APPENDIX G

ECOLOGICAL CONSTRAINTS & OPPORTUNITIES REPORT

LODGE
ENVIRONMENTAL

Date: 24 September 2024
Project Code: LE1911

ECOLOGICAL CONSTRAINTS & OPPORTUNITIES

2 REDDALL STREET YASS

PREPARED FOR
DIVERSE PROJECT SOLUTIONS

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1.0 INTRODUCTION

Lodge Environmental Pty Ltd AS commissioned by Jamie Bush of Diverse Project Solutions to prepare this Ecological Constraints and Opportunities (ECO) Report to provide insight into development opportunities and constraints at 2 Reddall Street, Yass 2582 (herein referred to as the Study Area). It is understood that the landowner is currently investigating the potential to subdivide the property.

This report describes the native vegetation, any threatened species, populations and communities and associated habitat features which were recorded or are predicted to occur within the Study Area. This report is based on information obtained through data searches and field survey. The legislative context, methods used, and recommendations are included within this report.

1.1 OBJECTIVES

The purpose of this report is to provide a preliminary understanding of the site's biodiversity values and to identify and assess ecological constraints of relevance for the proposal so that an informed planning proposal can be developed. It is not the intention of this report to act as an assessment of the impacts on biodiversity to the level required to gain consent from Council.

1.2 SITE DESCRIPTION

The Study Area encompasses Lot 4 in Deposited Plan (DP) 255064 (Figure 1), with vehicle access via Reddall Street. Covering approximately 10.92 ha, the Study Area contains one existing residential dwelling with associated infrastructure, including a driveway and sheds. The vegetation within the Study Area predominately consists of cleared exotic pasture, with scattered native and exotic trees, which all appear to be planted. Two dams are present, one on the western border and another partially inside the north-eastern border. Neighbouring land consists of similarly cleared land with scattered trees.

Figure 1: Aerial of the Study Area

2.0 LEGISLATIVE CONTEXT

2.1 ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

The NSW *Environmental Planning and Assessment Act 1979* (EP&A Act) is the principal planning legislation for the state, providing a framework for the overall environmental planning, and development assessment process. Various legislative instruments, such as the NSW *Biodiversity Conservation Act 2016* (BC Act), NSW *Water Management Act 2000* (WM Act) and NSW *Rural Fires Act 2007* (RF Act) are integrated with the EP&A Act and have been reviewed below where relevant.

Any potential Development Application for the site would be subject to Part 4 of the EP&A Act.

2.2 BIODIVERSITY CONSERVATION ACT 2016

The NSW *Biodiversity Conservation Act 2016* (BC Act) aims to slow the decline of threatened species, populations and communities listed under the Act. The BC Act is integrated with the EP&A Act and requires consideration of whether a development (Part 4 of the EP&A Act) is likely to significantly affect threatened species, populations and ecological communities or their habitat.

The schedules of the BC Act lists species, populations and communities as endangered or vulnerable. All developments, land use changes or activities need to be assessed to determine if they will have an unacceptable impact on species, populations or communities listed on these schedules.

The potential impact of a proposed development on any threatened species, populations or communities is assessed through application of an Assessment of Significance (AoS) under Section 7.3 of the BC Act at the development application stage. If the impacts on the area are found to be 'significant', a Biodiversity Development Assessment Report (BDAR) would be required as would concurrence from the Chief Executive of the NSW Office of Environment & Heritage (OEH) including application of the Biodiversity Assessment Methodology (BAM) and entering into the Biodiversity Offset Scheme (BOS). A BDAR would also be deemed necessary if any proposed development were to involve clearance of vegetation mapped on the State Biodiversity Values Map (BVM) or involve native vegetation clearance above the threshold tables within the BC Act (**Table 1**). The thresholds are based on the minimum lot size (associated with land zoning under the relevant LEP) or actual lot size (where there is no minimum lot size under the LEP).

Table 1: Offset scheme thresholds – native vegetation clearance area criteria

Minimum lot size associated with the property	Threshold for clearing, above which the BAM and offsets scheme applies
Less than 1 ha	0.25 ha or more
1 ha, and less than 40 ha	0.5 ha or more
40 ha, and less than 1,000 ha	1 ha or more
1,000 ha or greater	2 ha or more

2.3 ENVIRONMENT PROTECTION AND BIODIVERSITY CONSERVATION ACT 1999

The Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) aims to protect and encourage the recovery of threatened species, populations and communities listed under the Act. Under this Act an action will require approval from the Minister for the Environment if the action has, will have, or is likely to have, a significant impact on a Matters of National Environmental Significance (MNES). MNES include listed threatened species and ecological communities, migratory species and wetlands of international importance protected under international agreements. Where applicable, the assessment criteria relevant to this Act must be drawn upon to determine whether there would be a significant impact on these species and hence whether referral to the Federal Environmental Minister is required.

2.4 LOCAL PLANNING INSTRUMENTS

2.4.1 Yass Valley Local Environment Plan 2013

The Yass Valley Local Environment Plan 2013 (LEP) is the principal planning instrument for the YV LGA. The LEP sets out the planning framework and establishes the requirements for the use and development of land in the LGA. The LEP provides broad direction regarding what types of development are permitted within specific land use zones.

2.4.1.1 Relevant Local Provisions

The Study Area is partially covered by the YVLEP 2013 Clause 6.3 Terrestrial Biodiversity. The objectives of this clause are to maintain terrestrial biodiversity by–

(a) protecting native fauna and flora, and

(b) protecting the ecological processes necessary for their continued existence, and

(c) encouraging the conservation and recovery of native fauna and flora and their habitats.

Small areas of the Study Area in the east and west are covered by this clause (Figure 2)

2.4.2 Yass Valley Comprehensive Development Control Plan 2023

The Yass Valley Comprehensive Development Control Plan 2023 (DCP) aims to make detailed local provisions for all land within the LGA. The purpose of this Plan is to give effect to the aims and objectives of YVLEP 2013 and to guide and facilitate permissible development accordingly. This Plan outlines Council's standards for new development and seeks to achieve the objectives of the land use zones as prescribed in YVLEP 2013.

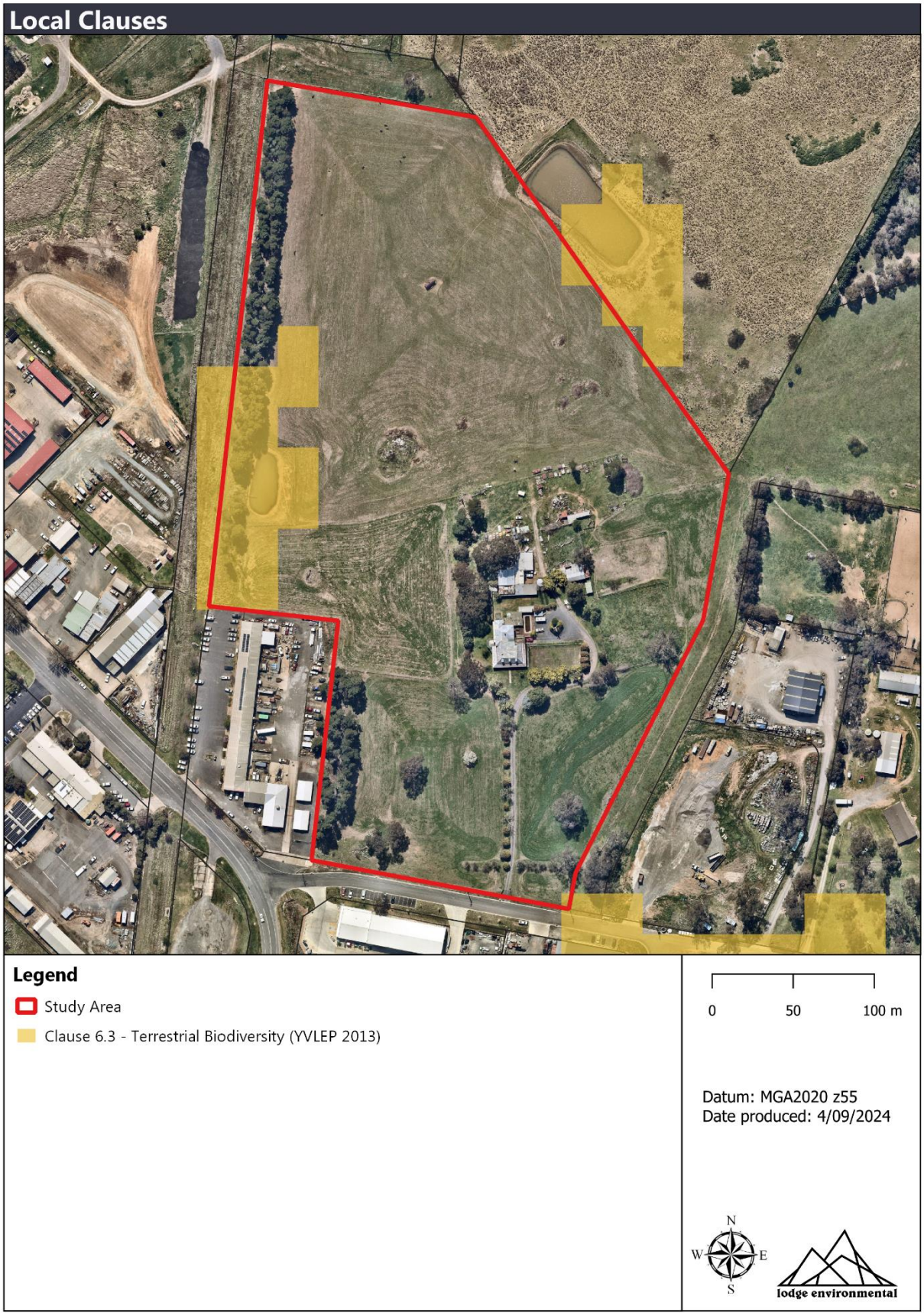

Figure 2: Terrestrial Biodiversity (YVLEP 2013)

3.0 METHODS

3.1 DATA AND LITERATURE REVIEW

Data records and relevant literature pertaining to the ecology of the Study Area and surrounding areas were reviewed on 23 August 2024. The material reviewed included:

- NSW BioNet, Atlas of NSW Wildlife database search (10 km)
- EPBC Act Protected Matters Search Tool (10 km)
- Review of the State Biodiversity Values Map
- NSW State Vegetation Type Map
- Property Report
- Relevant legislative documents
- Aerial photography.

3.2 FIELD SURVEY

To determine applicable Ecological Constraints and Opportunities within the Study Area, the following survey methods were undertaken on 3 September 2024 by ecologists Henry Dowling and Lissabelle Giuliano:

- Identification of plant species and vegetation communities present within the site
- Search for signs of threatened species, observe and record significant flora and fauna – threatened and migratory species, other incidental fauna observations
- Observe and record current disturbance and threats (e.g. weeds, trampling, litter)
- Identifying potential habitat for threatened flora and fauna species/populations (e.g. habitat bearing trees (HBTs), creeks, boulders etc) and record with a handheld GPS
- Recording presence of environmental weeds
- Taking reference photographs of the entire site.

3.3 SURVEY LIMITATIONS

Survey was conducted during the noted times and may be outside of the optimal survey period for some flora and fauna species. It is therefore possible that some species may not have been detected due to their seasonal geographic variation. Cryptic species may not have been obvious. However, habitat assessments were conducted to further predict the likelihood of species occurrence at the site. A conservative approach was applied in the assumption of the presence of species that could potentially occur within the site area. In this regard, the survey is considered adequate for the purposes of this report.

4.0 DESKTOP REVIEW

4.1 BIODIVERSITY VALUES MAP

A review of the State Biodiversity Values Map was conducted on 23 August 2024. There are no Biodiversity Values (BV) mapped throughout the Study Area (**Figure 3**). The nearest mapped BV lies approximately 480 metres to the west.

4.2 EXISTING VEGETATION MAPPING

A review of vegetation mapping that covers the Study Area (DCCEEW 2023) identified no Plant Community Types (PCTs) within the Study Area. PCT 3376 – Southern Tableland Grassy Box Woodland is mapped nearby (**Figure 4**).

4.3 LAND ZONING

The Study Area is entirely zoned as E3 – Productivity Support under the Yass Valley LEP (2013) (Figure 5). The objectives of this zone are:

- To provide a range of facilities and services, light industries, warehouses and offices
- To provide for land uses that are compatible with, but do not compete with, land uses in surrounding local and commercial centres
- To maintain the economic viability of local and commercial centres by limiting certain retail and commercial activity
- To provide for land uses that meet the needs of the community, businesses and industries but that are not suited to locations in other employment zones
- To provide opportunities for new and emerging light industries
- To enable other land uses that provide facilities and services to meet the day to day needs of workers, to sell goods of a large size, weight or quantity or to sell goods manufactured on-site

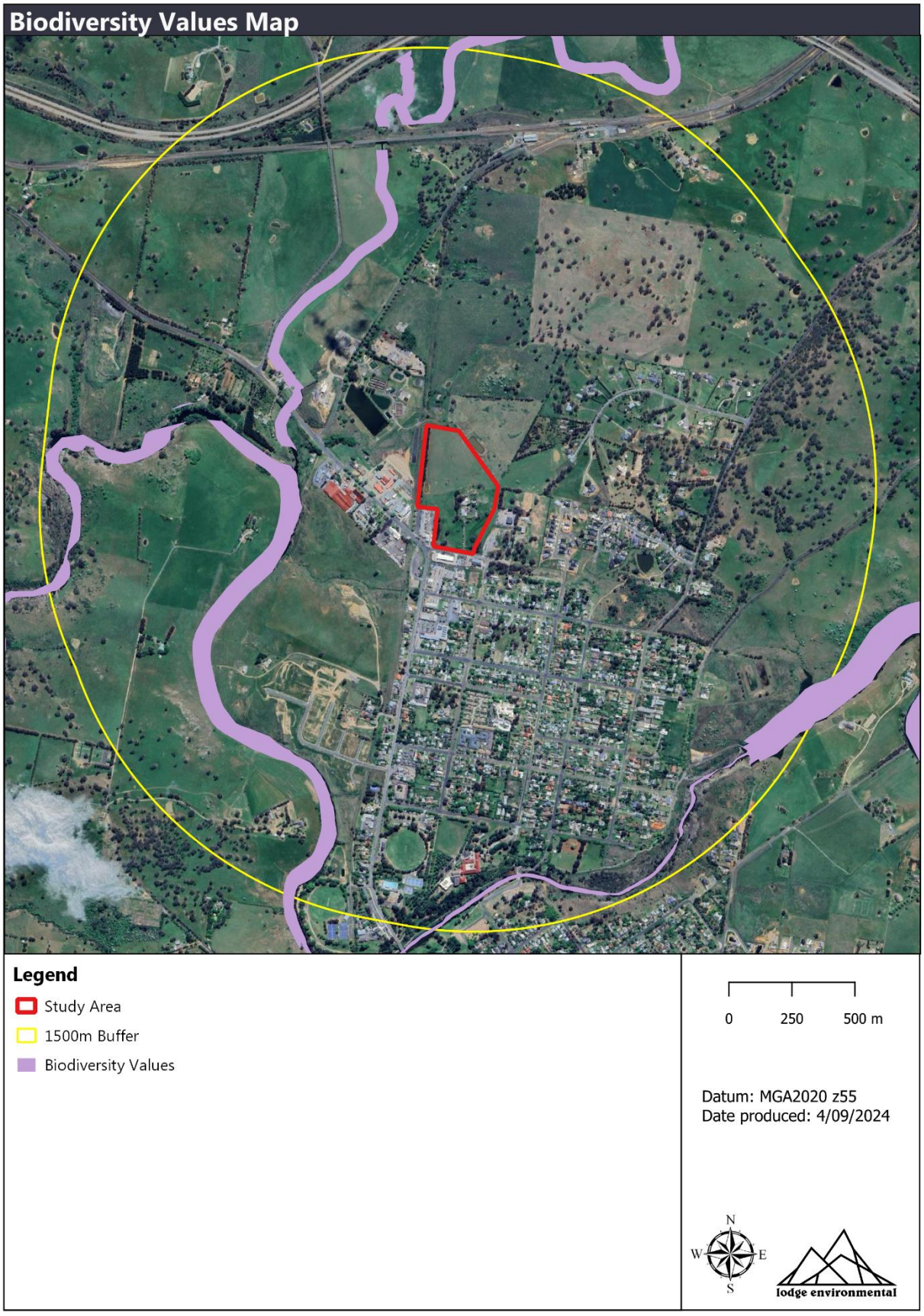

Figure 3: Biodiversity Values Mapping

Figure 4: Unvalidated Vegetation Mapping (DCCEEW 2023)

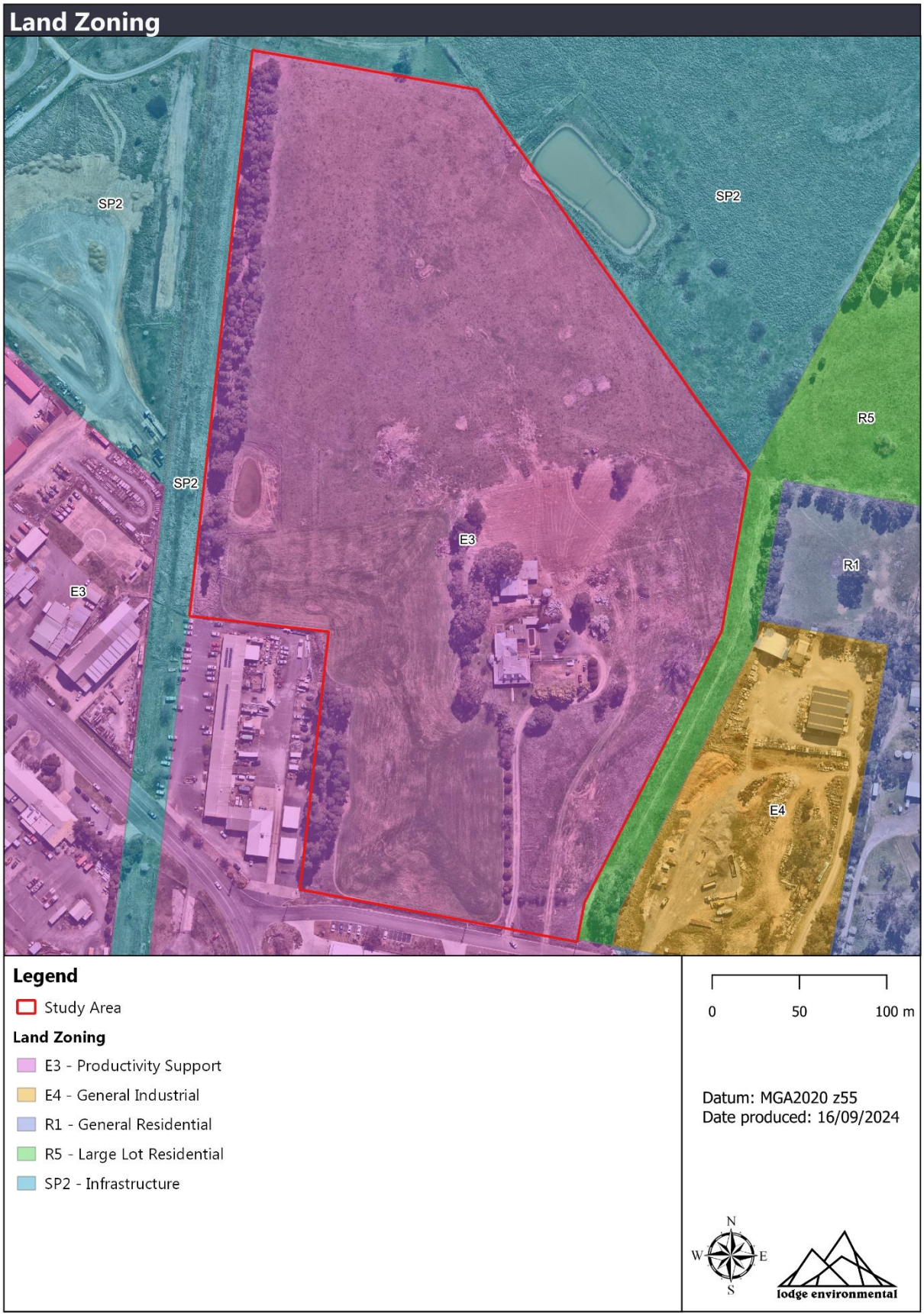

Figure 5: Land Zoning of the Study Area (Yass Valley LEP 2013)

4.4 THREATENED FLORA SPECIES

A review of the NSW Atlas of Wildlife and the Commonwealth Protected Matters Search Tool identified three Threatened Ecological Communities (TECs) and 11 threatened plants listed under the BC Act and/or the EPBC Act that have been previously recorded, or are considered to have habitat, within 10km of the site (**Figure 6**). This initial compilation of potentially occurring species, which informed the site survey, provided an indication of which species required consideration within the Study Area.

Prior to field survey, seven threatened entities were identified as having a potential to occur within the Study Area (**Table 2**).

Table 2: Potentially occurring TECs and threatened flora

Scientific name	Common name	BC Act	EPBC Act
Threatened Ecological Communities			
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland		-	CE
Grey Box (*Eucalyptus microcarpa*) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia		-	E
Natural Temperate Grassland of the South Eastern Highlands		-	CE
Flora			
Ammobium craspedioides	Yass Daisy	V	V
Leucochrysum albicans subsp.tricolor	Hoary Sunray	V	V
Rutidosis leptorhynchoides	Button Wrinklewort	-	E
Swainsona sericea	Silky Swainson-pea	V	-

4.5 THREATENED FAUNA SPECIES

A review of the NSW Atlas of Wildlife and the Commonwealth Protected Matters Search Tool identified 42 threatened fauna listed under the BC Act and/or the EPBC Act that have been previously recorded, or are considered to have habitat, within 10km of the site (**Figure 6**). This initial compilation of potentially occurring species, which informed the site survey, provided an indication of which species required consideration within the Study Area.

Prior to field survey, 18 threatened fauna species were identified as having the potential to occur within the Study Area (**Table 3**).

Table 3: Potentially occurring threatened fauna.

Common name	Scientific name	BC Act	EPBC Act
Aves			
Dusky Woodswallow	*Artamus cyanopterus cyanopterus*	V	-
Gang-gang Cockatoo	*Callocephalon fimbriatum*	V	E
Brown Treecreeper	*Climacteris picumnus victoriae*	V	V
Varied Sittella	*Daphoenositta chrysoptera*	V	-
Little Eagle	*Hieraaetus morphnoides*	V	-
Swift Parrot	*Lathamus discolor*	E	CE
Blue-winged Parrot	*Neophema chrysostoma*	V	-
Superb Parrot	*Polytelis swainsonii*	V	V

Scarlet Robin	*Petroica boodang*	V	-
Flame Robin	*Petroica phoenicea*	V	-
Diamond Firetail	*Stagonopleura guttata*	V	-
Mammals			
Southern Myotis	*Myotis macropus*	V	-
Greater Broad-nosed Bat	*Scoteanax rueppellii*	V	-
Grey-headed Flying Fox	*Pteropus poliocephalus*	V	V
Reptilia			
Pink-tailed Legless Lizard	*Aprasia parapulchella*	V	V
Striped Legless Lizard	*Delma impar*	V	V
Insecta			
Key's Matchstick Grasshopper	*Keyacris scurra*	E	-
Golden Sun Moth	*Synemon plana*	V	V

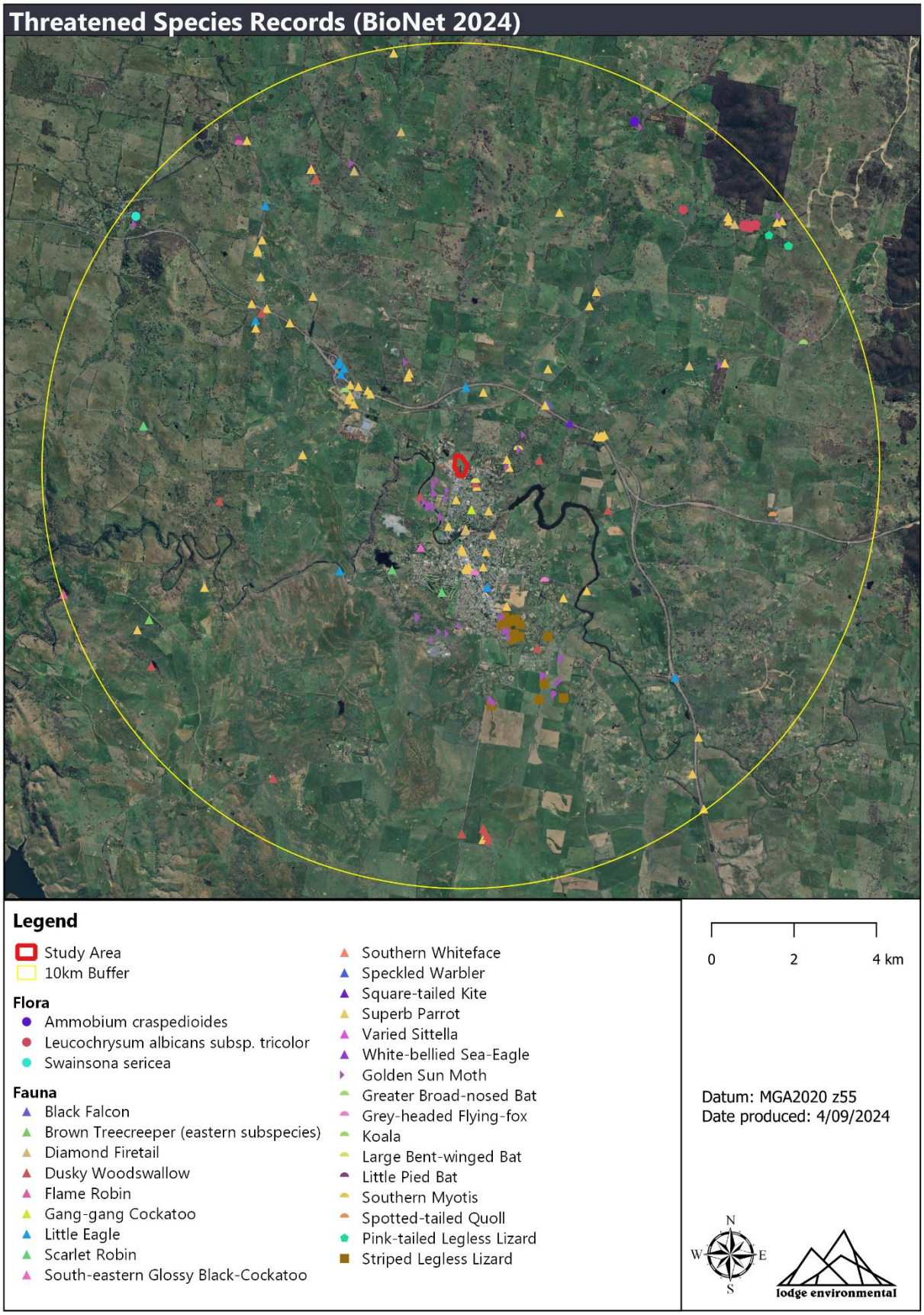

Figure 6: Threatened species recorded within 10km of the Study Area

5.0 FIELD SURVEY RESULTS

5.1 EXISTING ENVIRONMENT AND HABITAT

The Study Area is characterised by cleared areas comprised of exotic grasses, weeds and pasture species. Exotic and native trees are planted around the existing infrastructure and driveway. There is a dam present at the western border of the Study Area, and another extending beyond the north-eastern border.

The cleared grasslands consist predominantly of exotic ground cover species, including *Cynodon dactylon* (Common Couch), *Cenchrus clandestinus* (Kikuyu), *Dactylis glomerata* (Cocksfoot) and *Plantago lanceolata* (Lamb's Tongue), bordered by rows of *Pinus radiata* (Radiata Pine). The patches of native vegetation occur mostly in proximity to the existing dwelling, consisting of planted mature trees including *Eucalyptus globulus subsp. maidenii* (Maiden's Gum), *Eucalyptus leucoxylon* (Yellow Gum), *Eucalyptus mannifera* (Brittle Gum) and *Eucalyptus elata* (River Peppermint).

The native tree cover across the site is expected to facilitate the movement and foraging of a wide variety of highly mobile native fauna species (i.e. birds and mammals) between the Study Area and the wider locality. An overview of the habitat features present within the Study Area are described below in **Table 4**.

Table 4: Habitat features present within the Study Area

Habitat Feature	Description of the feature	Presence of the habitat feature
Habitat-bearing trees	Habitat-bearing trees can be alive or dead (stag) and include any additional sheltering, roosting or nesting features that may be relied upon by native fauna, but are not captured within the traditional definition of a Hollow-bearing tree. These features include hollows, crevices, cracks, fissured branches, exfoliating bark, nests, dreys and arboreal termite mounds.	Several hollows were recorded, across one stag and one exotic tree (Figure 7). Small and medium hollows were recorded. These recorded habitat features have the potential to provide roosting and shelter habitat for a variety of threatened and non-threatened fauna species found within the locality.
Groundcover	Groundcover consists of low shrubs, grasses, herbs and leaf litter. Tall, dense tussock grasses provide important shelter and nesting habitat for a diverse range of animals, including birds, reptiles, marsupials and insects.	Groundcover was predominately exotic species. Exotic groundcover species still provide habitat for a range of fauna found in the locality.
Leaves, flowers, fruits, seeds and sap	Leaves, flowers, fruits, seeds and sap serve as a critical food source for a diverse array of native animals ranging from large mammals to insects, that are subsequently eaten by birds and mammals. In addition, the foliage of plants can offer vital shelter to nesting or roosting animals, protecting them from both harsh weather conditions and predators.	Upper stratum species across the Study Area provide leaves, flowers, fruits and seeds as a foraging and shelter habitat for fauna within the locality.
Waterbodies	Access to water is an essential habitat feature for many animals. While some animals require water only for drinking, others depend heavily on certain aquatic habitats for breeding and foraging. Aquatic ecosystems are home to a diverse array of species such as fish, frogs, turtles, platypus, water rats and aquatic invertebrates. These animals use fallen logs, instream rocks and substrate as places to hide,	Two dams were located across the Study Area. No vegetation was observed within these dams, and surrounding vegetation was exotic pasture. Nevertheless, the dams provide habitat for waterbirds, frogs and aquatic fauna.

	rest and nest. Plants floating on or growing in the water, such as reeds, also provide important breeding, feeding and sheltering areas for waterbirds and frogs.	

5.2 VALIDATED VEGETATION

Following the field assessment and consideration of the historical disturbance and current land use practices, two vegetation zones were validated within the Study Area, being:

- Native Vegetation (Planted)
- Exotic Vegetation

Figure 7 depicts the validated vegetation within the Study Area. The below subsections and **Table 5** provide a detailed description of the vegetation zones recorded. Native vegetation within the Study Area was not assigned to a PCT, as several of the *Eucalyptus* species present are not known to occur naturally within the area. The previous, long-term landowner advised that all trees had been planted.

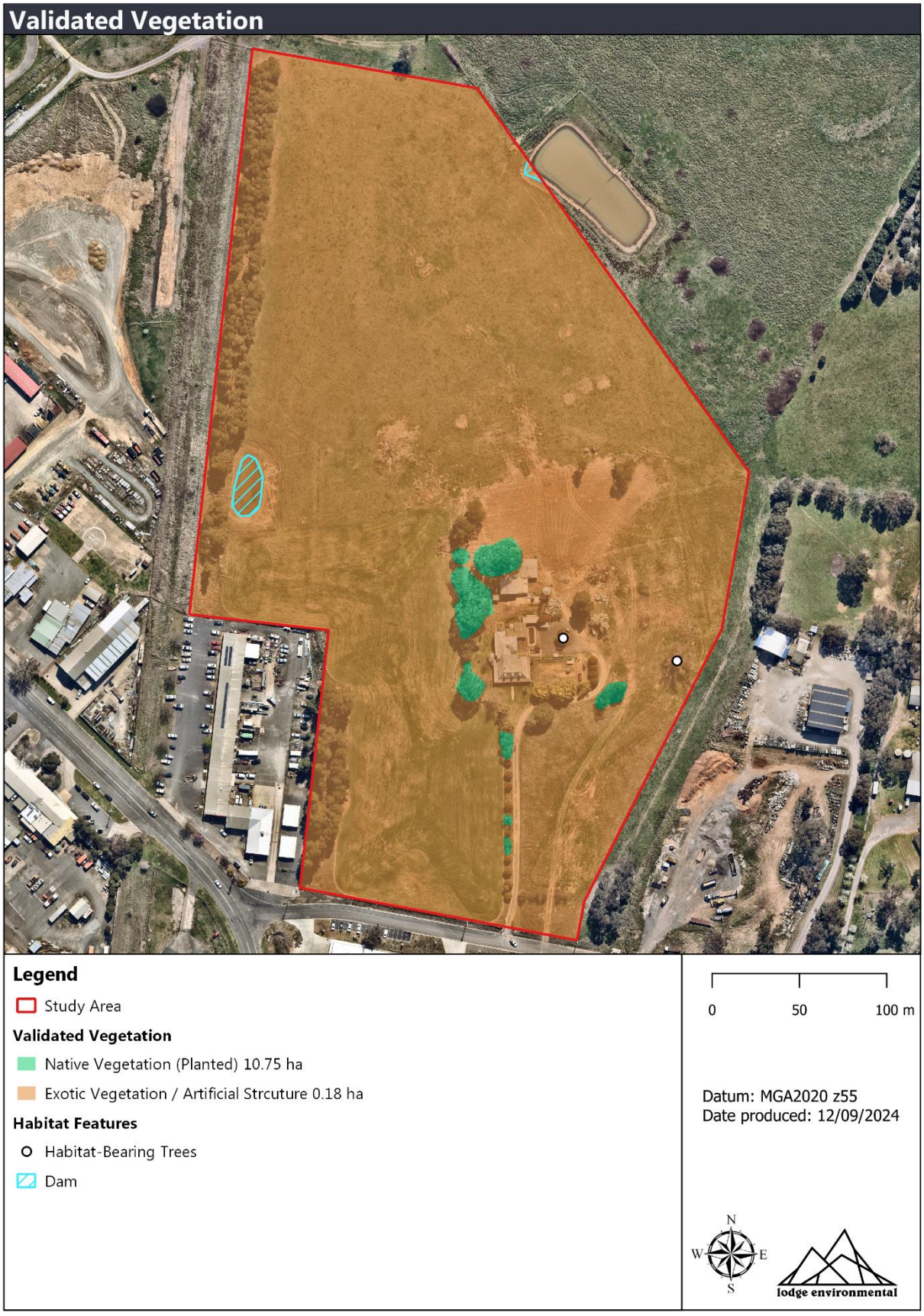

Figure 7: Validated Vegetation (Lodge Environmental 2024)

5.2.1 Native Vegetation

Table 5: Native Vegetation Zone Description

Native Vegetation		
Vegetation Structure	Overstorey only present, including *Eucalyptus mannifera* (Brittle Gum) and *Eucalyptus elata* (River Peppermint), as well as planted species that do not occur naturally within the area, including *Eucalyptus globulus subsp.maidenii* (Maiden's Gum) and *Eucalyptus leucoxylon* (Yellow Gum).	
Landscape Position	Occurs surrounding the existing dwelling and driveway, at elevations of 490-500 m asl.	
Soil	With reference to eSPADE (DPIE 2024), the Study Area is mapped as occurring on 'Binalong' (SI5512bi). Binalong soils are defined as *'Undulating low hills. Slope gradients 3 – 10%. Local relief between 30 – 90 m. Permanent erosional stream or convergent integrated tributary pattern. Elevations vary between 500 – 630 m above sea-level.'*	
Survey Method	**Condition**	**Area (ha)**
Random meander	Poor	0.22ha
Zone Photo		

5.2.2 Exotic Vegetation / Artificial Structure

The Exotic Vegetation / Artificial Structure zone encompasses the existing infrastructure, including a residential dwelling, sheds and access roads, with planted ornamental garden species, planted windrows and cleared exotic pasture.

The vegetation present within this zone consists of mostly exotic planted trees and landscaping, including *Pinus radiata* (Monterey Pine), *Cedrus deodara* (Deodar Cedar) and *Ulmus* sp. (Elm). The cleared paddocks are restricted to exotic pasture including *Cynodon dactylon* (Common Couch), *Cenchrus clandestinus* (Kikuyu), *Dactylis glomerata* (Cocksfoot), *Eleusine* sp. (Goose Grass) and *Plantago lanceolata* (Lamb's Tongue).

No threatened species were recorded within this vegetation zone.


Figure 8: Exotic vegetation

5.3 THREATENED ECOLOGICAL COMMUNITIES

TECs are ecological communities that are at the risk of extinction from a number of pressures, including:

- Clearing of native vegetation
- Inappropriate fire regimes
- Exotic and/or invasive species
- Climate change
- Water diversion
- Pollution and urban development.

TECs are afforded considerable protection via their listing under both the State BC Act and Commonwealth EPBC Act.

The native vegetation within the Study Area is not considered to align with any listed TECs.

5.4 FLORA

A total of 27 species were recorded during the site inspection (6 native and 21 exotic). A species list is provided in **Appendix A**.

5.4.1 Threatened Flora Species

Targeted flora surveys were not conducted as part of this assessment. Following the site survey and with a greater understanding of the habitat attributes within the Study Area, no threatened flora species are considered to have potential of occurring within the Study Area.

5.5 FAUNA

A total of 10 fauna species were identified within the site. A species list is included in **Appendix B**. Targeted surveys were not conducted as part of this assessment.

5.5.1 Threatened Fauna Species

There were no threatened fauna species identified within the Study Area.

In general, the habitat potential of the Study Area for specialist native species, such as the listed threatened species, is poor. This is primarily due to the isolated nature of the native vegetation and historical land use, which has degraded much of the Study Area's natural habitat value. Nevertheless, the remaining native canopy within the Study Area has the potential to be utilised by native fauna moving through the landscape, offering sheltering and foraging habitat.

The following observations were noted:

- One stag and one exotic tree with hollows were identified throughout the Study Area, which provide sheltering habitat in the form of small and medium sized hollows.
- Native canopy provides flowers which may be utilised as a food source for highly mobile fauna.
- Mid and ground stratum absent.
- Poor connectivity to areas of greater condition vegetation due to a fragmented landscape.
- Two dams are located within or just outside the Study Area, which provide potential habitat for waterbirds, frog and aquatic fauna.
- No rocks, caves, overhangs or crevices to provide habitat.
- No natural recruitment or regeneration of native flora species.

Following the site survey and with a greater understanding of the habitat attributes of the Study Area, the threatened species listed in **Table 6** have the potential to utilise the habitat attributes within the Study Area.

If future development impacts habitat features these threatened species utilise, targeted survey may be required to determine presence or absence and the level of impact. Alternatively, proposal design and planning should aim to avoid and incorporate habitat features. In doing so, preservation and protection of critical habitat for threatened species can be preserved.

Table 6: Threatened fauna species with a potential to use the sites habitat features

Common name	Scientific name	BC Act	EPBC Act
Aves			
Dusky Woodswallow	*Artamus cyanopterus cyanopterus*	V	-
Gang-gang Cockatoo	*Callocephalon fimbriatum*	V	E
Varied Sittella	*Daphoenositta chrysoptera*	V	-
Swift Parrot	*Lathamus discolor*	E	CE
Blue-winged Parrot	*Neophema chrysostoma*	V	-
Superb Parrot	*Polytelis swainsonii*	V	V
Scarlet Robin	*Petroica boodang*	V	-
Flame Robin	*Petroica phoenicea*	V	-
Diamond Firetail	*Stagonopleura guttata*	V	-
Mammals			
Southern Myotis	*Myotis macropus*	V	-
Corben's Long-eared Bat	*Nyctophilus corbeni*	-	V

Greater Broad-nosed Bat	*Scoteanax rueppellii*	V	-
Grey-headed Flying Fox	*Pteropus poliocephalus*	V	V

5.5.2 Biodiversity and Conservation SEPP 2021

The Koala Habitat Protection SEPP 2021 has now been consolidated under Chapter 4 of the Biodiversity and Conservation SEPP 2021 (The SEPP). The SEPP aims to encourage the proper conservation and management of areas of natural vegetation that provide habitat for *Phascolarctos cinereus* (Koala) to ensure a permanent free-living population over their present range and reverse the current trend of Koala population decline.

5.5.2.1 Development Assessment Process – No Approved Koala Plan of Management

Part 4.9 of The SEPP applies to the Study Area due to the following criteria being met:

- The Study Area encompasses an area of at least 1 ha (including adjoining land), and
- YVC does not have an approved koala plan of management.

Before the consenting authority approve a DA, they must assess whether the development is likely to have any impact on Koalas or Koala habitat. To demonstrate a development has low or no impact on Koalas or Koala habitat information prepared by a suitably qualified ecologist must detail if the DA:

- Does not include any trees belonging to the Koala use tree species.
- Is not Core Koala Habitat. Core Koala Habitat is defined as:
    - An area of land where Koalas are recorded as being present (individuals recorded, scratch marks or scat).
    - An area of land where Koalas have been recorded as being present in the previous 18 years.
- Does not include any trees with a diameter at breast height of more than 10 cm.
- Includes only horticultural or agricultural plantations.

If a DA is considered to have a higher level of impact on Koalas or Koala habitat, a Koala Assessment Report (KAR) must be submitted to the consenting authority to assist with deciding whether to grant consent.

Eucalyptus mannifera (Brittle Gum) was identified within the Study Area, which is considered a Koala use tree within the Central and Southern Tablelands Koala Management Area, however there have not been any Koala sightings within 10km of the Study Area in the last 18 years. As such, the Study Area is not considered Core Koala Habitat, and any future DA is anticipated to pose low or no impact on Koalas or Koala habitat.

6.0 ECOLOGICAL CONSTRAINTS

Ecological values identified through the literature review and field survey were ranked on a scale of high, moderate, and low based on the level of ecological value and legislative protection. The constraint levels and relevant attributes recorded within the Study Area are shown in **Figure 9** and detailed in **Table 7**.

Table 7: Ecological Constraints within the Study Area

Constraint Level	Description/Activity
High	• There are no high ecological constraints within the Study Area
Moderate	• Impact to potential fauna habitat features, including dams, non-native HBTs and low habitat stag. • Planted native vegetation removal with no identifiable habitat features.
Low	• Existing artificial structure and hardstand areas. • Removal of exotic vegetation, including pasture grasses.

6.1 HIGH CONSTRAINTS

High constraints for the proposal include entry in the Biodiversity Offset Scheme (BOS), which is considered unlikely. See Section 7.0.

6.2 MODERATE CONSTRAINTS

Clearance or impact to native vegetation below the BOS clearance threshold is considered a moderate constraint and will require an Assessment of Significance accompanying a Flora and Fauna Assessment (FFA), to be prepared by a suitably qualified ecologist. The FFA will need to outline all impacts associated with the development and how the development minimises and/or mitigates impacts to native biodiversity.

The two dams present within or immediately adjacent the Study Area may provide potential foraging resources for native fauna such as microbats, waterbirds, frogs and aquatic fauna, with the northern dam observed being utilised for foraging by the Pacific Black Duck (*Anas superciliosa*). These dams are also overlaid by the YVLEP Terrestrial Biodiversity clause, which aims to protect native flora, fauna, ecological processes and encourage recovery of habitat. Impacts to these waterbodies should be minimised. As these dams contain no native vegetation and appear in overall poor condition, they have been categorised as a moderate constraint.

Two non-native HBTs, one stag (dead tree) and one exotic tree with hollows, have been categorised as moderate constraint, as they present lower quality habitat, however, are still considered potential sheltering habitat for passing fauna.

6.3 LOW CONSTRAINTS

Areas of Exotic Vegetation / Artificial Structures are considered as a 'Low' ecological constraint. These areas provide low habitat value compared to the native vegetation found within the Study Area. Removal or impact to these areas are unlikely to impact native flora or fauna species.

However, future development will need to consider measures to limit the spread of weeds and other exotic vegetation.

Figure 9: Ecological constraints within the Study Area

7.0 BIODIVERSITY OFFSET SCHEME ENTRY

Entry into the BOS is triggered by developments, projects and activities that exceed certain thresholds for significant impacts on biodiversity. The thresholds are:

- Clearing over the relevant native vegetation clearance threshold associated with the proposed minimum lot size. Where no minimum lot size applies to the land, the clearance threshold is associated with the actual lot size.
- Clearance of native vegetation mapped on the Biodiversity Values (BV) Map.
- Significant impacts to matters listed under the BC Act as assessed using s7.3 of the BC Act.

There is no BV mapping within the Study Area, and total area of native vegetation within the Study Area is below the lowest clearance threshold. No threatened entities were detected during the survey, and with historical land use removing any high-value habitat, it is not anticipated that the proposal will constitute a significant impact to any threatened entities. As such, a Flora and Fauna Assessment (FFA) will be sufficient to accompany the DA.

If clearing of native vegetation can be avoided altogether, the DA may not require an accompanying FFA.

8.0 RECOMMENDATIONS

The following recommendations are provided to assist preliminary planning, with the aim of reducing impacts to biodiversity. In general, avoiding impacts in areas of high ecological constraint will minimise approval risk of any future Planning Proposals or Development Applications. Ecological constraints have been categorised as low, moderate or high which provides general guidance on areas where impact avoidance or minimisation should be considered. Detailed recommendations and additional considerations will be provided in future reporting.

Key preliminary recommendations and comments include:

- Locate building envelopes within existing cleared areas to avoid removal of any native vegetation or HBTs.
- Micro-siting any access roads and fence alignments is recommended to avoid the need for native tree removal. An arborist will be required to provide information on suitable Tree Protection Zones (TPZs).
- Retention of key habitat features, including dams and HBTs.
- Native landscaping including locally occurring species will aim to restore habitat value to the Study Area. This will address the YVLEP Terrestrial Biodiversity clause by "*encouraging the conservation and recovery of native fauna and flora and their habitats*".

9.0 CONCLUSION

Lodge Environmental has conducted a preliminary assessment of biodiversity values present at 2 Reddall Street, Yass to identify notable constraints in the context of future development opportunities.

Vegetation within the Study Area is predominantly exotic pasture that has been heavily modified due to historical and current land use practices, with planted native and exotic trees surrounding the dwelling and driveway. Ecological constraints are only considered low to medium.

Targeted surveys were not conducted for threatened species, however, there is limited suitable habitat present. Native canopy presents some foraging habitat suitable for highly mobile threatened avifauna.

The Biodiversity Offset Scheme (BOS) will not be triggered by vegetation clearance and the proposal is unlikely to constitute a significant impact to matters listed under the BC Act. Therefore, a Flora and Fauna Assessment (FFA) will be sufficient to accompany the DA.

10.0 REFERENCES

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11.0 LIMITATIONS

This report and the associated services performed by Lodge Environmental are in accordance with the scope of services set out in the contract between Lodge Environmental and the Client. The scope of services was defined by the requests of the Client, by the time and budgetary constraints imposed by the Client, and by the availability of access to Site.

Lodge Environmental derived the data in this report primarily from visual inspections, and, limited survey and analysis made on the dates indicated. In preparing this report, Lodge Environmental has relied upon, and presumed accurate, certain information provided by government authorities, the Client and others identified herein. The report has been prepared on the basis that while Lodge Environmental believes all the information in it is deemed reliable and accurate at the time of preparing the report, it does not warrant its accuracy or completeness and to the full extent allowed by law excludes liability in contract, tort or otherwise, for any loss or damage sustained by the Client arising from or in connection with the supply or use of the whole or any part of the information in the report through any cause whatsoever.

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This report has been prepared on behalf of and for the exclusive use of the Client and is subject to and issued in connection with the provisions of the agreement between Lodge Environmental and the Client. Lodge Environmental accepts no liability or responsibility whatsoever and expressly disclaims any responsibility for or in respect of any use of or reliance upon this report by any third party or parties.

It is the responsibility of the Client to accept if the Client so chooses any recommendations contained within and implement them in an appropriate, suitable and timely manner.

Appendices

Appendix A: Flora Species List

Scientific name	Common name	Native	Exotic
Arctotheca calendul	Capeweed		X
Cedrus deodara	Deodar Cedar		X
Cirsium sp.			X
Cordyline Australis	New Zealand Cabbage Tree		X
Crassula sieberriana	Australian Stonecrop	X	
Dactylis glomerata	Cocksfoot		X
Echium plantagineum	Patterson's Curse		X
Eleusine sp.	Goose Grass		X
Eucalyptus elata	River Peppermint	X	
Eucalyptus globulus subsp. maidenii	Maiden's Gum	X	
Eucalyptus leucoxylon	Yellow Gum	X	
Eucalyptus mannifera	Brittle Gum	X	
Eucalyptus sp.		X	
Fumaria sp.			X
Juncus sp.			X
Lolium sp.	Ryegrass		X
Onopordum acanthium	Scotch thistle		X
Photina sp.			X
Pinus radiata	Radiata pine		X
Plantago lanceolata	Ribwort Plantain		X
Prunus sp.	Cherry blossom		X
Romulus rosea	Onion Grass		X
Rubus fruticosa	Blackberry		X
Stellaria media	Chickweed		X
Taraxacum officinale	Dandelion		X
Trifolium sp.	White clover		X
Ulmus pumila	Siberian elm		X

Appendix B: Fauna Species List

Class Name	Scientific Name	Common Name
Aves	*Grallina cyanoleuca*	Magpie Lark
	Hirundo neoxena	Welcome Swallow
	Sturnus vulgaris	European Starling
	Strepera graculina	Pied Currawong
	Rhipidura leucophrys	Willy Wagtail
	Chrysococcyx basalis	Horsefield's Bronze-cuckoo
	Anas superciliosa	Pacific Black Duck
	Corvus coronoides	Australian Raven
	Gymnorhina tibicen	Australian Magpie
	Platycercus eximius	Crimson Rosella