



# Flora and fauna report

45 Perry Lane Boxers Creek, NSW 2580

Prepared for YLess4U



## DOCUMENT TRACKING

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## Abbreviations

| Abbreviation | Definition                                                  |
|--------------|-------------------------------------------------------------|
| BAM          | Biodiversity Assessment Method                              |
| BC Act       | Biodiversity Conservation Act                               |
| BDAR         | Biodiversity Development Assessment Report                  |
| BOM          | Bureau of Meteorology                                       |
| BOS          | Biodiversity Offset Scheme                                  |
| BVM          | Biodiversity Values Map                                     |
| CE           | Critically Endangered                                       |
| CEMP         | Construction Environmental Management Plan                  |
| DCCEEW       | Department of Climate Change, Energy, Environment and Water |
| DCP          | Development Control Plan                                    |
| DP           | Deposited Plan                                              |
| DPE          | Department of Planning and Environment                      |
| EEC          | Endangered Ecological Community                             |
| EP&A Act     | Environmental Planning and Assessment Act                   |
| EPBC Act     | Environment Protection and Biodiversity Conservation Act    |
| ha           | Hectares                                                    |
| LEP          | Local Environmental Plan                                    |
| LGA          | Local Government Area                                       |
| km           | Kilometers                                                  |
| m            | Metres                                                      |
| MNES         | Matter of National Environmental Significance               |
| NSW          | New South Wales                                             |
| OEH          | Office of Environment and Heritage                          |
| PCT          | Plant Community Types                                       |
| PMST         | Protected Matters Search Tool                               |
| RH           | Relative Height                                             |
| SEPP         | State Environmental Planning Policy                         |
| SIC          | Significant Impact Criteria                                 |
| TEC          | Threatened Ecological Community                             |
| ToS          | Test of Significance                                        |
| EEC          | Endangered Ecological Community                             |
| VMP          | Vegetation Management Plan                                  |
| WE           | Waratah Ecology                                             |

# 1. Introduction

## 1.1. Project background

Waratah Ecology was engaged by YLess4U (the client) to undertake a flora and fauna assessment for a proposed development at 45 Perry Lane, Boxers Creek NSW 2580 (the study area).

This document reports on the ecological values identified within the study area and considers both the direct and indirect impacts of the proposed development in relation to current environmental planning legislation. This includes an assessment of the impacts on ecological communities and native flora and fauna listed under the NSW *Biodiversity Conservation Act 2016* (BC Act), and the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) that could occur in and around the study area.

This report has been prepared to accompany a Development Application, and should be considered in conjunction with the following reports:

- Ember Bushfire Consulting Services (2024). Bushfire Assessment Report, 45 Perry Lane, Boxers Creek 'Installation of a Wi-Fi communications tower', dated 23 October 2024.
- Bereza Surveying (2024) Tower Location Survey, dated 7 November 2024.

## 1.2. Site description and location

The study area is located 45 Perry Lane, Boxers Creek NSW 2580 and covers approximately 131.43ha (see **Figure 1 & 2** and images **1-12** in **Appendix A**). The subject land is defined by the extent of the proposed works within the study area and includes the Asset Protection Zone (APZ) and adjacent areas likely to be directly or indirectly affected by the development.

The site is located within Goulburn Mulwaree Local Government Area (LGA) and can be further identified as Lot 4 in Deposited Plan (DP) 1094055. The study area is zoned as C3 – Environmental Management and is bordered by other C3 zoned lots under the Goulburn Mulwaree Local Environment Plan (LEP) 2009 (see **Figure 3**). Curlewin Lane runs towards the south-west corner of the study area and the remainder of the study area appears undeveloped, with the land cleared of much of the original vegetation.

The study area is not mapped on the Biodiversity Values Map (BVM) (refer **Figure 4**) however the whole of the study area is mapped as containing 'Terrestrial Biodiversity' under the Goulburn Mulwaree LEP 2009 (refer **Figure 5**). The majority of the study area is not classified as a PCT, however some patches of Wollondilly-Shoalhaven Quartz Hills Forest (PCT 3492), Goulburn Tableland Scribbly Gum Shrub Forest (PCT 3737), Bungonia Tableland Silvertop Ash-Stringybark Forest (PCT 3643) and Goulburn Lithgow Tableland Hills Grassy Forest (PCT 3738) are mapped within the study area. The subject land, where development is proposed, does not conform to any PCTs, although patches of PCT 3737 and PCT 3492 exist within 150 metres of the proposed development.

The property is not subject to the Rural Boundary Clearing Code, The study area is located in a designated 10/50 vegetation entitlement clearing area. The study area is mapped as land excluded from the Local Land Services Act under the NSW Government Draft Native Vegetation Regulatory Map.

**Table 1:** Site Description

| Criteria                                   | Description                          |
|--------------------------------------------|--------------------------------------|
| Street Address                             | 45 Perry Lane, Boxers Creek NSW 2580 |
| Lot and DP                                 | Lot 4, DP 1094055                    |
| Approximate Area                           | 131.43ha                             |
| Local Governing Area                       | Goulburn Mulwaree Council            |
| Land Zoning                                | C3 – Environmental Management        |
| Biodiversity Values Map                    | No                                   |
| Terrestrial Biodiversity                   | Yes                                  |
| Bushfire prone land                        | Vegetation Category 3                |
| 10/50 Vegetation Entitlement Clearing Area | Yes                                  |
| Rural Boundary Clearing Code               | No                                   |

### 1.3. Proposed Development

As per the site plans provided by the client, the proposal involves the construction of a single Wi-Fi Communications Tower and associated infrastructure. Also proposed is the construction of a 200m long and 2m wide access road running from the end of Curlewin Lane to the proposed Tower's location. It is understood that no tree removal will be required to accommodate the proposed development, however the slashing of undergrowth, grassy tussocks, and shrubs may be required in order to provide an adequate access and to maintain the APZ, which requires the clearing of 20m of vegetation around the tower (**Figure 6**).

As noted above, the property is not subject to the Rural Boundary Clearing Code and is located in a designated 10/50 vegetation entitlement clearing area.

The development footprint will occupy an area of approximately 0.1ha and is sited in an area considered to be of relatively low ecological value. The area is heavily dominated by thistle weed (*Cirsium vulgare*) and Serrated Tussock (*Nassella trichotoma*), a Weed of National Significance which is identified as a threat to native flora, able to displace native plants and dominate local plant communities (Goulburn Mulwaree Council Local Weed Management Plan, 2019). Any persons dealing with Serrated Tussock must comply with their Biosecurity Duty including the prevention, elimination, or minimisation of adverse effects of this weed on the economy, environment, and community. The proposed development will result in minimal disturbance to areas within the study area (outside of the subject land) which is considered to be of higher ecological value.

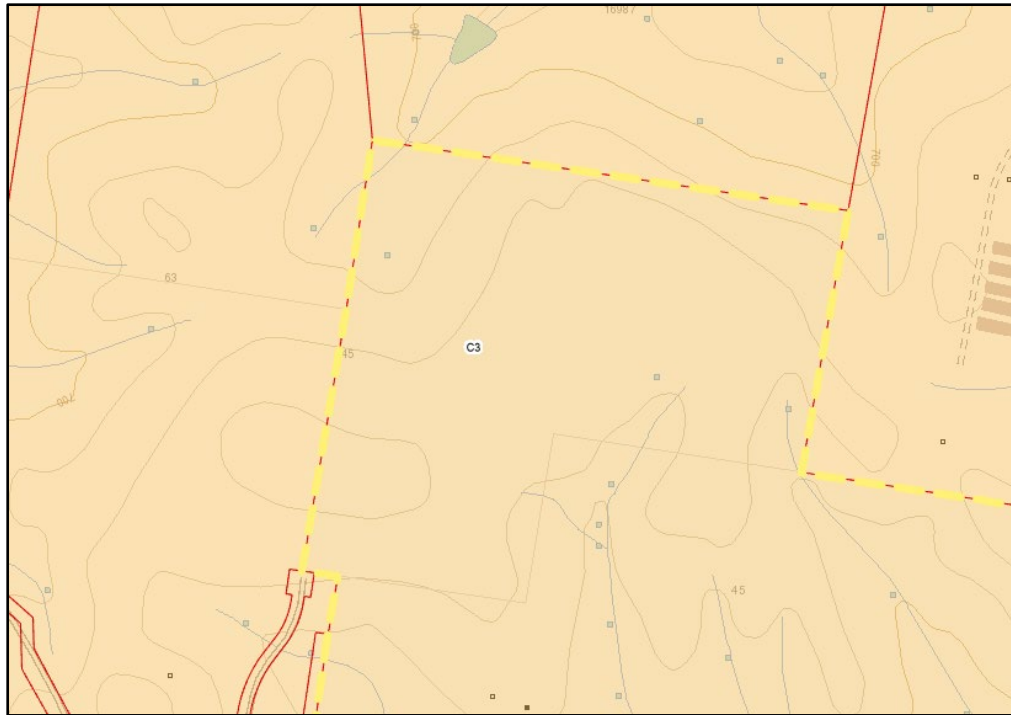
X



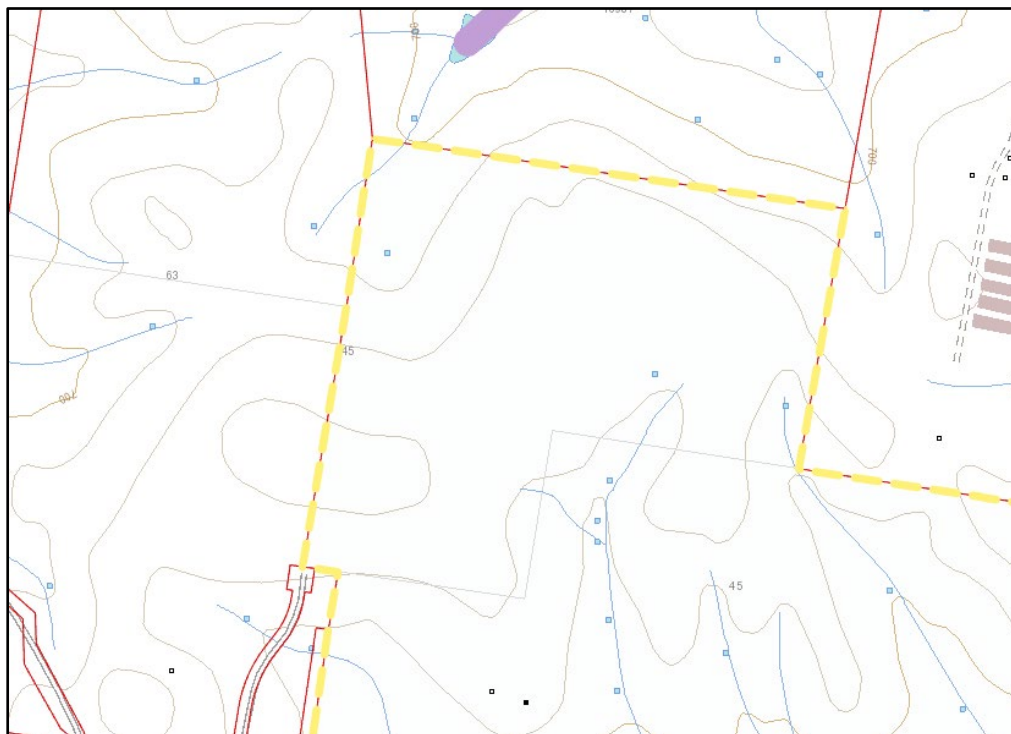
**Figure 1:** Aerial view of the subject land within the study area (source: nearmap.com)



**Figure 2:** Aerial view of the subject land (source: nearmap.com)

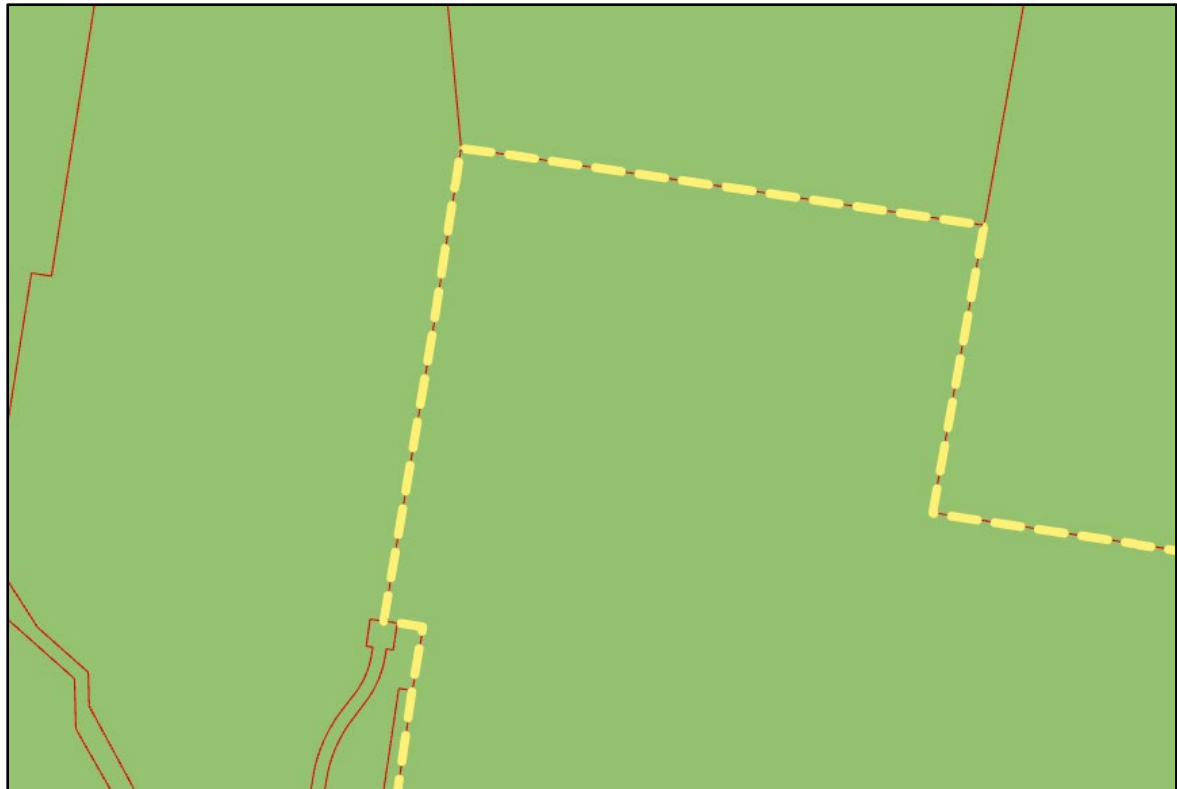


**Figure 3:** Current land zoning (C3) of 45 Perry Lane, Boxers Creek NSW 2580 (source: NSW Planning Portal Spatial Viewer)



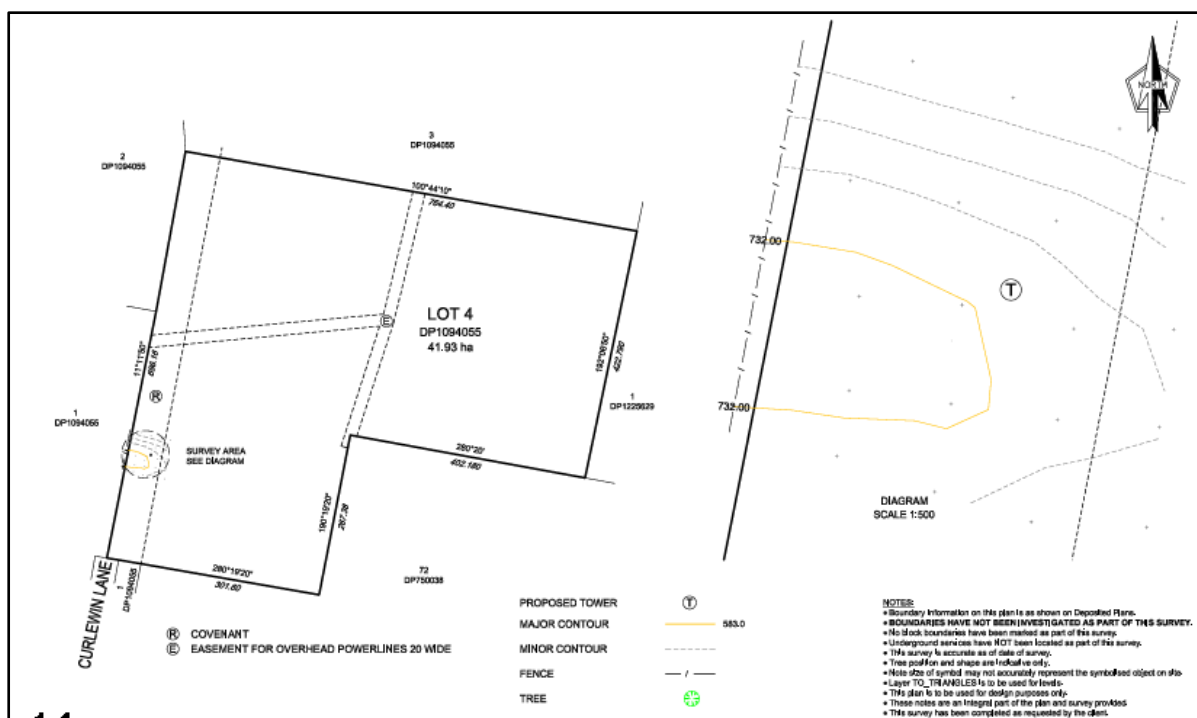
**Figure 4:** The study area in relation to areas mapped on the Biodiversity Value Map (source: NSW Planning Portal Spatial Viewer)

 Biodiversity Values



**Figure 5:** The study area in relation to areas mapped on the Terrestrial Biodiversity Map (source: NSW Planning Portal Spatial Viewer)

Terrestrial Biodiversity Map – Environmentally Sensitive Land



**Figure 6:** Proposed development at 45 Perry Lane, Boxers Creek NSW (source: Bereza Surveying)

## 1.4. Legislative context

**Table 2:** Legislative Framework reviewed in this report (Commonwealth, State and Local)

| Instrument                                                                      | Consideration                                                         | Context                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------------------------------------------------------------------------|-----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Commonwealth</b>                                                             |                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <i>Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)</i> | Matters of National Environmental Significance                        | An action will require approval from the Minister if the action has, will have, or is likely to have, a significant impact on a matter of national environmental significance.                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>State (New South Wales)</b>                                                  |                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <i>Environmental Planning and Assessment Act 1979 (EP&amp;A Act)</i>            | Part 4 – Development Assessment and Consent                           | <b>The EP&amp;A Act</b> is the principal planning legislation for NSW. It provides a framework for the overall environmental planning and assessment of proposals.                                                                                                                                                                                                                                                                                                                                                                                                |
| <i>Biodiversity Conservation Act 2016 (BC Act)</i>                              | Part 7 – Biodiversity Assessment and Approvals under the Planning Act | <b>Section 7.3</b> provides the test for determining whether proposed development or activity is likely to significantly affect threatened species or ecological communities, or their habitats.                                                                                                                                                                                                                                                                                                                                                                  |
| <i>Biodiversity Conservation Regulation 2017 (BC Reg)</i>                       | Part 7.1                                                              | Establishes that a proposed development triggers the biodiversity offset scheme if it involves the clearing of native vegetation on land included on the Biodiversity Values Map.                                                                                                                                                                                                                                                                                                                                                                                 |
| <i>State Environmental Planning Policy (Biodiversity and Conservation) 2021</i> |                                                                       | This <b>SEPP</b> aims to protect the biodiversity values of trees and other vegetation in non-rural areas of the State, and to preserve the amenity of non-rural areas of the State through the preservation of trees and other vegetation.                                                                                                                                                                                                                                                                                                                       |
| <i>State Environmental Planning Policy (Koala Habitat Protection) 2021</i>      |                                                                       | This policy aims to encourage the conservation and management of areas of natural vegetation that provide habitat for koalas to support a permanent free living population over their present range and reverse the current trend of koala population decline. This SEPP applies to LGAs that are listed in Schedule 1 of the SEPP. As the Goulburn Mulwaree LGA is listed in Schedule 1, the Koala Habitat Protection SEPP 2021 applies to potential development applications and may require a suitably qualified environmental consultant to prepare a report. |
| <i>Rural Fires Act 1997</i>                                                     | Rural Boundary Clearing Code<br>10/50 Vegetation Clearing Scheme      | <b>Rural Boundary Clearing Code</b> means a code under Section 100RA, as in force from time to time, allowing landholders in a Rural Boundary clearing area to clear vegetation on their property within 25 metres of their property boundary (25 metre rule)<br><br><b>10/50 Vegetation Clearing Scheme</b> means a code of practice under Section 100Q, in force from time to time, relating to the clearing of vegetation on land situated in a 10/50 Vegetation Clearing                                                                                      |

| Instrument                                             | Consideration                                                                               | Context                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|--------------------------------------------------------|---------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Entitlement Area.                                      |                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Local Government                                       |                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <i>Goulburn Mulwaree Local Environmental Plan 2009</i> | Part 1.2 'Aims of Plan'<br>Part 2.1 'Land use zones'<br>Part 7.2 'Terrestrial Biodiversity' | <p><b>1.2(e)</b> to protect and conserve the environmental and cultural heritage of Goulburn Mulwaree</p> <p><b>1.2 (i)</b> to allow development only if it occurs in a manner that minimises risks due to environmental hazards, and minimises risks to important elements of the physical environment, including water quality,</p> <p><b>2.1:</b> In accordance with the LEP, the study area is zoned as C3 – 'Environmental Management'. The objectives of the zone are:</p> <ul style="list-style-type: none"> <li>• To protect, manage and restore areas with special ecological, scientific, cultural or aesthetic values.</li> <li>• To provide for a limited range of development that does not have an adverse effect on those values.</li> <li>• To facilitate the management of water catchment areas, environmentally sensitive land and areas of high conservation value.</li> </ul> <p><b>7.2 Terrestrial biodiversity</b></p> <p>The objectives of this clause are to protect, maintain or improve the diversity of the native vegetation, including protecting biological diversity of native flora and fauna, protecting the ecological processes necessary for their continued existence and encouraging the recovery of threatened species, communities or populations and their habitats.</p> <p>This clause applies to development on land that is identified as "Biodiversity" on the Terrestrial Biodiversity Map.</p> <p>Development consent must not be granted to development on land to which this clause applies unless the consent authority has considered a report that addresses the following matters:</p> <p><b>(a)</b> identification of any potential adverse impact of the proposed development on any of the following—</p> <ul style="list-style-type: none"> <li><b>(i)</b> a native vegetation community,</li> <li><b>(ii)</b> the habitat of any threatened species, population or ecological community,</li> <li><b>(iii)</b> a regionally significant species of plant, animal or habitat,</li> <li><b>(iv)</b> a habitat corridor</li> <li><b>(v)</b> a wetland</li> <li><b>(vi)</b> the biodiversity values within a reserve, including a road reserve or a stock route</li> </ul> |

| Instrument                                             | Consideration | Context                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|--------------------------------------------------------|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                        |               | <p>(b) a description of any proposed measures to be undertaken to ameliorate any such potential adverse impact.</p> <p>(4) Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that the development is consistent with the objectives of this clause and—</p> <p>(a) the development is designed, sited and managed to avoid the potential adverse environmental impact, or</p> <p>(b) if a potential adverse impact cannot be avoided, the development—</p> <p>(i) is designed and sited so as to have minimum adverse impact, and</p> <p>(ii) incorporates effective measures so as to have minimal adverse impact, and</p> <p>(iii) mitigates any residual adverse impact through the restoration of any existing disturbed or modified area on the site.</p> |
| <i>Goulburn Mulwaree Development Control Plan 2009</i> |               | Contains development controls that development applications must adhere to or address. In addition, the DCP also contains controls relating to the removal of vegetation in an urban zone, whether or not a development application is required.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

## 1.5. Biodiversity Offsets Scheme

Under the BC Act and its Regulations, developments that trigger the ‘Biodiversity Offset Scheme’ (BOS) may require a ‘Biodiversity Development Assessment Report’ (BDAR) that addresses the Biodiversity Assessment Method (BAM) and the purchasing of Biodiversity Credits

For a local development under Part 4 of the EP&A Act, the BOS and BAM may be triggered by the following means:

- It is likely to significantly affect threatened species or ecological communities, or their habitats, according to the test in section 7.3
- It is carried out in a declared area of outstanding biodiversity value
- Exceeding the area clearing threshold associated with the minimum lot size for the property (Table 3)
- If the impacts occur on an area mapped on the Biodiversity Values Map (BVM).

The BC Act and its regulations stipulate native vegetation clearing ‘area threshold’ values that determine whether a development is required to be assessed in accordance with the BOS. Minimum entry thresholds for native vegetation clearing depend on the minimum lot size (shown in the Lot Size Maps made under the relevant Local Environmental Plan [LEP]), or actual lot size (where there is no minimum lot size provided for the relevant land under the LEP).

The biodiversity impacts of any vegetation clearing required for a proposal must be considered under Part 7 of the BC Act. This includes:

- Proposed APZ required under Planning for Bushfire Protection (PBP) 2019 including areas of vegetation that are partially cleared and already meet the specifications of a proposed APZ
- Access roads to meet requirements under the PBP 2021 or for other reasons
- Facilities/works that are ancillary to the proposal such as driveways, fence lines and landscaping.

If an APZ is proposed within vegetation that is partially cleared and meets the specifications of the proposed APZ or subsequent 10/50 clearing entitlement, it must still be considered when determining whether a BDAR is required.

The minimum lot size for the subject property is 40ha, allowing for 1 ha of native vegetation to be cleared before which the BAM and offsets scheme applies. The study area is not mapped on the Biodiversity Values Map (BVM). The subject land is not classified as an area containing outstanding biodiversity value.

**Table 3:** BOS area clearing threshold

| Minimum lot size associated with the property | Threshold for clearing native vegetation, above which the BAM and offsets scheme apply |
|-----------------------------------------------|----------------------------------------------------------------------------------------|
| Less than 1 ha                                | 0.25 ha or more                                                                        |
| 1 ha to less than 40 ha                       | 0.5 ha or more                                                                         |
| 40ha to less than 1000 ha                     | 1 ha or more                                                                           |
| 1000 ha or more                               | 2 ha or more                                                                           |

## 1.6. Significance Assessments

### 1.6.1 Assessment of Significance under the BC Act

Assessments using the criteria provided under the BC Act (i.e. Test of Significance (ToS)) must be taken into account by consent or determining authorities when considering a development proposal or development application. This enables a decision to be made as to whether there is likely to be a significant impact on the species and hence if entry into the BOS is required.

The results of the field survey have been used to inform whether significance assessments are required for any listed species and communities.

### 1.6.2 EPBC Act Significant Impact Guidelines

The EPBC Act establishes a process for assessing the environmental impact of activities and developments where Matters of National Environmental Significance (MNES) may be affected.

The process includes the application of Significant Impact Criteria (SIC) for listed threatened species and ecological communities that represent a MNES that will be impacted as a result of the proposed action. Significant impact guidelines that outline a number of criteria have been developed by the Commonwealth, to provide assistance in conducting the assessment and help decide whether or not a referral to the Commonwealth is required.

Under the Act, any action which “has, will have, or is likely to have a significant impact on a MNES” is defined as a controlled action and requires approval from the Commonwealth Department of Climate Change, Energy, the Environment and Water.

## 2. Methodology

### 2.1. Literature and database review

A site-specific literature and database review was undertaken prior to the field survey and the preparation of this report. This included desktop analysis of aerial photography and review of regional scale information from the following sources:

- Biodiversity Values Map (DPE 2024a)
- EPBC Act Protected Matters Search Tool (DCCEEW 2024)
- NSW BioNet Atlas (OEH 2024a)
- NSW BioNet Vegetation Classification (OEH 2024b)
- NSW ePlanning spatial viewer (DPE 2024b)
- SEED The Central Resource for Sharing and Enabling Environmental Data in NSW (OEH 2024c)
- Six Maps (LPI 2022)
- Nearmaps.com
- Goulburn Mulwaree Local Environmental Plan 2009
- Goulburn Mulwaree Development Control Plan 2009
- Goulburn Mulwaree Biodiversity Strategy (Eco Logical 2007)

Searches using NSW BioNet Atlas (OEH 2024a) and the Commonwealth Protected Matters Search Tool (DCCEEW 2024) were conducted to identify threatened flora and fauna, as well as migratory fauna records within a 10km x 10km cell search area centred on the study area. This data, combined with the available habitat, was used to establish the likelihood of any threatened species occurring within the study area.

Vegetation communities were assessed against described Threatened Ecological Communities (TECs) listed under the EPBC Act and/or the BC Act.

### 2.2. Field survey

Traverses were undertaken across the study area, whilst recording visible flora species and identifying potential habitat for threatened species. Areas that were more likely to resemble intact, resilient vegetation were surveyed more extensively than degraded areas of the site.

An opportunistic fauna survey was undertaken for birds, amphibians, reptiles and mammals, which included observations along with signs of direct and indirect occupancy (i.e., scats, owl pellets, fur, bones, tracks, bark scratches, foliage chew marks etc.).

Fauna habitat searches were conducted for potential foraging, roosting, breeding or nesting habitat of nocturnal and diurnal species. This included tree hollows, stags, bird nests, possum dreys, decorticating bark, mature/old growth trees, food trees, culverts, dens, dams, riparian areas and refuge habitats.

### 2.3. Likelihood assessment

The likelihood and occurrence of threatened species, populations and migratory species:

- Reviewing the location and date of recent (<5 years) and historical (>5-20 years) records
- Reviewing available habitat within the study area and surrounding areas
- Applying expert knowledge of each species' ecology.

The potential for each threatened species, population and/or migratory species to occur was assessed and the necessity for targeted field surveys was determined.

Following field surveys and review of available habitat within the subject site and study area, the potential for species to utilise the site and be affected directly or indirectly by the proposed action were considered as either:

- “Recent record” = species has been recorded in the study area within the past 5 years
- “High” = species has previously been recorded in the study area (>5 years) or in proximity (for mobile species), and/or habitat is present that is likely to be utilised by a local population
- “Moderate” = suitable habitat for a species is present onsite but no evidence of a species detected and relatively high number of recent records (5-20 years) in the locality or species is highly mobile
- “Low” = suitable habitat for a species is present onsite but limited or highly degraded, no evidence of a species detected and relatively low number of recent records in the locality
- “Not present” – suitable habitat for the species is not present onsite or adequate survey has determined species does not occur in the study area.

A significance assessment was conducted for all species with a “moderate” or higher likelihood of occurrence within the study area.

## 3. Results

This section outlines the results of the desktop assessment and field survey.

### 3.1. Literature and database review

#### 3.1.1. Goulburn Mulwaree LEP 2009

The literature review identified that the following Additional Local Provision is applicable to the study area, as the site is mapped as an area of biodiversity on the Terrestrial Biodiversity Map:

#### ***7.2 Terrestrial biodiversity***

The objectives of this clause are to protect, maintain or improve the diversity of the native vegetation, including protecting biological diversity of native flora and fauna, protecting the ecological processes necessary for their continued existence, encouraging the recovery of threatened species, communities or populations and their habitats.

Development consent must not be granted to development on land to which this clause applies unless the consent authority has considered a report that addresses the following matters:

(a) identification of any potential adverse impact of the proposed development on any of the following—

- (i) a native vegetation community
- (ii) the habitat of any threatened species, population or ecological community
- (iii) a regionally significant species of plant, animal or habitat
- (iv) a habitat corridor
- (v) a wetland
- (vi) the biodiversity values within a reserve, including a road reserve or a stock route

(b) a description of any proposed measures to be undertaken to ameliorate any such potential adverse impact.

Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that the development is consistent with the objectives of this clause and—

(a) the development is designed, sited and managed to avoid the potential adverse environmental impact, or

(b) if a potential adverse impact cannot be avoided, the development—

- (i) is designed and sited so as to have minimum adverse impact, and
- (ii) incorporates effective measures so as to have minimal adverse impact, and
- (iii) mitigates any residual adverse impact through the restoration of any existing disturbed or modified area on the site.

### 3.1.2. Threatened flora and fauna

A review of the NSW BioNet Atlas the Commonwealth PMST, and the Goulburn Mulwaree Biodiversity Strategy, identified 6 threatened flora species and 26 threatened fauna species that are known or considered likely to occur within 5km of the study area. A habitat assessment and review of recent records was undertaken to determine the likelihood of occurrence and whether a significant impact assessment was required. Many of the threatened flora and fauna species excluded from further consideration are species that do not have suitable habitat in the study area, and thus are not likely to be affected by the proposed works. The likelihood assessment is provided at **Appendix B**

### 3.1.3. Vegetation type

Based on the NSW State Vegetation Type Map, there are four plant community types (PCTs) mapped throughout the study area, two of which are present within 150 metres of the proposed development. None of these PCTs are associated with Threatened Ecological Communities

***PCT Number: 3492 – Present within 150 metres of proposed development***

- PCT name: Wollondilly-Shoalhaven Quartz Hills Forest
- Vegetation Class: South East Dry Sclerophyll Forests
- Vegetation Formation: Dry Sclerophyll Forests (Shrubby sub-formation)
- IBRA: South Eastern Highlands, Sydney Basin
- LGAs: Goulburn Mulwaree, Upper Lachlan Shire, Wingecarribee

**PCT description:**

A tall dry shrub/grass sclerophyll open forest of elevated gorges and hills distributed from the western rim of the Southern Highlands west to Goulburn, mostly from Sandy Flat and Newfoundland south to Bungonia and Governors Hill.

This PCT occurs predominantly on dissected hills of quartz-rich sedimentary and metasedimentary geologies, at elevations of 550-900 metres asl with 650-850 mm mean annual rainfall. The tree canopy very frequently includes *Eucalyptus agglomerata*, commonly with *Eucalyptus punctata* and occasionally *Eucalyptus macrorhyncha*.

A patchy to sparse mid-stratum includes occasional tall *Acacia falciformis* with smaller shrubs that very frequently include *Hibbertia obtusifolia* and *Persoonia linearis*, occasionally with *Melichrus urceolatus*, *Lissanthe strigosa*, *Olearia viscidula* or *Podolobium ilicifolium*. The ground layer contains a mix of hardy tableland grasses and forbs, commonly including taller clumps of *Dianella revoluta* and *Rytidosperma pallidum*.

Sparse and scattered smaller species almost always include *Goodenia hederacea* and *Lomandra filiformis*, commonly with *Pomax umbellata*, *Gonocarpus tetragynus*, *Hardenbergia violacea*, *Lomandra multiflora* subsp. *multiflora*, *Billardiera scandens*, *Opercularia diphylla* and *Microlaena stipoides*.

**PCT Number: 3737 – Present within 150 metres of proposed development**

- PCT name: Bungonia Tableland Scribbly Gum Shrub Forest
- Vegetation Class: Southern Tableland Dry Sclerophyll Forests
- Vegetation Formation: Dry Sclerophyll Forests (Shrubby sub-formation)
- IBRA: South Eastern Highlands, Sydney Basin
- LGAs: Goulburn Mulwaree, Queanbeyan-Palerang Regional, Wingecarribee

**PCT description:**

A dry shrubby sclerophyll open forest of shallow soils on rolling low tableland hills, primarily within the Bungonia subregion of the South Eastern Highlands.

This PCT is distributed from Cookbundoon Range foothills east to Arthursleigh and Penrose, and south to Larbert and Wog Wog, at elevations of 550-700 metres asl with 650-950 mm mean annual rainfall. This community is strongly associated with moderately infertile sandy clay soils derived from sedimentary rocks, particularly sandstones of the Abercrombie Formation, however also has scattered occurrences on other geologies including other sedimentary, granite and ignimbrite rocks.

A mid-high to tall tree canopy is very frequently dominated by *Eucalyptus rossii*, commonly with *Eucalyptus mannifera* and/or *Eucalyptus dives* and occasionally *Eucalyptus macrorhyncha*. An occasional sparse small tree layer includes scattered *Allocasuarina littoralis*, and a sparse to mid-dense shrub layer commonly includes *Brachyloma daphnoides* and *Persoonia mollis*, with diverse occasional species including *Daviesia leptophylla*, *Gompholobium minus*, *Melichrus urceolatus*, *Hakea dactyloides*, *Aotus ericoides*, *Hibbertia obtusifolia*, *Lomatia ilicifolia*, *Persoonia linearis*, *Leucopogon virgatus* and *Xanthorrhoea concava*.

The sparse to mid-dense ground layer has a suite of tough, wiry plants that very frequently includes *Goodenia hederacea*, *Dianella revoluta* and *Lomandra multiflora subsp. multiflora*, and commonly *Gonocarpus tetragynus*, *Lomandra filiformis*, *Patersonia sericea*, *Rytidosperma pallidum*, *Lomandra obliqua*, *Lepidosperma gunnii* and *Entolasia stricta*. Occasionally present are *Hovea linearis*, *Opercularia diphylla*, *Stylidium graminifolium*, *Microlaena stipoides*, *Lomandra glauca* or *Poa sieberiana*.

**PCT Number: 3643**

- PCT name: Bungonia Tableland Silvertop Ash-Stringybark Forest
- Vegetation Class: South East Dry Sclerophyll Forests
- Vegetation Formation: Dry Sclerophyll Forests (Shrubby sub-formation)
- IBRA: South Eastern Highlands, Sydney Basin
- LGAs: Goulburn Mulwaree, Queanbeyan-Palerang Regional, Shoalhaven, Upper Lachlan Shire, Wingecarribee

**PCT Number: 3738**

- PCT name: Goulburn-Lithgow Tableland Hills Grassy Forest
- Vegetation Class: Southern Tableland Dry Sclerophyll Forests
- Vegetation Formation: Dry Sclerophyll Forests (Shrubby sub-formation)
- IBRA: South Eastern Highlands, Sydney Basin
- LGAs: Goulburn Mulwaree, Lithgow City, Queanbeyan-Palerang Regional, Shoalhaven, Upper Lachlan Shire, Wingecarribee

## 3.2. Field survey

A daytime field survey was conducted on 26 November 2024. Weather conditions on the day were fine and sunny (refer **Table 4**)

**Table 4:** Weather conditions at 45 Perry Lane, Boxers Creek NSW 2580 on 26 November 2024

| Date       | Temp (C°) |      | Rainfall (mm) | Wind      |              | Humidity |
|------------|-----------|------|---------------|-----------|--------------|----------|
|            | Min       | Max  |               | Direction | Speed (km/h) |          |
| 26/11/2024 | 10.5      | 23.8 | 1.3           | NW        | 26.7         | 67%      |

### 3.2.1. Vegetation and ecological communities

The vegetation within the study area consists of open derived grassland with scattered remnant eucalypt trees. The subject land is dominated by exotic species including *Sonchus oleraceus* (Common Sowthistle) and *Nassella trichotoma* (Serrated Tussock).

Patches of remnant native vegetation exist within the study area, however, none of this vegetation will be impacted by the proposed development.

### 3.2.2. Flora

A list of flora species identified during the survey is provided at **Appendix C**.

No threatened flora species were recorded during the survey, and none have been recorded in the study area in the last 20 years.

One Weed of National Significance (WoN) was identified during the survey (*Nassella trichotoma*). This species is subject to a general biosecurity duty under the BC Act 2015 and should be managed in accordance with the Goulburn Mulwaree Council Local Weed Management Plan (2019) and the South East Regional Strategic Weed Management Plan 2023-2027 to avoid further spread, particularly during construction.

The flora survey aimed to record as many species as possible. However, a definitive list of the flora within the study area cannot be gathered without systematic traverses and surveys across several seasons. Additional species may be recorded during a longer survey over various seasons. Some species cannot always be accurately identified during a brief survey, generally due to a lack of suitable flowering and/or fruiting material. The techniques used in this investigation are considered adequate to gather the data necessary to validate the vegetation communities and vegetation condition in the study area and assess the likelihood of occurrence of any threatened flora species.

### 3.2.3. Fauna and fauna habitat

No threatened fauna species were recorded during field surveys. Some fauna habitat features exist within the study area, including trees, shrubs, rocks and groundcover. These features provide potential foraging, roosting, breeding and nesting resources (**Table 5**). There are no mature trees, rocks, caves, overhangs or crevices to provide potential habitat within the subject land.

The native vegetation (including mature trees) and associated features, within the study area (outside of the subject land) are considered to provide habitat for a number of species which could utilise the vegetation for foraging and/or nesting. It is understood that this vegetation will not be impacted by the proposed development.

Macropod scats were identified during the field survey, indicating that the subject land is utilised for grazing by native animals.

**Table 5:** Fauna habitat features within the study area.

| Habitat features              | Fauna species                                                                                 |
|-------------------------------|-----------------------------------------------------------------------------------------------|
| Shrubs and groundcover        | Habitat and foraging resources for diurnal birds, reptiles, ground mammals                    |
| Leaf litter                   | Foraging resources for reptiles, gastropods, birds and mammals                                |
| Juvenile and mature trees     | Habitat, nesting, and foraging resources for birds, megachiropteran bats and arboreal mammals |
| Rocks, fallen timber and logs | Refuge and foraging habitat for reptiles, ground mammals, and birds.                          |

### 3.2.4. State Environmental Planning Policy (Koala Habitat Protection) 2021

The subject site is within the Central and Southern Tablelands Koala Management Area (Central and Southern Tablelands KMA or KMA 5).

State Environmental Planning Policy (Biodiversity and Conservation) 2021, Chapter 4 – Koala habitat protection 2021 (Koala Habitat SEPP 2021) applies in all land zones within the Goulburn Mulwaree LGA.

According to Part 2 of the Koala Habitat SEPP 2021:

- Before a council may grant consent to a development application for consent to carry out development on the land, the council must assess whether the development is likely to have any impact on koalas or koala habitat.
- If the council is satisfied that the development is likely to have low or no impact on koalas or koala habitat, the council may grant consent to the development application.

Step 1: Is the land highly suitable habitat (where highly suitable habitat means 15% or greater of the total number of trees within any Plant Community Type (PCT) are the regionally relevant species of those listed in the SEPP).

- The study area does contain koala use tree species as listed in Schedule 2 of the Koala Habitat SEPP 2021 for the Central and Southern Tablelands koala management area. However, none of these trees are present within the subject land.

Step 2: Is the land considered to be core koala habitat (where core koala habitat is an area of land which has been assessed by a suitably qualified and experienced person as being highly suitable koala habitat and where koalas are recorded as being present at the time of assessment of the land as highly suitable koala habitat, or (b) an area of land which has been assessed by a suitably qualified and experienced person as being highly suitable koala habitat and where koalas have been recorded as being present in the previous 18 years.

- Historical koala occupation of the area is determined by considering koala records within the 18 years in the form of NSW BioNet records. There are 17 recorded sightings within 5km of the study area within the last 18 years. The closest record was approximately 2km from the study area in 2017 and the most recent record was in 2023, approximately 3km away from the study area. No signs of koalas were recorded during the field survey. The study area is not considered to be core koala habitat

### 3.2.5. Migratory Fauna Species

The following EPBC Act listed migratory and listed overfly marine fauna species have the potential of occurring within the study area:

- *Gallinago hardwickii* (Latham's Snipe, Japanese Snipe)
- *Apus pacificus* (Fork-tailed Swift)
- *Calidris acuminata* (Sharp-tailed Sandpiper)
- *Calidris melanotos* (Pectoral Sandpiper)
- *Calidris ferruginea* (Curlew Sandpiper)
- *Actitis hypoleucos* (Common Sandpiper)
- *Motacilla flava* (Yellow Wagtail)
- *Hirundapus caudacutus* (White-throated Needletail)

The proposed development will have minimal impacts to potential foraging and breeding habitat for these species, given their migratory nature.

In the event that these species forage within the study area, the proposed removal of vegetation will have minimal impacts to habitat given the large areas of suitable foraging habitat in the surrounding area. As such, the proposed development is not likely to have a significant impact on these species.

### 3.2.6. Survey limitations

The field survey data collected during the survey period is representative of species occurring within the study area for that occasion. Due to effects of fire, breeding cycles, migratory patterns, camouflage, weather conditions, time of day, visibility, predatory and / or feeding patterns, increased species frequency or richness may be observed within the study area outside the nominated survey period.

Targeted surveys would need to be repeated over several seasons, during the evening and at dawn, to more adequately capture the diversity of flora and fauna that could occupy the study area. Habitat assessments based on the habitat features for various species of interest, including regionally significant and threatened species, were used to overcome this survey limitation.

The flora survey aimed to record as many species as possible. However, a definitive list of the flora within the study area cannot be gathered without systematic traverses and surveys across several seasons. Additional species may be recorded during a longer survey over various seasons. However, the techniques used in this investigation are considered adequate to gather the data necessary to validate the vegetation communities and vegetation condition in the study area and assess the likelihood of occurrence of any threatened flora species.

A full fauna survey following *Threatened Species Survey and Assessment Guidelines* (OEH 2020) was not undertaken as sufficient detail to determine the likelihood of occurrence of threatened and migratory species for the purpose of this report was achieved through opportunistic surveys and habitat assessment during the field survey.

## 4. Impact Assessment

All applications to Council for development or clearing approvals must set out how impacts on biodiversity will be avoided, minimised or mitigated. This includes applications that do not trigger entry into the Biodiversity Offsets Scheme.

Both direct and indirect impacts for the proposed works have been considered in the impact assessment below

### 4.1. Avoidance

The proposed development footprint is sighted close to the existing road in an area heavily dominated by exotic groundcover which has been historically modified and cleared of most of any previous canopy and understory layer. Only groundcover, exotic shrubs and potentially native saplings will be removed to accommodate the development. The area chosen is considered to have lower ecological value and will have a lower impact on the surrounding native vegetation than other potential sites within the study area.

## 4.2. Direct impacts

Direct impacts are those impacts that directly affect habitat and individuals. Direct impacts considered for this assessment are vegetation and habitat removal.

Due to the nature of the site, clearing of vegetation cannot be avoided to allow for the proposed Wi-Fi tower, associated infrastructure and required access driveway. As such, all impacts must be minimised or mitigated.

The proposed development is likely to result in the removal of 0.1ha of groundcover and shrubs. This area has been included in the calculations for the BOS area clearing threshold. No tree removal is required to achieve compliance with the APZ requirements. However, tree removal or pruning may be required in the future to maintain compliance.

Although exotic or modified grasslands may lack the full ecological richness of native vegetation, they may still offer biodiversity value by providing limited habitat and foraging opportunities for various species, supporting activities like sheltering, nesting, and feeding. Additionally, these grasslands contribute to soil stabilization and help control erosion. Therefore, even though impacts may seem minimal, rehabilitation is strongly recommended to enhance the ecological value within the subject land.

No threatened flora or fauna species listed under the EPBC Act or BC Act were identified in the study area during the field survey. Thirty-two threatened species have been recorded within 5km of the study area in the last 20 years. All these species were considered to have a 'low' likelihood of utilising the habitat within the subject land.

The directly impacted vegetation is considered to be of relatively low ecological value in comparison to other areas of the study area. However, any potential impacts are to be reduced with the implementation of the recommendations listed in Section 5.

## 4.3. Indirect Impacts

The proposed development is not considered to introduce any considerable additional indirect impacts on important vegetation or fauna habitat surrounding the study area.

The development footprint, as well as the associated APZ is not within a location that is considered to fragment any biodiversity linkages, and the proposal is not considered to have any significant indirect impacts outside of the study area, subject to the recommendations in Section 5 being implemented.

Indirect impacts may include:

- Weed spread and edge effects associated with construction
- Damage to native vegetation adjacent to the proposed development
- Increase in surface water runoff, sedimentation and nutrients during and following construction
- Increase in noise and disturbance to fauna in adjacent vegetation.

Impacts associated with changed water runoff, increased sedimentation and increased nutrients during demolition and construction should be mitigated through preparation and implementation of an Erosion and Sediment Control Plan. Increases in noise and disturbance during construction to potential fauna inhabitants in adjacent vegetation is likely to be minimal, given the urban environment and the availability of suitable habitat adjacent to the study area.

All other impacts are considered to be manageable through adherence with the recommendations listed in Section 5.

## 5. Recommendations

This section of the report details recommended efforts to avoid, minimise and mitigate impacts on biodiversity values associated with the proposed activity. Measures to be implemented before, during and post construction are provided below.

- Construction fencing pre and during construction should be put in place to ensure that construction related impacts are contained within the construction areas.
- Areas of retained native vegetation adjacent to the site should be no-go zones for plant and equipment and be clearly delineated with construction fencing.
- An Erosion and Sediment Control Plan should control sediment and stormwater runoff within the work site and prevent detrimental impacts from occurring in the surrounding area.
- Silt fences should be put in place around the construction site to limit the spread of sediment and weeds into adjacent vegetation.
- The works should be scheduled outside of predicted heavy rain periods.
- Erosion controls should be inspected regularly (daily during workdays) and after rainfall. Damaged controls should be fixed immediately. Accumulated sediment or waste material is to be removed from within the sediment controls regularly and disposed of at a licensed waste facility.
- Erosion and sediment controls are to be left in place until after the works are completed.
- Any areas outside the subject site that are disturbed in any way (vegetation removal, soil disturbance) should be rehabilitated through revegetation
- Weed control management should be put in place as follows:
  - ensure construction vehicles and earthmoving equipment are clean (and if necessary, are cleaned to remove soil and weed seed) before entering or leaving the study area
  - monitor soil disturbance in the work area and control any weeds as soon as they emerge
  - consider planting native species that are indigenous to the local area in landscaping
  - ensure garden plantings do not include other potentially invasive plant species.
  - Any exotic vegetation removed from the site should be disposed of at an approved facility.

## 6. Conclusions

This report provides an assessment of the ecological value of the flora and fauna within the subject land located at 45 Perry Lane, Boxers Creek NSW 2580 and considers the impacts of the proposed Wi-Fi tower development in relation to current environmental planning legislation.

The proposed Wi-Fi tower development (including the associated APZ, access road, infrastructure and cabling) is estimated to occupy an area of approximately 0.1ha. This is likely to require the removal of groundcover and understorey vegetation in the immediate area, which is considered to be of relatively low ecological value.

The study area is bordered by higher-quality native vegetation, and it is understood that none of this vegetation will be impacted by the proposed development.

The entirety of the site is also mapped as containing 'Terrestrial Biodiversity' as mapped on the Terrestrial Biodiversity Map (Sheet BIO\_001) in the Goulburn Mulwaree LEP 2009. Waratah Ecology understands that Council needs to be satisfied that the following has been considered in the design of the proposed development and/or through adherence with the recommendations proposed in Section 5:

- (a) the development is designed, sited and managed to avoid the potential adverse environmental impact, or
- (b) if a potential adverse impact cannot be avoided, the development—
  - (i) is designed and sited so as to have minimum adverse impact, and
  - (ii) incorporates effective measures so as to have minimal adverse impact, and
  - (iii) mitigates any residual adverse impact through the restoration of any existing disturbed or modified area on the site.

The mitigation measures recommended in this report are considered to be sufficient for Council to determine that the proposed development will not have an adverse impact on any of the following:

- native vegetation communities;
- the habitat of any threatened species, population or ecological community;
- a regionally significant species of plant, animal or habitat;
- a habitat corridor;
- a wetland; and
- the biodiversity values within a reserve, including a road reserve or a stock route.

This report also concludes that the development is consistent with the objectives of clause 7.2 of the Goulburn Mulwaree LEP and is designed, sited and managed to avoid any potential adverse environmental impact. The proposed development is located in an area of relatively low ecological value in comparison to other potential sites within the study area and measures will be implemented to minimise any negative impacts on the surrounding environment.

Section 7.2 of the BC Act provides that development under the EP&A 1979 is likely to significantly affect threatened species if: (a) it is likely to significantly affect threatened species or ecological communities, or their habitats, according to the test in section 7.3, or (b) the development exceeds the biodiversity offsets scheme threshold if the biodiversity offsets scheme applies to the impacts of the development on biodiversity values, or (c) it is carried out in a declared area of outstanding biodiversity value.

If the test of significance indicates that a significant effect on threatened species or ecological communities or their habitat is likely, the biodiversity offsets scheme will apply to the proposed development and a BDAR may be required.

No threatened flora or fauna listed under the EPBC Act or BC Act were identified within the study area during the field survey. It is noted that some threatened fauna species may utilise the area intermittently as foraging habitat. However, the habitat in the study area is not likely to be significant for populations of these highly mobile species. The overall impact to fauna habitat is considered to be insignificant given the condition of the habitat that would be impacted. It is unlikely that any species would be reliant upon the vegetation to be removed and would only utilise the habitat on an opportunistic basis while moving throughout the wider landscape. The site habitat would likely be less preferential to the retained woodland areas surrounding the subject site.

This assessment has adequately considered threatened species and communities in the context of the proposed development within the study area by:

- conducting a field survey
- adopting the precautionary principle in the assessment of threatened species
- designating appropriate recommendations to minimise potential impacts to threatened species that may transiently occur on the site as well as any other fauna.

The proposed native vegetation clearing is below the clearing threshold that triggers the Biodiversity Offset Scheme under the BC Act. Furthermore, no vegetation clearing is proposed in areas identified as high biodiversity on the BVM, nor is a significant impact to a species listed under the BC Act or EPBC Act likely to occur provided the recommendations contained in this report are adhered to. Under these assumptions, the Biodiversity Offset Scheme is not triggered.

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## Appendix A: Images – 45 Perry Lane, Boxers Creek NSW 2580



Image 1: View of the subject land looking east



Image 2: View of the subject land looking west



Image 3: View of the subject land looking north-west



Image 4: View of the subject land looking north



Image 5: Proposed location of the WiFi tower



Image 6: *Cirsium vulgare* within the subject land



Image 7: *Nassella trichotoma* within the subject land



Image 8: View of the subject land looking north-east



Image 9: *Nassella trichotoma* within the subject land



Image 10: Entrance to the study area from Curlewin Lane



Image 11: Mature *Eucalyptus* spp. approximately 100m from the proposed tower location



Image 12: View of Curlewin Lane looking south towards Penny Lane

## Appendix B: Threatened flora and fauna species – likelihood assessment

| Scientific Name<br>(Common Name)                   | Fauna/<br>flora type | EPBC Act<br>Status,<br>BC Act<br>Status | Distribution and Habitat                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Records<br>within 5km<br>of study area<br>within the<br>last 20 years | Most recent<br>record and<br>proximity | Closest record<br>and date | Likelihood of occurrence<br>(potential habitat to be<br>disturbed) | Test of<br>Significance<br>Required |
|----------------------------------------------------|----------------------|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|----------------------------------------|----------------------------|--------------------------------------------------------------------|-------------------------------------|
| <i>Macquaria australasica</i><br>(Macquarie Perch) | Fish                 | E<br>E                                  | Macquarie Perch are found in both river and lake habitats; especially the upper reaches of rivers and their tributaries. In the Murray-Darling Basin, the species was once typically found in the cool, upper reaches of drainage systems located in southern New South Wales, the Australian Capital Territory and northern Victoria. In east coast drainage systems, the species has been recorded naturally occurring in the Hawkesbury/Nepean, Georges and Shoalhaven rivers in New South Wales.                                                                                                                         | 0                                                                     | N/A                                    | N/A                        | Not present<br>No suitable habitat within the subject land         | No                                  |
| <i>Anthochaera phrygia</i><br>(Regent Honeyeater)  | Bird                 | CE<br>E4A                               | The Regent Honeyeater's range is currently restricted to between north-eastern Victoria and south-eastern Queensland, with breeding regions in New South Wales at Capertree Valley, Mudgee/Wollar, Lower Hunter Valley, and the Bundarra-barraba region. The Regent Honeyeater are mainly found in temperate woodlands and open forests on the inland slopes of south-east Australia, particularly Box-Ironbark woodland and riparian forests of River Sheoak. They may also be found in drier coastal woodlands and forests with some flocks observed foraging in flowering coastal Swamp Mahogany and Spotted Gum Forests. | 0                                                                     | N/A                                    | N/A                        | Low<br>No potential habitat to be disturbed                        | No                                  |
| <i>Lathamus discolor</i><br>(Swift Parrot)         | Bird                 | CE<br>E1                                | Swift Parrots are a migratory species which breed in Tasmania during summer months and migrate north to overwinter on Mainland Australia. Their habitat varies, dispersing across                                                                                                                                                                                                                                                                                                                                                                                                                                            | 0                                                                     | N/A                                    | N/A                        | Low<br>No potential habitat to be disturbed                        | No                                  |

| Scientific Name<br>(Common Name)                                 | Fauna/<br>flora type | EPBC Act<br>Status,<br>BC Act<br>Status | Distribution and Habitat                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Records<br>within 5km<br>of study area<br>within the<br>last 20 years | Most recent<br>record and<br>proximity | Closest record<br>and date | Likelihood of occurrence<br>(potential habitat to be<br>disturbed) | Test of<br>Significance<br>Required |
|------------------------------------------------------------------|----------------------|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|----------------------------------------|----------------------------|--------------------------------------------------------------------|-------------------------------------|
|                                                                  |                      |                                         | the mainland to forage on flowers and <i>psyllid</i> lerps in eucalypts. They breed and nest in tree hollows of eucalypts both dead and living, staying near to foraging resources such as <i>Eucalyptus globulus</i> and <i>Eucalyptus ovata</i> , with high nesting site fidelity. In Victoria they are found predominantly in dry forests and woodland of the Box-Ironbark region on the inland slopes of the Great Dividing Range, in NSW they forage in forests and woodlands through Coastal and western slopes regions.                                                                          |                                                                       |                                        |                            |                                                                    |                                     |
| <b><i>Rostratula Australia</i></b><br>(Australian Painted Snipe) | Bird                 | E<br>E1                                 | The Australian Painted Snipe is most common in eastern Australia with a number of recordings at scattered locations throughout Queensland, NSW, and Victoria, with most records from the south-east particularly the Murray Darling Basin. In NSW they have been recorded at the Paroo wetlands, Lake Cowal, Macquarie Marshes, Fivebough Swamp, swamps near Balldale and Wanganella, and wetlands on the Hawkesbury River, the Clarence, and lower Hunter Valleys. Australian Painted Snipes prefer the fringes of swamps, dams, and marshy areas with grass, lignum, low scrub, or open timber cover. | 0                                                                     | N/A                                    | N/A                        | Low<br>No potential habitat to be<br>disturbed                     | No                                  |
| <b><i>Callocephalon fimbriatum</i></b><br>(Gang-gang Cockatoo)   | Bird                 | E<br>E1                                 | The Gang-gang Cockatoo is distributed from southern Victoria through the south-east coast of the Hunter region and inland to the Central Tablelands and south-west slopes, regularly occurring in the ACT. Isolated records are known north to Coffs Harbour and west to Mudgee. Gang-gang cockatoos are generally                                                                                                                                                                                                                                                                                      | 0                                                                     | N/A                                    | N/A                        | Low<br>No potential habitat to be<br>disturbed                     | No                                  |

| Scientific Name<br>(Common Name)                                                | Fauna/<br>flora type | EPBC Act<br>Status,<br>BC Act<br>Status | Distribution and Habitat                                                                                                                                                                                                                                                                                                                                                                     | Records<br>within 5km<br>of study area<br>within the<br>last 20 years | Most recent<br>record and<br>proximity | Closest record<br>and date | Likelihood of occurrence<br>(potential habitat to be<br>disturbed) | Test of<br>Significance<br>Required |
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|                                                                                 |                      |                                         | found a variety of habitat on a seasonal basis. In spring and summer, they can be found in mature wet sclerophyll forests and tall mountain forests and woodlands. In autumn and winter, they can be found in more open eucalypt forests and woodlands, including Box-Gum and Box-Ironbark assemblages, or in dry forest coastal areas. They may also occur in sub-alpine Snow Gum woodland. |                                                                       |                                        |                            |                                                                    |                                     |
| <i>Melanodryas cucullata cucullate</i><br>(South-eastern Hooded Robin)          | Bird                 | E<br>E1                                 | The Hooded Robin is widespread and found across Australia. They are rarely found on the coast and found throughout much of inland NSW preferring lightly wooded country, usually open eucalypt woodland, acacia scrub, and mallee. They require structurally diverse habitats with a mixture of mature eucalypts, saplings, shrubs, and tall native grasses.                                 | 0                                                                     | N/A                                    | N/A                        | Low<br>No potential habitat to be disturbed                        | No                                  |
| <i>Calyptorhynchus lathami lathami</i><br>(South-eastern Glossy Black-Cockatoo) | Bird                 | V<br>V                                  | South-eastern Glossy Black Cockatoos are widespread throughout suitable habitats from the central Queensland coast to east Gippsland in Victoria and inland to the Southern Tablelands and Central Western Plains of NSW. They inhabit open forest and woodlands of the coast, and the Great Dividing Range where stands of sheoak and other forage occurs.                                  | 0                                                                     | N/A                                    | N/A                        | Low<br>No potential habitat to be disturbed                        | No                                  |
| <i>Falco hypoleucos</i><br>(Grey Falcon)                                        | Bird                 | V<br>V                                  | The Grey Falcon is distributed mainly throughout the Murray-Darling Basin in NSW with occasional vagrants to the east of the Great Dividing Range. This bird is usually restricted to shrubland, grassland, and wooded watercourses of arid and semi-arid regions.                                                                                                                           | 0                                                                     | N/A                                    | N/A                        | Low<br>No potential habitat to be disturbed                        | No                                  |

| Scientific Name<br>(Common Name)                       | Fauna/<br>flora type | EPBC Act<br>Status,<br>BC Act<br>Status | Distribution and Habitat                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Records<br>within 5km<br>of study area<br>within the<br>last 20 years | Most recent<br>record and<br>proximity | Closest record<br>and date | Likelihood of occurrence<br>(potential habitat to be<br>disturbed) | Test of<br>Significance<br>Required |
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|                                                        |                      |                                         | They may also occur near wetlands or in open woodlands near the coast.                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                       |                                        |                            |                                                                    |                                     |
| <i>Polytelis swainsonii</i><br>(Superb Parrot)         | Bird                 | V<br>V                                  | The Superb Parrot mainly inhabit the Riverina, south-west slopes, and Southern Tableland regions, with their range extending north to around Narrabri and Wee Waa, and extending as far west as Tottenham and Quambone. The Superb Parrot mainly inhabits forests and woodlands dominated by eucalypts, especially River Red Gums and Box eucalypts such as Yellow or Grey Box. In the Riverina they nest in the hollows of large trees mainly in tall riparian River Red Gum Forest or woodland.                           | 0                                                                     | N/A                                    | N/A                        | Low<br>No potential habitat to be disturbed                        | No                                  |
| <i>Grantiella picta</i><br>(Painted Honeyeater)        | Bird                 | V<br>V                                  | The Painted Honeyeater occurs in the greatest concentrations on the inland slopes of the Great Dividing Range in NSW, Victoria, and southern Queensland where almost all breeding occurs. They inhabit Boree/Weeping Myall, Brigalow and Box-Gum Woodlands and Box-Ironbark Forests.                                                                                                                                                                                                                                        | 0                                                                     | N/A                                    | N/A                        | Low<br>No potential habitat to be disturbed                        | No                                  |
| <i>Aphelocephala leucopsis</i><br>(Southern Whiteface) | Bird                 | V<br>V                                  | The Southern Whiteface occurs across most of mainland Australia south of the tropics from the north-eastern edge of the Western Australian wheatbelt, and east to the Great Dividing Range. They occur in a wide range of open woodlands and shrublands with understoreys composed of grasses and/or shrubs. These habitats are generally dominated by acacias, eucalypts, foothills, lowlands, and plains; with the Southern Whiteface favouring habitats with low tree densities and herbaceous understorey litter cover. | 0                                                                     | N/A                                    | N/A                        | Low<br>No potential habitat to be disturbed                        | No                                  |

| Scientific Name<br>(Common Name)                                                        | Fauna/<br>flora type | EPBC Act<br>Status,<br>BC Act<br>Status | Distribution and Habitat                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Records<br>within 5km<br>of study area<br>within the<br>last 20 years | Most recent<br>record and<br>proximity | Closest record<br>and date | Likelihood of occurrence<br>(potential habitat to be<br>disturbed)                                           | Test of<br>Significance<br>Required |
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| <i>Stagonopleura guttata</i><br>(Diamond Firetail)                                      | Bird                 | V<br>V                                  | The Diamond Firetail is widely distributed in NSW, with a concentration of records from the Northern, Central, and Southern Tablelands, the northern, central, and south-western slopes, and the north-west Plains and Riverina. With some records from near Sydney, the Hunter Valley, and the Bega valley, it is very rare west of the Darling River. They can be found in grassy eucalypt woodlands, such as Box-Gum woodlands and Snow Gum woodlands, and can also occur in open forest, mallee, Natural Temperate Grassland, and in riparian areas. | 0                                                                     | N/A                                    | N/A                        | Low<br>No potential habitat to be disturbed                                                                  | No                                  |
| <i>Hieraaetus morphnoides</i><br>(Little Eagle)                                         | Bird                 | N/L<br>V                                | The Little Eagle is found throughout the Australian Mainland except through the most densely forested parts of the Great Dividing Range escarpment. It occurs as a single population through NSW occupying open eucalypt forest, woodland, or open woodland. It also inhabits Sheoak or acacia woodlands and riparian woodlands in the interior of NSW, nesting in tall living trees. Preys on birds, reptiles and mammals, occasionally adding large insects and carrion.                                                                               | 2                                                                     | 2018<br>Within 1.5km                   | 2018<br>Within 1.5km       | Low<br>Limited suitable foraging habitat to be disturbed.<br>Both recent records were along the Hume Highway | No                                  |
| <i>Melithreptus gularis gularis</i><br>Black-chinned Honeyeater<br>(eastern subspecies) | Bird                 | N/L<br>V                                | The eastern subspecies extends south from central Queensland, through NSW, Victoria into south eastern South Australia, though it is very rare in the last state. In NSW it is widespread, with records from the tablelands and western slopes of the Great Dividing Range to the north-west and central-west plains and the Riverina. It is rarely recorded east of the Great Dividing                                                                                                                                                                  | 1                                                                     | May 2024<br>Within 3 km                | May 2024<br>Within 3 km    | Low<br>No potential habitat to be disturbed                                                                  | No                                  |

| Scientific Name<br>(Common Name)                   | Fauna/<br>flora type | EPBC Act<br>Status,<br>BC Act<br>Status | Distribution and Habitat                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Records<br>within 5km<br>of study area<br>within the<br>last 20 years | Most recent<br>record and<br>proximity | Closest record<br>and date | Likelihood of occurrence<br>(potential habitat to be<br>disturbed) | Test of<br>Significance<br>Required |
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|                                                    |                      |                                         | Range, although regularly observed from the Richmond and Clarence River areas. It has also been recorded at a few scattered sites in the Hunter, Central Coast and Illawarra regions, though it is very rare in the latter. Occupies mostly upper levels of drier open forests or woodlands dominated by box and ironbark eucalypts, especially Mugga Ironbark ( <i>Eucalyptus sideroxylon</i> ), White Box ( <i>E. albens</i> ), Inland Grey Box ( <i>E. microcarpa</i> ), Yellow Box ( <i>E. melliodora</i> ), Blakely's Red Gum ( <i>E. blakelyi</i> ) and Forest Red Gum ( <i>E. tereticornis</i> ). Also inhabits open forests of smooth-barked gums, stringybarks, ironbarks, river sheoaks (nesting habitat) and tea-trees. |                                                                       |                                        |                            |                                                                    |                                     |
| <i>Chthonicola sagittate</i><br>(Speckled Warbler) | Bird                 | N/L<br>V                                | The Speckled Warbler is distributed throughout south-eastern Queensland, the eastern half of NSW, and into Victoria as far west as the Grampians. They are most frequently reported from the hills and tablelands of the Great Dividing Range and are rarely reported from the coast. They occupy a wide range of eucalypt dominated communities with grassy understoreys, often along rocky ridges and gullies, preferring large and relatively undisturbed remnants.                                                                                                                                                                                                                                                             | 1                                                                     | 2020<br>Within 5km                     | 2020<br>Within 5km         | Low<br>No potential habitat to be<br>disturbed                     | No                                  |
| <i>Petroica boodang</i><br>(Scarlet Robin)         | Bird                 | N/L<br>V                                | Found from south-east Queensland to south-east South Australia, the Scarlet Robin occurs from the coast of NSW to the inland slopes. They may also be found dispersed to the lower valleys and plains of the tablelands and slopes after breeding. The Scarlet Robin lives in dry                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 8                                                                     | April 2024<br>Within 3km               | April 2024<br>Within 3km   | Low<br>No potential habitat to be<br>disturbed                     | No                                  |

| Scientific Name<br>(Common Name)                                                      | Fauna/<br>flora type | EPBC Act<br>Status,<br>BC Act<br>Status | Distribution and Habitat                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Records<br>within 5km<br>of study area<br>within the<br>last 20 years | Most recent<br>record and<br>proximity | Closest record<br>and date | Likelihood of occurrence<br>(potential habitat to be<br>disturbed)                                           | Test of<br>Significance<br>Required |
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|                                                                                       |                      |                                         | eucalypt forests and woodlands, with an open and grassy understorey. They occasionally occur in mallee or wet forest communities, or in wetlands and tea-tree swamps.                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                       |                                        |                            |                                                                                                              |                                     |
| <i>Daphoenositta chrysoptera</i><br>(Varied Sittella)                                 | Bird                 | N/L<br>V                                | The Varied Sittella are distributed nearly continuously throughout NSW from the coast to the far west. This bird inhabits eucalypt forests and woodlands, especially ones containing rough barked species and mature smooth-barked gums with dead branches, mallee, and acacia woodlands.                                                                                                                                                                                                                                                                                                                                              | 3                                                                     | May 2024<br>Within 4km                 | May 2024<br>Within 4km     | Low<br>No potential habitat to be disturbed                                                                  | No                                  |
| <i>Climacteris picumnus victoriae</i><br>(Brown Treecreeper (eastern subspecies))     | Bird                 | V<br>V                                  | The Brown Treecreeper occurs in the inland plains and solpes of the Great Dividing Range. The western boundary of their range runs through Corowa, Wagga Wagga, Temora, Forbes, Dubbo, and Inverell. They occur through central NSW, and in coastal areas such as the Snowy River Valley, Cumberland Plains, Hunter Valley, and parts of Richmond and Clarence Valleys. They can be found in eucalypt woodlands including Box-Gum Woodland, and dry open forest mainly inhabiting woodlands dominated by stringybarks and other rough-barked eucalypts. They can also be found in mallee and River Red Gum Forests bordering wetlands. | 0                                                                     | N/A                                    | N/A                        | Low<br>Not identified during the site survey and no records within 10km of the site in the last 20 years.    | No                                  |
| <i>Aprasia parapulchella</i><br>(Pink-tailed Worm-lizard, Pink-tailed Legless Lizard) | Reptile              | V<br>V                                  | The Pink-tailed Legless Lizard primarily is found in the Central and Southern Tablelands, and the south-western slopes. Confirmed outliers occur on the Hay Plains north of Hay. Concentrated populations occur in the Canberra/Queanbeyan Region, also recorded near Cooma, Yass,                                                                                                                                                                                                                                                                                                                                                     | 0                                                                     | N/A                                    | N/A                        | Low<br>Limited potential habitat to be disturbed and no records within 5km of the site in the last 20 years. | No                                  |

| Scientific Name<br>(Common Name)                                                         | Fauna/<br>flora type | EPBC Act<br>Status,<br>BC Act<br>Status | Distribution and Habitat                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Records<br>within 5km<br>of study area<br>within the<br>last 20 years | Most recent<br>record and<br>proximity | Closest record<br>and date | Likelihood of occurrence<br>(potential habitat to be<br>disturbed)                                                                                 | Test of<br>Significance<br>Required |
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|                                                                                          |                      |                                         | Bathurst, Albury, and west Wyalong. They inhabit sloping, open woodland areas with predominantly native grassy groundlayers such as Kangaroo Grass. These sites are typically well-drained with either rocky outcrops or scattered and partially buried rocks.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                       |                                        |                            |                                                                                                                                                    |                                     |
| <i>Dasyurus maculatus</i><br>(Spot-tailed Quoll,<br>Spotted-tailed Quoll, Tiger Quoll)   | Mammal               | E<br>V                                  | Spot-tailed Quolls range from the Queensland border to Kosciuszko National Park in New South Wales, with records from Hunter Valley, Taree, Port Macquarie and Coffs Harbor, through to the gorges and escarpments of the New England Tableland. Locally abundant populations occur in the south of the state in Kosciuszko National Park and coastal national parks. Spot-tailed Quolls prefer mature, wet forest habitat and unlogged forests or forests that have been less disturbed by timber harvesting. They are recorded from a wide range of habitats including temperate and subtropical rainforest mountain areas, wet sclerophyll forests, woodland forests, open and closed eucalypt woodlands, inland riparian and River Red Gum forests, sub-alpine woodlands, coastal heathlands, and some sightings from treeless areas such as grazing lands or open country. | 13                                                                    | 2019<br>Within 3km                     | 2019<br>Within 3km         | Low<br>No potential habitat to be disturbed. All recent records are from within dense forest to the east of the study area.                        | No                                  |
| <i>Phascolarctos cinereus</i><br>(combined<br>populations of<br>Qld, NSW and the<br>ACT) | Mammal               | E<br>E1                                 | In NSW Koala populations are found on the Central and North Coasts, Southern Highlands, and Southern and Northern Tablelands, Blue Mountains, southern coastal forests, and on the plains west of the Great Dividing Range. Koalas inhabit eucalypt woodlands and forests,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 17                                                                    | 2023<br>Within 3km                     | 2017<br>Within 2km         | Low<br>Some feed trees in the study area but no potential habitat to be disturbed and no records within 2km of the study area in the last 20 years | No                                  |

| Scientific Name<br>(Common Name)                                                        | Fauna/<br>flora type | EPBC Act<br>Status,<br>BC Act<br>Status | Distribution and Habitat                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Records<br>within 5km<br>of study area<br>within the<br>last 20 years | Most recent<br>record and<br>proximity | Closest record<br>and date | Likelihood of occurrence<br>(potential habitat to be<br>disturbed) | Test of<br>Significance<br>Required |
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| (Koala)                                                                                 |                      |                                         | feeding on the foliage of over 70 eucalypt species and 30 non-eucalypt species.                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                       |                                        |                            |                                                                    |                                     |
| <i>Saccolaimus flaviventris</i><br>(Yellow-bellied Sheathtail-bat)                      | Mammal               | N/L<br>V                                | The Yellow-bellied Sheathtail-bat is a wide-ranging species found across northern and eastern Australia with scattered records across the New England Tablelands and north-west slopes, with their most southerly range being most of Victoria, south-western NSW, and adjacent South Australia. Hollow-bearing trees are essential habitat for this species.                                                                                                                                        | 1                                                                     | 2018<br>Within 5km                     | 2018<br>Within 5km         | Low<br>No potential habitat to be disturbed                        | No                                  |
| <i>Myotis Macropus</i><br>(Southern Myotis)                                             | Mammal               | N/L<br>V                                | The Southern Myotis is found in the coastal band from the north-west of Australia, across the top-end and south to western Victoria. It is rarely found more than 100 km inland, except along major rivers. Generally roost in groups of 10 - 15 close to water in caves, mine shafts, hollow-bearing trees, storm water channels, buildings, wharves, bridges and in dense foliage.<br>Forage over streams and pools catching insects and small fish by raking their feet across the water surface. | 1                                                                     | 2019<br>Within 4km                     | 2019<br>Within 4km         | Low<br>No potential habitat to be disturbed                        | No                                  |
| <i>Miniopterus orianae oceanensis</i><br>(Large Bent-wing Bat, Eastern Bent-winged bat) | Mammal               | N/L<br>V                                | Large Bent-wing Bats occur along the east and north-west coasts of Australia with caves being their primary roosting habitat. They may also use derelict mines, storm water tunnels, buildings, and other man-made structures as roosting areas. They hunt in forested areas.                                                                                                                                                                                                                        | 6                                                                     | 2019<br>Within 4km                     | 2019<br>Within 4km         | Low<br>No potential habitat to be disturbed                        | No                                  |
| <i>Chalinolobus dwyeri</i>                                                              | Mammal               | E<br>E1                                 | The Large-eared Pied Bat has been recorded from Shoalwater Bay, Queensland, through to the vicinity of Ulladulla, NSW. Most NSW records concentrate the populations in the                                                                                                                                                                                                                                                                                                                           | 0                                                                     | N/A                                    | N/A                        | Low<br>No potential habitat to be disturbed                        | No                                  |

| Scientific Name<br>(Common Name)                     | Fauna/<br>flora type | EPBC Act<br>Status,<br>BC Act<br>Status | Distribution and Habitat                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Records<br>within 5km<br>of study area<br>within the<br>last 20 years | Most recent<br>record and<br>proximity | Closest record<br>and date | Likelihood of occurrence<br>(potential habitat to be<br>disturbed)                                  | Test of<br>Significance<br>Required |
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| (Large-eared Pied Bat, Large Pied Bat)               |                      |                                         | sandstone escarpments of the Sydney Basin and the north-west slopes such as Coolah Tops, Mt. Kaputar, Warrumbungle National Park, and Pilliga Nature Reserve. They roost near the entrances of caves, crevices in cliffs, old mine workings, and the disused mud nests of the Fairy Martin. They frequent low to mid-elevation dry open forest and woodlands and are found in well-timbered areas containing gullies.                                                                                              |                                                                       |                                        |                            |                                                                                                     |                                     |
| <i>Petaurus australis</i><br>(Yellow-bellied Glider) | Mammal               | V<br>V                                  | Yellow-bellied Gliders are found along the Eastern Coast to the western slopes of the Great Dividing Range, from southern Queensland to Victoria. They occur in tall, mature eucalypt forests generally in areas with high rainfall and nutrient rich soils. Preferences for forest type vary; in the north they range from mixed coastal forests to dry escarpment forests, and in the south they range from moist coastal gullies and creek flats to tall montane forests.                                       | 0                                                                     | N/A                                    | N/A                        | Low<br>No potential habitat to be disturbed                                                         | No                                  |
| <i>Persoonia mollis</i><br><i>subsp. revoluta</i>    | Plant                | V<br>V                                  | <i>Persoonia mollis</i> subsp. <i>revoluta</i> is endemic to New South Wales where it is currently known to occur in seven populations, primarily in the area between Mittagong, Paddys River and High Range in the Southern Highlands with an outlying population in the Bindook Highlands. Most of the populations occur between 600 and 800m a.s.l., and with an average annual rainfall across the range of between 700 and 900 mm. Mainly on relatively deep sandy soils on broad ridgetops and upper slopes. | 1                                                                     | 2013<br>Within 2.5km                   | 2013<br>Within 2.5km       | Low<br>Limited suitable habitat and only 1 record within 5km of the study area in the last 20 years | No                                  |

| Scientific Name<br>(Common Name)                               | Fauna/<br>flora type | EPBC Act<br>Status,<br>BC Act<br>Status | Distribution and Habitat                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Records<br>within 5km<br>of study area<br>within the<br>last 20 years | Most recent<br>record and<br>proximity | Closest record<br>and date | Likelihood of occurrence<br>(potential habitat to be<br>disturbed)                                                                          | Test of<br>Significance<br>Required |
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| <i>Pomaderris pallida</i><br>(Pale Pomaderris)                 | Plant                | V<br>V                                  | Pale Pomaderris has been recorded from near Kydra Trig (north-west of Nimmitabel), Tinderry Nature Reserve, the Queanbeyan River (near Queanbeyan), the Shoalhaven River (between Bungonia and Warri), the Murrumbidgee River west of the ACT and the Byadbo area in Kosciuszko National Park. It is also found along the Murrumbidgee River in the ACT and has been recently recorded in eastern Victoria. This species usually grows in shrub communities surrounded by Brittle Gum ( <i>Eucalyptus mannifera</i> ) and Red Stringybark ( <i>E. macrorhyncha</i> ) or <i>Callitris</i> spp. woodland. | 0                                                                     | N/A                                    | N/A                        | Low<br>Limited suitable habitat and no records within 5km of the study area in the last 20 years                                            | No                                  |
| <i>Pomaderris delicata</i><br>(Delicate Pomaderris)            | Plant                | CE<br>E4A                               | Delicate Pomaderris grows in dry open forest dominated by Silvertop Ash with a dense she-oak understorey. They grow in shallow soils derived from sandstone and siltstone. They are only known from two sites, between Goulburn and Bungonia, and south of Windellama.                                                                                                                                                                                                                                                                                                                                  | 0                                                                     | N/A                                    | N/A                        | Low<br>Very limited potential habitat on site and no records within 5km of the study area in the last 20 years.                             | No                                  |
| <i>Leucochrysum albicans subsp. tricolor</i><br>(Hoary Sunray) | Plant                | E<br>E1                                 | The Hoary Sunray occurs in a variety of grassland, woodland, and forest habitats. They are generally found on heavy soils in natural, semi-natural, grazed, or ungrazed habitat. It can also occur in modified habitats such as semi-urban areas and roadsides. In NSW and ACT they occur at relatively high elevations in woodland and open forest communities, known from a variety of areas; roughly bounded by Goulburn, Albury and Bega, also recorded in the Yass Valley, Tumut, Upper Lachlan, Snowy River, and Galong. They have also been                                                      | 0                                                                     | N/A                                    | N/A                        | Low<br>Potential habitat on site but not recorded during the field survey and no records within 5km of the study area in the last 20 years. | Yes                                 |

| Scientific Name<br>(Common Name)                           | Fauna/<br>flora type | EPBC Act<br>Status,<br>BC Act<br>Status | Distribution and Habitat                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Records<br>within 5km<br>of study area<br>within the<br>last 20 years | Most recent<br>record and<br>proximity | Closest record<br>and date | Likelihood of occurrence<br>(potential habitat to be<br>disturbed)                                       | Test of<br>Significance<br>Required |
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|                                                            |                      |                                         | recorded from the Southeastern Highlands, Australian Alps, and Sydney Basin bioregions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                       |                                        |                            |                                                                                                          |                                     |
| <i>Eucalyptus aggregate</i><br>(Black Gum)                 | Plant                | V<br>V                                  | Black Gum are found in the NSW Central and Southern Tablelands, in the Southeastern Highlands bioregion and on the western fringe of the Sydney Basin bioregion, occurring mainly in the cooler and wetter parts of the tablelands such as Blayney, Crookwell, Goulburn, Braidwood, and Bungendore. They grow along the lower parts of the landscape on alluvial soils, on cold and poorly-drained flats and adjacent to creeks and smaller rivers.                                                                                                             | 0                                                                     | N/A                                    | N/A                        | Low<br>Not identified during the site survey and no records within 5km of the site in the last 20 years. | No                                  |
| <i>Thesium australe</i><br>(Austral Toadflax,<br>Toadflax) | Plant                | V<br>V                                  | In NSW Austral Toadflax occurs on the coast, the Tablelands, and the western slopes, with most collections in the Nandewar, New England Tablelands, and NSW North Coast bioregions. Known sites include Perpendicular Point in Kattang Nature Reserve, Look At Me Now Headland at Moonee Creek Nature Reserve, Yetman-Wallangra, Linton Nature Reserve, Boambee Head, Hat Head National Park, Blackville, Bibbenluke, Cabramurra, and Yarrangobilly caves. They occur in grassland on coastal headlands, or grassland and grassy woodlands away from the coast. | 0                                                                     | N/A                                    | N/A                        | Low<br>Not identified during the site survey and no records within 5km of the site in the last 20 years. | No                                  |

## Appendix C: Flora species identified during site survey

| Family         | Scientific Name               | Common Name         | Native / Exotic | Weed of National Significance | State priority weed | Regional priority weed |
|----------------|-------------------------------|---------------------|-----------------|-------------------------------|---------------------|------------------------|
| Asteraceae     | <i>Cirsium vulgare</i>        | Spear thistle       | Exotic          | No                            | No                  | No                     |
| Asteraceae     | <i>Sonchus oleraceus</i>      | Common Sowthistle   | Exotic          | No                            | No                  | No                     |
| Asteraceae     | <i>Sonchus asper</i>          | Prickly Sowthistle  | Exotic          | No                            | No                  | No                     |
| Asteraceae     | <i>Microseris lanceolata</i>  | Yam daisy           | Native          | No                            | No                  | No                     |
| Brassicaceae   | <i>Hirschfeldia incana</i>    | Hoary mustard       | Exotic          | No                            | No                  | No                     |
| Convolvulaceae | <i>Convolvulus erubescens</i> | Pink Bindweed       | Native          | No                            | No                  | No                     |
| Fabaceae       | <i>Acacia decurrens</i>       | Black wattle        | Native          | No                            | No                  | No                     |
| Juncaceae      | <i>Juncus usitatus</i>        | Common rush         | Native          | No                            | No                  | No                     |
| Malvaceae      | <i>Modiola caroliniana</i>    | Red-flowered Mallow | Exotic          | No                            | No                  | No                     |
| Poaceae        | <i>Lolium perenne</i>         | Perennial Ryegrass  | Exotic          | No                            | No                  | No                     |
| Poaceae        | <i>Nassella trichotoma</i>    | Serrated Tussock    | Exotic          | Yes                           | Yes                 | Yes                    |
| Poaceae        | <i>Microlaena stipoides</i>   | Weeping Grass       | Native          | No                            | No                  | No                     |
| Poaceae        | <i>Eragrostis curvula</i>     | African lovegrass   | Exotic          | No                            | No                  | Yes                    |
| Poaceae        | <i>Themeda triandra</i>       | Kangaroo grass      | Native          | No                            | No                  | No                     |



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