is not connected to a riverine system.**
- Salinity of the water is fresh to slightly brackish. Salinity mostly lies within the range, 0 to 1000 mg/L but can be up to 3000 mg/L, typically exhibiting a progressive increase in salinity as wetlands dry. **Existing vegetation indicates that the water is fresh.**

Biota

- Trees and shrubs are sparse to absent. When present, they mostly occur as fringing or scattered individuals. The cover of woody species accounts for no more than 10% projective foliage cover across the wetland. **Trees are absent within the potential area of SHWFTLP**
- The vegetative cover of the ecological community is dominated by a ground layer of native wetland graminoids and/or native wetland forbs. **Other than August 2020 when a substantial cover of native wetland graminoids was observed, the vegetative cover has been dominated by exotic grasses such as Chilean Needle-grass, Kikuyu, Toowoomba Canary Grass, Sweet Vernal, Paspalum and Brown-top Bent on all other survey occasions.**
- A range of graminoids is often present and typically includes one or more of the following taxa: *Amphibromus* spp., *Carex tereticaulis*, *Deyeuxia* spp., *Glyceria* spp., *Lachnagrostis* spp., *Poa labillardierei*, and *Rytidosperma duttonianum*. **Some *Poa labillardierei* is always present (<10-15% cover) along with Kangaroo Grass *Themeda triandra* (not relevant to SHWFTLP), however, other graminoids such as *Amphibromus nervosus* and *Rytidosperma duttonianum* have only been recorded in 2020 and are not considered typical for the subject area.**
- At least one native wetland forb species must be present (preferably more) after the ecological community is inundated. The suite of forbs that may occur within the ecological community's range is variable and potentially large. **Only two herbaceous species with potential affinities to SHWFTLP have been recorded within the overall study area including Golden Stars *Pauridia glabella* and Common Woodruff *Asperula conferta*, however, only Common Woodruff has been recorded within the vicinity of the potential area of SHWFTLP and it is widespread across the site and not dependent on flooding.**

- Freshwater algae often are present when the wetland is, or recently has been, wet. The most evident representatives are green algae from the groups Charales (stoneworts) and Zygnematales (pond scums). **Algae has never been recorded in association with the potential area of SHWFTLP**
- Characteristic fauna that may be associated with the ecological community include invertebrate groups that are temporary water specialists. The types of fauna present can be highly variable, depending on the inundation history, current conditions and other factors. **No characteristic fauna have been recorded.**

Step A2) Is 50% or more of the total cover of plants in the ground layer of the wetland dominated by native species characteristic of the Seasonal Herbaceous Wetlands ecological community? **Typically not and dominated by exotics. Only on one occasion in 2020 has the vegetation cover been observed to support a high cover of *Poa labillardierei*, *Amphibromus nervosus* and *Rytidosperma duttonianum*.**

Part B) For dry conditions (e.g. drought):

Step B1. Determine landscape position, including any modifications of the surrounds. Observations of the wetland and its surrounding landscape should show that it is clearly consistent with the Seasonal Herbaceous Wetlands. There should be evident natural features such as the presence of shallow depressions, drainage lines or gilgaes that would foster temporary pooling of water. However, the landscape supporting wetland formation may have been modified by works that have caused catastrophic changes to its hydrology. Works and modifications should be reasonably evident to show that a site no longer has the capacity to support a seasonal wetland.

The subject area of potential SHWFTLP is small (~ 0.1 ha) and occurs within a low point with shallow depressions, however, many of these are heavily compacted artificial ruts from previous heavy vehicle movement. The area is also bound by the elevated shared trail and aqueduct pipeline to the east as well as an informal access track from the shared trail to the easement, which all effectively act as levee banks. In addition, the recent nearby construction of the Findon Road extension has substantially altered local hydrology via incorporation of new stormwater drainage infrastructure.

Step B2. Investigate the known or inferred history of the likely wetland. Is the wetland known to be a natural wetland from existing information?

The subject area has only been observed to meet the SHWFTLP graminoid cover threshold of 50% on one occasion in August 2020, however, the seed bank from which the vegetation was derived was clearly reflective of past occurrences. Nevertheless, the vegetation survey at the time recorded just three native graminoid species and no native herbs characteristic of SHWFTLP, suggesting that species composition is likely to have been historically low. Although no reliable or detailed historical vegetation lists / surveys are attributable to the site, the subject area is not modelled as currently or historically supporting any wetland layers

Step B3. Determine the nature of the vegetation surrounding the wetland. Is the wetland surrounded by or adjoining a native vegetation remnant?

Part of the subject area has been mapped as part of both Plains Grassy Woodland (EVC 55) and the EPBC Act-listed *GEWVVP*. However, the area occurs beneath an electric power easement that is grazed by kangaroos and irregularly slashed for biomass control by the easement authority.

Part C) Minimum wetland size

The potential area of SHWFTLP mapped as part of this assessment is less than threshold size of 0.5 ha, whether treated as a single isolated wetland, or a fine-scale cluster of wetlands / gilgaes. However, the subject area estimated to be approximately 0.1 ha and is connected to modified patches of Plains Grassy Woodland (HZ2, 3 & 4) that have a combined area of > 1ha, hence the size threshold may be met under part c of the listing advice criteria. However, it should also be noted that the potential area of SHWFTLP shown on Figure 4 is an estimate only and highly precautionary.

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Implications

The breakdown above indicates that while certain factors such as landscape position and climate may meet the criteria for SHWFTLP, remaining components such as hydrology, biota and minimum patch size are questionable and suggest that the subject area is unlikely to qualify as the listed community even under ideal flooding conditions. Nevertheless, the subject area will be avoided as part of the proposed development of the land and has been earmarked with a suitable buffer area as a no-go-zone.

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4 Figures

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Study Area

Threatened Flora Records (Victorian Biodiversity Atlas)

Threatened Fauna Records (Victorian Biodiversity Atlas)

Parks and Conservation Reserves

Waterbody

Watercourse

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Figure 1
Location of Study Area and Threatened Species Records
165 Williamsons Road, South Morang



Date: 4/12/2025
Created by: LK
Project: 20065
File: 20065_165WilliamsonsRd_VG2020
Note: Location of property boundaries, watercourse, roads and topography indicative only.

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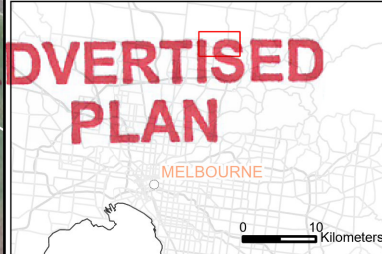
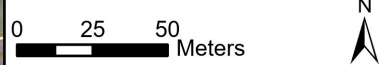
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- Study Area
- Grassy Eucalypt Woodland of the Victorian Volcanic Plain (EPBC-listed) Distribution - Consolidated 12/2024 and 11/2025
- Seasonal Herbaceous Wetlands (Freshwater) of the Temperate Lowland Plains (EPBC-listed) Potential Distribution
- Plains Grassy Woodland (EVC55)
- Large Indigenous Patch Tree
- Large Indigenous Scattered Tree
- Small Indigenous Scattered Tree
- Austral Cranesbill (January and May 2026)
- Matted Flax-lily (May 2026)
- Matted Flax-lily (November 2025)
- Matted Flax-lily (December 2022)
- Contour (1m)

Figure 2
Assessed Native Vegetation
165 Williamsons Road, South Morang



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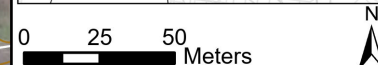
Scale: 1:2,500 (A4)
GDA 2020 VicGrid

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- Study Area
- Matted Flax-lily (May 2026)
- Matted Flax-lily (November 2025)
- Targeted Matted Flax-lily Survey - November 2025
- Matted Flax-lily (December 2022)
- Targeted Matted Flax-lily Survey - December 2022
- Contour (1m)

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Figure 3
Targeted Matted Flax-lily (*Dianella amoena*) Surveys
165 Williamsons Road, South Morang



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- Study Area
- Proposed Data Centre
- Proposed Driveway, Car Park and Paved Areas
- Proposed Fire Tanks and Pumps
- Proposed Substation
- Proposed Tanks and Fuel
- Proposed Security Checkpoint
- Proposed OSD Tank
- Construction Buffer (10m major infrastructure and 2.5m access)
- No-go zone buffer: Potential Seasonal Herbaceous Wetland of the Temperate Lowland Plains
- Impacted Native Vegetation
- Seasonal Herbaceous Wetlands (Freshwater) of the Temperate Lowland Plains (EPBC-listed) Potential Distribution
- Plains Grassy Woodland (EVC55)
- Large Indigenous Patch Tree - Retained
- Small Indigenous Scattered Tree - Retained
- Large Indigenous Patch Tree - Direct Loss
- Large Indigenous Scattered Tree - Direct Loss
- Small Indigenous Scattered Tree - Direct Loss
- Large Indigenous Tree - Consequential Loss
- Small Indigenous Tree - Consequential Loss
- Austral Cranesbill
- Matted Flax-lily (May 2026)
- Matted Flax-lily (November 2025)
- Matted Flax-lily (December 2022)
- Contour (1m)

Figure 4
Development Plans and Native Vegetation Impacts
165 Williamsons Road, South Morang



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Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community

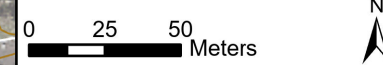


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-  Study Area
-  GEWVP Distribution - 11/2025
-  GEWVP Distribution - 11/2024
-  Contour (1m)

Figure 5
Grassy Eucalypt Woodland of the Victorian Volcanic Plain - Distribution 11/2024 to 11/2025
165 Williamsons Road, South Morang



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Study Area

- Proposed Data Centre
- Proposed Driveway, Car Park and Paved Areas
- Proposed Fire Tanks and Pumps
- Proposed Substation
- Proposed Tanks and Fuel
- Proposed Security Checkpoint
- Proposed OSD Tank
- Construction Buffer (10m major infrastructure and 2.5m access)

Survey Results by Species

- Common Froglet
- Garden Skink
- Lowland Copperhead
- Little Whip Snake
- Moth
- Spotted Marsh Frog
- Tussock Skink
- Wolf Spider
- Survey Group Corner Point
- Contour (1m)

Figure 6
Targeted Fauna Survey Results and Proposed Development Footprint
165 Williamsons Road, South Morang

0 25 50 Meters

Date: 7/08/2026
Created by: LK
Project: 20065
File: 20065_165WilliamsonsRd_VG2020

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5 Fauna

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5.1 Fauna Habitat

The quality and estimated value of habitat for fauna within the study area was determined by assessment against the criteria described below.

Habitat Quality Classification

Low: Habitat areas classed as being of low quality are usually fragmented and have lost most structural elements such as tussock/hummock forming grasses or sedges, inter-tussock spaces, understorey shrubs, logs, rocks and hollow-bearing trees. Connectivity with higher quality patches may be limited or absent. Such patches are generally weed infested, have little or no natural regeneration and remaining indigenous species are under threat from invasive exotic species.

Moderate: Some structural elements have been lost, and invasive species are not dominant over indigenous species but pose a significant threat. There is some connectivity with adjacent habitat of equal or greater quality. The patch may provide suitable habitat for fauna of conservation significance known or likely to occur in the area.

High: Most structural elements are present, understorey species are healthy, most life forms are present and weed invasion is low, with the majority of invasive species not posing a significant threat. The patch is part of a mosaic of reasonably contiguous areas of moderate to high quality vegetation. The patch provides suitable habitat for fauna of conservation significance known or likely to occur in the area.

5.2 Habitat Types and Assessment of Quality

The site has a number of natural and modified vegetation types that provide habitat for a range of common fauna species. The study area encompasses two broad habitat types.

- Modified grassland; and,
- Modified woodland.

Modified grassland

A large proportion of the study area, especially sections beneath the transmission easements and boundary lines are dominated by noxious grass species such as Chilean Needle-grass and high-threat woody weeds such as Sweet Briar, Gorse and Common Blackberry. These areas of exotic grassland support low floristic diversity and generally only provide poor quality habitat for a limited range of fauna species adapted to modified open environments such as Australian Magpie *Gymnorhina tibicen*. Woody weeds such as thickets of Common Blackberry are providing harbor for European Rabbit *Oryctolagus cuniculus*, European Hare *Lepus europaeus* and Red Fox *Vulpes vulpes*, which were all observed on site, however, the same vegetation is also providing shelter and foraging resources for families of Superb Fairy Wren *Malurus cyaneus*.

Remaining areas of modified grassland, especially the southern tip and most of the north-east, support a higher cover of native tussock grasses, with some inter-tussock spaces and structural complexity such as scattered and embedded rock and defined leaf-litter. In combination with soils that are susceptible to deep cracking during the drier months, these areas provide a variety of habitat niches for many species of reptiles, amphibians, small mammals and invertebrates such

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as Common Blue-tongued Lizard *Tiliqua scincoides*, Garden Skink *Lampropholis guichenoti*, Lowland Copperhead *Austrelaps superbus*, Little Whip Snake *Suta flagellum*, Spotted Marsh Frog *Limnodynastes tasmaniensis*, House Mouse **Mus musculus*, Meadow Argus *Junonia villida* and Wolf Spiders *Lycosidae* (Images 27-30).



Images 27-30 (clockwise from top left). Meadow Argus, Spotted Marsh Frog, Wolf Spider and Lowland Copperhead, all recorded within the study area (Abzeco 2025 & 2026).

Modified grassland areas also provide foraging resources for a relatively large mob (30-50 individuals) of Eastern Grey Kangaroos *Macropus giganteus* that can move through the site via both the rail underpass to the south and to the north across Williamsons Road and Findon Road toward the adjacent power easement and Hillscrest Conservation Reserve. The mob also appears to currently have access to the power substation site to the west through at least one breach in the cyclone fencing. Due to the regular presence of kangaroos on site, an Eastern Grey Kangaroo Management Plan (EGKMP) will be required as part of the planning application.

Modified Woodland

Several sections of the study area support modified patches of woodland in poor to moderate condition due to a history of disturbance, high weed cover and previous tree removal. Although most of the remaining trees are juvenile, semi-mature or recovering via coppicing, several large-old trees are present that contain hollows, spouts, cracks and fissures, which provide high-quality habitat niches for nesting and roosting for numerous bird species, insectivorous bats and potentially arboreal mammals such as possums. Tree #43 along the north-east boundary is a particularly important habitat tree with hollows and spouts currently occupied by Red-rumped Parrot *Psephotus haematonotus*, Striated Pardalote *Pardalotus striatus*, Rainbow Lorikeet *Trichoglossus moluccanus* and the introduced Common Myna **Acridotheres tristis*. This tree is also likely to support micro-bats. The author has witnessed several generations of Red-rumped Parrots emerging from hollows in Tree #43 and successfully fledging over the many years surveying this site (Image 31).

Given the extent of past tree clearance and land modification in the surrounding area, as well as the limited connectivity to other areas of vegetation, the remaining trees are a vital resource for local or transitory fauna and as such are considered of high local habitat value. A wide range of

relatively common native bird species were noted utilizing the trees including Australian Magpie, Red Wattlebird *Anthochaera carunculata*, Eastern Rosella *Platycercus eximius*, Crimson Rosella *Platycercus elegans*, Sulphur-crested Cockatoo *Cacatua galerita*, Little Raven *Corvus melori*, Grey Butcherbird *Cracticus torquatus*, Noisy Miner *Manarina melanocephala* and Crested Pigeon *Ocyphaps lophotes*. The canopy trees also provide important areas of shade for the local Eastern Grey Kangaroo population.

A list of fauna species recorded within the study area over the past five years is provided in Appendix 4.



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Image 31. Red-rumped Parrot within a hollow in large tree #43 (Abzeco 26/05/2026)

5.3 Habitat Suitability for Threatened Fauna

No EPBC Act-listed fauna species were recorded within the study area, however, one FFG Act-listed species, Tussock Skink *Pseudemoia pagenstecheri* (Image 32) was recently identified during targeted survey efforts for the EPBC Act-listed Victorian Grassland Earless Dragon *Tympanocryptis pinguicolla* (further discussed below).



Image 32. Tussock Skink *Pseudemoia pagenstecheri* located within the study area (Abzeco 26/03/2026)

The VBA contains previous records of 20 EPBC Act-listed fauna and 30 additional FFG Act-listed fauna species within a 5 km radius of the study area (Appendix 5; DEECA 2026d). Only one record is located within the immediate study area (Musk Duck *Biziura lobata*) which is considered an outlier and incidental record as the site does not support suitable habitat and most records are associated with Plenty Gorge Parklands approximately 2 km to the south and other local reserves supporting larger open waterbodies (Figure 1). The PMST search contains an additional nine

EPBC Act-listed fauna that have not been previously recorded but are considered to have the potential to occur in the local area, including Curlew Sandpiper *Calidris ferruginea* and Dwarf Galaxias *Galaxiella pusilla* (Appendix 6; DCCEEW 2026).

Many of the VBA records are old and no longer relevant to the current setting such as Bush-stone Curlew *Burhinus grallarius*, Spot-tailed Quoll *Dasyurus maculatus maculatus*, Eastern Barred-bandicoot *Perameles gunnii* and Grey-crowned Babbler *Pomatostomus temporalis temporalis* (all dated 1930) (DEECA 2026d). The most recent records (post 2010) are primarily associated with fauna species adapted to aquatic environments that are absent from the study area, such as Musk Duck *Biziura lobata*, Eastern Snake-necked Turtle *Chelodina longicollis*, Murray River Turtle *Emydura macquarii*, Hardhead *Aythya australis*, Freckled Duck *Stictonetta naevosa*, Blue-billed Duck *Oxyura australis*, Plumed Egret *Ardea intermedia plumifera* and Latham's Snipe *Gallinago hardwickii*. The majority of the records are concentrated within the Plenty Gorge Parklands to the south and the Plenty River corridor to the east, as well the Lakes Reserve to the north-west of the study area (DEECA 2026d).

Based on the current condition of the study area and known habitat preferences, most threatened fauna species listed in Appendices 5 and 6 are considered unlikely to occur within the study area. However, the existing grassy (non-treed) areas support suitable habitat for the FFG Act-listed Tussock Skink (recently recorded in many locations) and the relatively common Garden Skink *Lampropholis guichenoti* (Figure 6). Much of this habitat is also suitable for the EPBC Act-listed Striped Legless Lizard *Delma impar* and Victorian Grassland Earless Dragon *Tympanocryptis pinguicolla*. Habitat Distribution Mapping (HDM) for Striped Legless Lizard (SLL) does not overlap with the site (DEECA 2026b) and based on previous discussions with both Council and DEECA it is acknowledged that due to the lack of connectivity to the site and lack of previous records within 5 km of the site, SLL is considered unlikely to occur and targeted surveys are not required. This outcome was also in accordance with the EPBC Act referral information lodged for the recent extension to the adjacent Findon Road.

The lack of habitat connectivity and previous records similarly applies to Victorian Grassland Earless Dragon (VGED), however, the recent re-discovery of this species (thought extinct in Victoria since the 1960's) has resulted in a new habitat modelling layer that now marginally overlaps with the site. Despite being considered unlikely to occur, it was determined upon consultation with all stakeholders that targeted surveys for VGED should be conducted for the following reasons:

- Precautionary measure in response to the Habitat Distribution Mapping
- Recommendations by DEECA
- To satisfy EPBC Act referral requirements
- To more clearly determine presence/absence and ensure that the species is either not overlooked, or not assumed present due to a lack of survey effort as this would lead to the application of corresponding offsets.

Targeted surveys for VGED incorporated the use of 200 artificial spider burrow and deployment of 220 concrete roof tiles throughout the study area, as well as endoscopy of soil cracks and natural spider burrows. All burrows and tiles were checked twice weekly for 8 weeks between March and early May 2026. No VGED were located, however, many Tussock Skinks and other common fauna were identified (Figure 6). With specific reference to DEECA RFI Condition 5, the recent targeted reptile surveys identified Tussock Skink on 47 occasions over 8 weeks from 9 of the 12 tile grids employed. Although no tile grids were installed within areas with consolidated

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canopy trees (as shaded areas are typically not favoured by reptiles), observations of Tussock Skink were distributed across most of the site, therefore it is assumed to have potential to occur throughout. Adjacent public land along the Findon Road reserve was not included within targeted surveys. The road reserve is regularly mown and less suitable, however, Tussock Skink must be assumed present given the habitat is contiguous with the study area.

A stand-alone report has been prepared discussing VGED targeted surveys, including the various methodologies used, results and habitat analysis, which is to be read in conjunction with this report (Abzeco 2026).

Although considered unlikely, a limited range of additional threatened fauna species such as Grey-headed Flying-fox *Pteropus poliocephalus* and Swift Parrot *Lathamus discolor* may occasionally pass through or utilise habitat within the study area for opportunistic foraging. Some of the habitat within the study area is also suitable for Golden Sun Moth *Synemon plana* (e.g. the high cover of Chilean Needle-grass, which is a known food plant), however, the site is a modified woodland and is historically mapped as a woodland, and the underlying matrix of indigenous grasses are primarily C4 species (e.g. Kangaroo Grass) which are not utilised by Golden Sun Moth. The site has also been isolated for many decades and has little to no connectivity to other areas of suitable vegetation or known populations of Golden Sun Moth or other threatened fauna. Many spring and summer surveys have been conducted by Abzeco across the study area during the optimal flying period for Golden Sun Moth and the species have never been incidentally recorded. This conclusion is also in accordance with the EPBC Act referral information lodged for the recent extension to the adjacent Findon Road, whereby Golden Sun Moth was not considered a relevant matter to the application.

Based on many years of survey effort and recent targeted surveys, the study area is not considered to support critical or limiting habitat for any threatened fauna species. However, the proposed development will impact the FFG Act-listed Tussock Skink, therefore it is recommended that if planning approval is granted, the initial site scrape is supervised by a qualified Wildlife Handler to salvage and translocate any individuals that are uncovered during the works. Based on previous advice from DEECA it is anticipated that any salvaged Tussock Skink can be translocated on site into areas that are not being developed (e.g. parts of the powerline easements) and ideally within 200 m of where they are located. It is also anticipated that these works can be conducted by a qualified wildlife handler with FFG Act authority. However, if required a stand-alone salvage and translocation protocol can be prepared for Tussock Skink for review and approval by DEECA.

5.4 Vegetation Quality Assessment (Habitat Hectares)

Habitat hectare assessments were conducted for each of the identified patches of native vegetation in the study area. The assessment is a site-based measure of the condition of native vegetation with reference to the benchmark for the Plains Grassy Woodland EVC (DEECA 2026c). Table 3 details the habitat hectare results for each Habitat Zones. Note: HZ3 & 4 have been assigned the same condition score as they do not support canopy trees and have similar lifeforms, structure and species composition.

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Table 3. Habitat hectare assessment results – 165 Williamsons Rd Sth Morang

Habitat Zone			HZ1	HZ2	HZ3 & 4	HZ5
Bioregion			Victorian Volcanic Plain	Victorian Volcanic Plain	Victorian Volcanic Plain	Victorian Volcanic Plain
EVC Name			Plains Grassy Woodland	Plains Grassy Woodland	Plains Grassy Woodland*	Plains Grassy Woodland*
EVC Number			55_61	55_61	55_61	55_61
EVC Conservation Status			Endangered	Endangered	Endangered	Endangered
		Max Score				
Site Condition	Large Old Trees	10	2	4	0	0
	Canopy Cover	5	5	5	0	0
	Understorey	25	15	10	10	5
	Lack of Weeds	15	6	6	6	2
	Recruitment	10	1	1	0	0
	Organic Litter	5	4	4	4	4
	Logs	5	0	0	0	0
	Treeless EVC Multiplier		1.00	1.00	1.00	1.00
	Subtotal =		33	30	20	11
Landscape Value		25	2	2	2	2
Habitat Points		100	35	32	22	13
Habitat Score		/100	0.35	0.32	0.22	0.13
Large trees			1	2	0	0

Notes: EVC - Ecological Vegetation Class; * - modified Plains Grassy Woodland without canopy

5.5 Proposed Native Vegetation Removal

The study area is modelled as Locations 1 and 2 (DEECA 2025a). Based on the most recent development plan (Ewert Leaf, Project No. M24062, Rev. C, dated 28/07/2026; Attachment 1), most of HZ1 & 2 require removal to facilitate construction of the data centre and substation areas. Some of the remaining parts of HZ1 and HZ2 will be highly fragmented by the proposed new access alignment and have therefore been treated as consequential losses for offset purposes. Similarly, only part of HZ5 will require removal to accommodate the main building and construction buffer, however, the full extent of HZ5 will be offset as a precautionary measure. HZ4 will be fragmented to create the carparking area and access roads. The small area of HZ4 between the access road and carpark areas was initially proposed to support a raingarden, which has since been removed from the landscape plan, nevertheless, as a precautionary measure the area of Plains Grassy Woodland within this space has been included as a loss irrespective of retention and future revegetation efforts, as it will be subjected to a range of edge effects, altered drainage and other pressures. No impacts are proposed to Habitat Zone 3.

The following 'construction buffers' have been applied to the proposed development plan:

- 10 m or to the property boundary around the main building and sub-station areas
- 2.5 m buffers around all services and carparking areas, access roads and the new crossover to Findon Road.

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A summary of potential impacts as well as any protections for existing native vegetation within the construction buffers is provided below and depicted in Figure 4. Tree numbers follow those utilised by the consulting arborist (TMC Reports 2025). A summary of tree status throughout the property, with a focus on those specimens within or closely associated with construction buffers is provided in Table 4.

The construction buffer along the northern boundary is relatively narrow and services are shown on the development plan within the buffer that appear to extend to the boundary, therefore all trees and mapped Plains Grassy Woodland within this buffer section have been included as a loss. One small, scattered tree (#4) and one large tree (#7) within HZ1 will be impacted (Image 33). The northern buffer also supports several populations of Austral Crane's-bill that are recommended for salvage and translocation. Land immediately north of the buffer is shown as a non-gazetted extension of Williamsons Road no longer intended for construction (see Figure 4; Attachment 1). However, the current development activities at 160 Williamsons Road, have stripped most of the 'non-gazetted area' of vegetation, added crushed rock and are using it for the delivery and stockpiling of materials, as well as heavy machinery such as cranes (Image 34). There is also a large stockpile of soil at the western end, within the proposed alignment for incoming (below-ground) power and communications conduits (Image 35).



Image 33. Facing east showing Large Tree #7 within the northern buffer that will ~~require removal to facilitate~~ construction of the main building (Abzeco 26/05/2026)

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Image 34. Facing west along the northern boundary showing works and activities in the adjacent land parcels (Abzeco 26/05/2026)



Image 35. Weedy north-west corner, showing proposed alignment for underground power and communications services in the adjoining land parcel currently used to stockpile soil (Abzeco 26/05/2026)

Proposed services also appear to extend to the property boundary along the north-east interface and will impact most of the small trees along the edge of HZ1. Trees with greater than 10% TPZ encroachment include #19, 20, 22, 23 & 24, hence they are all considered lost and have been incorporated into offset calculations (Image 36; Figure 4). Whereas the TPZ of Tree #21 is not encroached and is therefore not included as a loss (Image 37; Figure 4). Tree #21 will need to be demarcated with TPZ fencing during any approved works. The north-east buffer also supports many (200+) small Austral Crane's-bill specimens (Figures 2 & 4).

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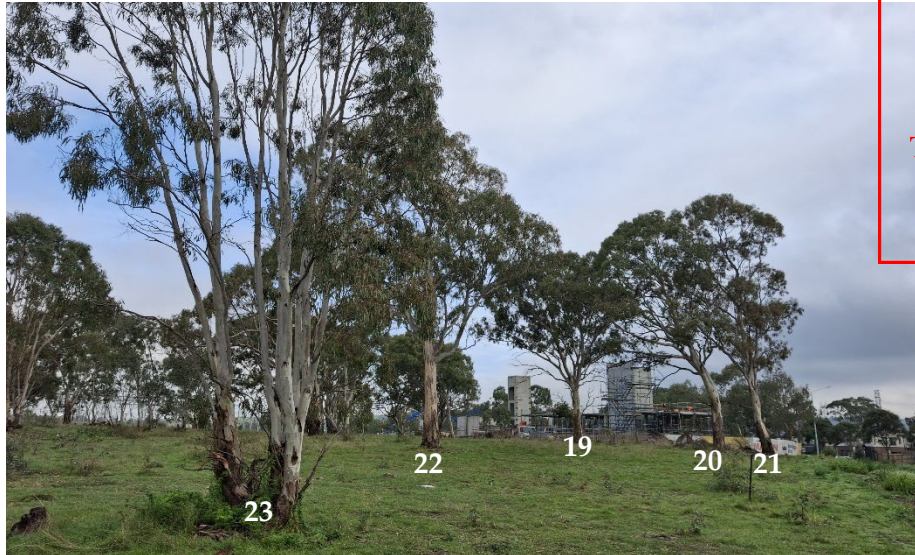


Image 36. Facing west along the north-east boundary showing peripheral trees within the construction buffer (Abzeco 26/05/2026)



Image 37. Facing east along the north-east boundary showing trees #20 and 21 on the edge of the construction buffer (Abzeco 26/05/2026)

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The most important large, habitat tree (#43) associated with the study area is also located along the outer edge of the north-east buffer, within the public reserve to Findon Road (see Cover Image). This tree requires application of the maximum 15 m TPZ if it is to be adequately protected long-term. The current development plan shows minor encroachment to the outer edge of the TPZ due to the proposed location of Fire Services equipment, however, there may also be minor encroachment from the establishment of posts for the new boundary fence (Figure 4). Tree #43 has not been included in offset calculations and must be prioritised for protection as part of any future works.

Tree #44 in the north-east could potentially be retained, however, it occurs within the construction buffer and is very close to proposed fire tanks. Works are likely to encroach greater than 10% of the TPZ and the tree will remain within a highly fragmented section of HZ1, therefore Tree #44 is considered as a consequential loss (Figure 4). Under the same principle all

native vegetation between the proposed access and the main building has been considered as a consequential loss due to fragmentation.

Direct impacts to HZ1 within the public road reserve are limited to the new driveway access and its buffer on the basis that all remaining works will be conducted from within the private land parcel. Small protrusions into the public land are shown around Trees #7, 19, 20, 23 and 24 as the losses include the approximate canopy outline.

Trees in the south-east associated with the proposed sub-station footprint and construction buffer include large tree #53 (Image 38) and several clusters of small, coppiced trees and young recruits shown by the arborist as #54, 153, 156 & 157, 158 & 160 (Image 39). There is also one young sapling Tree #200 in the northern buffer. Tree #53 is healthy with good structure and has been assessed as having high retention value by the arborist and as part of this assessment, however, retention may require further arboricultural and engineering advice. Under the current scenario, the required TPZ is approximately 10 m which extends into the substation envelope, therefore Tree #53 has been offset on a precautionary basis.



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Image 38. Large tree #53 within the construction buffer to the substation (Abzeco 26/05/2026)

Trees #54, 153, 156 & 157, 158 & 160 are in reasonable health but have poor structure and potential long-term stability issues. Removing the more defective trees within the buffer and allowing some of the new recruits on the outer edge to mature would provide a safer long-term outcome given the proposed adjacent infrastructure. All trees within the construction buffer have been included as part of the offset.



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Image 39. Small trees #54, 156, 157, 158, & 160 within the southern construction buffer all have poor structure from previous felling (Abzeco 26/05/2026)

Table 4. Proposed Canopy Tree Retention and Removal throughout the study area

ID	Common Name	DBH (cm)	Size Class	Comments	Status	Offset
1,2,5,6	River Red-gum			N/A adjacent property 160 Williamsons Rd – subject of different permit		
3	Cherry Plum			HZ1 - N/A exotic species	Removal	NO
4	River Red-gum	46	Small	Scattered tree within northern buffer – directly impacted by services	Removal	Yes
7	River Red-gum	110	Large	Edge of northern building footprint and buffer HZ1 – directly impacted	Removal	Yes
8-18	River Red-gum	< 80	Small	Main building footprint – direct impact – HZ1	Removal	Yes
19	River Red-gum	70	Small	Northern buffer HZ1 – impacted by services	Removal	Yes
20	River Red-gum	64	Small	Northern buffer HZ1 – impacted by services	Removal	Yes
21	River Red-gum	61	Small	Northern buffer HZ1 – outside of proposed services alignment. Public land. TPZ required.	Retention	NO
22	River Red-gum	67	Small	Northern buffer HZ1 – impacted by services	Removal	Yes
23	River Red-gum	26	Small	Northern buffer HZ1 – poor quality – trifurcated at base - impacted by services	Removal	Yes
24	River Red-gum	61	Small	Northern buffer HZ1 – tall straight tree could potentially be retained – TPZ impacted by services – offset as precautionary measure	Possible retention	Yes
25	River Red-gum	83	Large	Scattered tree south-west corner of building footprint – HZ1 - directly impacted	Removal	Yes
26	River Red-gum	86	Large	Scattered tree south-west corner of building footprint – HZ1 - directly impacted	Removal	Yes
27-37	River Red-gum	< 80	Small	Western edge of HZ1 – direct impacts from building footprint	Removal	Yes
38	River Red-gum	28	Small	South central HZ1 – direct impacts from building footprint	Removal	Yes
39	River Red-gum	20	Small	Edge of south-east corner of building footprint within construction buffer – HZ1	Removal	Yes
40-42	River Red-gum	< 80	Small	Eastern section of building footprint within – direct impacts – HZ1	Removal	Yes
43	River Red-gum	165	Large	Very important habitat tree within the Findon Rd reserve and HZ1. Overlaps with 10 m construction buffer. Must be protected with minimum 15m TPZ – some concern with TPZ encroachment from proposed fire tanks.	Retention	NO
44	River Red-gum	48	Small	HZ1 east – within construction buffer to proposed building and fire tanks – could potentially be retained – offset as precautionary measure	Possible retention	Yes
45	River Red-gum	68	Small	HZ1 east. No direct impact and can be retained, however, will occur in highly fragmented residual extent of HZ1, therefore treated as a consequential loss and offset as precautionary measure. Large DBH discrepancy with Arborist data, however, still a small tree.	Retention	Yes
46	River Red-gum	29	Small	HZ1 east – edge of construction buffer to new access – can be retained, however, will occur in highly fragmented residual extent of HZ1, therefore treated as a consequential loss and offset as precautionary measure.	Retention	Yes

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ID	Common Name	DBH (cm)	Size Class	Comments	Status	Offset
47	River Red-gum	20	Small	Small scattered tree on east site boundary and edge of shared trail. Not part of patch mapping. No impact.	Retention	NO
48	River Red-gum	81	Large	Development footprint HZ2 direct impact. Some discrepancy with arborist data. See notes in text.	Removal	Yes
49	River Red-gum	40	Small	Development footprint HZ2 direct impact	Removal	Yes
50	River Red-gum	30	Small	Scattered tree in poor condition, however, outside of development footprint and buffer	Retention	NO
51	River Red-gum	20	Small	Outside development footprint and construction buffer – HZ2	Retention	NO
52	River Red-gum	93	Large	Within development footprint – HZ2 – directly impacted (some discrepancy with arborist data – see notes below)	Removal	Yes
53	River Red-gum	84	Large	Within construction buffer – likely major TPZ encroachment – HZ2 – considered lost (some discrepancy with arborist data – see notes below)	Removal	Yes
54	River Red-gum	20	Small	Very poor quality tree on edge of construction buffer HZ2 – could retain but better to remove and let surrounding saplings mature	Removal	Yes
55-57	River Red-gum	70	Small	Outside of development footprint and buffer - HZ3	Retention	NO
58-67	River Red-gum	< 80	Small	SW corner of site – well outside of development footprint and buffer – HZ3	Retention	NO
68-110	Sugar Gum	n/a		Non-indigenous planted trees outside of property boundary along either side of shared trail	Retention	n/a
111-126	River Red-gum	< 80	Small	Planted trees along council frontage to 160 Williamsons Rd. Well outside of study area	Retention	n/a
127	Blackwood	< 10	n/a	Solitary understory tree species, growing against southern cyclone fence to rail corridor. Not part of patch and does not qualify as a scattered tree. No impact	Retention	NO
128	River Red-gum	< 10	Small	Sapling growing against southern cyclone fencing to the shared path and rail corridor. Outside of patch mapping and development footprint – included as scattered tree	Retention	NO
129-135	River Red-gum	< 10-20	Small	Small saplings that have grown over past 3 years – all outside of development footprint – HZ3	Retention	NO
136	Cherry Plum			HZ3 - N/A exotic species – outside development footprint - recommended removal as part of future weed control strategy	Removal	NO
137-139	River Red-gum	< 10-20	Small	Small saplings that have grown over past 3 years – all outside of development footprint – HZ3	Retention	NO
140	River Red-gum	< 5	Small	Small sapling on western boundary outside of patch mapping – not considered to qualify as a scattered tree due to size, however, will be retained as outside of footprint	Retention	NO
141	Cherry Plum			HZ3 - N/A exotic species – outside development footprint - recommended removal as part of future weed control strategy	Removal	NO
142-144	River Red-gum	< 10-20	Small	Small trees outside of development footprint – HZ3 – no impact	Retention	NO
145	Cherry Plum			HZ3 - N/A exotic species – outside development footprint - recommended removal as part of	Removal	NO

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ID	Common Name	DBH (cm)	Size Class	Comments	Status	Offset
				future weed control strategy		
146-151	River Red-gum	< 10-30	Small	Small trees outside of development footprint – HZ3 – no impact	Retention	NO
152	River Red-gum	16	Small	Poor quality coppicing tree on edge of construction buffer to sub-station HZ3 – could retain although likely safer long-term outcome to remove and let surrounding saplings mature	Removal	Yes
153	River Red-gum	32	Small	Poor quality bifurcated tree within construction buffer to sub-station HZ3 – considered lost and likely safer long-term outcome to remove and let surrounding saplings mature	Removal	Yes
154-155	River Red-gum	< 10-15	Small	Poor quality coppicing trees from previous felling. Outside of development footprint. No impacts	Retention	NO
156-160	River Red-gum	< 10-20	Small	Poor quality coppicing trees from previous felling within construction buffer to sub-station HZ2. Considered lost	Removal	Yes
161-188 & 199	River Red-gum	< 80	Small	Trees of various quality and age – no large. Footprint of sub-station - HZ2. Direct impact	Removal	Yes
189,191-193, 196-198	River Red-gum	< 80	Small	Trees of various quality and age – no large. Within construction buffer to sub-station HZ2. Considered lost. Cannot practically be retained.	Removal	Yes
190,194-195, 197	River Red-gum	< 80	Small	Trees of various quality and age – no large. Footprint of storage area - HZ2. Direct impact	Removal	Yes
200	River Red-gum	< 10	Small	Sapling within construction buffer to sub-station HZ2. Considered lost	Removal	Yes
201	River Red-gum	35	Small	Southern edge of HZ4 – outside building footprint – no impact. TPZ protection required	Retention	NO
202	River Red-gum	< 10	Small	Sapling on east edge of HZ4 – outside building footprint – no impact.	Retention	NO
203-204	River Red-gum	10	Small	Scattered, multi-stemmed, young trees within carparking area. Direct impact	Removal	Yes
205-238	River Red-gum	< 80	Small	Trees of various quality and age – no large. Footprint of main building – HZ1. Direct impact	Removal	Yes
239	River Red-gum	10	Small	Young tree on east edge of buffer to main building. No direct impact and can be retained (TPZ protection required), however, will occur in highly fragmented residual extent of HZ1, therefore treated as a consequential loss & offset	Retention	Yes
240	River Red-gum	28	Small	Small tree between buffer areas to main building and new access road. No direct impact and can be retained, however, will occur in highly fragmented residual extent of HZ1, therefore treated as a consequential loss and offset	Retention	Yes
241-242	River Red-gum	28	Small	Small multi-stemmed trees on edge of buffer to new access road. No direct impact and can be retained, however, will occur in highly fragmented residual extent of HZ1, therefore treated as a consequential loss and offset	Retention	Yes
243-245	River Red-gum	< 30	Small	Small trees within new access road footprint. Direct impact. HZ1	Removal	Yes
246-253	River Red-gum	< 80	Small	Trees of various quality and age – no large. Footprint of main building – HZ1. Direct impact	Removal	Yes
254 or (23?)	River Red-gum	26	Small	Northern buffer HZ1 – poor quality – trifurcated at base - impacted by services. This tree appears to be a double up with Tree 23	Removal	Yes

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ID	Common Name	DBH (cm)	Size Class	Comments	Status	Offset
255-294	River Red-gum	< 80	Small	Trees of various quality and age – no large. Footprint of main building – HZ1. Direct impact	Removal	Yes
295-302, 306-308	Spotted Gum		n/a	Planted non-indigenous trees on public land (batter to Findon Road). No impacts	Retention	n/a
303-305	Spotted Gum		n/a	Planted non-indigenous trees on public land (batter to Findon Road). Direct impact from proposed new access. May require replacement.	Removal	n/a
309	River Red-gum	10	Small	2 small multi-stemmed trees, east edge HZ within public land. Outside footprint and buffer. No direct impact - can be retained. Although part of HZ1, specimens are effectively scattered trees as no native understorey present, therefore fragmentation of the patch should not cause consequential loss.	Retention	NO
310-314	Smooth-barked Apple		n/a	Non-indigenous planted trees in public road reserve. Within proposed new access alignment. Direct impact. May require replacement.	Removal	n/a

With specific reference to Condition 15 of the DEECA RFI regarding inconsistencies with large tree data between earlier versions of this report, the associated NVR and the arborist results, we note that some of the discrepancies cannot be easily explained, however, tree measurements are taken at slightly different heights by arborists (DBH 1.4 m above ground and also basal diameter) and those using the VQA methodology (DBH measurements taken at 1.3 m), which may account for some of the variation. Further summary is provided below:

- Tree 8 is a small tree based on data from both the arborist and Abzeco. The tree is bifurcated at the base and both stems are less than 80 cm DBH when measured at 1.3 m above ground level. The bracketed measurement of 86 cm in the arborist report refers to a combined measurement of both stems and is not relevant to the VQA method.
- Tree 48 was measured by Abzeco as 81 cm DBH, thereby qualifying as a Large tree in accordance with the Plains Grassy Woodland 80 cm benchmark. The arborist measurement is 75 cm, which is not a substantial difference and may be attributable to DBH data collected at different heights or factors such as minor burls or protruding bark influencing trunk diameter measurements.
- Tree 52 was measured by Abzeco as 93 cm DBH. The relatively large difference between the arborist assessment of 61 cm is likely because the tree is bifurcated at approximately 1.2 m therefore our DBH measurement effectively captured the width of both trunks.
- Tree 54 occurs on the outer south-west edge of the construction buffer to the sub-station. As noted in Table 4 and also by the arborist, Tree 54 is in poor condition, has previously been felled and is coppicing from a root plate with basal decay. This tree has been offset.

Remaining impacts to native vegetation associated with construction buffer areas include part of HZ5 in the north-west along the southern boundary of the data centre footprint (Figure 4). With exception of several Austral Crane's-bill plants, the patch is entirely composed of young River Red-gums that have self-recruited (see Image 18). Given the context of the young saplings to the future data centre, many of the trees would eventually require thinning and could technically be removed post-construction if they are within 10 m of the future building, therefore the removal of all saplings within the 10 m buffer and retention of remaining specimens within the southern extent of the habitat zone will provide suitable future setbacks for remaining trees to mature. However, it should be noted that some of the saplings at the southern end of HZ5 marginally

overlap with the powerline easement and may also require thinning or removal as part of future easement maintenance. As a precautionary measure and consideration of consequential losses, all of HZ5 has been included in the offset calculations.

Please note: the summary of proposed impacts to native vegetation in relation to the provision of services to and from the study area is based on the Preliminary Inground Services Sketch (Ewert Leaf, Project No. M24062, Rev. 2, dated 20/5/2026; Attachment 1). The plan includes the following note:

In-ground pipework and conduit locations are an approximation only. These sketches have been provided to attempt to demonstrate the extent of in-ground works associated with the data centre only.

Some uncertainty therefore remains as to the exact location of service alignments and how they will be connected. For example, topography to Findon Road includes a steep batter and intervening drainage line, which has been planted with native vegetation (Image 40). Some existing service pits such as stormwater already exist in places (Images 41 & 42), however, power and communications conduits are also shown to be installed at 600-1500 mm below ground in this section. A 2.5 m buffer has therefore been included around all known services and any overlap with mapped native vegetation has been included in the offset scenario. Where possible, it is recommended that all services associated with public land are connected to existing pits via sub-surface boring to reduce impacts to native vegetation on public land.



Image 40. Planted drainage line immediately north of the study area where some services alignments are proposed (Abzeco 26/05/2026)



Images 41 & 42. Examples of existing service pits along the Findon Road interface (Abzeco 26/05/2026)

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Under the current development scenario a total of **3.061 hectares** of native vegetation and **six large trees** will require removal to facilitate construction of the proposed data centre. The native vegetation impacts are summarised in Table 5 and the Native Vegetation Removal Report (Attachment 2).

Table 5. Summary of Assessed Native Vegetation Proposed for Removal

Location Category (DELWP 2017a)	2
Patch of native vegetation (hectares)	2.858
Number of Large trees in patches	4
Scattered Trees (total number and hectares)	3 trees / 0.140 ha
Large	2
Small	3
Total extent	3.061
Assessment Pathway	Detailed
Strategic Biodiversity Value	0.640 to 0.675

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5.6 Offset Requirements

Based on the current development plan, the offset requirement for the proposed works is **1.1880 General Habitat Units (GHU) and 6 Large Trees**, with a **minimum Strategic Biodiversity Value (SBV) of 0.5294**. The required offset must be located within the City of Whittlesea or the Melbourne Water Catchment Management Authority (MWCMA). A summary of the offset requirements is provided in Table 6.

Table 6. Offset requirement for the proposed clearance of native vegetation

General Offset		
General Habitat Score		0.13-0.33
Offset Amount (General Habitat Units)		1.1880
Large Trees		
Large Tree offset requirement (number)		6
Offset Attributes		
Vicinity	The offset site must be located within the same Catchment Management Authority (CMA) boundary or the same municipal district as the native vegetation to be removed.	Melbourne Water CMA or the City of Whittlesea
Minimum Strategic Biodiversity Value (SBV) score	The SBV score of the offset site must be at least 80 per cent of the strategic biodiversity value score of the native vegetation to be removed	0.5294

5.6.1 Offset Strategy

The required General offset in the MWCMA region or City of Whittlesea (Table 5) can be sourced through an accredited Broker. At the time of preparation of this report, the required offset is

available on the Native Vegetation Offset Register (NVOR) via an accredited Broker and a search report has been provided to the proponent detailing the relevant credit sites and brokers.

Note: the offset summary provided above and the relevant search report is State-based only and does not consider offsets relevant to the EPBC Act and matters of NES.

5.7 Landscaping Plan and Revegetation

With specific reference to Condition 2 of the recent DEECA RFI, it is our understanding that the planting schedule proposed within the Landscape Plan (Greenjoy 2026, Rev. E) is flexible and not formalised and will be secondary to the protection and maintenance of existing or remaining area of Plains Grassy Woodland. Abzeco does not recommend planting woody vegetation beneath the power easements as part of future landscaping. Overall, revegetation is not considered a key component for the site. The priority activity for future site management is weed control, which will allow regeneration and expansion of the underlying matrix of native grasses and herbs, however, the goal is not to reinstate GEWVVP outside of the current mapped extent, as this is very difficult to achieve and too onerous given the site constraints. The long-term viability of native vegetation is difficult to quantify, however, the current extent has persisted through the entirety of colonialism to this point in time without any specific or tailored conservation management regime. Kangaroos are currently responsible for much of the biomass management, therefore vegetation dynamics may change with modified kangaroo activity, however, the easements also appear to be slashed as part of irregular maintenance by the relevant utility authority. It is our understanding that the proponent intends to continue this arrangement with the easement holder, therefore it is assumed that slashing of remaining vegetation can continue post development. A future Weed Management Plan will also be prepared for the site that will provide a 10 year action plan and works schedule for all remaining vegetation that will include consideration of easement management and can be adapted and carried into the future.

5.8 Avoid and Minimise Statement

5.8.1 Statement

A substantial amount of background planning and site investigation has taken place to inform the design to this stage and designs have varied significantly over time. As much of the study area is encumbered by existing infrastructure, such as the high voltage power easement in the south-west and central sections, the developable portion of the land is somewhat constrained. For this reason, the current plan proposes to develop those sections outside of the easements and to the north of the landholding as access is not available from the south. Under the current plan some impacts to native vegetation are unavoidable and avoiding areas of woody vegetation, would undermine the objectives and feasibility of the current plan and render the site largely undevelopable with respect to this project, as the infrastructure demands are considerable.

Steps considered to avoid and minimise impacts to native vegetation have included:

1. Avoid - consolidation from two buildings to one

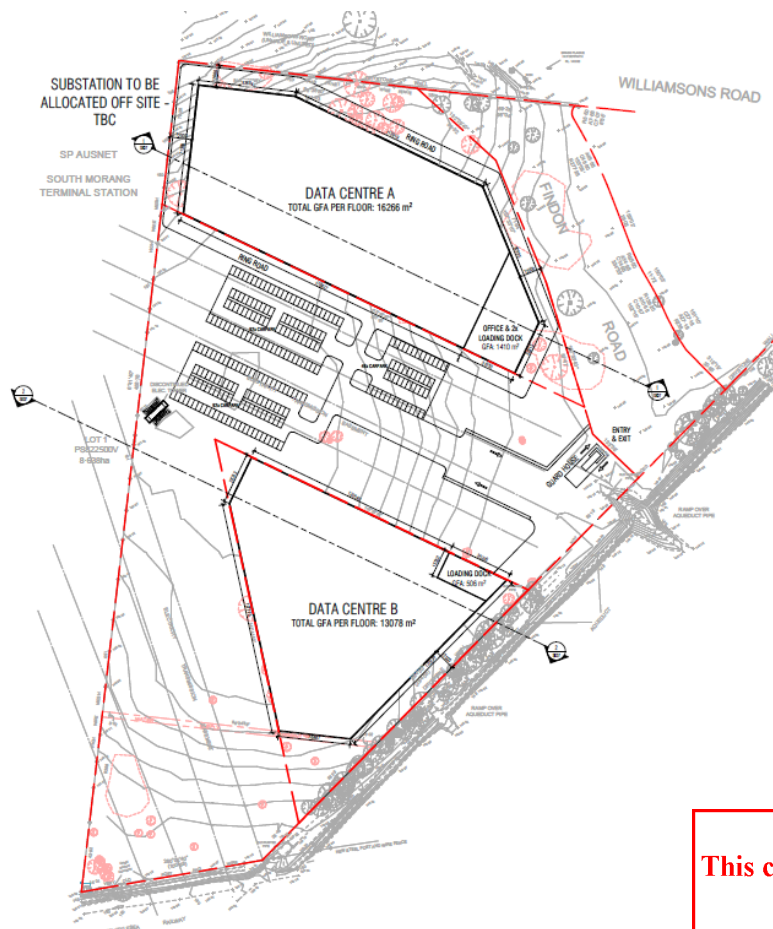
The original SM2 concept (Ewert Leaf Concept Pack, M24062, issued 15 April 2025) comprised two separate data centre buildings on the 8.638 ha site (Data Centre A and Data Centre B), each with its own footprint, car parking and loading dock (Capture 2). The current design consolidates the former concept into a single data centre building. The consolidation is the principal avoidance measure behind the design change: it removes the second building footprint, together

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with its associated car parking, hardstand and access infrastructure, from the site. It underpins the 48% reduction in overall built form footprint, with the current design occupying only 10.5% of the total site area, down from approximately 34% under the original two-building concept (see summary below).

Although a specific comparison of the proportional reduction of impacts to native vegetation was beyond the scope of this report, it is estimated that the revised plans have avoided approximately 0.2 ha of HZ1 along with several mature River Red-gum trees (e.g. #45) and many juvenile saplings. The revised access and carparking arrangement has also avoided most of HZ4 and importantly all of the potential area of SHWFTLP. The removal of Data Centre B and replacement with the smaller sub-station footprint has also avoided approximately 0.2 ha of HZ2 and numerous River Red-gums of various age classes.

	Original concept (Apr 2025)	Current design (Oct 2025)
Number of buildings	2 (Data Centre A + Data Centre B)	1
Ground floor footprint	Building A: 16,266 m ² Building B: 13,078 m ² Combined: ~29,344 m ²	Single building: 18,081 m ²
Total GFA (all levels)	Building A: 94,719 m ² Building B: 76,019 m ² Combined: 170,738 m ²	Single building: 88,624 m ²
Approx. site coverage	~34% of the 8.638 ha site	10.5% of the 8.638 ha site



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Capture 2. Original SM2 concept (Ewert Leaf Concept Pack, M24062, issued 15 April 2025) showing two data centres.

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2. Minimise - vegetation retention and landscape integration

- The original design intent contemplated removing all native vegetation from the site. The current, single-building design retains native vegetation where possible, limiting removal to areas required for the reduced building envelope, access, car parking and essential services.
- Remaining areas of vegetation will be subject to strategic weed control to remove all woody weeds and encourage natural recruitment of native herbs and grasses. The future Weed Management Plan will also provide a works schedule and action plan for at least 10 years and can be adapted and carried into the future.
- New landscaping proposed for the site has been designed to be consistent with existing retained Plains Grassy Woodland and the overarching Weed Management Plan, so that new planting complements rather than conflicts with the remaining native vegetation.

3. Offset - residual impacts

Although substantial impacts to native vegetation will result from the proposed action, including removal of the EPBC Act listed GEWVVP and the Endangered EVC Plains Grassy Woodland, the vegetation is not considered to be critical or limiting habitat for any threatened species given its urban context, and the proposed losses do not trigger a species offset. Importantly, some of the offset accounting also includes precautionary and consequential losses (e.g. parts of HZ1, 2, 4 and 5) both within and beyond construction buffers and it is expected that much of this vegetation can be retained, maintained and potentially improved through further detailed design and employment of the future weed management plan (see Section 5.5).

Where native vegetation removal could not be avoided or further minimised, native vegetation offsets have been sourced and an offset strategy is in preparation to fulfil offset requirements simultaneously for both State and Federal requirements. An executed Memorandum of Understanding is in place for a native vegetation offset site, addressing the offset obligation for the residual, unavoidable impact associated with the current design.

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6 Legislation, Regulations and the City of Whittlesea Planning Scheme

The key biodiversity protection legislation and regulations relevant to the study area are the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), the Victorian *Flora and Fauna Guarantee Act 1988* (FFG Act), the *Catchment and Land Protection Act 1994* (CaLP Act), and the City of Whittlesea planning scheme (DTP 2026a). The Guidelines (DEECA 2025a) is the principal document that informs biodiversity regulation under the planning scheme.

The implications and requirements associated with the relevant legislation are summarised below.

6.1 *Environment Protection and Biodiversity Conservation Act 1999*

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) is the primary Commonwealth legislation for environmental protection. Under the EPBC Act, an action will require approval from the Commonwealth Environment Minister if it is likely to have a potential significant impact on a matter of National Environmental significance (NES) and it is not subject to certain specified exceptions (DOE 2013).

Matters of NES trigger the Commonwealth's environmental assessment and approval responsibilities. These matters are: World Heritage properties, National Heritage Places, Ramsar wetlands of international importance, nationally listed threatened species and ecological communities, migratory species protected under international agreements, the Commonwealth marine environment, the Great Barrier Reef Marine Park, nuclear actions and water resources (coal seam gas development and large coal mining development).

If a project is likely to have a potential significant impact on a matter of NES, a referral to the Commonwealth Minister for the Environment is required. If the Minister considers it likely that a proposed action may have a significant impact on matters of NES, the action may be considered 'controlled' and requires a detailed assessment and the grant of a permit to proceed (DOE 2013).

Implications

Two Matters of NES are relevant to the study area including a population of Matted Flax-lily *Dianella amoena*, as well as the EPBC Act listed community *Grassy Eucalypt Woodland of the Victorian Volcanic Plain* (GEWVVP) (Figure 2). When subjected to prolonged flooding, it is also possible that the very eastern portion of Habitat Zone 4 could share affinities with the nationally listed community *Seasonal Herbaceous Wetlands (Freshwater) of the Temperate Lowland Plains* (SHWFTLP). The relevant area is very small and has been captured as part of GEWVVP mapping as it was not supporting standing water at the time of assessment nor did it support any aquatic based vegetation. However, as a further precautionary measure the potential area of SHWFTLP has been enlarged along with a buffer zone that covers areas of shallower topography. Importantly, under the current development plan, none of the potential area of SHWFTLP is proposed to be impacted and there is a reasonable buffer to any proposed activities, nevertheless, the entire area should be avoided and treated as a no-go-zone.

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Referral to the Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW) will be required, and the proposed development is likely to be considered a controlled action due to impacts to two matters of NES. A consolidated plan will be required as part of the future EPBC Act referral that includes a suitable Commonwealth offset proposal to compensate for the loss of GEWVVP, as well as the formulation of a Salvage and Translocation Plan for Matted Flax-lily.

6.2 Flora and Fauna Guarantee Act 1988

The *Flora and Fauna Guarantee Act 1988* (FFG Act) is the primary State legislation for the protection of native plants, animals and ecological communities on public land and water in Victoria. Species, ecological communities and threatening processes can be listed as threatened or protected under the Act based on determination by an independent Scientific Advisory Committee. Listing is intended to protect species or communities from further threats to their survival in Victoria.

The *Flora and Fauna Guarantee Amendment Act 2019* came into effect on 1 June 2020, updating the *Flora and Fauna Guarantee Act 1988*. Several updates, including a consolidation of flora and fauna listings using the Common Assessment Method (CAM) and new guidelines regarding Critical Habitat determinations are currently in progress. The amended FFG Act requires Ministers and public authorities to consider the FFG Act when performing functions that might impact biodiversity.

A permit under the FFG Act is required to take (kill, injure, disturb or collect) Restricted Use Protected Flora (under Sections 47 and 47A), Generally Protected Flora (under Sections 47B and 47C) and listed fish (under Section 52) from public land. A permit is required to take components of listed ecological communities on public land.

A permit is also required to take, trade in, keep, move or process protected flora from private land from areas that are designated as Critical Habitat under the Act and for tree-ferns, grasstrees or sphagnum moss taken for the purpose of sale.

Implications

Two FFG Act listed flora species were recorded in the study area (Matted Flax-lily *Dianella amoena* and Austral Crane's-bill *Geranium solanderi* var. *solanderi*) as well as one listed fauna species (Tussock Skink *Pseudemoia pagenstecheri*). Plains Grassy Woodland vegetation and GEWVVP within the study area also qualifies as the FFG Act community *Western Basalt Plains (River Red Gum) Grassy Woodland Floristic Community 55-04*. An FFG Act permit, obtained from DEECA is required for any proposed removal of listed species or floristic communities within public land (e.g. Austral Crane's-bill within the Findon Road reserve), however, the permit requirement does not apply to the immediate 165 Williamsons Road study area as land tenure is private.

However, in line with current permit requirements for threatened fauna, it is recommended that a qualified zoologist is present during the initial site scraping and terraforming to salvage and translocate any Tussock Skink identified during works. This consideration applies to any works within both public and private land.

Matted Flax-lily considerations will be addressed as part of the EPBC Act referral and via preparation of a salvage and translocation plan, however, no specimens are relevant to public land.

It is also recommended that the project considers and takes measures to avoid a range of threatening processes outlined under the FFG Act including:

- Habitat fragmentation as a threatening process for fauna in Victoria.
- Invasion of native vegetation by Blackberry **Rubus fruticosus* L. agg.
- Invasion of native vegetation by 'environmental weeds'.
- Loss of coarse woody debris from Victorian native forests and woodlands.
- Use of *Phytophthora*-infected gravel in construction of roads, bridges and reservoirs.

6.3 Catchment and Land Protection Act 1994

The *Catchment and Land Protection Act 1994* (CaLP Act) seeks to protect Victorian land and water resources from degrading processes.

Under the Act, landowners are required to conserve soil, protect water resources, eradicate 'Controlled' and 'Prohibited' weeds, eradicate pest animals and avoid actions that may result in land degradation on neighbouring properties. In certain instances, landowners may be served with a Land Management Notice that may prohibit or regulate land use, or specify management actions required to be undertaken on their property.

Implications

At least 15 noxious weed species listed under the CaLP Act are present within the study area, including Crow Garlic **Allium vineale*, Bridal Creeper, Spear Thistle, Hawthorn **Crataegus monogyna*, Artichoke Thistle, Stinkwort **Dittrichia graveolens*, Paterson's Curse **Echium plantagineum*, Montpellier Broom **Genista monspessulana*, St John's Wort **Hypericum perforatum* subsp. *veronese*, Chilean Needle-grass, Serrated Tussock **Nassella trichotoma*, Soursob **Oxalis pes-caprae*, Sweet Briar, Gorse, Common Blackberry and Bulbil Watsonia **Watsonia meriana* var. *bulbillifera* (Appendix 1). Six of the above species are also recognised as Weeds of National Significance (WoNS) along with Texas Needle-grass **Nassella leucotricha*, although the latter species is not listed under the CaLP Act (Appendix 1). Landowners are legally responsible for the control of CaLP Act-listed weeds.

It is expected that several woody weed species such as Sweet Briar, Gorse and Common Blackberry, as well as low density herbaceous weed species such as Spear Thistle, Crow Garlic **Allium vineale* and to a lesser degree Paterson's Curse, can be relatively easily controlled via repeat spot spraying. However, the extent of Chilean and also Texas Needle-grass is far more pervasive throughout the site and will not be easily eradicated. Any excavated soil is therefore likely to contain a substantial seed bank of high threat and noxious weeds and should be treated as contaminated. Under the CaLP Act, it is an offence to:

- Sell or trade any restricted weeds;
- Remove or sell soil, sand, stone, gravel, fodder or grain likely to contain any part of a noxious weed without a permit from the Department of Transport and Planning (DTP). A person who contravenes any of these prohibitions may be directed to remove the noxious weed from any infested goods (animal, plants, vehicle, soil, sand, gravel and stone) or destroy them or restrict the movement if it is likely to spread weeds;
- Buy, sell, possess for sale, bring into the State or transport within the State without a permit noxious weeds, seeds of noxious weeds or any part of a noxious weed capable of growing;
- Deposit on land, without a permit from DTP, a noxious weed or a part of a noxious weed that is capable of germinating.

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6.4 *Wildlife Act 1975* and Wildlife Regulations 2002 (Victoria)

The *Wildlife Act 1975* and Wildlife Regulations 2002 is the primary legislation in Victoria providing for the management and protection of wildlife. The objective of the Act is to regulate the conduct of those involved in working with wildlife and establish procedures for the protection and conservation of wildlife and prevention of species extinctions.

Implications

Any persons engaged in the salvage, translocation and/or handling of native fauna during any construction works must have a management authorization under the *Wildlife Act 1975*. Any large trees or those with hollows permitted for removal must undergo pre-clearance fauna checks by a qualified zoologist and must also be supervised during removal.

6.5 *Planning and Environment Act 1987* (The Guidelines 2017)

In Victoria, a permit is required to remove, destroy or lop native vegetation. Regulation of planning proposals with potential impacts to native vegetation is governed by Clause 12.01 (Biodiversity) and Clause 52.17 (Native Vegetation) of Victorian planning schemes. Clause 52.17 references the requirements of the Victorian *Guidelines for the removal, destruction, or lopping of native vegetation* (the Guidelines, DEECA 2025a), which is an incorporated document under Clause 81 of all planning schemes (DTP 2026a).

In accordance with the relevant planning scheme clauses, the Guidelines seek to ensure that there is no net loss to biodiversity as a result of the removal, destruction or lopping of native vegetation.

Strategic planning plays a primary role in avoiding and minimising the impacts of uses and developments on native vegetation. In Victoria, the three-step approach for ensuring the objective of no net loss is achieved at the permit level is:

- Avoid the removal, destruction or lopping of native vegetation;
- Minimise impacts on Victoria's biodiversity from the removal, destruction and lopping of native vegetation; and,
- Provide an offset to compensate for the biodiversity impact from the removal, destruction or lopping of native vegetation.

Referral of Planning Applications

The relevant responsible authorities are required to assess permit applications for the removal, destruction or lopping of native vegetation. The responsible authority is the relevant Council. Under Clause 66 (Referral and Notice Provisions) of planning schemes, DEECA is a recommending referral authority where one or more of the following requirements are met:

- To remove, destroy or lop native vegetation in the Detailed Assessment Pathway;
- To remove, destroy or lop native vegetation if a Property Vegetation Plan applies to the site; or,
- To remove, destroy or lop native vegetation on Crown land which is occupied or managed by the responsible authority.

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Exemptions

Clause 52.17-7 of the planning scheme lists a number of exemptions from requiring a planning permit to remove, destroy or lop native vegetation. The *Exemptions from requiring a planning permit to remove, destroy or lop native vegetation* guidance document explains the intended meaning and practical application of the exemptions (DELWP 2017a).

Relevant exemptions are discussed where applicable.

Implications

A planning permit to remove, destroy or lop native vegetation is required under Clause 52.17 of the City of Whittlesea planning scheme as part of the proposed works. The requirement for the provision of native vegetation offsets is generally included as a condition of an approved planning permit. In this instance DEECA is mandatory recommending referral authority in accordance with Clause 66.02, as the application is in the Detailed assessment pathway.

6.5.1 City of Whittlesea Planning Scheme

The study area is covered under the Commercial 2 Zone (C2Z), as well as the Development Plan Overlay – Schedule 7 (DPO7) and the Vegetation Protection Overlay - Schedule 1 (VPO1) (DTP 2026a). In addition to the various requirements of the Zones and Overlays, Clause 12.01 (River Red Gum Protection Policy) also applies to the study area. Relevant zoning and overlays are discussed in further detail below.

Commercial 2 Zone (C2Z)

Implications

A permit is required under the C2Z to construct a building or construct or carry out works.

Vegetation Protection Overlay - Schedule 1 (VPO1)

SIGNIFICANT VEGETATION (RIVER REDGUM GRASSY WOODLAND)

Statement of nature and significance of vegetation to be protected

Native vegetation in the Plenty Valley and surrounding areas of Mernda, Doreen and South Morang play an important role in the maintenance of the environmental and rural character providing areas of natural habitat for flora and fauna and assisting with minimising soil erosion and maintaining soil qualities.

Vegetation within the Redgum Grassy Woodlands of particular significance includes; River Red Gum, Black Box, White Box and Grey Box, Yellow Box and various native grasses.

Vegetation protection objectives to be achieved

- To preserve and maintain significant vegetation and the character of the area;
- Maintain soil qualities and minimise the impacts of erosion;
- Preserve natural habitat for flora and fauna;

Implications

A permit is required under the VPO1 to remove, destroy or lop native vegetation.

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Clause 12.01 River Red Gum Protection Policy

Policy Basis

Mature River Red Gums in an open plains grassland environment are generally recognised as the most important visual and environmental feature of this municipality. Many of the River Red Gums within the urban areas have been estimated to be between 200-800 years of age.

Existing and future urban areas such as Mill Park, South Morang, Mernda/Doreen and Wollert contain significant River Red Gum habitat. Council's experience has been that very few of the original River Red Gums survive the surrounding encroachment of urban development, unless careful site assessment and planning occurs. It is therefore essential that existing River Red Gums are properly assessed and treated as an integral part of development design. This policy aims to provide guidance to applicants in the design of development proposals to ensure that River Red Gums are assessed and incorporated into development design.

Objective

To ensure that the development of urban and rural areas takes into account the presence, retention, enhancement and long term viability of River Red Gums in urban areas.

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7 Conclusion and Recommendations

The following key requirements should be considered as part of proposed development:

- Two Matters of National Environmental Significance captured under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) are relevant to the study area, including up to 14 Matted Flax-lily *Dianella amoena* plants and approximately 4.5 hectares of the significant ecological community *Grassy Eucalypt Woodland of the Victorian Volcanic Plain* (GEWVVP).
- Referral to the Commonwealth Minister under the EPBC Act will be required along with an offset strategy to compensate for the proposed loss of GEWVVP.
- A Matted Flax-lily Salvage and Translocation Plan will be required as part of any further project approvals from both DEECA and DCCEEW.
- One flora species (Austral Crane's-bill *Geranium solanderi* var. *solanderi* s.s.) listed as endangered under the FFG Act is present within the study area and public reserve buffer to Findon Road. Salvage of this species is recommended and a permit under the FFG Act is required for the removal of any specimens from public land.
- One fauna species (Tussock Skink *Pseudemoiapagenstecheri*) listed as endangered under the FFG Act is present within the study area and is assumed present within the public road reserve. It is recommended that a qualified zoologist is present during the initial site scrape to salvage and translocate any Tussock Skinks identified. A permit under the FFG Act is required for the salvage of any specimens from public land.

Plains Grassy Woodland vegetation within the study area is attributable to *Western Basalt Plains (River Red Gum) Grassy Woodland Floristic Community 55-04*, which is listed under the FFG Act. Any the clearance of this vegetation community upon public land will require an FFG Act permit.

- A planning permit to remove, destroy or lop native vegetation is required under Clause 52.17 of the City of Whittlesea planning scheme (*Planning and Environment Act 1987*) as part of the proposed development application.

- A permit is required under the Vegetation Protection Overlay – Schedule 1 (VPO1) to remove, destroy or lop native vegetation. The application must also show due consideration of Clause 12.01 River Red Gum Protection Policy to the City of Whittlesea Planning Scheme.

- Under the current development plan, approximately 2.858 hectares of Plains Grassy Woodland (EVC 55) vegetation including six Large indigenous trees will be impacted by the proposed action. The offset requirement for the current scenario is **1.1880 General Habitat Units (GHU) and 6 Large Trees**, with a **minimum Strategic Biodiversity Value (SBV) of 0.5294**. Offsets must be secured within the City of Whittlesea or the Melbourne Water CMA prior to the commencement of any works.

- Appropriate consideration is required for the local mob of kangaroos that visit and often reside on site, as the works are likely to drive individuals into residential areas and onto local roads without due protection. The preparation of an Eastern Grey Kangaroo Management Plan (EGKMP) will be required as part of the planning approval.
- Management authorization under the *Wildlife Act 1975* is required for the salvage, translocation or handling of any native fauna if required during construction works.

- A qualified zoologist must conduct pre-clearance surveys of all trees and be present on site during vegetation removal if required to ensure any wildlife encountered is suitably protected and relocated.
- Consideration should be made within the current development plan to protect a proportion of the River Red Gum trees on site, especially those with any hollows.
- Appropriate consideration and mitigation measures such as Tree Protection Zones (TPZ) are to be established for any retained trees within the study area (e.g. Large tree 43).

Other planning considerations:

- Tree Protection fencing and No-Go-Zones are to be established at the edge of the construction zones. Fencing is to be installed prior to the start of all construction activities and remain in place until the completion of the project.
- Tree Protection fencing specifications require fencing to be constructed of a 1.5m chain mesh fence or with 1.8m star pickets with high visibility webbing and/or wire.
- No construction activity is to be undertaken within the Tree Protection Zone or No-Go-Zones, which must also be clearly signed, including but not limited to excavation, vehicle and equipment storage and movement, stockpiling and re-fueling.
- Ensure all personnel are familiar with the extent of the works area and are appropriately inducted/aware of ecologically sensitive areas in the study area and immediate surrounds.
- Any construction stockpiles, storage of equipment and machinery should be placed away from areas supporting native vegetation or waterbodies, this includes designated wash-down areas.
- The spread of weeds during construction should be appropriately managed through appropriate hygiene protocols for machinery, vehicles and personnel, especially with regard to Chilean and Texas Needle-grass. Soil contaminated with seeds of these species cannot be removed from the site.
- Prevention of sedimentation and erosion during construction undertaken near the roadside drainage points.
- All of the above measures should be captured within a Construction Environmental Management Plan (CEMP) that must be read and signed by all project workers.
- A Weed Management Plan is recommended to guide maintenance and improvement works for remaining areas of vegetation.

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Appendix 1. Flora Species Recorded in the Study Area (2022-2026)

Legend:

* – Introduced/exotic species

- native to Australia or Victoria but non-indigenous to the study area

EN – Endangered under the EPBC Act

cr – critically endangered under the FFG Act

en – endangered under the FFG Act

W – Weed of National Significance (WoNS)

C – Weed listed as regionally controlled under the CaLP Act.

R – Weed listed as regionally restricted under the CaLP Act.

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Origin	Scientific Name	Common Name	Status
	<i>Acacia melanoxylon</i>	Blackwood	
	<i>Acaena echinata</i>	Sheep's Burr	
*	<i>Agrostis capillaris</i>	Brown-top Bent	
*	<i>Aira cupaniana</i>	Quicksilver Grass	
*	<i>Allium vineale</i>	Crow Garlic	R
	<i>Amphibromus nervosus</i>	Common Swamp Wallaby-grass	
	<i>Anthosachne scabra</i> s.s.	Common Wheat-grass	
*	<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass	
*	<i>Arctotheca calendula</i>	Cape weed	
	<i>Arthropodium strictum</i> s.s.	Chocolate Lily	
*	<i>Asparagus asparagoides</i>	Bridal Creeper	R, W
	<i>Asperula conferta</i>	Common Woodruff	
	<i>Atriplex semibaccata</i>	Berry Saltbush	
*	<i>Avena barbata</i>	Bearded Oat	
*	<i>Brassica fruticulosa</i>	Twiggy Turnip	
*	<i>Briza maxima</i>	Large Quaking-grass	
*	<i>Briza minor</i>	Lesser Quaking-grass	
*	<i>Bromus catharticus</i>	Prairie Grass	
*	<i>Bromus hordeaceus</i>	Soft Brome	
	<i>Bulbine bulbosa</i>	Bulbine Lily	
	<i>Burchardia umbellata</i>	Milkmaids	
	<i>Carex inversa</i>	Knob Sedge	
	<i>Cassinia sifton</i>	Drooping Cassinia	
*	<i>Cenchrus clandestinus</i>	Kikuyu	
*	<i>Centaurium erythraea</i>	Common Centaury	
*	<i>Cirsium vulgare</i>	Spear Thistle	C
	<i>Clematis microphylla</i> s.l.	Small-leaved Clematis	
	<i>Crassula decumbens</i> var. <i>decumbens</i>	Spreading Crassula	
	<i>Crassula helmsii</i>	Swamp Crassula	
*	<i>Crataegus monogyna</i>	Hawthorn	C
*	<i>Cynara cardunculus</i> subsp. <i>flavescens</i>	Artichoke Thistle	C
*	<i>Cynodon dactylon</i> var. <i>dactylon</i>	Couch	
	<i>Dianella admixta</i>	Black-anther Flax-lily	
	<i>Dianella amoena</i>	Matted Flax-lily	EN, cr
	<i>Dianella longifolia</i> s.l.	Pale Flax-lily	
	<i>Dichelachne crinite</i>	Long-hair Plume-grass	
	<i>Dichondra repens</i>	Kidney-weed	
*	<i>Dittrichia graveolens</i>	Stinkwort	
*	<i>Echium plantagineum</i>	Paterson's Curse	
	<i>Einadia nutans</i> subsp. <i>nutans</i> (s.s.)	Nodding Saltbush	

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Origin	Scientific Name	Common Name	Status
	<i>Enchylaena tomentosa</i> var. <i>tomentosa</i>	Ruby Saltbush	
	<i>Epilobium billardiereanum</i>	Variable Willow-herb	
	<i>Eucalyptus camaldulensis</i>	River Red-gum	
*	<i>Freesia</i> spp.	Freesia	
*	<i>Fumaria bastardii</i>	Bastard's Fumitory	
*	<i>Fumaria capreolata</i>	White Fumitory	
*	<i>Genista monspessulana</i>	Montpellier Broom	C, W
	<i>Geranium solanderi</i> var. <i>solanderi</i> s.s.	Austral Crane's-bill	en
	<i>Geranium</i> sp. 5	Naked Crane's-bill	
*	<i>Helminthotheca echioides</i>	Ox-tongue	
*	<i>Holcus lanatus</i>	Yorkshire Fog	
	<i>Hypericum gramineum</i>	Small St John's Wort	
*	<i>Hypericum perforatum</i> subsp. <i>veronense</i>	St John's Wort	
*	<i>Hypochaeris radicata</i>	Flatweed	
	<i>Juncus amabilis</i>	Hollow Rush	
*	<i>Lolium perenne</i>	Perennial Rye-grass	
	<i>Lomandra longifolia</i> subsp. <i>longifolia</i>	Spiny-headed Mat-rush	
*	<i>Lotus uliginosus</i>	Greater Bird's-foot Trefoil	
*	<i>Lysimachia arvensis</i>	Pimpernel	
*	<i>Malva parviflora</i>	Small-flower Mallow	
*	<i>Medicago polymorpha</i>	Burr Medic	
	<i>Microlaena stipoides</i> var. <i>stipoides</i>	Weeping Grass	
*	<i>Nassella leucotricha</i>	Texas Needle-grass	R, W
*	<i>Nassella neesiana</i>	Chilean Needle-grass	R, W
*	<i>Nassella trichotoma</i>	Serrated Tussock	C, W
*	<i>Oxalis incarnata</i>	Pale Wood-sorrel	
	<i>Oxalis perennans</i>	Grassland Wood-sorrel	
*	<i>Oxalis pes-caprae</i>	Soursob	R
*	<i>Paspalum dilatatum</i>	Paspalum	
	<i>Pauridia glabella</i> var. <i>glabella</i>	Tiny Star	
*	<i>Phalaris aquatica</i>	Toowoomba Canary-grass	
*	<i>Plantago lanceolata</i>	Ribwort	
*	<i>Poa annua</i> s.s.	Annual Meadow-grass	
	<i>Poa labillardierei</i> var. <i>labillardierei</i>	Common Tussock-grass	
	<i>Poa morrisii</i>	Soft Tussock-grass	
	<i>Poa sieberiana</i> var. <i>sieberiana</i>	Grey Tussock-grass	
*	<i>Polycarpon tetraphyllum</i>	Four-leaved Allseed	
*	<i>Polygonum aviculare</i> s.l.	Prostrate Knotweed	
	<i>Portulaca oleracea</i>	Common Purslane	
*	<i>Prunus cerasifera</i>	Cherry Plum	
*	<i>Ranunculus repens</i>	Creeping Buttercup	
*	<i>Raphanus raphanistrum</i>	Wild Radish	
*	<i>Ricinus communis</i>	Castor Oil Plant	
*	<i>Romulea rosea</i>	Onion Grass	
*	<i>Rosa rubiginosa</i>	Sweet Briar	C
*	<i>Rubus anglocandicans</i>	Common Blackberry	C, W
*	<i>Rumex crispus</i>	Curled Dock	
	<i>Rytidosperma duttonianum</i>	Brown-back Wallaby-grass	
	<i>Rytidosperma geniculatum</i>	Kneed Wallaby-grass	
	<i>Rytidosperma racemosum</i> var. <i>racemosum</i>	Slender Wallaby-grass	
	<i>Rytidosperma setaceum</i> var. <i>setaceum</i>	Bristly Wallaby-grass	
	<i>Schoenus apogon</i>	Common Bog-sedge	
	<i>Senecio quadridentatus</i>	Cotton Fireweed	

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Origin	Scientific Name	Common Name	Status
*	<i>Sonchus oleraceus</i>	Common Sow-thistle	
	<i>Themeda triandra</i>	Kangaroo Grass	
*	<i>Trifolium campestre</i> var. <i>campestre</i>	Hop Clover	
*	<i>Trifolium dubium</i>	Suckling Clover	
*	<i>Trifolium repens</i> var. <i>repens</i>	White Clover	
*	<i>Ulex europaeus</i>	Gorse	C, W
*	<i>Vicia sativa</i> subsp. <i>sativa</i>	Common Vetch	
*	<i>Vulpia bromoides</i>	Squirrel-tail Fescue	
*	<i>Watsonia meriana</i> var. <i>bulbillifera</i>	Bulbil Watsonia	C

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Appendix 2. Threatened Flora Species Previously Recorded Within 5 km of the Study Area

The list below provides records for threatened flora species previously recorded within 5 km of the study area (DEECA 2026d).

Legend:

= native to Australia or Victoria but non-indigenous to the study area;

EPBC Act 1999

CR = critically endangered

EN = endangered

VU = vulnerable

FFG Act 1988

cr = critically endangered

en = endangered

vu = vulnerable

Likelihood of Occurrence (LO) Definitions:

K = Known Occurrence

- Recorded during current survey;
- Considered present based on record from previous survey.

H = High Likelihood

- High quality habitat present in the study area based on a site-level assessment;
- Previous records in the study and/or local area.

L, M = Low to Moderate Likelihood

- Limited habitat present in the study area, key and/or not all habitat characteristics present;
- Limited recent and history in records in the local area.

U = Unlikely

- Suitable habitat absent;
- Generally outside of the species range

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Scientific Name	Common Name	No. Records	Latest Record	EPBC Act	FFG Act	Comments	LO
<i>Acacia howittii</i>	Sticky Wattle	2	02/11/2017		vu #	Woody species easily identified if present and not indigenous to local area	U
<i>Amphibromus fluitans</i>	River Swamp Wallaby-grass	2	22/02/1996	VU		Highly restricted and irregular ephemeral habitat only. No direct connectivity to other waterbodies. Nearest record ~ 3km to NE and 30 years old. HDM extensive over site, however, not reflective of on-ground conditions.	U
<i>Billardiera scandens</i> s.s.	Velvet Apple-berry	13	08/10/2020		en	Woody scrambler easily identifiable if present	U
<i>Caladenia amoena</i>	Charming Spider-orchid	4	02/09/2022	EN	cr	Suitable habitat limited. Flowers in spring. Never observed over many targeted spring surveys. Previous records and HDM restricted to areas east of Plenty River.	U

Scientific Name	Common Name	No. Records	Latest Record	EPBC Act	FFG Act	Comments	LO	
<i>Caladenia oenochila</i>	Wine-lipped Spider-orchid	5	27/07/2018		cr	Suitable habitat limited. Flowers in spring. Never observed over many targeted spring surveys. Previous records and HDM restricted to areas east of Plenty River.	U	This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright
<i>Cladium procerum</i>	Leafy Twig-sedge	3	12/02/1996		en	Suitable habitat absent. Previous records and HDM restricted to Plenty River and other waterway corridors to the east.	U	
<i>Coronidium gunnianum</i>	Pale Swamp Everlasting	2	24/11/2016		cr	Highly restricted and irregular ephemeral habitat only. Flowers in spring, yet never observed over many targeted spring surveys. HDM does not overlap with study area.	U	
<i>Corybas fimbriatus</i>	Fringed Helmet-orchid	1	05/02/1996		en	Suitable habitat limited. Flowers May-Sept. Not observed during fine-scale May surveys or in September targeted surveys. Previous records and HDM restricted to Plenty River corridor and areas to the east.	U	
<i>Corymbia maculata</i>	Spotted Gum	16	13/02/2023		vu #	Woody species easily identified if present and not indigenous to local area	U	
<i>Cymbonotus lawsonianus</i>	Bear's-ear	1	07/12/1995		en	This record appears to be an anomaly as the species has very scattered and restricted distribution mainly associated with northern Victoria and the Upper Murray. HDM not relevant to the study area.	U	
<i>Dianella amoena</i>	Matted Flax-lily	310	10/12/2021	EN	cr	Suitable habitat present. Species previously recorded on site	K	
<i>Dianella callicarpa</i>	Swamp Flax-lily	1	23/05/2002		en #	Not indigenous to the local area and considered absent given extensive previous targeted survey efforts for Dianella spp. HDM not relevant to the study area.	U	
<i>Eucalyptus globulus</i> subsp. <i>globulus</i>	Southern Blue-gum	1	10/02/2010		en #	Woody species easily identified if present and not indigenous to local area	U	
<i>Eucalyptus leucoxylon</i> subsp. <i>connata</i>	Melbourne Yellow-gum	12	03/12/2020		en	Woody species easily identified if present	U	
<i>Eucalyptus sideroxylon</i> subsp. <i>sideroxylon</i>	Mugga	2	03/12/2020		en	Woody species easily identified if present	U	
<i>Eucalyptus yarraensis</i>	Yarra Gum	4	04/11/2005		cr	Woody species easily identified if present	U	
<i>Geranium solanderi</i> var. <i>solanderi</i> s.s.	Austral Crane's-bill	2	31/03/2021		en	Suitable habitat present. Species previously recorded on site	K	
<i>Geranium</i> sp. 1	Large-flower Crane's-bill	2	01/10/2021		cr	Suitable habitat present. Flowers April, June or December. Never observed over many targeted surveys. HDM does not overlap with study area	L	
<i>Geranium</i> sp. 3	Pale-flower Crane's-bill	5	31/03/2021		en	Suitable habitat present. Flowers Sept-Jan. Never	L	

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Scientific Name	Common Name	No. Records	Latest Record	EPBC Act	FFG Act	Comments	LO
						observed over many targeted surveys. Extensive HDM overlap with study area	
<i>Glycine latrobeana</i>	Clover Glycine	1	07/12/1995	VU	vu	Extensive HDM overlap with study area and some suitable habitat present. Flowers Sept-Dec yet never observed during optimal targeted surveys.	U
<i>Goodia medicaginea</i>	Western Golden-tip	1	31/03/2021		en	Woody species easily identified if present	U
<i>Leucochrysum albicans</i> subsp. <i>tricolor</i>	White Sunray	1	24/11/2016	EN	en	Single record appears to be an anomaly. Species of Western VIC. HDM not relevant to study area	U
<i>Levenhookia sonderi</i>	Slender Stylewort	1	07/12/1995		en	Highly cryptic species sensitive to disturbance. Previous records and HDM restricted to areas east of Plenty River.	U
<i>Limonium australe</i> var. <i>australe</i>	Yellow Sea-lavender	1	02/12/1991		en	Suitable habitat absent. Solitary, old record likely an anomaly. HDM not relevant to study area	U
<i>Melaleuca armillaris</i> subsp. <i>armillaris</i>	Giant Honey-myrtle	7	25/10/2022		en #	Woody species easily identified if present and not indigenous to local area	U
<i>Microseris scapigera</i> s.s.	Plains Yam-daisy	1	24/11/2016		cr	Suitable habitat present, however, species is highly susceptible to previous disturbance, weeds and habitat fragmentation. HDM does not overlap with study area	U
<i>Pterostylis smaragdina</i>	Emerald-lip Greenhood	2	18/08/2016		en	Winter flowering. Targeted surveys not optimal, however, species highly susceptible to disturbance, weeds and habitat fragmentation. Previous targeted surveys in spring have not detected any residual flowering material. HDM and previous records east of Plenty River	U
<i>Rhagodia parabolica</i>	Fragrant Saltbush	4	24/02/2022		vu #	Woody species easily identified if present and not indigenous to local area	U
<i>Tripogonella loliiformis</i>	Rye Beetle-grass	6	01/10/2021		en	Some suitable habitat present in form of shallow soils over partially exposed basalt rock but limited due to grazing pressure and high weed cover. HDM extensive over study area, however, not previously recorded	L

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Appendix 3. EPBC Act Protected Matters Search Tool Results– Flora

The EPBC Act Protected Matters Search Tool was queried for EPBC Act flora related matters occurring or likely to occur within 5 km of the study area (DCCEEW 2026).

Likelihood of Occurrence Definitions:

K = Known Occurrence

- Recorded during current survey;
- Considered present based on record from previous survey.

H = High Likelihood

- High quality habitat present in the study area based on a site-level assessment;
- Previous records in the study and/or local area.

L, M = Low to Moderate Likelihood

- Limited habitat present in the study area, key and/or not all habitat characteristics present;
- Limited recent and history in records in the local area.

U = Unlikely

- Suitable habitat absent;

Generally outside of the species range.

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Species	EPBC Act Status	Likely occurrence or habitat (DCCEEW 2026)	Likely Occurrence in Study Area
Flora			
<i>Amphibromus fluitans</i> River Swamp Wallaby-grass	Vulnerable	Species or species habitat may occur within area	U
<i>Caladenia amoena</i> Charming Spider-orchid	Endangered	Species or species habitat may occur within area	U
<i>Caladenia concolor</i> Crimson Spider-orchid	Vulnerable	Species or species habitat may occur within area	U
<i>Dianella amoena</i> Matted Flax-lily	Endangered	Species or species habitat likely to occur within area	K
<i>Diuris fragrantissima</i> Sunshine Diuris	Endangered	Species or species habitat may occur within area	U
<i>Dodonaea procumbens</i> Clover Glycine, Purple Clover	Vulnerable	Species or species habitat may occur within area	U
<i>Glycine latrobeana</i> Clover Glycine, Purple Clover	Vulnerable	Species or species habitat likely to occur within area	U
<i>Lachnagrostis adamsonii</i> Adamson's Blown-grass	Endangered	Species or species habitat may occur within area	U
<i>Lepidium aschersonii</i> Spiny Peppercress	Vulnerable	Species or species habitat may occur within area	U
<i>Lepidium hyssopifolium</i> Basalt Peppercress	Endangered	Species or species habitat likely to occur within area	U
<i>Leucochrysum albicans</i> var. <i>tricolor</i> Hoary Sunray	Endangered	Species or species habitat may occur within area	U
<i>Pimelea spinescens</i> subsp. <i>spinescens</i> Spiny Rice-flower	Critically Endangered	Species or species habitat likely to occur within area	U
<i>Pomaderris vacciniifolia</i> Round-leaf Pomaderris	Critically Endangered	Species or species habitat likely to occur within area	U
<i>Prasophyllum suaveolens</i> Fragrant Leek-orchid	Endangered	Species or species habitat likely to occur within area	U
<i>Pterostylis chlorogramma</i> Green-striped Greenhood	Vulnerable	Species or species habitat likely to occur within area	U
<i>Pterostylis cucullata</i>	Vulnerable	Species or species habitat	U

Species	EPBC Act Status	Likely occurrence or habitat (DCCEEW 2026)	Likely Occurrence in Study Area
Leafy Greenhood		may occur within area	
<i>Rutidosia leptorrhynchoidea</i> Button Wrinklewort	Endangered	Species or species habitat likely to occur within area	U
<i>Senecioi macrocarpus</i> Large-fruit Fireweed	Vulnerable	Species or species habitat likely to occur within area	U
<i>Senecioi psilocarpus</i> Swamp Fireweed	Vulnerable	Species or species habitat likely to occur within area	U
<i>Thelymitra orientalis</i> Hoary Sun-orchid	Critically Endangered	Species or species habitat may occur within area	U
<i>Xerochrysum palustre</i> Swamp Everlasting	Vulnerable	Species or species habitat likely to occur within area	U

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Appendix 4. Fauna Species Recorded in the Study Area (2022-2026)

Legend:

* – Introduced/exotic species

Origin	Scientific Name	Common Name	Status
Birds			
	<i>Acanthiza pusilla</i>	Brown Thornbill	
*	<i>Acridotheres tristis</i>	Common Myna	
*	<i>Alauda arvensis</i>	Eurasian Skylark	
	<i>Anthochaera carunculata</i>	Red Wattlebird	
	<i>Anthochaera chrysoptera</i>	Little Wattlebird	
	<i>Aquila audax</i>	Wedge-tailed Eagle	
	<i>Cacatua galerita</i>	Sulphur-crested Cockatoo	
	<i>Cacatua sanguinea</i>	Little Corella	
	<i>Coracina novaehollandiae</i>	Black-faced Cuckoo-shrike	
	<i>Corvus mellori</i>	Little Raven	
	<i>Cracticus torquatus</i>	Grey Butcherbird	
	<i>Eolophus roseicapilla</i>	Galah	
	<i>Grallina cyanoleuca</i>	Magpie-lark	
	<i>Gymnorhina tibicen</i>	Australian Magpie	
	<i>Hirundo neoxena</i>	Welcome Swallow	
	<i>Malurus cyaneus</i>	Superb Fairy-wren	
	<i>Manorina melanocephala</i>	Noisy Miner	
	<i>Ocyphaps lophotes</i>	Crested Pigeon	
	<i>Pardalotus striatus</i>	Striated Pardalote	
	<i>Platycercus elegans</i>	Crimson Rosella	
	<i>Platycercus eximius</i>	Eastern Rosella	
	<i>Psephotus haematonotus</i>	Red-rumped Parrot	
	<i>Ptilotula penicillata</i>	White-plumed Honeyeater	
*	<i>Spilopelia chinensis</i>	Spotted Dove	
	<i>Strepera graculina</i>	Pied Currawong	
*	<i>Sturnus vulgaris</i>	Common Starling	
	<i>Threskiornis molucca</i>	Australian White Ibis	
	<i>Trichoglossus moluccanus</i>	Rainbow Lorikeet	
*	<i>Turdus merula</i>	Common Blackbird	
Mammals			
*	<i>Felis catus</i>	Domestic Cat (feral)	
*	<i>Lepus europaeus</i>	European Brown Hare	
	<i>Macropus giganteus</i>	Eastern Grey Kangaroo	
*	<i>Mus musculus</i>	House Mouse	
*	<i>Oryctolagus cuniculus</i>	European Rabbit	
	<i>Pseudocheirus peregrinus</i>	Eastern Ring-tailed Possum	
	<i>Trichosurus vulpecula</i>	Common Brush-tailed Possum	
*	<i>Vulpes vulpes</i>	Red Fox	
Reptiles			
	<i>Austrelaps superbus</i>	Lowland Copperhead	
	<i>Lampropholis guichenoti</i>	Garden Skink	
	<i>Parasuta flagellum</i>	Little Whip Snake	
	<i>Pseudemoia pagenstecheri</i>	Tussock Skink	en
	<i>Pseudonaja textilis</i>	Eastern Brown Snake	
Amphibians			
	<i>Crinia signifera</i>	Common Froglet	
	<i>Limnodynastes tasmaniensis</i>	Spotted Marsh Frog	

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Appendix 5. Threatened Fauna Species Previously Recorded Within 5 km of the Study Area

The following list shows Victorian Biodiversity Atlas records for threatened fauna species that have previously been recorded within a 5 km radius of the study area (DEECA 2026d).

Legend:

= native to Australia or Victoria but non-indigenous to the study area;

EPBC Act 1999

CR = critically endangered

EN = endangered

VU = vulnerable

FFG Act 1988

cr = critically endangered

en = endangered

vu = vulnerable

Likelihood of Occurrence (LO) Definitions:

K = Known Occurrence

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- Considered present based on record from previous survey.

H = High Likelihood

- High quality habitat present in the study area based on a site-level assessment;
- Previous records in the study and/or local area.

L, M = Low to Moderate Likelihood

- Limited habitat present in the study area, key and/or not all habitat characteristics present;
- Limited recent and history in records in the local area.

U = Unlikely

- Suitable habitat absent;
- Generally outside of the species range

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Scientific Name	Common Name	No. of Records	Latest Record	EPBC Act	FFG Act	Comments	LO
Birds							
<i>Accipiter novaehollandiae</i>	Grey Goshawk	3	16/09/2017		en	Possible vagrant species – may fly over site but not dependent on habitat – nearest records restricted to Plenty Gorge	L
<i>Anthochaera phrygia</i>	Regent Honeyeater	7	11/11/1988	CR	cr	Old records restricted to Plenty River corridor	U
<i>Aphelocephala leucopsis</i>	Southern Whiteface	3	30/01/2003	VU	vu	Some suitable habitat present. However, this species has high site fidelity or short home range. Considered highly unlikely to visit site given lack of connectivity and fragmentation	U
<i>Ardea alba modesta</i>	Eastern Great Egret	66	24/08/2019		vu	No suitable aquatic habitat	U
<i>Ardea intermedia plumifera</i>	Plumed Egret	3	09/11/2019		cr	No suitable aquatic habitat	U
<i>Biziura lobata</i>	Musk Duck	22	25/08/2020		vu	No suitable aquatic habitat	U

Scientific Name	Common Name	No. of Records	Latest Record	EPBC Act	FFG Act	Comments	LO
<i>Burhinus grallarius</i>	Bush Stone-curlew	1	01/01/1930		cr	Old record no longer relevant given lack of connectivity to site	U
<i>Callocephalon fimbriatum</i>	Gang-gang Cockatoo	33	23/10/2020	EN	en	Possible vagrant though not dependent on habitat within site	L-M
<i>Climacteris affinis</i>	White-browed Treecreeper	1	13/05/2009		en	Single record from Plenty Gorge. Unlikely given lack of connectivity to site and limited suitable habitat.	U
<i>Climacteris picumnus</i>	Brown Treecreeper	14	21/12/1990	VU	vu	Closest records effectively limited to Plenty river corridor. Unlikely given lack of connectivity to site and limited suitable habitat.	U
<i>Egretta garzetta</i>	Little Egret	2	01/01/1990		en	No suitable aquatic habitat	U
<i>Falco subniger</i>	Black Falcon	4	30/01/2003		cr	Possible vagrant species – may fly over site but not dependent on habitat	U
<i>Gallinago hardwickii</i>	Latham's Snipe	70	15/12/2020	VU	vu	Minor suitable habitat present when site is wet though no associated waterway or waterbody	U
<i>Grantiella picta</i>	Painted Honeyeater	1	21/12/1990	VU	vu	Solitary old record from Plenty Gorge	U
<i>Haliaeetus leucogaster</i>	White-bellied Sea-Eagle	1	18/02/1998		en	No suitable aquatic habitat	U
<i>Hieraaetus morphnoides</i>	Little Eagle	13	05/12/2018		vu	Possible vagrant species – may fly over site but not dependent on habitat	U
<i>Hirundapus caudacutus</i>	White-throated Needletail	10	10/03/2020	VU	vu	Possible vagrant species – may fly over site but not dependent on habitat	U
<i>Ixobrychus dubius</i>	Australian Little Bittern	1	01/01/1986		en	No suitable aquatic habitat	U
<i>Lathamus discolor</i>	Swift Parrot	43	25/05/2021	CR	cr	Possible vagrant species – may fly over site but not dependent on habitat	L
<i>Lewinia pectoralis</i>	Lewin's Rail	2	09/01/2006		vu	No suitable aquatic habitat	U
<i>Lophochroa leadbeateri</i>	Major Mitchell's Cockatoo	1	01/10/1982	EN	en	Single anomaly record not relevant to site	U
<i>Melanodryas cucullata</i>	Hooded Robin	5	17/09/2015	EN	en	Some suitable habitat present. Possible vagrant, however, connectivity to site very poor and records restricted to Plenty Gorge and Granite Hills	U
<i>Neophema chrysostoma</i>	Blue-winged Parrot	3	02/04/2007	VU	vu	Highly nomadic species. May pass through site though not dependent on habitat	L
<i>Ninox connivens</i>	Barking Owl	5	28/01/2003		cr	Possible vagrant species. May fly over site or opportunistically forage though not dependent on habitat	L
<i>Ninox strenua</i>	Powerful Owl	4	15/10/2008		vu	Possible vagrant species. May fly over site or opportunistically forage though not dependent on habitat	L
<i>Oxyura australis</i>	Blue-billed Duck	72	12/05/2021		vu	No suitable aquatic habitat	U
<i>Pomatostomus temporalis</i>	Grey-crowned Babbler	1	01/01/1930		vu	Solitary old record no longer relevant to study area	U
<i>Pyrrholaemus sagittatus</i>	Speckled Warbler	10	27/08/2003		en	Records restricted to Plenty River corridor and Granite Hills. Some suitable habitat present however, site connectivity poor and urban setting unsuitable	U
<i>Rostratula australis</i>	Australian Painted-snipe	1	01/01/1977	EN	cr	No suitable aquatic habitat	U
<i>Spatula rhynchotis</i>	Australasian Shoveler	85	30/05/2020		vu	No suitable aquatic habitat	U
<i>Stagonopleura guttata</i>	Diamond Firetail	3	30/05/1988	VU	vu	Some suitable habitat present. Possible vagrant, however, connectivity to site very poor and records now quite old	U
<i>Stictonetta naevosa</i>	Freckled Duck	55	12/02/2020		en	No suitable aquatic habitat	U
<i>Tringa nebularia</i>	Common Greenshank	1	23/09/2017	EN	en	No suitable aquatic habitat	U

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Scientific Name	Common Name	No. of Records	Latest Record	EPBC Act	FFG Act	Comments	LO
<i>Tyto novaehollandiae</i>	Masked Owl	1	01/01/1986		cr	Old record. Suitable old growth habitat absent	U
Reptiles							
<i>Emydura macquarii</i>	Murray River Turtle	9	22/04/2022		cr	No suitable aquatic habitat	U
<i>Pseudemoia pagenstecheri</i>	Tussock Skink	10	21/03/2022		en	Suitable habitat present and recently recorded throughout most of study area during targeted reptile surveys	K
<i>Varanus varius</i>	Lace Monitor	1	21/11/2005		en	Single record from Plenty Gorge. No connectivity to study area.	U
Mammals							
<i>Dasyurus maculatus maculatus</i>	Spot-tailed Quoll	1	01/01/1930	EN	en	Old record no longer relevant	U
<i>Dasyurus viverrinus</i>	Eastern Quoll	1	01/01/1930	EN	en-x	Old record no longer relevant	U
<i>Miniopterus orianae oceanensis</i>	Eastern Bent-winged Bat	3	25/06/1992		cr	HDM over whole of central and eastern VIC. Possible vagrant not dependent on study area	L
<i>Ornithorhynchus anatinus</i>	Platypus	17	20/07/2003		vu	No suitable aquatic habitat	U
<i>Perameles gunnii</i>	Eastern Barred Bandicoot	1	01/01/1930	EN	en	Old record no longer relevant	U
<i>Phascogale tapoatafa</i>	Brush-tailed Phascogale	3	09/02/1987		vu	Suitable habitat absent and lack of connectivity	U
<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox	4	03/12/2020	VU	vu	Possible vagrant species – may visit and forage opportunistically but not dependent on habitat	L
<i>Sminthopsis crassicaudata</i>	Fat-tailed Dunnart	3	24/01/1991		vu	HDM extensive over study area. Some suitable but limited habitat present. Not observed during recent targeted surveys using tile grids.	L
<i>Sminthopsis murina murina</i>	Common Dunnart	3	30/12/2020		vu	No HDM overlap with study area. Some suitable but limited habitat present. Not observed during recent targeted surveys using tile grids	L
Amphibians							
<i>Litoria raniformis</i>	Growling Grass Frog	42	19/02/2012	VU	vu	No suitable aquatic habitat or connectivity	U
<i>Pseudophryne bibronii</i>	Brown Toadlet	3	25/06/1992		en	Lack of consistent suitable habitat and no site connectivity to known populations	U
<i>Pseudophryne semimarmorata</i>	Southern Toadlet	14	05/03/1990		en	Lack of consistent suitable habitat and no site connectivity to known populations	U
Invertebrates							
<i>Synemon plana</i>	Golden Sun Moth	13	24/12/2010	VU	vu	Extensive HDM over study area. Suitable exotic habitat (Chilean Needle-grass) present, however, underlying native grass matrix is C4 (Themeda) not C3 as preferred by GSM and the site was historically all woodland. Nearest record ~2.5km NW associated within grassland. Species not incidentally recorded on site despite many ecological surveys during the flight season. We also note that this species was not considered relevant to planning approvals for the recent adjacent Findon Road extension.	U

Background information: Birds: Christidis and Boles 2008, Garnet and Crowley, G. M. 2000., Menkhorst *et al.* 2017. Reptiles and Amphibians: Cogger 2014. Mammals: Strahan 1995 in Menkhorst and Knight 2004, Woinarski *et al.* 2014.

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Appendix 6. EPBC Act Protected Matters Search Tool Records – Fauna

The EPBC Act Protected Matters Search Tool was queried for EPBC Act fauna related matters occurring or likely to occur within 5 km of the study area (DCCEEW 2026).

Likelihood of Occurrence Definitions:

K = Known Occurrence

- Recorded during current survey;
- Considered present based on record from previous survey.

H = High Likelihood

- High quality habitat present in the study area based on a site-level assessment;
- Previous records in the study and/or local area;

L, M = Low to Moderate Likelihood

- Limited habitat present in the study area, key and/or not all habitat characteristics present;
- Limited recent and history in records in the local area.

U = Unlikely

- Suitable habitat absent;
- Generally outside of the species range.

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Species	EPBC Act Status	Likely occurrence or habitat in the search area (DCCEEW 2026)	Likely Occurrence in Study Area
Birds			
<i>Anthochaera phrygia</i> Regent Honeyeater	Critically Endangered	Species or species habitat known to occur within area	U
<i>Aphelocephala leucopsis</i> Southern Whiteface	Vulnerable	Species or species habitat known to occur within area	U
<i>Botaurus poiciloptilus</i> Australasian Bittern	Endangered	Species or species habitat known to occur within area	U
<i>Calidris acuminata</i> Curlew Sandpiper	Critically Endangered	Species or species habitat known to occur within area	U
<i>Calidris ferruginea</i> Curlew Sandpiper	Critically Endangered	Species or species habitat may occur within area	U
<i>Callocephalon fimbriatum</i> Gang-gang Cockatoo	Endangered	Species or species habitat known to occur within area	L
<i>Climacteris picumnus victoriae</i> Brown Treecreeper (south-eastern)	Vulnerable	Species or species habitat likely to occur within area	U
<i>Falco hypoleucos</i> Grey Falcon	Vulnerable	Species or species habitat likely to occur within area	U
<i>Grantiella picta</i> Painted Honeyeater	Vulnerable	Species or species habitat likely to occur within area	U
<i>Hirundapus caudacutus</i> White-throated Needletail	Vulnerable	Species or species habitat known to occur within area	U
<i>Lathamus discolor</i> Swift Parrot	Critically Endangered	Species or species habitat likely to occur within area	L
<i>Melanodryas cucullata cucullata</i> South-eastern Hooded Robin	Endangered	Species or species habitat likely to occur within area	U
<i>Neophema chrysostoma</i> Blue-winged Parrot	Vulnerable	Species or species habitat known to occur within area	U
<i>Numenius madagascariensis</i> Eastern Curlew	Critically Endangered	Species or species habitat may occur within area	U

Species	EPBC Act Status	Likely occurrence or habitat in the search area (DCCEEW 2026)	Likely Occurrence in Study Area
<i>Pedionomus torquatus</i> Plains Wanderer	Critically Endangered	Species or species habitat may occur within area	U
<i>Pycnoptilus floccosus</i> Pilotbird	Vulnerable	Species or species habitat may occur within area	U
<i>Rostratula australis</i> Australian Painted Snipe	Endangered	Species or species habitat may occur within area	U
<i>Stagonopleura guttata</i> Diamond Firetail	Vulnerable	Species or species habitat may occur within area	U
<i>Tringa nebularia</i> Common Greenshank	Migratory	Species or species habitat likely to occur within area	U
Fish			
<i>Maccullochella peelii</i> Murray Cod	Vulnerable	Species or species habitat known to occur within area	U
<i>Nannoperca obscura</i> Yarra Pygmy Perch	Vulnerable	Species or species habitat may occur within area	U
<i>Prototroctes maraena</i> Australian Grayling	Vulnerable	Species or species habitat likely to occur within area	U
Reptiles			
<i>Aprasia parapulchella</i> Pink-tailed Worm-lizard	Vulnerable	Species or species habitat likely to occur within area	U
<i>Delma impar</i> Striped Legless Lizard	Vulnerable	Species or species habitat may occur within area	U
<i>Lissolepis coventryi</i> Swamp Skink	Endangered	Species or species habitat known to occur within area	U
<i>Pseudemoia rawlinsoni</i> Glossy Grass Skink	Vulnerable	Species or species habitat known to occur within area	U
<i>Tympanocryptis pinguicolla</i> Grassland Earless Dragon	Endangered	Species or species habitat may occur within area	U
Amphibians			
<i>Litoria raniformis</i> Growling Grass Frog	Vulnerable	Species or species habitat known to occur within the area	U
Invertebrates			
<i>Paralucia pyrodiscus lucida</i> Eltham Copper Butterfly	Endangered	Species or species habitat likely to occur within the area	U
<i>Synemon plana</i> Golden Sun Moth	Vulnerable	Species or species habitat likely to occur within the area	U
Mammals			
<i>Dasyurus maculatus maculatus</i> Spot-tailed Quoll	Endangered	Species or species habitat may occur within area	U
<i>Isodon obesulus obesulus</i> Southern Brown Bandicoot	Endangered	Species or species habitat likely to occur within the area	U
<i>Petaurus australis australis</i> Yellow-bellied Glider	Vulnerable	Species or species habitat likely to occur within the area	U
<i>Pteropus poliocephalus</i> Grey-headed Flying-fox	Vulnerable	Foraging, feeding or related behaviour known to occur within area	L
Migratory Marine Birds			
<i>Apus pacificus</i> Fork-tailed Swift	Migratory	Species or species habitat likely to occur within area	U
Migratory Terrestrial Species			
<i>Hirundapus caudacutus</i> White-throated Needletail	Migratory	Species or species habitat known to occur within area	U

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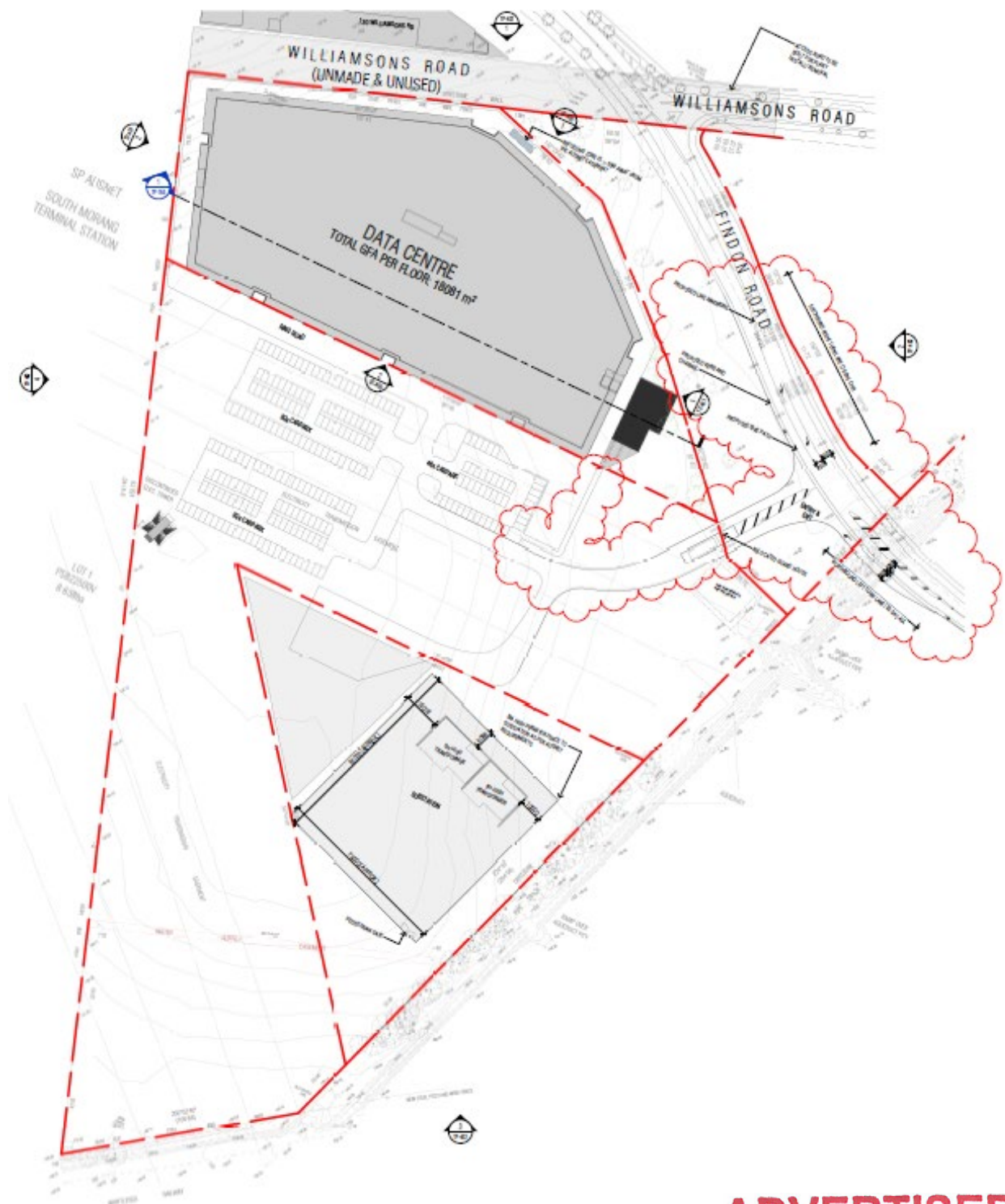
Species	EPBC Act Status	Likely occurrence or habitat in the search area (DCCEEW 2026)	Likely Occurrence in Study Area
<i>Motacilla flava</i> Yellow Wagtail	Migratory	Species or species habitat likely to occur within area	U
Migratory Wetland Species			
<i>Actitis hypoleucos</i> Common Sandpiper	Migratory	Species or species habitat may occur within area	U
<i>Calidris acuminata</i> Sharp-tailed Sandpiper	Migratory	Species or species habitat likely to occur within area	U
<i>Calidris melanotos</i> Pectoral Sandpiper	Migratory	Species or species habitat may occur within area	U
<i>Gallinago hardwickii</i> Latham's Snipe	Migratory	Species or species habitat may occur within area	U
<i>Pandion haliaetus</i> Osprey	Migratory	Species or species habitat likely to occur within area	U
<i>Tringa nebularia</i> Common Greenshank	Migratory	Species or species habitat likely to occur within area	U

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Attachment 1a: Current Site Plan

Source: Ewert Leaf, Project No. M24062, Rev. C, dated 28/07/2026



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Attachment 2: Native Vegetation Removal Report (DEECA)

NVRR ID: 373_20260807_GUS

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Native Vegetation Removal Report

NVRR ID: 373_20260807_GUS

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 Guidelines). This report is **not an assessment by DEECA** 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.

Report details

Date created: 07/08/2026

Local Government Area: WHITTLESEA CITY

Shapefile name:

20065_NVR_Patches_20260807.shp

20065_NVR_Trees_20260807.shp

Site assessor name: Matt Hatton

Registered Aboriginal Party: Wurundjeri

Coordinates: 145.08213, -37.64439

Address:

385 MCDONALDS ROAD SOUTH MORANG 3752

385F MCDONALDS ROAD SOUTH MORANG 3752

165 WILLIAMSONS ROAD SOUTH MORANG 3752

Regulator Notes

Removal polygons are located:

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Summary of native vegetation to be removed

Assessment pathway	Detailed Assessment Pathway		
Location category	Location 2 The native vegetation extent map indicates that this area is typically characterised as supporting native vegetation. Additionally, it is modelled as encompassing an endangered Ecological Vegetation Class, sensitive wetland or sensitive coastal area. The removal of less than 0.5 hectares of native vegetation in this area will not require a Species Offset.		
Total extent including past and proposed removal (ha) <i>Includes endangered EVCs (ha): 3.061</i>	3.061	Extent of past removal (ha)	0
		Extent of proposed removal - Patches (ha)	2.858
		Extent of proposed removal - Scattered Trees (ha)	0.203
No. Large Trees proposed to be removed	6	No. Large Patch Trees	4
		No. Large Scattered Trees	2
No. Small Scattered Trees	3		

Offset requirements if approval is granted

Any approval granted will include a condition to obtain an offset, before the removal of native vegetation, that meets the following requirements:

General Offset amount ¹	1.1880 General Habitat Units	This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright
Vicinity	Melbourne Water CMA or WHITTLESEA CITY LGA	
Minimum strategic biodiversity value score ²	0.5294	
Large Trees*	6	
*The total number of Large Trees that the offset must protect	6 Large Trees to be protected in either the General, Species or combination across all habitat units protected	

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 with mapped habitat at the site

Appendix 3 includes the following figures

- Location map
- Strategic Biodiversity Value map
- Condition map
- Endangered EVCs map
- Aerial photograph showing mapped native vegetation
- Property in context
- Habitat Importance maps

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1. The General Offset amount required is the sum of all General Habitat Units in Appendix 1.

2. Minimum strategic biodiversity value score is 80 per cent of the weighted average score across habitat zones where a General Offset is required.

3. The Species Offset amount(s) required is the sum of all Species Habitat Units in Appendix 1.



Next steps

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

If you wish to remove the mapped native vegetation you are required to apply for approval from the responsible authority. The responsible authority will refer your application to DEECA for assessment, as required. **This report is not a referral assessment by DEECA.**

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

Refer to the Guidelines for a full list of application requirements This report provides information that meets the following application requirements:

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

Additional application requirements must be met including:

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

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Appendix 1: Description of native vegetation to be removed

The Species-General Offset Test was applied to your proposal. This test determines if the proposed removal of native vegetation has a proportional impact on any rare or threatened species habitats above the Species Offset threshold. The threshold is set at 0.005 per cent of the mapped habitat value for a species. When the proportional impact meets or exceeds the Species Offset threshold, a Species Offset is required. This test is completed for all species with mapped habitat at the site. Multiple Species Offsets will be required if the Species Offset threshold is exceeded for multiple species.

Where a zone requires Species Offset(s), the Species Habitat Units for each species in that zone are calculated by the following equation in accordance with the Guidelines: ***Species Habitat Units = extent without overlap x condition score x species landscape factor x 2, where the species landscape factor = 0.5 + (habitat importance score/2)***

The Species Offset amount(s) required is the sum of all Species Habitat Units per zone.

Where a zone does not require a Species Offset, the General Habitat Units in that zone are calculated by the following equation in accordance with the Guidelines: ***General Habitat Units = extent without overlap x condition score 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							Information calculated by NVR Map						
Zone	Type	DBH (cm)	EVC code	Bioregional conservation status	Partial Removal	Condition score	Large Tree(s)	Polygon extent (ha)	Extent without overlap (ha)	SBV score	HI Score	Habitat Units	Offset Type
1-a	Patch	-	VVP_0055	Endangered	no	0.330	1	2.025	2.025	0.669	-	0.836	General
2-b	Patch	-	VVP_0055	Endangered	no	0.320	3	0.643	0.643	0.643	-	0.254	General
4-c	Patch	-	VVP_0055	Endangered	no	0.220	-	0.028	0.028	0.654	-	0.008	General
4-d	Patch	-	VVP_0055	Endangered	no	0.220	-	0.107	0.107	0.675	-	0.030	General

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Information provided by or on behalf of the applicant							Information calculated by NVR Map						
Zone	Type	DBH (cm)	EVC code	Bioregional conservation status	Partial Removal	Condition score	Large Tree(s)	Polygon extent (ha)	Extent without overlap (ha)	SBV score	HI Score	Habitat Units	Offset Type
5-e	Patch	-	VVP_0055	Endangered	no	0.130	-	0.055	0.055	0.650	-	0.009	General
203-ee	Scattered Tree	10	VVP_0055	Endangered	no	0.200	-	0.031	0.031	0.640	-	0.008	General
204-dd	Scattered Tree	10	VVP_0055	Endangered	no	0.200	-	0.031	0.031	0.640	-	0.008	General
25-aa	Scattered Tree	82	VVP_0055	Endangered	no	0.200	1	0.070	0.059	0.650	-	0.015	General
26-bb	Scattered Tree	91	VVP_0055	Endangered	no	0.200	1	0.070	0.050	0.650	-	0.012	General
4-cc	Scattered Tree	48	VVP_0055	Endangered	no	0.200	-	0.031	0.031	0.650	-	0.008	General

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

This table identifies all rare or threatened species with mapped habitat at the site and the proportional impact associated with the proposed native vegetation removal.

Species common name	Species scientific name	Taxon ID	Conservation status	Group	Habitat impacted	Proportional impact (%)
Curly Sedge	Carex tasmanica	500650	Endangered	Dispersed	Habitat importance map	0.0007
Plump Swamp Wallaby-grass	Amphibromus pithogastrus	503624	Critically Endangered	Dispersed	Habitat importance map	0.0003
Large-flower Crane's-bill	Geranium sp. 1	505342	Critically Endangered	Dispersed	Habitat importance map	0.0003
Growling Grass Frog	Litoria raniformis	13207	Vulnerable	Dispersed	Habitat importance map	0.0002
Golden Sun Moth	Synemon plana	15021	Vulnerable	Dispersed	Habitat importance map	0.0002
Western Golden-tip	Goodia medicaginea	501518	Endangered	Dispersed	Habitat importance map	0.0002
Purple Blown-grass	Lachnagrostis punicea subsp. punicea	504206	Endangered	Dispersed	Habitat importance map	0.0002
Matted Flax-lily	Dianella amoena	505084	Critically Endangered	Dispersed	Habitat importance map	0.0002
Pale-flower Crane's-bill	Geranium sp. 3	505344	Endangered	Dispersed	Habitat importance map	0.0002
Annual Fireweed	Senecio glomeratus subsp. longifructus	507144	Vulnerable	Dispersed	Habitat importance map	0.0002

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Species common name	Species scientific name	Taxon ID	Conservation status	Group	Habitat impacted	Proportional impact (%)
Yarra Gum	Eucalyptus yarraensis	501326	Critically Endangered	Dispersed	Habitat importance map	0.0001
Clover Glycine	Glycine latrobeana	501456	Vulnerable	Dispersed	Habitat importance map	0.0001
Pale Swamp Everlasting	Coronidium gunnianum	504655	Critically Endangered	Dispersed	Habitat importance map	0.0001
Plains Yam-daisy	Microseris scapigera s.s.	504657	Critically Endangered	Dispersed	Habitat importance map	0.0001
Arching Flax-lily	Dianella sp. aff. longifolia (Benambra)	505560	Critically Endangered	Dispersed	Habitat importance map	0.0001
Floodplain Fireweed	Senecio campylocarpus	507136	Endangered	Dispersed	Habitat importance map	0.0001
Black Falcon	Falco subniger	10238	Critically Endangered	Dispersed	Habitat importance map	0.0000
Bearded Dragon	Pogona barbata	12177	Vulnerable	Dispersed	Habitat importance map	0.0000
Victorian Grassland Earless Dragon	Tympanocryptis pinguicolla	12922	Critically Endangered	Dispersed	Habitat importance map	0.0000
Small Scurf-pea	Cullen parvum	502773	Endangered	Dispersed	Habitat importance map	0.0000
Tough Scurf-pea	Cullen tenax	502776	Endangered	Dispersed	Habitat importance map	0.0000

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Species common name	Species scientific name	Taxon ID	Conservation status	Group	Habitat impacted	Proportional impact (%)
Swamp Everlasting	Xerochrysum palustre	503763	Critically Endangered	Dispersed	Habitat importance map	0.0000

Habitat Group

- Highly localised habitat means there is 2,000 hectares or less mapped habitat for the species.
- Dispersed habitat means there is more than 2,000 hectares of mapped habitat for the species.

Habitat Impacted

The Species General Offset test, as described in Section 5.3.1 of the Guidelines, is used to determine if proposed native vegetation removal will result in a proportionally significant impact on the habitat value of rare or threatened species. The test is applied where the native vegetation proposed for removal:

- Intersects the Habitat Importance Map for a rare or threatened species; or
- Intersects the 'top ranking' modelled habitat for a rare or threatened species with dispersed habitat, as identified in its Top Ranking Habitat Importance Map.

Top Ranking Maps consist of the 2,000 hectares of habitat with the highest Habitat Importance Scores for each dispersed species.

The 'Habitat impacted' column identifies whether the Habitat Importance Map or its Top Ranking Map was used to determine the proportional impact for a species with dispersed habitat.

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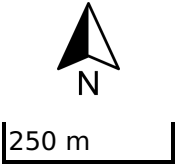
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Appendix 3: Images of mapped native vegetation

1. Property in context



- Proposed Removal
- Past Removal
- Partial Removal
- Property Boundaries



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2. Aerial photograph showing mapped native vegetation



- Proposed Removal
- Past Removal
- Partial Removal

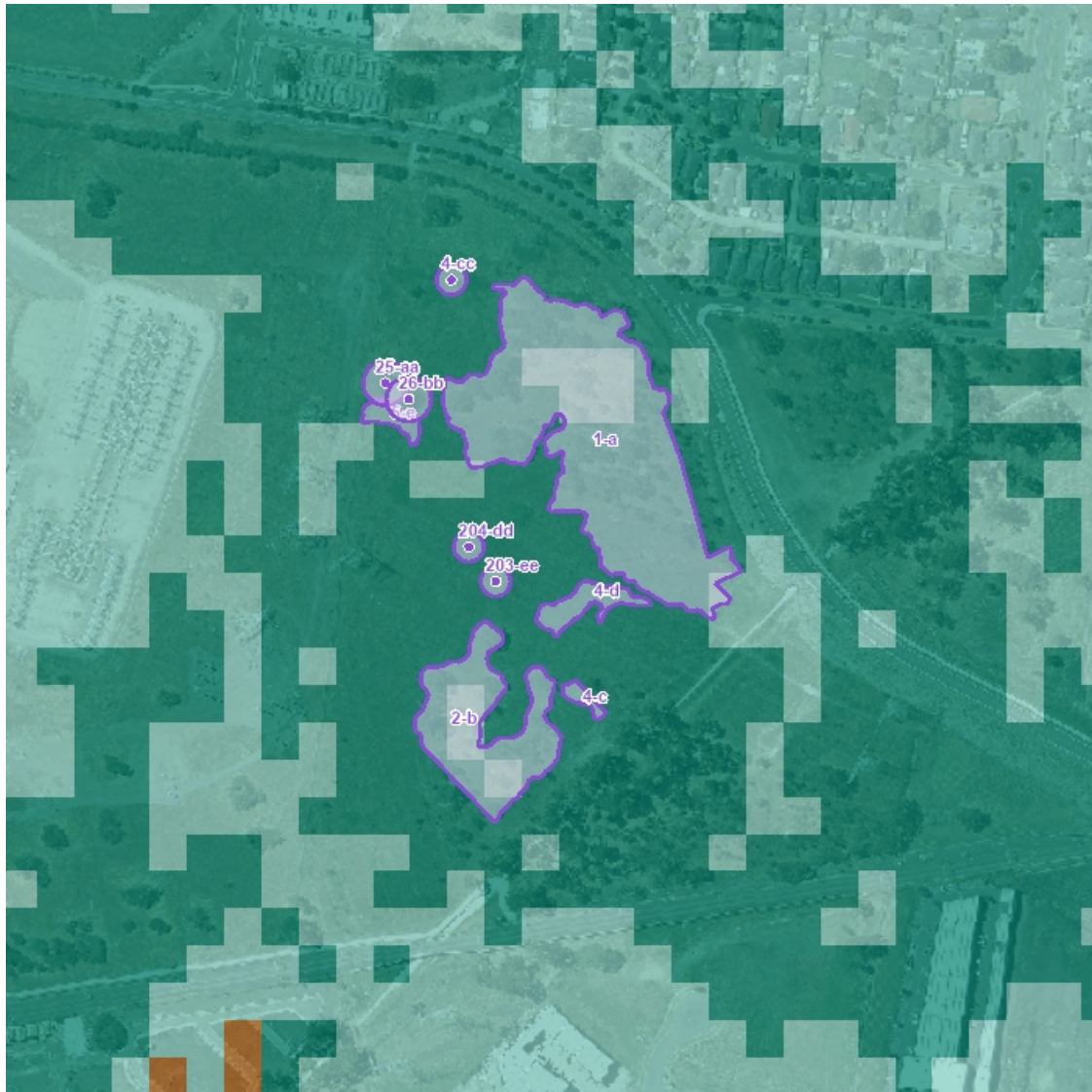


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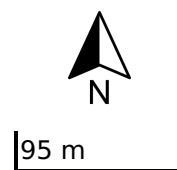
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3. Location Risk Map



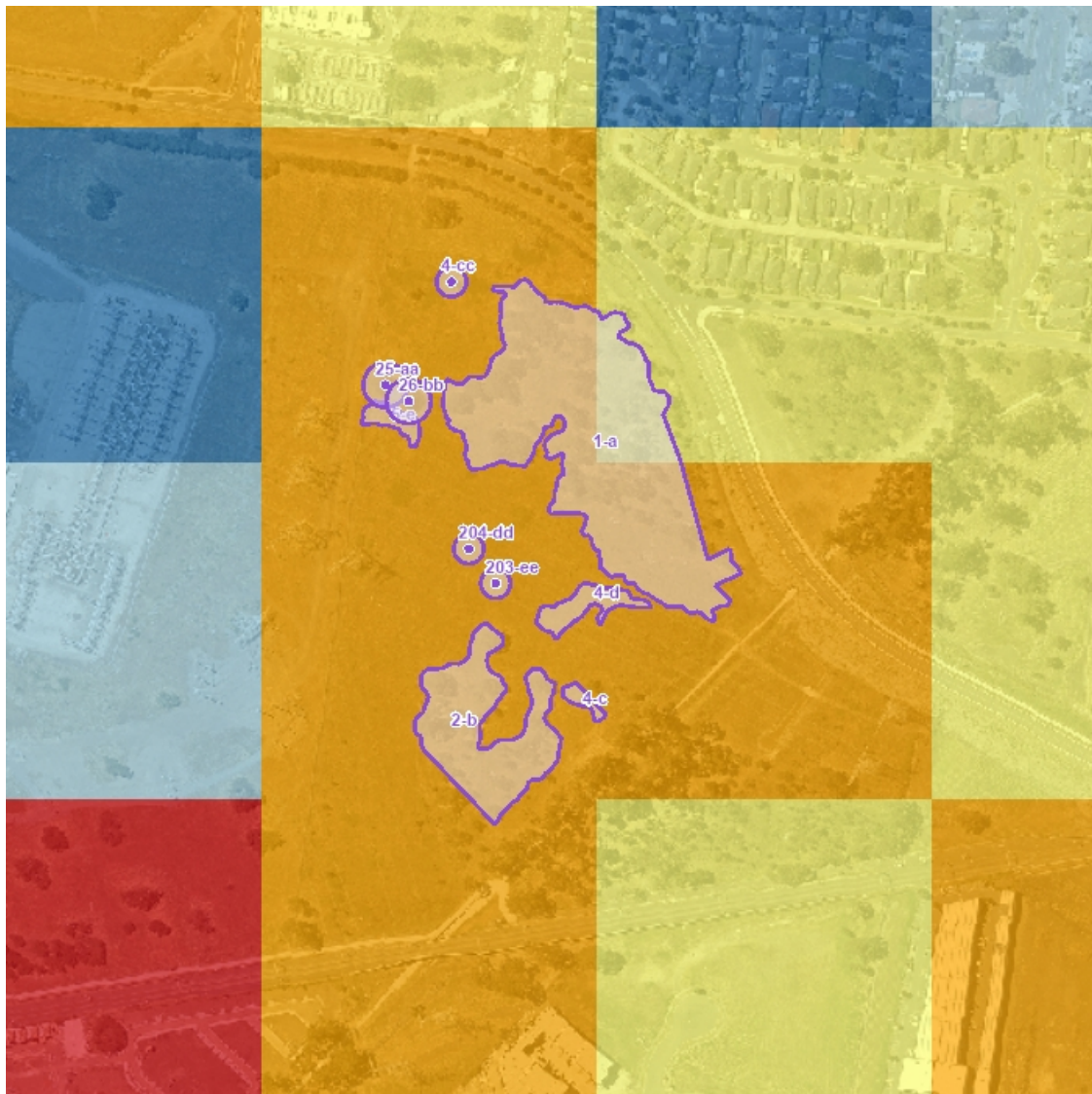
- | | |
|--|--|
| Proposed Removal | Location 1 |
| Past Removal | Location 2 |
| Partial Removal | Location 3 |



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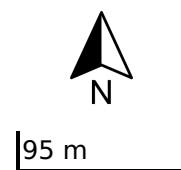
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4. Strategic Biodiversity Value Score Map



- Proposed Removal
- Past Removal
- Partial Removal

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



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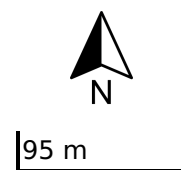
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5. Modelled Condition Score Map



- Proposed Removal
- Past Removal
- Partial Removal

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



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6. Modelled Endangered EVCs



- Proposed Removal
- Past Removal
- Partial Removal
- Endangered 1750 Ecological Vegetation Classes



95 m

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7. Habitat Importance maps

Not Applicable

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