Hamilton Environmental Services
ABN: 89 108 410 911

TEST OF SIGNIFICANCE
– TRINITY ANGLICAN COLLEGE, THURGOONA

Test of Significance – Trinity Anglican College, Thurgoona

Submitted to:

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Cover Photo: Looking east across the south-eastern section of the proposed development area.

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1. INTRODUCTION

In August 2022, Hamilton Environmental Services (HES) was engaged to undertake a Biodiversity Assessment and complete a Test of Significance under Part 7 Division 1 Section 7.3 of the *Biodiversity Conservation Act 2016* for Trinity Anglican College, Thurgoona, through Habitat Planning.

The School is seeking to develop Primary and Secondary Precinct buildings, a Music and Drama Centre, extensions to existing sporting facilities and new multi-sports areas across the southern and eastern sections of the property (Matt Johnson pers. comm. 2022).

Avoidance and minimisation of vegetation loss and biodiversity impacts has been a feature of design. While trees are proposed for removal, the majority of these are planted exotic and non-indigenous native trees. Some losses are unavoidable, as the site is relatively constrained in terms of locating the buildings elsewhere on the property, given the large footprint of the proposed buildings and the location of the existing buildings on-site. At present, the proposed works area has been selected as it adjoins existing buildings and services, and uses largely under-utilised sections of the property. The location of the buildings avoid impacts resulting from adjoining bushfire hazards and also avoids the need to have to remove the large sporting ovals that currently exist on-site, thereby reducing the amount of usable play spaces for students.

Field assessment of the site was conducted on the 8th September 2022 by Dr. Steve Hamilton, and this report presents these findings.

2. BACKGROUND

2.1 Consultant Background

Steve Hamilton (Dr.)

AssocDipAppBiol, BAppSc(AppBiol), MAppSc (RMIT), PhD (University of Melbourne), BAM accredited Assessor (DPIE NSW), Vegetation Quality Assessment Certified (DSE/DEPI/DELWP Victoria), Bush Broker Assessor (DELWP Victoria), Certificate IV in Training and Assessment.

Steve is an ecologist specialising in flora and fauna inventory, auditing, monitoring and surveying, as well as soil typing, analysis and mapping. He has 12 years consulting experience, associated with a range of ecological evaluations and monitoring processes across all of Victoria, and southern and western New South Wales, which includes assessing and mapping vegetation condition, vegetation type, targeted threatened species surveys, habitat quality assessment (in Victoria, Habitat Hectares assessment and 'Net Loss and Gain' evaluations), across the range of terrestrial, riparian and wetland ecosystems.

He has vast experience in the assessment of native vegetation and species, and habitat loss assessment, for irrigation, residential, infrastructure and mining (including sand, rock and ore extraction) developments, and the successful negotiation of the appropriate legislative, regulatory and statutory frameworks across the three levels of Government to provide suitable outcomes for clients across both States to allow developments to proceed. In Victoria, this involves the production of Net Loss Reports, Vegetation Offset Management Plans and Work Plans, and in NSW, reporting for potential native vegetation/habitat losses and threatened species threats in Development Applications (DAs), and in more detailed situations where Director General Requirements (or Secretary's Environmental Assessment Requirements; SEARs) are specified, Environmental Impact Statements (EISs) or Reviews of Environmental Factors (REFs).

Beyond statutory requirements and reporting, Steve is often called upon to provide technical reporting into particular issues, such as research/survey investigations into vegetation-soil-fauna management issues in natural areas or for development proposals, such as weed management surveys and strategies, kangaroo survey and management, potential mining pollution impacts, sustainability of timber resources, soil mapping and land capability assessment, ecosystem restoration, or revegetation design.

Prior to consulting, Steve spent 20 years as a senior teaching/research academic, and has more than 30 peer-reviewed papers and many technical reports, most focussing on the impacts of disturbance on the ecology and floristics of woodlands and grasslands.

2.2 Location and Description

The school property of 10 ha is located approximately 1.5 km north of Thurgoona (Fig. 2-1), and the proposed developments have an approximate footprint of 2.3 ha across the southern and eastern sections of the property (see Fig. 2-2; Matt Johnson pers. comm. 2022); the property is bordered by Elizabeth Mitchell Drive on the eastern boundary, a public land drainage line on the northern boundary, and other forward planting public land on the southern and western boundary (see Fig. 2-2).

The proposed area of development is a highly managed landscape, and encapsulates areas that are existing sealed roads, paths and car parks, basketball courts (in the north), works areas (in the south west) and water storage tanks (in the south), interspersed with large areas that are maintained for amenity through regular mowing, and which have a range of often regularly spaced planted exotic, indigenous, and non-indigenous native tree and shrub species found across them in rows.

These mown areas are dominated by an introduced species ground layer.

There are six juvenile Blakely's Red Gum (*Eucalyptus blakelyi*) – none of which are hollow-bearing - found in the southern fringes of the property and development area, that are not planted, and which appear to have recruited from the forward planting area along the southern boundary of the property.

The proposed development will result in the removal of 62 planted individuals, and four juvenile Blakely's Red Gum recruits.

The Existing and Demolition Site Plan can be seen in Fig. 2-3.

3. METHODOLOGY

3.1 Desktop Review

The following desktop information was gathered prior to field assessment:

- Aerial imagery and base map from Land and Property Information New South Wales;
- Determination of a general species list for the area (Department of Planning and Environment [DPE] 2022a);
- Matters of National Significance reporting for the 10 km radius around the property (Department of Agriculture, Water and Environment [DAWE] 2022);
- Flora, fauna and threatened species lists, sighting records and information for the district was obtained from *BioNet – Website of the Atlas of NSW Wildlife* (DPE 2022b).

Figure 2-1 **Aerial image of the general location of the assessed areas of the property within the district (Image from ESRI Australia 2022).**

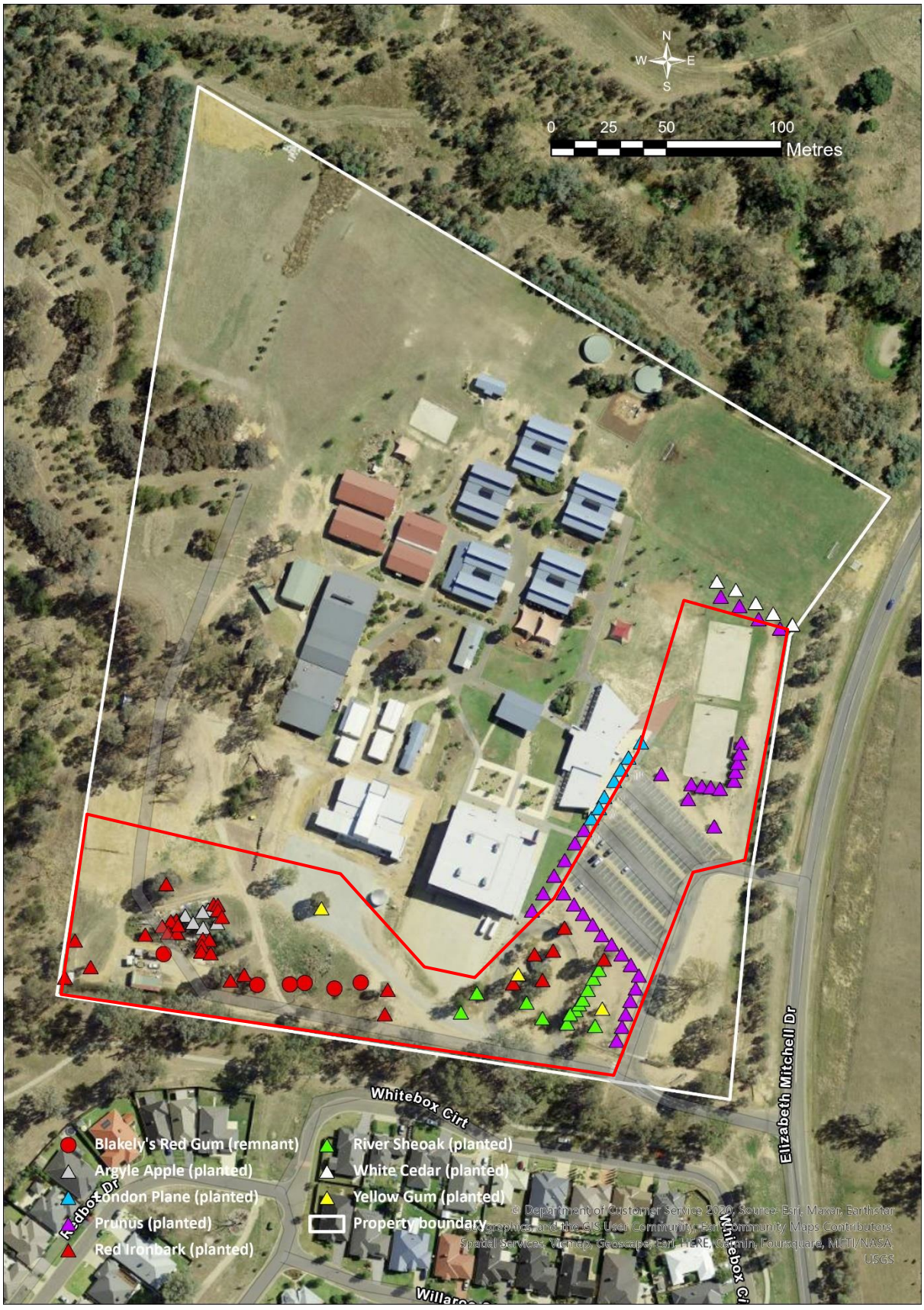

Figure 2-2 **Aerial image of the assessed property, showing the location of the assessed trees within or in close proximity to the proposed development footprint, the extent of which is broadly outlined in red (Image from ESRI Australia 2022).**

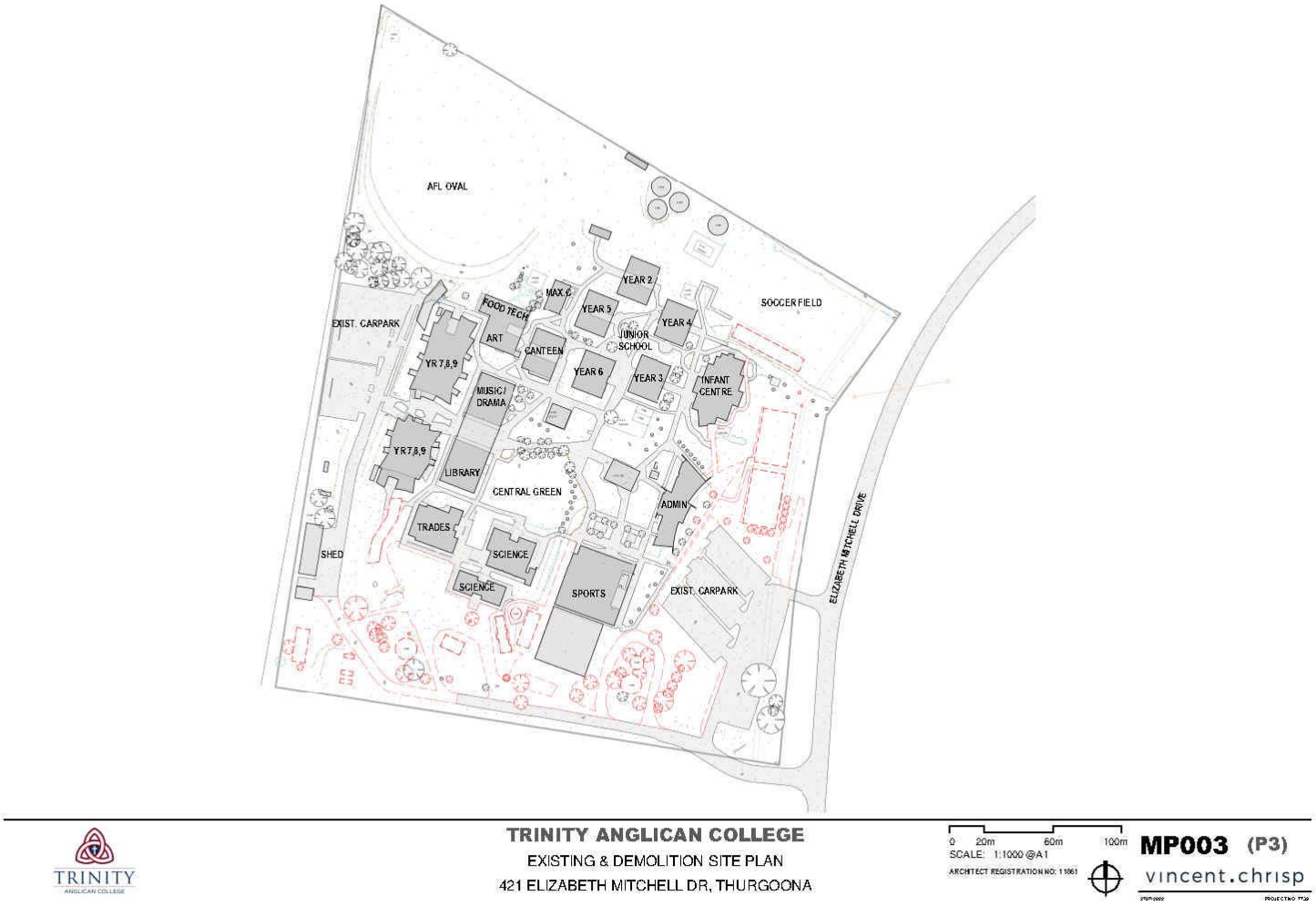

Figure 2-3 Existing and Demolition Site Plan for proposed developments at Trinity Anglican College, Thurgoona (Vincent Crisp, dated 27/7/22).

3.2 General Site Assessment

On the 8th September 2022, Dr. Steve Hamilton (BAAS 18106) visited the property and the adjacent area to undertake the assessment. On this day, air temperatures were between 15 and 16°C, there was persistent rain, and winds were calm (Bureau of Meteorology 2022).

The assessed area and surrounds were traversed by foot, and continuous active searching was conducted over a total period of 1 hour.

In a general sense, the following assessments were undertaken:

- Vascular plant species were identified and noted according to zone, with an overall cover/abundance value recorded for each species (see Table 3-1);
- The species, location, diameter, health and basic hollow characteristics of all assessed tree individuals was recorded, and an image of the tree taken;
- Opportunistic recording of any fauna;
- Digital images across the site taken.

Forty eight (48) images were taken across the proposed development area during the assessment.

Table 3-1 Modified Braun-Blanquet scale applied to assessment to each vascular plant species identified.

Visual assessment of cover/abundance	
Symbol	*Description*
+	rare, cover < 5%
1	Uncommon, cover < 5 %
2	Very common, cover < 5 % or cover 5-25 % with any number of individuals
3	Cover 25-50 % with any number of individuals
4	Cover 50-75 % with any number of individuals
5	Cover 75-100 % with any number of individuals

3.3 Taxonomy

3.3.1 Flora

Vascular plants that could not be identified in the field, specimens and images were collected for identification using the *Flora of New South Wales* (Harden 1990, 1991, 1992, 1993), and *PlantNet Flora On-line* (Royal Botanic Gardens Sydney 2022).

3.3.2 Fauna

Any fauna observed were recorded, with the nomenclature based variously on the compilations of Hero *et al.* (1991), Menkhorst (1995), Cogger (1996) and Simpson and Day (1998), utilising Triggs (1996) for identification using indirect methods, such as the presence of scats or tracks.

4. EXISTING ENVIRONMENT

4.1 Vegetation

As indicated, the proposed area of development is a highly managed landscape, and encapsulates areas that are existing sealed roads, paths and car parks, basketball courts (in the north), works areas (in the south west) and water storage tanks (in the south), interspersed with large areas that are maintained

for amenity through regular mowing, and which have a range of often regularly spaced planted exotic, indigenous, and non-indigenous native tree and shrub species, such as River Sheoak, White Cedar, Argyle Apple, Red Ironbark, Yellow Gum, London Plane and Prunus found across them in rows (see Appendix C).

These mown areas are dominated by an introduced species ground layer, including species such as Kikuyu Grass, Fescue, Onion-grass, Winter-grass, Water Couch, Paspalum, Red-flowered Mallow, Great Brome, Cat's Ear and Wimmera Ryegrass; there were no indigenous ground layer species observed (95 % projective foliage cover in vegetated areas; Appendix C).

There are six juvenile Blakely's Red Gum found in the southern fringes of the property and development area, that are not planted, and which appear to have recruited from the forward planting area along the southern boundary of the property.

The proposed development will result in the removal of 62 planted individuals, and four juvenile Blakely's Red Gum recruits.

These juvenile Blakely's Red Gum individuals are the only remnant native vegetation on the site, and the four to be removed constitute a total extent of only 40 m^2 (0.004 ha; based on the combined canopy extent).

Based on remnant vegetation in the locale, it is likely that the whole property – including the assessed proposed development area - is former *Blakely's Red Gum - Yellow Box grassy tall woodland of the NSW South Western Slopes Bioregion* (NSW Plant Community Type (PCT) 277; Environment and Heritage 2012 and DPE 2022d).

This PCT is no longer represented across the proposed development area, and the only remnants are the six juvenile Blakely's Red Gum that have recruited from the forward plantings to the south.

4.2 Significant Trees

A total of 106 tree and shrub individuals evaluated across the proposed development area and in the immediate proximity.

The location of all assessed trees can be seen across Figures 4-1 to 4-3, and their characteristics outlined in Appendix D.

Development projects that involve earthworks can cause indirect losses of native vegetation that are retained during construction due to root damage and soil modification within the zone where roots occur. Of particular concern is the longer-term impact of soil compaction and excavation (e.g. trenching for pipelines) close to trees and the effects of this on immediate and longer-term tree health. Guidance and clarity has been provided, and a definition of an acceptable distance for tree retention in order to prevent indirect losses of native vegetation during and after construction activities as a guiding principle has been developed. These designated *Tree Protection Zones* (TPZs) should be implemented for the duration of construction activities (Standards Australia 2009) as part of the development conditions. A TPZ is a specific area above and below the ground, with a radius 12 times the Diameter at Breast Height (dbh; 1.3 m) of any individual tree; the TRZ of trees should be no less than 2 m or greater than 15 m, and it is recommended that physical barriers be erected to delineate the TPZ during construction activities (Standards Australia 2009). Encroachment of < 10 % of the TPZ is considered unlikely to have any influence on the survival and health of the tree provided the lost area is compensated for elsewhere in the TPZ, and that the loss is not within the tree's Structural Root Zone (SRZ), which is a 4 m radius from the tree truck for a tree of 150 cm dbh (Standards Australia 2009). However, encroachment of more than 10 % of the TPZ area of any tree results in that tree being considered a loss (even if it remains standing during and after the development activity).

Plate 4-1 **Views across the southern section of the proposed development area: near the south-western corner (top left), Tree 24 near the south-eastern corner (top right), near the south-western corner (middle left), looking east along the southern boundary (middle right), looking west along the southern boundary (bottom left), and looking north-east in the south-eastern corner (bottom right)(Images taken by author 8/9/22). Selected trees are numbered in white.**

As indicated, the proposed area of development is a highly managed landscape, and encapsulates areas that are existing sealed roads, paths and car parks, basketball courts (in the north), works areas (in the

south west) and water storage tanks (in the south), interspersed with large areas that are maintained for amenity through regular mowing, and which have a range of often regularly spaced planted exotic, indigenous, and non-indigenous native tree and shrub species, such as River Sheoak, White Cedar, Argyle Apple, Red Ironbark, Yellow Gum, London Plane and Prunus found across them in rows (see Appendix C).

There are six juvenile Blakely's Red Gum found in the southern fringes of the property and development area, that are not planted, and which appear to have recruited from the forward planting area along the southern boundary of the property.

The proposed development will result in the removal of 62 planted individuals, and four juvenile Blakely's Red Gum recruits.

These six juvenile Blakely's Red Gum individuals are the only remnant native vegetation on the site, and the four to be removed constitute a total extent of only 40 m^2 (0.004 ha; based on the combined canopy extent).

Of the 106 assessed trees:

- Trees 24, 27, 28, 29, 33 and 35 are indigenous remnant juvenile Blakely's Red Gum found in proximity to the southern boundary of the property, of which none are hollow-bearing, and all are < 20 cm diameter at breast height (dbh), and Trees 24, 27, 29 and 35 will be removed with the proposed development;
- The other 100 individuals are planted exotic, indigenous, and non-indigenous native tree and shrub species, such as River Sheoak, White Cedar, Argyle Apple, Red Ironbark, Yellow Gum, London Plane and Prunus. As indicated, these individuals are found in rows planted across amenity lawn areas that are regularly mown, and none of these individuals are hollow-bearing;
- A total of 62 of these planted exotic, indigenous, and non-indigenous native tree and shrub individuals will be removed with the proposed development (Trees 1 to 23, 25, 30. 31. 32, 34, 36, 37, 40 to 49, 56, 74 to 86, 88, 89, 94, 95, 97, 99 and 103);
- The other 38 planted exotic, indigenous, and non-indigenous native tree and shrub individuals will be retained, and their TPZs will be avoided, or impinged by < 10 % of their area;
- In summary, 62 planted exotic, indigenous, and non-indigenous native tree and shrub individuals on the property will be removed, none of which are hollow-bearing, and 4 indigenous remnant juvenile Blakely's Red Gum found in proximity to the southern boundary of the property, of which none are hollow-bearing, and all are < 20 cm dbh, will be removed with the proposed development. These six juvenile Blakely's Red Gum individuals are the only remnant native vegetation on the site, and constitute a total extent of only 40 m^2 (0.004 ha; based on the combined canopy extent).

4.3 Fauna

There were only 3 species of fauna observed or inferred across the property, including one which is introduced.

There were no rare or threatened species observed (after DPE 2022a).

As indicated previously, the proposed area of development is a highly managed landscape, and encapsulates areas that are existing sealed roads, paths and car parks, tennis courts (in the north), works areas (in the south west) and water storage tanks (in the south), interspersed with large areas that are maintained for amenity through regular mowing, and which have a range of often regularly spaced planted exotic, indigenous, and non-indigenous native tree and shrub species, such as River Sheoak, White Cedar, Argyle Apple, Red Ironbark, Yellow Gum, London Plane and Prunus found across them in rows.

There are six juvenile Blakely's Red Gum found in the southern fringes of the property and development area, that are not planted, and which appear to have recruited from the forward planting area along the southern boundary of the property.

Plate 4-2 **Views across the south-eastern section of the proposed development area: near the south-eastern corner (top), looking north along the edge of the car park (middle left), south-east across the south-eastern corner (middle right), looking south along the south-eastern boundary (bottom left), and looking west across the edge of the car park (bottom right)(Images taken by author 8/9/22). Selected trees are numbered in white.**

The proposed development will result in the removal of a 62 planted individuals, and four juvenile Blakely's Red Gum recruits.

Not surprisingly, the indigenous fauna observed across the property is low in diversity in such a modified/cleared urban environment, with the species observed being the indigenous Galah and Noisy Miner, and the introduced Common Blackbird.

Plate 4-3 **Views across the northern section of the proposed development area: near the south-eastern corner (top), looking north along the edge of the basketball courts (middle left), looking west along the edge of the basketball courts (middle right), looking south near the administration building (bottom left), and looking north near the administration building (bottom right)(Images taken by author 8/9/22). Selected trees are numbered in white.**

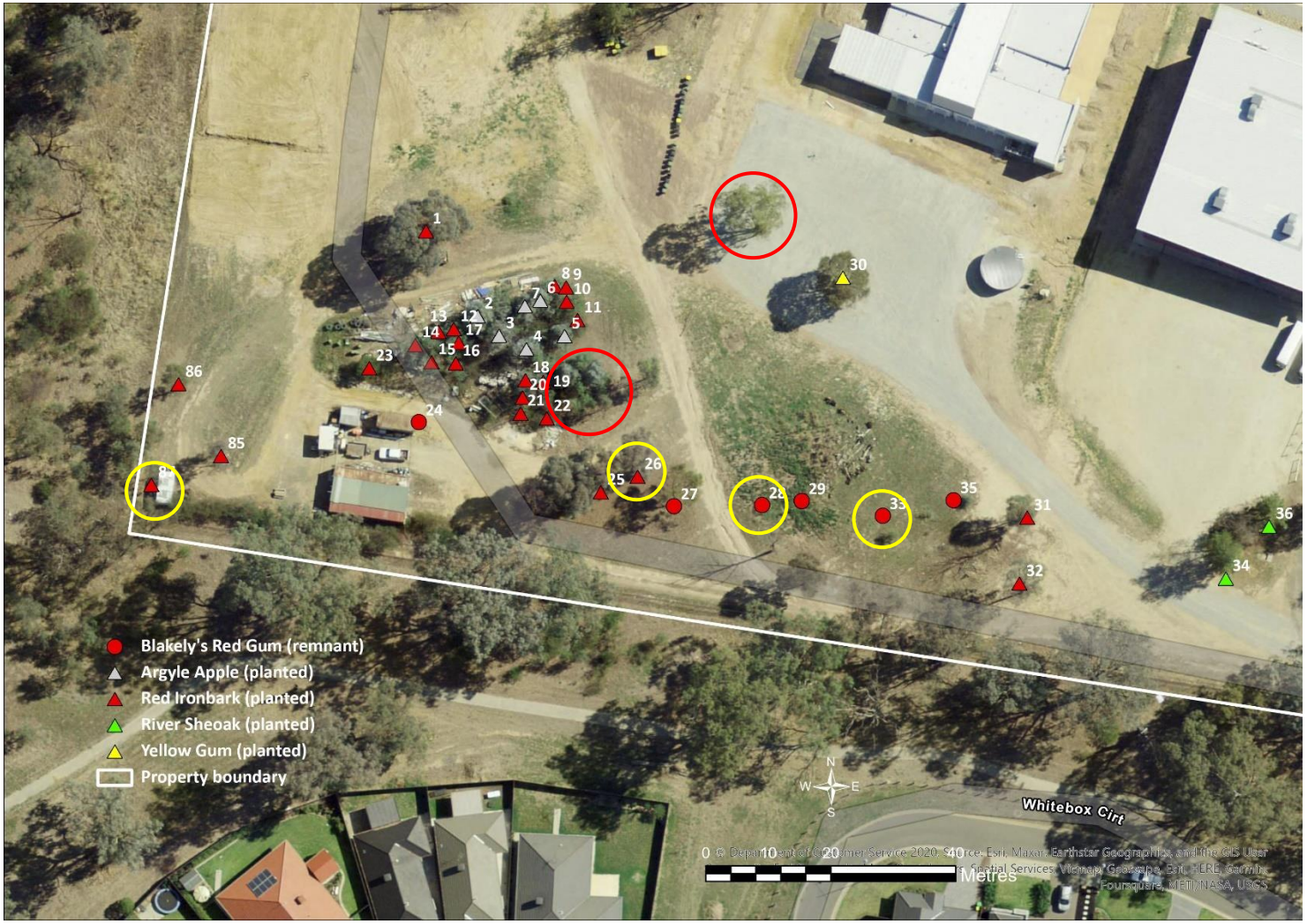

Figure 4-1 **Aerial image of the south-western section of the assessed development area showing the location of remnant trees and planted indigenous and non-indigenous native trees; numbers are tree identifiers used in Appendix D. Trees to be retained are circled in yellow. Trees no longer present at the time of the assessment but present in the 2018 aerial imagery are outlined in red (Image from ESRI Australia 2018).**

Figure 4-2 **Aerial image of the south-eastern section of the assessed development area showing the location of remnant trees and planted exotic, indigenous and non-indigenous native trees; numbers are tree identifiers used in Appendix D. Trees to be retained are circled in yellow. Trees no longer present at the time of the assessment but present in the 2018 aerial imagery are outlined in red (Image from ESRI Australia 2018).**

Figure 4-3 **Aerial image of the northern section of the assessed development area showing the location of remnant trees and planted exotic and non-indigenous native trees; numbers are tree identifiers used in Appendix D. Trees to be retained are circled in yellow (Image from ESRI Australia 2018).**

The lack of observed species diversity across the assessed areas is not surprising, given:

- the presence of the aggressive and territorial honeyeater Noisy Miner in the planted vegetation of the property will result in most small and medium-sized indigenous birds being deterred from residence within or near the site;
- except for the planted individuals, the forward plantings of the adjacent land, the lack of woody vegetation across the site and its environs, and the commensurate simplified vegetation structure, considerably limits mammal, reptile, bat and bird species residency;
- The property itself contains three hollow-bearing trees, there is a lack of hollow-bearing trees in the vicinity of the proposed development site;
- the lack of fallen timber on the property, which would considerably limit mammal, reptile, bat and bird species residency;
- The majority of the site is compacted earth/sand/gravel, buildings, or bitumen/concrete surface, and the vegetated areas on the property are mown lawn;
- the likely presence of feral animal populations such as foxes and feral/semi-domestic/domestic cats, which would actively predate any ground-dwelling or near ground-dwelling species heavily;
- The forward planting areas on the northern, western and southern boundaries of the property do provide good connectivity to larger blocks of planted/remnant vegetation to the west and east, and the site is only moderately connected in the landscape.

In summary, 62 planted exotic, indigenous, and non-indigenous native tree and shrub individuals on the property will be removed, none of which are hollow-bearing, and 6 indigenous remnant juvenile Blakely's Red Gum found in proximity to the southern boundary of the property, of which none are hollow-bearing, and all are < 20 cm dbh, will 4 will be removed with the proposed development. These six juvenile Blakely's Red Gum individuals are the only remnant native vegetation on the site, and the four to be removed constitute a total extent of only 40 m^2 (0.004 ha; based on the combined canopy extent).

The vegetation on the site and within the proposed development area provide only limited habitat opportunities for any native fauna that may utilise the site, despite the moderate landscape connectivity.

4.4 Threatened Species and Communities

4.4.1 Threatened community likelihood

Matters of National Environmental Significance searching reveals that the nationally critically endangered *White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland* community, and the nationally endangered *Grey Box Grassy Woodlands and Derived Native Grasslands of South-eastern Australia,* and the *Weeping Myall Woodlands* communities occur within a 10 km radius of the sites (DAWE 2022).

Threatened Ecological Communities (TECs) are listed in the schedules of the *Biodiversity Conservation Act 2016*. Three TECs are considered to occur within the district of the proposed alignment: *Inland Grey Box Woodland in the Riverina, NSW South Western Slopes, Cobar Peneplain, Nandewar and Brigalow Belt South Bioregions,* the *Allocasuarina luehmannii Woodland in the Riverina and Murray-Darling Depression Bioregions,* the *Sandhill Pine Woodland in the Riverina, Murray-Darling Depression and NSW South Western Slopes Bioregions,* and *White Box Yellow Box Blakely's Red Gum Woodland* (known as Grassy Box Gum Woodland) are all listed as *Endangered* under the Act (DPE 2022b).

As stated previously, based on remnant vegetation in the immediate vicinity, it is likely that the whole property – including the assessed proposed development area - is former *Blakely's Red Gum* -

Yellow Box grassy tall woodland of the NSW South Western Slopes Bioregion (NSW Plant Community Type (PCT) 277; Environment and Heritage 2012 and DPE 2022d).

This PCT is no longer represented across the proposed development area, and the only remnants are the six juvenile Blakely's Red Gum that have recruited from the forward plantings to the south

Grassy Box Gum Woodland

The critically endangered Grassy Box Gum Woodland (formally referred to as the White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland) is characterised by a species-rich understorey of native tussock grasses, herbs and scattered shrubs, and the dominance, or prior dominance, of White Box, Yellow Box and Blakely's Red Gum trees (Department of Environment, Heritage, Water and the Arts [DEHWA] 2006).

According to DEHWA (2006), areas in which an overstorey and indigenous shrub layer no longer exist are no longer a viable part of the ecological community, and while some small patches of indigenous ground layer remain, the community is effectively irretrievable (DEHWA 2006).

Therefore, the proposed development site should not be included within the listed critically endangered ecological community.

At an NSW level, the key habitat attributes for the threatened *White Box Yellow Box Blakely's Red Gum Woodland* community to be considered to be present are less prescriptive than the Commonwealth definitions. However, according to the NSW profile for this community (DPE 2022g), the adjacent vegetation to the predominantly cleared assessed sites, despite maintaining minimal indigenous understorey, does retain various age classes of trees, patches of regrowth and old trees with hollows in the immediate vicinity of these sites, and that this adjacent remnant vegetation is important wildlife habitat for insectivorous and nectar feeding birds. Disturbed remnants – such as forward planting areas adjacent to the assessed sites - are considered to form part of the community, including where the vegetation would respond to assisted natural regeneration (DPE 2022g), would fit the key habitat attributes of the threatened *White Box Yellow Box Blakely's Red Gum Woodland* community, and these areas are considered part of the *White Box Yellow Box Blakely's Red Gum Woodland* threatened community.

However, the proposed development site retains only one age class of trees (juveniles), no old trees with hollows, and given wholly introduced composition of the ground layer, and the current structures and management of the area precluding any assisted natural regeneration, and these areas are not considered part of the *White Box Yellow Box Blakely's Red Gum Woodland* threatened community.

4.4.2 Threatened species likelihood

There were no rare or threatened species under the *Biodiversity Conservation Act 2016* observed at the site (DPE 2022a).

The likelihood of presence for all recorded threatened species within a 10 km radius of the proposed has been considered (DPIE 2022a; Appendix A),and for those species listed in a broader search of the Threatened Species Profile for species known or predicted to occur in the Murray Catchment (DAWE 2022).

BioNet – Website of the Atlas of NSW Wildlife searches revealed that there were records or predicted occurrences of twenty four (24) threatened fauna species within a 10 km radius of the site and within the catchment (DPIE 2022a; Appendix A).

BioNet – Website of the Atlas of NSW Wildlife and Matters of National Environmental Significance searches revealed that there were records or predicted occurrences of six (6) threatened flora species within a 10 km radius of the site (DPIE 2022a; Appendix A).

The likelihood of the presence of these species and their likelihood of utilisation of the proposed development area was considered and rated based on the prevailing habitat and habitat quality of the site, the landscape connectivity and known records for species, and the composition, abundance and structure of any remnant indigenous vegetation (Appendix A).

Of these species, all species of flora and six fauna species were not likely to occur on the proposed works area or to utilise it because of the following issues (or combination of them):

- the lack of a suitable community/habitat type;
- the reduction in connectivity through clearing of habitat;
- the length of time since last sighting or lack of a sighting;
- disturbance to, and simplification of, the site.

Eighteen species of fauna – Black-chinned Honeyeater, Brown Treecreeper, Diamond Firetail, Dusky Woodswallow, Flame Robin, Gang-gang Cockatoo, Hooded Robin, Little Lorikeet, Painted Honeyeater, Purple-crowned Lorikeet, Regent Honeyeater, Scarlet Robin, Speckled Warbler, Squirrel Glider, Swift Parrot, Turquoise Parrot, Varied Sittella and Yellow-bellied Sheathtail-bat - were considered to have some potential to utilise the local area (Appendix A), notably, the adjacent areas of forward planting. As indicated previously, the vegetation on the site and within the proposed development area provide only limited habitat opportunities for any native fauna that may utilise the site, despite the moderate landscape connectivity to other planted areas of similar age and composition to the west and east.

Of the eighteen species mentioned, only Gang-gang Cockatoo, Squirrel Glider, Regent Honeyeater, Dusky Woodswallow, Hooded Robin, Speckled Warbler and Black-chinned Honeyeater have been recorded within 1 km of the site, with the most recent records for some of these species (e.g. Regent Honeyeater, Black-chinned Honeyeater, Hooded Robin, Dusky Woodswallow, Speckled Warbler, Gang-gang Cockatoo), more than 10 years old. As indicated, within the local area, these species are mostly likely to utilise the adjacent areas of forward planting. The vegetation on the site and within the proposed development area provide limited habitat, given that the ground layer is wholly introduced and there is a simplified vegetation structure. Nevertheless, a conservative approach suggests that the assessed area does provide very limited potential opportunities for seasonal foraging/hunting for all of these species.

4.4.3 Assessment of Significance

Part 7 Division 1 Section 7.3 of the *Biodiversity Conservation Act 2016* sets out five parameters that a determining authority must consider in deciding whether an activity is likely to have a significant effect on threatened species, populations, or ecological communities, or their habitats.

Five threatened communities, six threatened species of flora and twenty four species of fauna have been recorded within a 10 km radius of the site (DPIE 2022a), or are known or predicted to occur within 10 km of the site (DAWE 2022)(Appendix A).

As indicated, the proposed area of development is a highly managed landscape, and encapsulates areas that are existing sealed roads, paths and car parks, basketball courts (in the north), works areas (in the south west) and water storage tanks (in the south), interspersed with large areas that are maintained for amenity through regular mowing, and which have a range of often regularly spaced planted exotic, indigenous, and non-indigenous native tree and shrub species, such as River Sheoak, White Cedar, Argyle Apple, Red Ironbark, Yellow Gum, London Plane and Prunus found across them in rows

There are six juvenile Blakely's Red Gum found in the southern fringes of the property and development area, that are not planted, and which appear to have recruited from the forward planting area along the southern boundary of the property.

The proposed development will result in the removal of a 62 planted individuals, and four juvenile Blakely's Red Gum recruits.

These six juvenile Blakely's Red Gum individuals are the only remnant native vegetation on the site, and the four to be removed constitute a total extent of only 40 m^2 (0.004 ha; based on the combined canopy extent).

As indicated previously, the vegetation on the site and within the proposed development area provide only limited habitat opportunities for any native fauna that may utilise the site, despite the moderate landscape connectivity to other planted areas of similar age and composition to the west and east.

Of the eighteen species considered likely to be found within the area, only Gang-gang Cockatoo, Squirrel Glider, Regent Honeyeater, Dusky Woodswallow, Hooded Robin, Speckled Warbler and Black-chinned Honeyeater have been recorded within 1 km of the site, with the most recent records for some of these species (e.g. Regent Honeyeater, Black-chinned Honeyeater, Hooded Robin, Dusky Woodswallow, Speckled Warbler, Gang-gang Cockatoo), more than 10 years old. As indicated, within the local area, these species are mostly likely to utilise the adjacent areas of forward planting. The vegetation on the site and within the proposed development area provide limited habitat, given that the ground layer is wholly introduced and there is a simplified vegetation structure. Nevertheless, a conservative approach suggests that the assessed area does provide very limited potential opportunities for seasonal foraging/hunting for all of these species.

After likelihood assessment, the eighteen fauna species that have the potential to occur on the proposed works area have been evaluated using the five parameters (Appendix B). The application of the five parameters of Part 7 Division 1 Section 7.3 of the *Biodiversity Conservation Act 2016* in the following section specifically addresses the effects of the development on the threatened community and the eighteen threatened species.

All eighteen threatened fauna that are considered likely to utilise the site, and more particularly, the adjacent forward planting areas, are being considered in the following section collectively. As all of them have been recorded recently within close proximity, and all have similar issues in regards to their likely usage of the area, given its habitat quality, reasonable connectedness , and position on the fringe of development, this is considered a prudent action rather than providing a lengthy and repetitive response for each of the following individual species - Black-chinned Honeyeater, Brown Treecreeper, Diamond Firetail, Dusky Woodswallow, Flame Robin, Gang-gang Cockatoo, Hooded Robin, Little Lorikeet, Painted Honeyeater, Purple-crowned Lorikeet, Regent Honeyeater, Scarlet Robin, Speckled Warbler, Squirrel Glider, Swift Parrot, Turquoise Parrot, Varied Sittella and Yellow-bellied Sheathtail-bat.

1 (a) in the case of a threatened species, whether the action proposed is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction,

A total of 62 planted exotic, indigenous, and non-indigenous native tree and shrub individuals on the property will be removed, none of which are hollow-bearing, and 6 indigenous remnant juvenile Blakely's Red Gum found in proximity to the southern boundary of the property, of which none are hollow-bearing, and all are < 20 cm dbh, will be removed with the proposed development. These six juvenile Blakely's Red Gum individuals are the only remnant native vegetation on the site, and the four to be removed constitute a total extent of only 40 m^2 (0.004 ha; based on the combined canopy extent). The loss of this vegetation is highly unlikely to place any of these species at the risk of local extinction given the limited habitat available on the site; the site is sub-optimal habitat for all nominated species.

1 (b) in the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity:

(i) is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or

Not applicable.

(ii) is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction,

Not applicable.

1 (c) in relation to the habitat of a threatened species or ecological community:

(i) the extent to which habitat is likely to be removed or modified as a result of the proposed development or activity, and

A total of 62 planted exotic, indigenous, and non-indigenous native tree and shrub individuals on the property will be removed, none of which are hollow-bearing, and 6 indigenous remnant juvenile Blakely's Red Gum found in proximity to the southern boundary of the property, of which none are hollow-bearing, and all are < 20 cm dbh, will be removed with the proposed development. These six juvenile Blakely's Red Gum individuals are the only remnant native vegetation on the site, and the four to be removed constitute a total extent of only 40 m^2 (0.004 ha; based on the combined canopy extent). The loss of this vegetation is highly unlikely to place any of these species at risk of local extinction given the limited habitat available on the site; the site is sub-optimal habitat for all nominated species.

(ii) whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed development or activity, and

A total of 62 planted exotic, indigenous, and non-indigenous native tree and shrub individuals on the property will be removed, none of which are hollow-bearing, and 6 indigenous remnant juvenile Blakely's Red Gum found in proximity to the southern boundary of the property, of which none are hollow-bearing, and all are < 20 cm dbh, will be removed with the proposed development. These six juvenile Blakely's Red Gum individuals are the only remnant native vegetation on the site, and the four to be removed constitute a total extent of only 40 m^2 (0.004 ha; based on the combined canopy extent). The loss of this vegetation is highly unlikely to result in habitat fragmentation or isolation because of the proposed development, especially given the limited contribution of the proposed development site to the connectivity of the district – relative to the adjacent forward planting areas.

(iii) the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species or ecological community in the locality,

A total of 62 planted exotic, indigenous, and non-indigenous native tree and shrub individuals on the property will be removed, none of which are hollow-bearing, and 6 indigenous remnant juvenile Blakely's Red Gum found in proximity to the southern boundary of the property, of which none are hollow-bearing, and all are < 20 cm dbh, will be removed with the proposed development. These six juvenile Blakely's Red Gum individuals are the only remnant native vegetation on the site, and the four to be removed constitute a total extent of only 40 m^2 (0.004 ha; based on the combined canopy extent). The loss of this vegetation is highly unlikely to impact the long-term survival of any of the 18 threatened fauna species because of the proposed development; the site is sub-optimal habitat for all nominated species.

1 (d) whether the proposed development or activity is likely to have an adverse effect on any declared area of outstanding biodiversity value (either directly or indirectly):

No such declaration has been made for the area.

1 (e) whether the proposed development or activity is or is part of a key threatening process or is likely to increase the impact of a key threatening process.

Key threatening processes are listed in schedules of the *Biodiversity Conservation Act 2016*.

The proposed development will result in one key threatening process - *Clearing of native vegetation*.

5. SUMMARY

As indicated, the proposed area of development is a highly managed landscape, and encapsulates areas that are existing sealed roads, paths and car parks, basketball courts (in the north), works areas (in the south west) and water storage tanks (in the south), interspersed with large areas that are maintained for amenity through regular mowing, and which have a range of often regularly spaced planted exotic, indigenous, and non-indigenous native tree and shrub species, such as River Sheoak, White Cedar, Argyle Apple, Red Ironbark, Yellow Gum, London Plane and Prunus found across them in rows.

There are six juvenile Blakely's Red Gum found in the southern fringes of the property and development area, that are not planted, and which appear to have recruited from the forward planting area along the southern boundary of the property.

The proposed development will result in the removal of a 62 planted individuals, and four juvenile Blakely's Red Gum recruits.

These six juvenile Blakely's Red Gum individuals are the only remnant native vegetation on the site, and the four to be removed constitute a total extent of only 40 m^2 (0.004 ha; based on the combined canopy extent).

The generation of a Biodiversity Offset Scheme Entry Threshold Report (BOSET Report)(Appendix B; DPE 2022f) reveals that the minimum Lot Size for the property is 0.045 ha, and that the Area Clearing Threshold required to enter the Biodiversity Offset Scheme (BOS), and for a Biodiversity Development Assessment Report (BDAR) to be completed, is 0.25 ha.

Therefore, for development to avoid entering the BOS and requiring a BDAR to be undertaken, native vegetation clearance must be < 0.25 ha.

The loss of the six juvenile trees results in s total extent of loss of 0.004 ha; this is the only remnant native vegetation proposed for loss as a consequence of the proposed development.

Therefore, as this area of native vegetation loss is less than the threshold area of 0.25 ha, this proposal is not required to enter the Biodiversity Offset Scheme, and a BDAR is not required.

6. RECOMMENDATION

The area where the development is proposed is not in a declared area of outstanding biodiversity value, the proposed development area is not mapped as *Vulnerable or Sensitive Regulated Land* according to the *State Environmental Planning Policy (Vegetation) 2017*, and is also not mapped as an areas of Biodiversity Value (DPE 2022e; see Appendix B).

As indicated, the generation of BOSET Report reveals that the minimum Lot Size is 0.045 ha, and that the Area Clearing Threshold required to enter the BOS, and for a BDAR to be completed, is 0.25 ha.

However, the remnant native vegetation to be impacted with the proposed development is much

less than the threshold area of 0.25 ha (0.004 ha); this proposal is not required to enter the Biodiversity Offset Scheme, and a BDAR is not required.

The proposed development area has been evaluated and subjected to a Test of Significance under Part 7 Division 1 Section 7.3 of the *Biodiversity Conservation Act 2016*, and it is concluded that as a consequence of the proposed development, there will not be any significant impacts on any threatened species or community.

7. REFERENCES

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APPENDIX A THREATENED COMMUNITY AND SPECIES LIKELIHOOD OF PRESENCE

List of threatened communities, and flora and fauna species recorded by the BioNet - Atlas of NSW Wildlife and by Matters of National Environmental Significance search of a 10 km radius from the proposed development site, their status, and their likelihood of occurrence on the site (DPE 2022b; DAWE 2022).

Common Name	Scientific name	Conservation Status (NSW)[1]	Conservation Status (Comm)[2]	Likelihood of Occurrence[3]	Five Part Test
Vegetation community					
Buloke Woodlands of the Riverina and Murray-Darling Depression Bioregions		e	E	While this TEC is represented within the district, the site is former Grassy Box Gum woodland. **Likelihood: Not present**	No
Grey Box Grassy Woodlands and Derived Native Grasslands of South-eastern Australia		e	E	While this TEC is represented within the district, the site is former Grassy Box Gum woodland. **Likelihood: Not present**	No
Natural Grasslands of the Murray Valley Plains		e	CE	While this TEC is represented within the district, the site is former Grassy Box Gum woodland. **Likelihood: Not present**	No
Weeping Myall Woodlands		e	E	While this TEC is represented within the district, the site is former Grassy Box Gum woodland. **Likelihood: Not present**	No
Grassy Box Gum Woodland		e	CE	This TEC is well represented within the district, and the proposed development area was once this vegetation community prior to modification and disturbance. **Likelihood: Not present**	No
Flora					
Floating Swamp Wallaby-grass	*Amphibromus fluitans*	v	V	Wetland/riparian plant. There are many historic collections in the City of Greater Albury. It has been recorded recently in lagoons beside the Murray River near Cooks Lagoon (Shire of Greater Hume), Mungabarina Reserve, East Albury, at Ettamogah, Thurgoona (Charles Sturt University Campus), near Narranderra, and also further west along the Murray River (near Mathoura) and in Victoria. There are 15 records within 10 km of the proposed alignments, including some records within close proximity. The site is not suitable habitat for the species. **Likelihood: Unlikely to be present**	No
Crimson Spider-orchid	*Caladenia concolor*	e	V	The habitat for the species is regrowth woodland on granite ridge country that has retained a high diversity of plant species, including other orchids. Three populations in NSW. One of these populations comprises a few hundred plants on private property near Bethungra and the other of about 100 plants occurs in Burrinjuck Nature reserve. The other occurrences of the Crimson Spider Orchid in NSW are from the Nail Can Hill Crown Reserve near Albury. The species also occurs at two localities in Victoria near Beechworth and Chiltern. The site is not suitable habitat. **Likelihood: Highly unlikely to be present**	No
Rosella Spider-orchid	*Caladenia rosella*	x	E	The single NSW collection of the Rosella Spider Orchid (located in Albury) is undated, but is estimated to have been collected before 1896. Today the species is found near Melbourne in Victoria, but is listed as endangered because less than 200 plants are known to exist. While the site may have once been suitable habitat, the level of ground layer disturbance would preclude presence or re-colonisation. **Likelihood: Highly unlikely to be present**	No

Common Name	Scientific name	Conservation Status (NSW)[1]	Conservation Status (Comm)[2]	Likelihood of Occurrence[3]	Five Part Test
Austral Pillwort	*Pilularia novae-hollandiae*	e		In NSW, Austral Pillwort has been recorded from suburban Sydney, Khancoban, the Riverina between Albury and Urana (including Henty, Walbundrie, Balldale and Howlong), Oolambeyan National Park near Carathool and at Lake Cowal near West Wyalong. Austral Pillwort grows in shallow swamps and waterways, often among grasses and sedges. It is most often recorded in drying mud as this is when it is most conspicuous. The site is not suitable habitat for the species. **Likelihood: Highly unlikely to be present**	No
Woolly Ragwort	*Senecio garlandii*	v		This daisy is found between Temora, Bethungra and Albury and possibly Burrinjuck near Yass. The largest populations are at The Rock and Mt Tabletop (and surrounds), generally found on sheltered slopes of rocky outcrops. There is one record for the species within 10 km; north of Albury in the Black Range in 2004. The proposed works area is not suitable habitat for the species. **Likelihood: Highly unlikely to be present**	No
Silky Swainson-pea	*Swainsona sericea*	v		This species grows mostly in light soils on sand-hills and sand plains. Silky Swainson-pea has been recorded from the Northern Tablelands to the Southern Tablelands and further inland on the slopes and plains. Site is not suitable habitat. **Likelihood: Highly unlikely to be present**	No
Fauna					
Barking Owl	*Ninox connivens connivens*	v		Inhabits woodland and open forest, including fragmented remnants and partly cleared farmland. It is flexible in its habitat use, and hunting can extend in to closed forest and more open areas. Sometimes able to successfully breed along timbered watercourses in heavily cleared habitats due to the higher density of prey on these fertile soils. There have been 3 records for the species up to 2006 within 10 km of the site; none of these within 2 km of the proposed works area. While the site is suitable habitat for the species, there is a lack of connectivity to known locations. **Likelihood: Unlikely to be present**	No
Black-chinned Honeyeater	*Melithripterus gularis gularis*	v		Occurs in intact woodlands, and adjacent agricultural land. There have been 15 records for the species up to 2003 within 10 km of the site, some in close proximity to the proposed works area. Most of these records have been within the planted native vegetation in E3 zones around Thurgoona. The site provides potential sub-optimal habitat for the species. **Likelihood: May be present**	Yes
Brown Treecreeper (eastern ssp.)	*Climacteris picumnus victoriae*	v		Occurs in intact woodlands, and adjacent agricultural land. There have been 7 records for the species up to 2010 within 10 km of the site; none of these within 4 km of the proposed works area. The vegetation at the site provides potential sub-optimal habitat for the species. **Likelihood: May be present**	Yes
Bush Stone-curlew	*Burhinus grallarius*	e		Range in south-eastern Australia is now largely confined to grassy woodlands and farmland. Likes to roost and nest in grassy woodlands of Buloke, gum or box with low, sparse grassy or herb understorey. Branches on the ground are essential for the bird's camouflage, and it is unlikely to attempt nesting without it. Four records for the species within 10 km, and two within Thurgoona since 2003; however, no suitable habitat exists in the proposed works area. **Likelihood: Highly unlikely to be present**	No
Diamond Firetail	*Stagonopleura guttata*	v		Occurs in woodlands, and adjacent agricultural land. There have been 7 records for the species up to 2010 within 10 km of the site, and none within 3 km, with most records NW of Albury. The vegetation at the site provides potential sub-optimal habitat for the species. **Likelihood: May be present**	Yes

Common Name	Scientific name	Conservation Status (NSW)[1]	Conservation Status (Comm)[2]	Likelihood of Occurrence[3]	Five Part Test
Dusky Woodswallow	*Artamus cyanopterus cyanopterus*	v		The species primarily inhabits dry, open eucalypt forests and woodlands, including mallee associations, with an open or sparse understorey of eucalypt saplings, acacias and other shrubs, and ground-cover of grasses or sedges and fallen woody debris. There have been 7 records for the species up to 2004 within 10 km of the site, some in close proximity to the proposed works area. The vegetation of the site provides potential sub-optimal habitat for the species. **Likelihood: May be present**	Yes
Flame Robin	*Petroica phoenicea*	v		Breeds in upland tall moist eucalypt forests and woodlands, often on ridges and slopes. Prefers clearings or areas with open understoreys. The ground layer of the breeding habitat is dominated by native grasses and the shrub layer may be either sparse or dense. The Flame Robin is endemic to south eastern Australia, and ranges from near the Queensland border to south east South Australia and also in Tasmania. In NSW, it breeds in upland areas and in winter, many birds move to the inland slopes and plains. There have been 5 records for the species up to 2010 within 10 km of the site. The vegetation of the site provides potential sub-optimal habitat for the species. **Likelihood: May be present**	Yes
Gang-gang Cockatoo	*Callocephalon fimbriatum*	v		In New South Wales, the Gang-gang Cockatoo is distributed from the south-east coast to the Hunter region, and inland to the Central Tablelands and south-west slopes. In autumn and winter, the species often moves to lower altitudes in drier more open eucalypt forests and woodlands, particularly box-gum and box-ironbark assemblages, or in dry forest in coastal areas and often found in urban areas. The vegetation of the site provides potential sub-optimal habitat for the species. **Likelihood: May be present**	Yes
Hooded Robin	*Melanodryas cucullata cucullata*	v		Occurs in intact woodlands, and adjacent agricultural land. They occupy a wide range of Eucalypt woodlands, Acacia shrublands and open forests. In temperate woodlands, the species favours open areas adjoining large woodland blocks, with areas of dead timber and sparse shrub cover. There have been 5 records for the species up to 2010 within 10 km of the site. The vegetation of the site provides potential sub-optimal habitat for the species. **Likelihood: May be present**	Yes
Little Lorikeet	*Glossopsitta pusilla*	v		The species forages primarily in the canopy of open *Eucalyptus* forest and woodland, yet also finds food in *Angophora, Melaleuca* and other tree species. Riparian habitats are particularly used, due to higher soil fertility and hence greater productivity. It also utilises isolated flowering trees in open country, e.g. paddocks, roadside remnants and urban trees also help sustain viable populations of the species. There are numerous records for the species up to 2007 within 10 km of the site. The vegetation of the site provides potential sub-optimal habitat for the species. **Likelihood: May be present**	Yes
Magpie Goose	*Anseranas semipalmata*	v		The Magpie Goose is still relatively common in the Australian northern tropics, but had disappeared from south-east Australia by 1920 due to drainage and overgrazing of reed swamps used for breeding. Mainly found in shallow wetlands (less than 1 m deep) with dense growth of rushes or sedges. Two records near dams close to the Albury Airport in 2015 The site is not suitable habitat for the species. **Likelihood: Unlikely to be present**	No

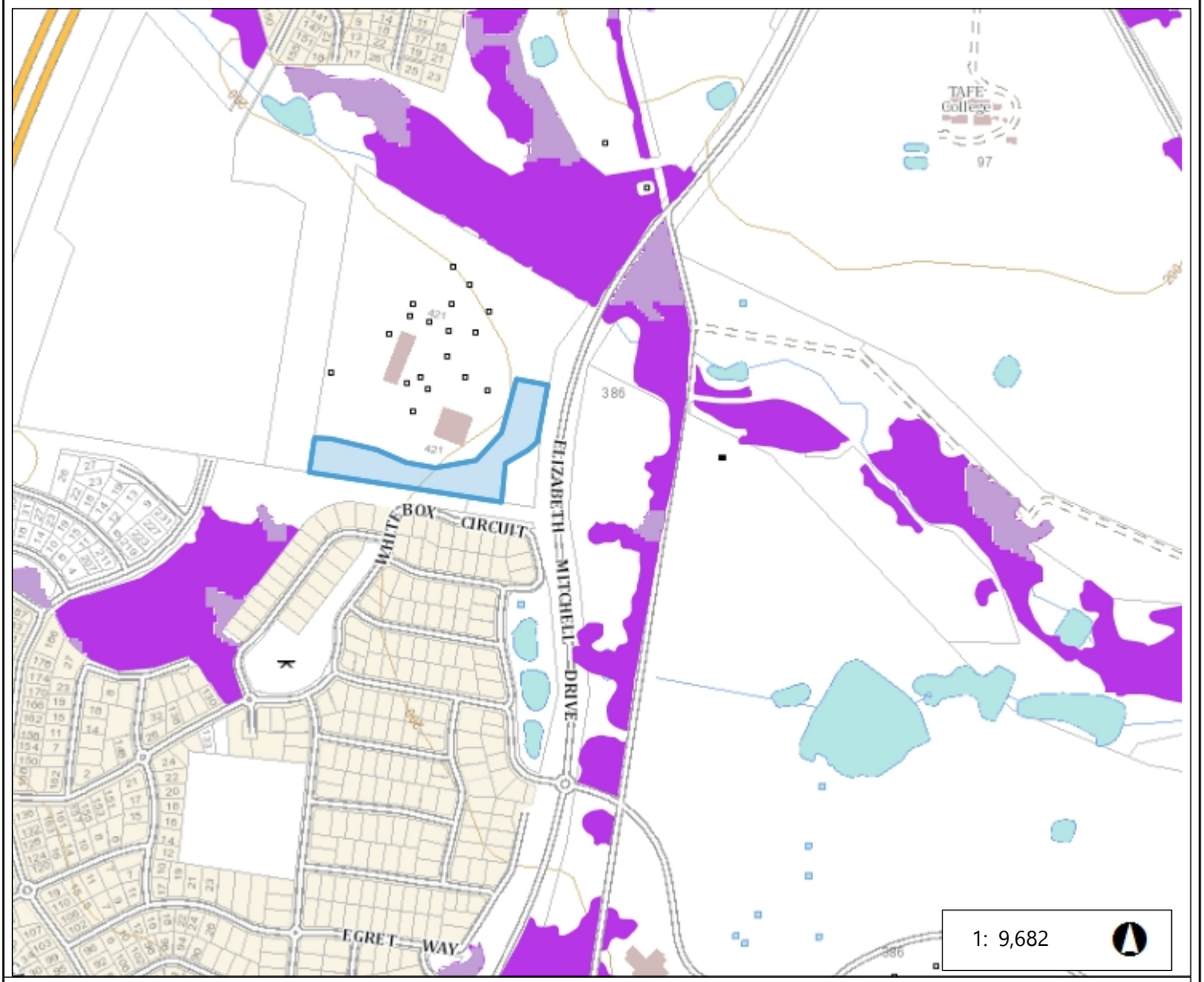
Common Name	Scientific name	Conservation Status (NSW)[1]	Conservation Status (Comm)[2]	Likelihood of Occurrence[3]	Five Part Test
Painted Honeyeater	*Grantiella picta*	v	V	The greatest concentrations of the bird and almost all breeding occurs on the inland slopes of the Great Dividing Range in NSW, Victoria and southern Queensland. Inhabits Boree/ Weeping Myall, Brigalow and Box-Gum Woodlands and Box-Ironbark Forests, particularly those infested with mistletoe. There has been only 1 record for the species within 10 km of the site; at the CSU Thurgoona Campus in 2003. The vegetation at the site provides potential sub-optimal habitat for the species. **Likelihood: May be present**	Yes
Purple-crowned Lorikeet	*Glossopsitta porphyrocephala*	v		It is uncommon in NSW, with records scattered across the box-ironbark woodlands of the Riverina and south west slopes, the River Red Gum forests and mallee of the Murray Valley as far west as the South Australian border. Found in open forests and woodlands, particularly where there are large flowering eucalypts. One record for the species in 2004 - 2 km north along Table Top Road. The vegetation at the site provides potential sub-optimal habitat for the species. **Likelihood: May be present**	Yes
Regent Honeyeater	*Anthochaera phrygia*	ce	CE	Occurs in woodlands, and adjacent agricultural land. There have been 30 records for the species up to 2003 within 10 km of the site, some in close proximity to the proposed works area. Most of these records have been within the planted native vegetation in E3 zones around Thurgoona. The vegetation at the site provides potential sub-optimal habitat for the species. **Likelihood: May be present**	Yes
Scarlet Robin	*Petroica boodang*	v		In NSW, it occurs from the coast to the inland slopes. After breeding, some Scarlet Robins disperse to the lower valleys and plains of the tablelands and slopes. Some birds may appear as far west as the eastern edges of the inland plains in autumn and winter. The Scarlet Robin lives in dry eucalypt forests and woodlands. The understorey is usually open and grassy with few scattered shrubs in both mature and regrowth vegetation. There have been 5 records for the species up to 2011 within 10 km of the site. The vegetation at the site provides potential sub-optimal habitat for the species. **Likelihood: May be present**	Yes
Sloane's Froglet	*Crinia sloanei*	v	V	Sloane's Froglet has been recorded from widely scattered sites in the floodplains of the Murray-Darling Basin, with the majority of records in the Darling Riverine Plains, NSW South Western Slopes and Riverina bioregions in New South Wales. It is typically associated with periodically inundated areas in grassland, woodland and disturbed habitats. There are many records for the species in Albury, and Thurgoona in particular, some in close proximity to site. The site does not provide any potential habitat for the species. **Likelihood: Unlikely to be present**	No
Southern Bell Frog	*Litoria raniformis*	e	V	In NSW the species was once distributed along the Murray and Murrumbidgee Rivers and their tributaries, the southern slopes of the Monaro district and the central southern tablelands as far north as Tarana, near Bathurst. There is only one record for the species within 10 km – in 1999 near Ettamogah. Currently, the species is known to exist only in isolated populations in the Coleambally Irrigation Area, the Lowbidgee floodplain and around Lake Victoria. **Likelihood: Unlikely to be present**	No

Common Name	Scientific name	Conservation Status (NSW)[1]	Conservation Status (Comm)[2]	Likelihood of Occurrence[3]	Five Part Test
Speckled Warbler	*Chthonicola sagittatus*	v		Patchy distribution on and inland of the Great Dividing Range, from level with Mackay in Queensland, to the Grampians National Park in Victoria. Lives in dry sclerophyll forests and woodlands dominated by eucalypts. It is mostly seen on the grassy ground layer, when it is foraging. There have been 13 records for the species up to 2007 within 10 km of the site; none of these within 3 km of the proposed works area. The vegetation of the site provides potential sub-optimal habitat for the species. **Likelihood: May be present**	Yes
Squirrel Glider	*Petaurus norfolcensis*	v		Prefers extensive intact woodlands with significant shrub and litter layers in blocks or along roadsides. Recorded over 170 times within 10 km of the site, with many records around Thurgoona. The vegetation of the site provides potential sub-optimal habitat for the species. **Likelihood: May be present**	Yes
Swift Parrot	*Lathamus discolor*	e	CE	Occurs in extensive riparian forests and woodlands, and adjacent agricultural land. There have been 5 records for the species up to 2005 within 10 km of the site. The vegetation of the site provides potential sub-optimal habitat for the species. **Likelihood: May be present**	Yes
Turquoise Parrot	*Neophema pulchella*	v		Occurs in extensive riparian forests and woodlands, and adjacent agricultural land. There have been 6 records for the species up to 2006 within 10 km of the site. The vegetation of the site provides potential sub-optimal habitat for the species. **Likelihood: May be present**	Yes
Varied Sittella	*Daphoenositta chrysoptera*	v		The Varied Sittella is sedentary and inhabits most of mainland Australia except the treeless deserts and open grasslands. It inhabits eucalypt forests and woodlands, especially those containing rough-barked species and mature smooth-barked gums with dead branches, mallee and Acacia woodland. One record for the species in 2010 at Ettamogah. The vegetation of the site provides potential sub-optimal habitat for the species. **Likelihood: May be present**	Yes
White-bellied Sea-eagle	*Haliaeetus leucogaster*	v		Occurs in extensive quality wetlands and riparian woodlands, and adjacent agricultural land. Some sections of the assessed or adjacent area is secondary habitat for the species, notably the creek line, with limited connectivity to the known locations along the Murray River. One sighting within 10 km of the assessed areas – at Koowong Wildlife Reserve in 2015. The site is not suitable habitat for the species **Likelihood: Unlikely to be present**	No
Yellow-bellied Sheathtail Bat	*Saccolaimus flaviventris*	v		The Yellow-bellied Sheathtail-bat is a wide-ranging species found across northern and eastern Australia. In the most southerly part of its range - most of Victoria, south-western NSW and adjacent South Australia - it is a rare visitor in late summer and autumn. Roosts singly or in groups of up to six, in tree hollows and buildings; in treeless areas they are known to utilise mammal burrows. When foraging for insects, flies high and fast over the forest canopy, but lower in more open country. Only one record for the species in 2001 at Corry's Wood, within 5 km of the proposed alignment. However, microbats are cryptic and rarely surveyed, and there is some likelihood that the species would be found in proximity to the site. **Likelihood: May be present**	Yes

1. x = presumed extinct in NSW; = endangered in NSW; v = vulnerable in NSW; ce = critically endangered in NSW (from DPE 2022a).
2. V = vulnerable nationally; E = endangered nationally; CE = critically endangered nationally (DAWE 2022).

APPENDIX B BIODIVERSITY OFFSET SCHEME ENTRY THRESHOLD (BOSET) TOOL REPORT DATED 4TH OCTOBER 2022

Biodiversity Values Map



491.8 0 245.91 491.8 Metres

WGS_1984_Web_Mercator_Auxiliary_Sphere

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

THIS MAP IS NOT TO BE USED FOR NAVIGATION

Legend

- Biodiversity Values that have been mapped for more than 90 days
- Biodiversity Values added within last 90 days

Notes

Biodiversity Values Map and Threshold Report

Results Summary

Date of Calculation	04/10/2022 9:28 PM	**BDAR Required***
Total Digitised Area	15,244.8 sqm	
Minimum Lot Size Method	LEP	
Minimum Lot Size 10,000sqm = 1ha	450 sqm	
Area Clearing Threshold 10,000sqm = 1ha	2,500 sqm	
Area clearing trigger Area of native vegetation cleared	Unknown #	Unknown #
Biodiversity values map trigger Impact on biodiversity values map(not including values added within the last 90 days)?	no	no
Date of the 90 day Expiry	N/A	

*If BDAR required has:

- at least one 'Yes': you have exceeded the BOS threshold. You are now required to submit a Biodiversity Development Assessment Report with your development application. Go to https://customer.lmbc.nsw.gov.au/assessment/AccreditedAssessor to access a list of assessors who are accredited to apply the Biodiversity Assessment Method and write a Biodiversity Development Assessment Report
- 'No': you have not exceeded the BOS threshold. You may still require a permit from local council. Review the development control plan and consult with council. You may still be required to assess whether the development is '"likely to significantly affect threatened species' as determined under the test in s. 7.3 of the Biodiversity Conservation Act 2016. You may still be required to review the area where no vegetation mapping is available.

Where the area of impact occurs on land with no vegetation mapping available, the tool cannot determine the area of native vegetation cleared and if this exceeds the Area Threshold. You will need to work out the area of native vegetation cleared - refer to the BMAT user guide for how to do this.

On and after the 90 day expiry date a BDAR will be required.

Disclaimer

This results summary and map can be used as guidance material only. This results summary and map is not guaranteed to be free from error or omission. The State of NSW and Department of Planning and Environment and its employees disclaim liability for any act done on the information in the results summary or map and any consequences of such acts or omissions. It remains the responsibility of the proponent to ensure that their development application complies will all aspects of the *Biodiversity Conservation Act 2016.*

The mapping provided in this tool has been done with the best available mapping and knowledge of species habitat requirements. This map is valid for a period of 30 days from the date of calculation (above).

Acknowledgement

I as the applicant for this development, submit that I have correctly depicted the area that will be impacted or likely to be impacted as a result of the proposed development.

Signature_____ Date:04/10/2022 09:28 PM

APPENDIX C ASSESSED FLORA OF TRINITY ANGLICAN COLLEGE THURGOONA

Recorded vascular plant species for the assessed area.

Vascular flora have been recorded for presence using a cover-abundance scale that is outlined in Table 3-1.

An asterisk denotes an introduced species.

Common name	Scientific name	Property
Capeweed	*Arctotheca calendula**	1
Great Brome	*Bromus diandrus**	1
River Sheoak (planted)	*Casuarina cunninghamii**	2
Kikuyu Grass	*Cenchrus clandestinus**	2
Annual Veldtgrass	*Ehrharta longifolia**	1
Blakely's Red Gum (remnant)	*Eucalyptus blakelyi*	2
Argyle Apple (planted)	*Eucalyptus cinerea*	1
Yellow Gum (planted)	*Eucalyptus leucoxylon**	1
Red Ironbark (planted)	*Eucalyptus sideroxylon**	2
Fescue	*Festuca* sp.*	*3*
Cat's Ear	*Hypochaeris radicata**	2
Wimmera Ryegrass	*Lolium rigidum**	1
Red-flowered Mallow	*Modiola caroliniana**	1
Paspalum	*Paspalum dilitatum**	1
Water Couch	*Paspalum distichum**	1
Plantain	*Plantago lanceolata**	+
London Plane (planted)	*Platanus* x *acerifolius**	2
Winter-grass	*Poa annua**	2
Prunus	*Prunus* spp.*	2
Onion-grass	*Romulea rosea**	2

APPENDIX D ASSESSED TREE CHARACTERISTICS

Introduced species are denoted with an asterisk.

Tree number	Common name	Scientific name	Diameter[1]	Tree location[2]		Status
				Easting	*Northing*	
1	Red Ironbark (planted)	*Eucalyptus sideroxylon*	30/28	498447	6012539	Remove
2	Argyle Apple (planted)	*Eucalyptus cinerea*	30	498456	6012526	Remove
3	Argyle Apple (planted)	*Eucalyptus cinerea*	< 20	498459	6012523	Remove
4	Argyle Apple (planted)	*Eucalyptus cinerea*	< 20	498463	6012521	Remove
5	Argyle Apple (planted)	*Eucalyptus cinerea*	< 20	498470	6012523	Remove
6	Argyle Apple (planted)	*Eucalyptus cinerea*	< 20	498466	6012528	Remove
7	Argyle Apple (planted)	*Eucalyptus cinerea*	< 20	498463	6012527	Remove
8	Red Ironbark (planted)	*Eucalyptus sideroxylon*	< 20	498468	6012531	Remove
9	Red Ironbark (planted)	*Eucalyptus sideroxylon*	< 20	498470	6012530	Remove
10	Red Ironbark (planted)	*Eucalyptus sideroxylon*	< 20	498470	6012528	Remove
11	Red Ironbark (planted)	*Eucalyptus sideroxylon*	< 20	498472	6012525	Remove
12	Red Ironbark (planted)	*Eucalyptus sideroxylon*	< 20	498452	6012524	Remove
13	Red Ironbark (planted)	*Eucalyptus sideroxylon*	< 20	498449	6012523	Remove
14	Red Ironbark (planted)	*Eucalyptus sideroxylon*	< 20	498446	6012521	Remove
15	Red Ironbark (planted)	*Eucalyptus sideroxylon*	< 20	498448	6012518	Remove
16	Red Ironbark (planted)	*Eucalyptus sideroxylon*	< 20	498452	6012518	Remove
17	Red Ironbark (planted)	*Eucalyptus sideroxylon*	< 20	498453	6012522	Remove
18	Red Ironbark (planted)	*Eucalyptus sideroxylon*	< 20	498463	6012516	Remove
19	Red Ironbark (planted)	*Eucalyptus sideroxylon*	< 20	498466	6012515	Remove
20	Red Ironbark (planted)	*Eucalyptus sideroxylon*	< 20	498463	6012513	Remove
21	Red Ironbark (planted)	*Eucalyptus sideroxylon*	< 20	498463	6012510	Remove
22	Red Ironbark (planted)	*Eucalyptus sideroxylon*	< 20	498467	6012509	Remove
23	Red Ironbark (planted)	*Eucalyptus sideroxylon*	25	498438	6012517	Remove
24	Blakely's Red Gum (remnant)	*Eucalyptus blakelyi*	15/12	498446	6012509	Remove
25	Red Ironbark (planted)	*Eucalyptus sideroxylon*	20/18 (dead)	498475	6012498	Remove

Tree number	Common name	Scientific name	Diameter[1]	Tree location[2]		Status
				Easting	*Northing*	
26	Red Ironbark (planted)	*Eucalyptus sideroxylon*	30	498481	6012500	Retain
27	Blakely's Red Gum (remnant)	*Eucalyptus blakelyi*	18	498487	6012495	Remove
28	Blakely's Red Gum (remnant)	*Eucalyptus blakelyi*	12	498501	6012495	Retain
29	Blakely's Red Gum (remnant)	*Eucalyptus blakelyi*	10	498507	6012496	Remove
30	Yellow Gum (planted)	*Eucalyptus leucoxylon**	25/25	498515	6012529	Remove
31	Red Ironbark (planted)	*Eucalyptus sideroxylon*	18/15	498544	6012494	Remove
32	Red Ironbark (planted)	*Eucalyptus sideroxylon*	25	498542	6012483	Remove
33	Blakely's Red Gum (remnant)	*Eucalyptus blakelyi*	15	498520	6012494	Retain
34	River Sheoak (planted)	*Casuarina cunninghamii**	30	498575	6012484	Remove
35	Blakely's Red Gum (remnant)	*Eucalyptus blakelyi*	15/15	498532	6012496	Remove
36	River Sheoak (planted)	*Casuarina cunninghamii**	20	498582	6012492	Remove
37	River Sheoak (planted)	*Casuarina cunninghamii**	25	498611	6012481	Remove
38	River Sheoak (planted)	*Casuarina cunninghamii**	25	498604	6012488	Retain
39	Red Ironbark (planted)	*Eucalyptus sideroxylon*	28	498598	6012496	Remove
40	Yellow Gum (planted)	*Eucalyptus leucoxylon**	10	498600	6012500	Remove
41	River Sheoak (planted)	*Casuarina cunninghamii**	20	498625	6012485	Remove
42	River Sheoak (planted)	*Casuarina cunninghamii**	< 20	498621	6012479	Remove
43	River Sheoak (planted)	*Casuarina cunninghamii**	< 20	498623	6012483	Remove
44	River Sheoak (planted)	*Casuarina cunninghamii**	< 20	498627	6012487	Remove
45	River Sheoak (planted)	*Casuarina cunninghamii**	< 20	498628	6012489	Remove
46	River Sheoak (planted)	*Casuarina cunninghamii**	< 20	498630	6012494	Remove
47	River Sheoak (planted)	*Casuarina cunninghamii**	< 20	498633	6012498	Remove
48	River Sheoak (planted)	*Casuarina cunninghamii**	< 20	498635	6012502	Remove
49	Red Ironbark (planted)	*Eucalyptus sideroxylon*	35/30	498638	6012507	Remove
50	Prunus (planted)	*Prunus* spp.*	< 20	498629	6012563	Retain
51	Prunus (planted)	*Prunus* spp.*	< 20	498625	6012557	Retain

Tree number	Common name	Scientific name	Diameter[1]	Tree location[2]		Status
				Easting	*Northing*	
52	Prunus (planted)	*Prunus* spp.*	< 20	498620	6012550	Retain
53	Prunus (planted)	*Prunus* spp.*	< 20	498616	6012543	Retain
54	Prunus (planted)	*Prunus* spp.*	< 20	498611	6012535	Retain
55	Prunus (planted)	*Prunus* spp.*	< 20	498606	6012528	Retain
56	Prunus (planted)	*Prunus* spp.*	< 20	498620	6012535	Remove
57	Prunus (planted)	*Prunus* spp.*	< 20	498624	6012531	Retain
58	Prunus (planted)	*Prunus* spp.*	< 20	498628	6012526	Retain
59	Prunus (planted)	*Prunus* spp.*	< 20	498633	6012522	Retain
60	Prunus (planted)	*Prunus* spp.*	< 20	498636	6012517	Retain
61	Prunus (planted)	*Prunus* spp.*	< 20	498641	6012513	Retain
62	Prunus (planted)	*Prunus* spp.*	< 20	498645	6012509	Retain
63	Prunus (planted)	*Prunus* spp.*	< 20	498649	6012504	Retain
64	Prunus (planted)	*Prunus* spp.*	< 20	498653	6012500	Retain
65	Prunus (planted)	*Prunus* spp.*	< 20	498651	6012494	Retain
66	Red Ironbark (planted)	*Eucalyptus sideroxylon*	20	498620	6012521	Retain
67	Red Ironbark (planted)	*Eucalyptus sideroxylon*	30	498615	6012511	Retain
68	Prunus (planted)	*Prunus* spp.*	< 20	498649	6012489	Retain
69	Prunus (planted)	*Prunus* spp.*	< 20	498647	6012483	Retain
70	Prunus (planted)	*Prunus* spp.*	< 20	498645	6012478	Retain
71	Prunus (planted)	*Prunus* spp.*	< 20	498643	6012471	Retain
72	Yellow Gum (planted)	*Eucalyptus leucoxylon**	18	498637	6012485	Retain
73	River Sheoak (planted)	*Casuarina cunninghamii**	20	498634	6012478	Retain
74	Prunus (planted)	*Prunus* spp.*	< 20	498662	6012587	Remove
75	Prunus (planted)	*Prunus* spp.*	< 20	498674	6012576	Remove
76	Prunus (planted)	*Prunus* spp.*	< 20	498685	6012565	Remove
77	Prunus (planted)	*Prunus* spp.*	< 20	498675	6012583	Remove

Tree number	Common name	Scientific name	Diameter[1]	Tree location[2]		Status
				Easting	*Northing*	
78	Prunus (planted)	*Prunus* spp.*	< 20	498680	6012582	Remove
79	Prunus (planted)	*Prunus* spp.*	< 20	498684	6012581	Remove
80	Prunus (planted)	*Prunus* spp.*	< 20	498688	6012581	Remove
81	Prunus (planted)	*Prunus* spp.*	< 20	498694	6012584	Remove
82	Prunus (planted)	*Prunus* spp.*	< 20	498695	6012588	Remove
83	Prunus (planted)	*Prunus* spp.*	< 20	498696	6012592	Remove
84	Prunus (planted)	*Prunus* spp.*	< 20	498696	6012596	Remove
85	Red Ironbark (planted)	*Eucalyptus sideroxylon*	< 20	498415	6012503	Remove
86	Red Ironbark (planted)	*Eucalyptus sideroxylon*	< 20	498408	6012515	Remove
87	Red Ironbark (planted)	*Eucalyptus sideroxylon*	< 20	498403	6012499	Retain
88	Red Ironbark (planted)	*Eucalyptus sideroxylon*	20	498607	6012509	Remove
89	Red Ironbark (planted)	*Eucalyptus sideroxylon*	20	498611	6012498	Remove
90	London Plane (planted)	*Platanus* x *acerifolius**	< 20	498632	6012568	Retain
91	London Plane (planted)	*Platanus* x *acerifolius**	< 20	498638	6012577	Retain
92	London Plane (planted)	*Platanus* x *acerifolius**	< 20	498642	6012584	Retain
93	London Plane (planted)	*Platanus* x *acerifolius**	< 20	498648	6012594	Retain
94	London Plane (planted)	*Platanus* x *acerifolius**	< 20	498654	6012601	Remove
95	London Plane (planted)	*Platanus* x *acerifolius**	< 20	498645	6012589	Remove
96	London Plane (planted)	*Platanus* x *acerifolius**	< 20	498635	6012572	Retain
97	Prunus (planted)	*Prunus* spp.*	< 20	498697	6012601	Remove
98	White Cedar (planted)	*Melia azerdarach**	< 20	498711	6012657	Retain
99	White Cedar (planted)	*Melia azerdarach**	< 20	498703	6012661	Remove
100	White Cedar (planted)	*Melia azerdarach**	< 20	498695	6012667	Retain
101	White Cedar (planted)	*Melia azerdarach**	< 20	498687	6012671	Retain
102	Prunus (planted)	*Prunus* spp.*	< 20	498714	6012650	Retain
103	Prunus (planted)	*Prunus* spp.*	< 20	498705	6012654	Remove

Tree number	Common name	Scientific name	Diameter[1]	Tree location[2]		Status
				Easting	*Northing*	
104	Prunus (planted)	*Prunus* spp.*	< 20	498696	6012660	Retain
105	Prunus (planted)	*Prunus* spp.*	< 20	498688	6012664	Retain
106	White Cedar (planted)	*Melia azerdarach**	< 20	498719	6012652	Retain

1. Diameter is diameter at breast height (1.3 m) in centimetres;
2. Eastings and Northings are in MGA94z55.