Appendix D Specialist assessments

D.1 Streamlined Biodiversity Development Assessment Report (SBDAR)

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STREAMLINED BIODIVERSITY DEVELOPMENT ASSESSMENT REPORT

for the proposed

Panorama Battery Energy Storage System (BESS)

at

800 Mid Western Hwy, Evans Plains

5 February 2026

CERTIFICATION

I, Lizzie Bowman of Hunter Ecology, hereby state that this Streamlined Biodiversity Development Assessment Report (SBDAR) has been prepared in accordance with the Biodiversity Assessment Method (BAM) 2020 established under the NSW *Biodiversity Conservation Act 2016.* Fieldwork and report writing was undertaken by Bart Schiebaan and Lizzie Bowman. Qualifications are provided below.

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Conflicts of Interest

The Accredited Assessors have signed an agreement to abide by the Accredited BAM Assessor Code of Conduct. The authors declare in accordance with the Assessors Code of Conduct that no actual, perceived, or potential conflicts of interest exist.

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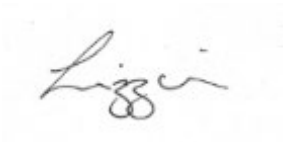

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TERMS & ABBREVIATIONS

Assessment area – The area that includes the Site and a 1.5 km buffer surrounding the Site.

BAM – Biodiversity Assessment Method 2020.

BC Act – NSW *Biodiversity Conservation Act 2016.*

BDAR – Biodiversity Development Assessment Report.

BESS – Battery Energy Storage System.

BioNet – NSW Atlas of NSW Wildlife.

BioNet VIS – NSW BioNet Vegetation Information System.

BOS – Biodiversity Offset Scheme.

Canopy – The tallest woody stratum present.

Connectivity – The measure of the degree to which an area of native vegetation or habitat is linked with other areas of native vegetation or habitat.

Cumulative impacts – the combined incremental effects of past, present and anticipated future actions within a regional setting.

Commonwealth DCCEEW – Department of Climate Change, Energy, Environment and Water (Commonwealth).

DBH – Diameter at breast height.

DEC – Department of Environment and Conservation (NSW).

Direct impacts – Impacts that directly affect the habitat of species and ecological communities and of individuals using the study area.

DoE – Department of Environment (Commonwealth).

EPBC Act – Commonwealth *Environment Protection and Biodiversity Conservation Act 1999.*

FM Act – NSW *Fisheries Management Act 1994*.

Ground layer – Vegetation generally below 1 m in height.

Ha – Hectare.

Habitat – An area or areas occupied, or periodically or occasionally occupied, by a species or ecological community, including any biotic or abiotic component.

IBRA – Interim Biogeographic Regionalisation for Australia.

Indirect impacts – Impacts which occur when project-related activities affect species or ecological communities or their habitats, in a manner other than direct loss within the study area.

Intact vegetation – Vegetation where all tree, shrub, grass and/or forb structural growth form groups expected for a plant community type are present.

KFH – Key Fish Habitat.

Koala SEPP 2020 – Chapter 3 (Koala Habitat Protection) of *State Environmental Planning Policy (Biodiversity and Conservation) 2021.*

Koala SEPP 2021 – Chapter 4 (Koala Habitat Protection) of *State Environmental Planning Policy (Biodiversity and Conservation) 2021.*

LGA – Local Government Area.

Lower stratum – Vegetation generally below 1 m in height.

Mid stratum – All vegetation between the upper stratum and a height of 1 m (typically tall shrubs, under-storey trees and tree regeneration).

Mitchell Landscape – Landscapes with relatively homogeneous geomorphology, soils and broad vegetation types, mapped at a scale of 1:250,000.

MNES – Matters of National Environmental Significance.

NSW DCCEEW – Department of Climate Change, Energy, Environment and Water (NSW).

PCT – Plant community type, identified using the PCT classification system described in the BioNet Vegetation Information System.

Project – Additional development footprint for the proposed Battery Energy Storage System at the Transgrid Panorama Substation, 800 Mid Western Hwy, Evans Plains NSW (the Site) associated with the proposed connection and expansion of the substation.

SAII – Serious and irreversible impact.

SBDAR – Streamlined Biodiversity Development Assessment Report.

SDT Explorer – NSW Government Spatial Digital Twin Explorer.

SEED – NSW Government, Sharing and Enabling Environmental Data portal.

SEPP – State Environmental Planning Policy.

Site – selected area at 800 Mid Western Hwy, Evans Plains.

SSD – State Significant Development.

SVTM – NSW State Vegetation Type Map (SVTM) (Current Release C2.0.M2.1, November 2024).

TEC – Threatened ecological community, listed as critically endangered, endangered or vulnerable in Schedule 2 of the BC Act, or any such listed communities under the EPBC Act.

Threatened species – Critically endangered, endangered or vulnerable species as defined by Schedule 1 of the BC Act, or any such listed species under the EPBC Act.

Upper stratum – The tallest woody stratum present.

VI – Vegetation integrity.

VZ – Vegetation Zone.

WM Act – NSW *Water Management Act 2000.*

EXECUTIVE SUMMARY

INTRODUCTION

Hunter Ecology has been contracted to prepare a Streamlined Biodiversity Development Assessment Report (SBDAR) for the additional development footprint for the proposed Panorama Battery Energy Storage System (BESS) related to the expansion of the substation ('the Project') at a selected area of 800 Mid Western Hwy, Evans Plains ('the Site'). The Project is part of a State Significant Development (SSD) and is being assessed under Part 4 of the *Environmental Planning and Assessment Act 1979*. This SBDAR has been prepared in accordance with Appendix C of the Biodiversity Assessment Method (BAM), 'Streamlined assessment module – Small area' and will provide information for the environmental assessment for the proposed expansion of the existing substation.

BIODIVERSITY VALUES

The majority of the Site (3.26 hectares (ha)) contains managed derived grassland. There is also a patch of landscape plantings (0.14 ha). A native grassy woodland occurs just north of the Site, along an ephemeral watercourse. This woodland comes just within the northern boundary of the Site (0.02 ha). The derived grassland is dominated by exotic flora species and contains very little habitat value (e.g., no logs, rocky features and regularly slashed). The 0.02 ha of impacted woodland is also highly modified with a cleared understorey, managed groundlayer dominated by exotic species and lack of hollow-bearing trees. It consists of three trees on the northern boundary, which may be impacted by the proposed access road and retaining wall (one mature tree, one stag and one sapling). These trees are not likely to require removal but are included in the area to be offset with biodiversity credits, as a precautionary measure. The planted vegetation was assessed under D2 of the BAM (Streamlined assessment module – Planted native vegetation), *Assessment of planted native vegetation for threatened species habitat*. The habitat value of the planted vegetation was concluded to be low and not important for any threatened entities.

The Site's woodland and derived grassland were identified as two separate vegetation zones of Plant Community Type (PCT) 3387 Central West Creekflat Grassy Woodland – 3387_1 (woodland) and 3387_2 (derived grassland). PCT 3387 is associated with the NSW *Biodiversity Conservation Act 2016* (BC Act) listed, White Box - Yellow Box – Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highlands, NSW South Western Slopes, South East Corner and Riverina Bioregions. It is also associated with the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) listed, White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland, but only where it meets the condition criteria as per section 4 of the Commonwealth DCCEEW (2023) Conservation Advice. An assessment against these criteria concluded that vegetation zone 3387_1 (woodland) would meet the EPBC Act listing, but vegetation zone 3387_2 (derived grassland) would not, due to its highly degraded state.

A vegetation integrity (VI) assessment was undertaken within each vegetation zone. The following table details the composition, structure, function and VI scores. An assessment of habitat suitability for candidate species was undertaken, in accordance with Section 5.2 of the BAM, and all were excluded from further assessment.

Table: Composition, Structure, Function and Vegetation Integrity Scores

Vegetation Zone	Composition Score	Structure Condition Score	Function Condition Score	VI Score
3387_1 (woodland)	10.7	22	65.6	**26.6**
3387_2 (derived grassland)	2.6	1.8	11.6	**3.8**

AVOIDANCE & MINIMISATION

The Project has been designed to largely avoid impacts to areas of woodland in the vicinity, with an overall impact of 3.26 ha on derived grassland and 0.02 ha of woodland. As discussed, the derived grassland to be impacted contains very minimal habitat value. The 0.02 ha of impacted woodland is also highly modified. Overall, it is concluded that the avoid and minimise provisions of the BAM and BC Act have been complied with.

IMPACT ASSESSMENT

An assessment of direct, indirect, prescribed and cumulative impacts was undertaken, and several construction and operation phase mitigation measures are proposed to address any residual impacts. One Serious And Irreversible Impact (SAII) entity was identified, being the TEC, White Box - Yellow Box – Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highlands, NSW South Western Slopes, South East Corner and Riverina Bioregions. A SAII assessment was undertaken for this, in accordance with the criteria in Section 9.1.1 of the BAM.

BIODIVERSITY CREDIT OBLIGATION

The Project would generate one ecosystem credit for PCT 3387 Central West Creekflat Grassy Woodland / White Box - Yellow Box – Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highlands, NSW South Western Slopes, South East Corner and Riverina Bioregions.

ASSESSMENT UNDER ADDITIONAL LEGISLATION AND PLANNING POLICIES

The Project was assessed under the provisions of the Commonwealth EPBC Act, NSW *Water Management Act 2000* (WM Act), NSW *State Environmental Planning Policy (Biodiversity and Conservation)* (Koala SEPP 2020) and *NSW Fisheries Management Act 1994* (FM Act). The following was concluded:

- EPBC Act – The Project would be unlikely to significantly impact any Matters of National Environmental Significance (MNES) and thus, referral to the Commonwealth Government is not necessary.
- WM Act – The Site is greater than 40 m from the 3rd order ephemeral watercourse to the north. It does however contain a 2nd order ephemeral watercourse in the north-east corner. This watercourse has been highly modified by the existing substation development; however, consultation with the NSW Department of Primary Industries Water is recommended to determine if a controlled activity approval is required under the WM Act.

- Koala SEPP 2020 – The Site would not constitute core Koala habitat and no further provisions apply.
- FM Act – The ephemeral watercourse, 50 m north of the Site, is mapped as Key Fish Habitat (KFH). It will not be directly impacted; however potential indirect impacts have been assessed, and several mitigation measures are proposed to avoid and minimise these impacts. The Project is not expected to cause harm to KFH and compliance with FM Act requirements will be maintained.

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1. INTRODUCTION

1.1 Purpose

Hunter Ecology has been contracted to prepare a Streamlined Biodiversity Development Assessment Report (SBDAR) for the additional development footprint for the proposed Panorama Battery Energy Storage System (BESS) related to the connection to and expansion of the substation ('the Project') at 800 Mid Western Hwy, Evans Plains ('the Site'). See **Figure 1-1** for a location map and **Figure 1-2** for a Site map. The Project is a State Significant Development (SSD) and is being assessed under Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). It is accompanied by a SBDAR, prepared in accordance with Appendix C of the Biodiversity Assessment Method (BAM), 'Streamlined assessment module – Small area' and will provide information for the environmental assessment for the proposed expansion of the existing substation.

1.2 Scope

Section 1 of this SBDAR identifies and describes the Site and Project (including the construction and operational footprint) and lists the sources of information used for the assessment.

Sections 2, 3 & 4 of this SBDAR address Stage 1 of the BAM and provide an assessment of the biodiversity values of the site by identifying:

- Landscape features and site context of the Site in accordance with Chapter 4 of the BAM;
- Presence of threatened ecological communities (TECs), plant community types (PCTs), and the condition (vegetation integrity) of native vegetation in the Site in accordance with Chapter 5 of the BAM;
- Habitat suitability for threatened species in the Site in accordance with Chapter 6 of the BAM; and

Sections 5, 6, 7 & 8 of this SBDAR address Stage 2 of the BAM and provide an assessment of the impacts on biodiversity values, as follows:

- Demonstration of efforts to avoid and minimise impacts on biodiversity values (including prescribed impacts) in accordance with Chapter 7 of the BAM;
- Determination of biodiversity impacts, including an assessment of direct, indirect, prescribed and cumulative impacts on native vegetation, threatened ecological communities and threatened species and their habitat;
- Identification of measures to mitigate or manage impacts in accordance with the recommendations in BAM Sections 8.4 and 8.5;
- Identification and assessment of impacts on TECs and threatened species that are at risk of a serious and irreversible impacts (SAII), in accordance with BAM Section 9.1);
- Identification of impacts requiring offset and not requiring offset in accordance with BAM Section 9.2;
- Identification of areas not requiring assessment in accordance with BAM Section 9.3;
- Identification of the ecosystem credits and species credits that measure the impact of the Project on biodiversity values; and

- Description of credit classes for ecosystem credits and species credits.

Finally, Section 9 of this SBDAR addresses requirements under additional state and federal biodiversity related legislation and planning policies, including the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), NSW *Water Management Act 2000* (WM Act), NSW *State Environmental Planning Policy (SEPP) (Biodiversity and Conservation) 2021* and NSW *Fisheries Management Act 1994* (FM Act).

1.3 Project Background

The proposed BESS facility, as detailed in the submitted Amendment Report #1 (NGH, 2025a), requires further changes as a result of recent consultation with Transgrid, regarding the connection works from the BESS to and expansion of the Panorama Substation. The additional amendments now required for the BESS facility affect the extent of the development footprint. The Project referred to in this SBDAR incudes the additional areas of development footprint required for the connection to and expansion of the substation.

The original proposed Panorama BESS facility was granted a BDAR waiver as part of the Environmental Impact Statement (EIS), given the minimal impact on native vegetation and biodiversity. Since then, advice from NSW Department of Planning, Housing and Infrastructure and NSW Conservation Programs, Heritage and Regulation have stated that where there are additional impacts to native vegetation outside of the BDAR waiver, the streamlined assessment approach can be applied to the Project, in adherence to the thresholds listed in Appendix C: Streamlined assessment module-Small area of the BAM. As the DA is SSD the SBDAR still follows the planning pathway of the relevant guidelines under the EP&A Act.

The Project includes the construction, operation and decommission of a BESS compound (with a capacity of 100 Megawatts (MW), and associated ancillary infrastructure, adjacent to an existing 132 Kilovolt (kV) substation. The Project area depicted in **Figure 1-2** shows the maximum potential (direct) impact area for the additional area. This area occurs within Lot 521 DP 603541 and slightly within the neighbouring Lot 2 DP 864272. This maximum impact area is referred to as 'the Site' throughout this SBDAR.

1.4 Subject Site Overview

Table 1-1: Overview of the Subject Site

Locality:	800 Mid Western Highway, Evans Plains
Lot / DP:	Lot 521 DP 603541 and partly within Lot 2 DP 864272
LGA:	Bathurst Regional
Site zoning:	RU1 Primary Production
Topography:	The Site undulates and slopes gently to the north toward a 3rd order ephemeral watercourse.
Vegetation:	The majority of the Site contains managed derived grassland, with a heavy dominance of exotic flora species. There is also a patch of landscape plantings (exotic and native trees) and a native grassy woodland occurs just north of the

	Site, along an ephemeral watercourse. This woodland comes just within the northern boundary of the Site.
Existing development/ land uses:	Transgrid Panorama Substation
Historical development/ land uses:	The Site and surrounding area have historically been subject to clearing for agriculture, livestock grazing and pasture improvement, as well as the existing substation.

1.5 Development Footprint

1.5.1 Construction Footprint and Operational Footprint

The construction footprint encompasses the BESS compound and its associated infrastructure, including any asset protection zones, access roads etc. The Site represents the maximum construction footprint. The operational footprint encompasses these areas but is also considered to cover the land within 50 m of the Site, which may be indirectly impacted during the Project's operation.

1.6 Information Sources

The Bibliography in Section 10 of this report contains a full list of information sources utilised for this report. Information sources included (but were not necessarily limited to) the following:

Databases used included:

- NSW Department of Climate Change, Energy, the Environment and Water (NSW DCCEEW) BioNet Vegetation Classification. Accessed November 2025, https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/nsw-bionet/about-bionet-vegetation-classification.
- Threatened fauna and flora records within a 10 km radius of the site, contained in the NSW DCCEEW BioNet Atlas. Accessed November 2025, https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/nsw-bionet/about-bionet-atlas.
- Predicted Matters of National Environmental Significance (MNES) within a 10 km radius of the site, using the Commonwealth Department of Climate Change, Energy, Environment and Water (Commonwealth DCCEEW) EPBC Act Protected Matters Search Tool. Accessed November 2025, https://www.dcceew.gov.au/environment/epbc/protected-matters-search-tool.
- NSW DCCEEW BioNet Threatened Biodiversity Profile Data Collection. Accessed November 2025, https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/nsw-bionet.
- Commonwealth DCCEEW Species Profile and Threats Database. Accessed November 2025, http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl.
- NSW Government, Sharing and Enabling Environmental Data portal (SEED). Accessed November 2025, https://www.seed.nsw.gov.au/.

- NSW State Vegetation Type Map (SVTM) (Current Release C2.0.M2.1, November 2024).

Aerial photograph interpretation included the use of the following:

- NSW Government Spatial Digital Twin Explorer (SDT Explorer). Accessed November 2025, https://portal.spatial.nsw.gov.au/explorer/index.html.

The following guidelines were reviewed and referred to in the development of biodiversity assessment and field survey methods:

- Biodiversity Assessment Method (BAM) 2020.
- Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities (Department of Environment and Conservation (DEC), 2004).
- Matters of National Environmental Significance: Significant impact guidelines 1.1 Environment Protection and Biodiversity Conservation Act 1999 (Department of Environment (DoE), 2013).

The following reports related to the Project were reviewed:

- Environmental Impact Statement, Panorama Battery Energy Storage System (BESS) (SLR Consulting Australia Pty Ltd, 2024).
- BDAR Waiver Request, Panorama Battery Energy Storage System (BESS), Bathurst, NSW (SLR Consulting Australia Pty Ltd, 2024).

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Figure 1-1: Site Map

Panorama Transgrid BESS
Bathurst Windfarm

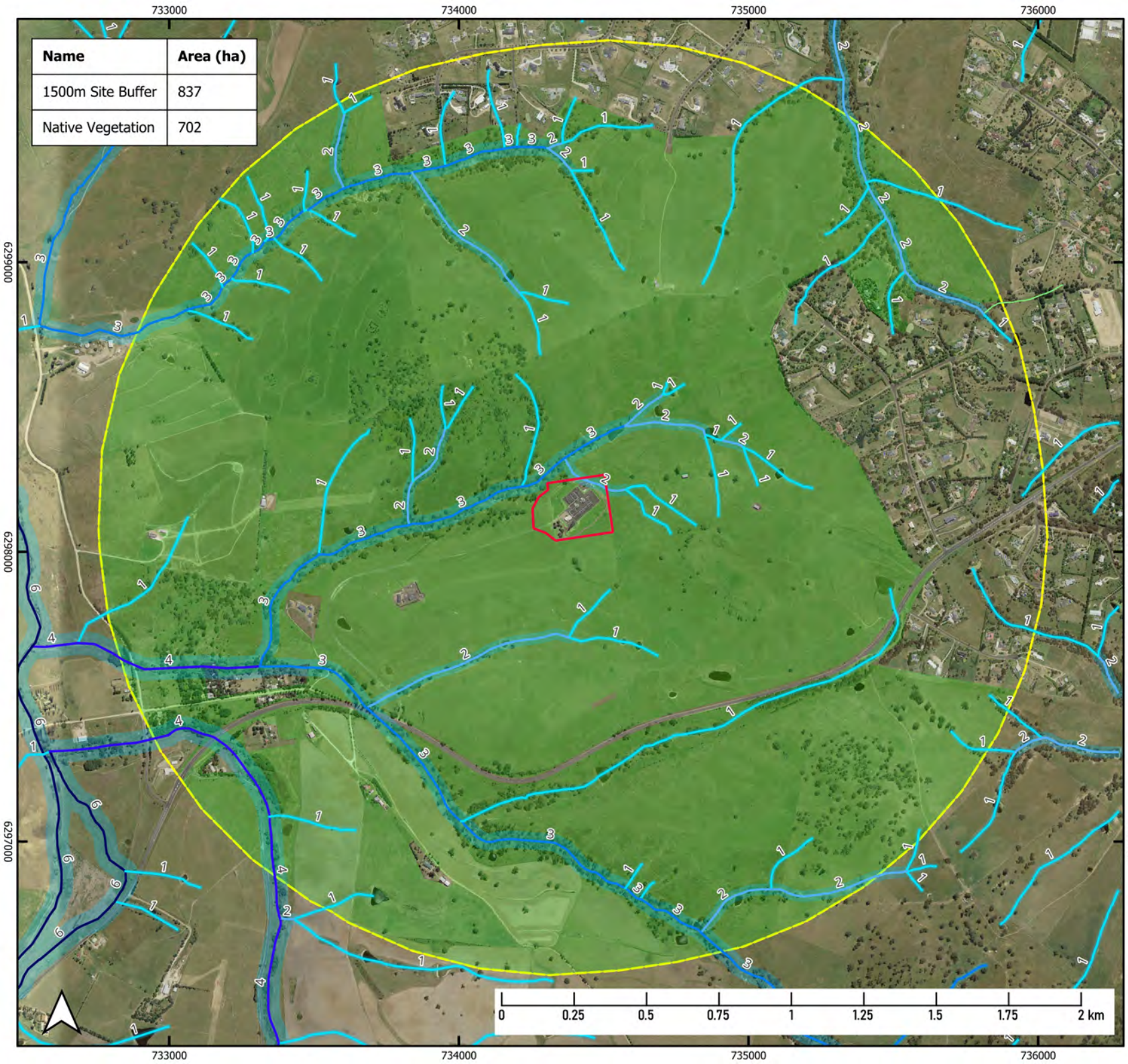
Legend

- Site Boundary / Development Footprint
- Cadastre
- Riparian Corridors
- Planted Vegetation
- Native Vegetation

Stream Order (Strahler System)

- 1
- 2
- 3

Date: 02/11/2025
Map Version: 1.2
CRS: GDA 2020 Zone 55
Imagery: SixMaps



Name	Area (ha)
1500m Site Buffer	837
Native Vegetation	702

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Figure 1-2: Site Location

Panorama Transgrid BESS
Bathurst Windfarm

Legend

- Site Boundary / Development Footprint
- 1500m Site Buffer
- Native Vegetation
- Riparian Corridors

Stream Order (Strahler System)

- 1
- 2
- 3
- 4
- 6

Date: 28/11/2025
Map Version: 1.1
CRS: GDA 2020 Zone 55
Imagery: SixMaps

2. LANDSCAPE FEATURES

This section details the landscape features occurring within the assessment area (i.e., a 1.5 km buffer surrounding the Site). See previous **Figure 1-1** for a Site Map and previous **Figure 1-2** for a Location Map.

Table 2-1: Landscape Features

IBRA Bioregions and Subregions	The Site is within the South Eastern Highlands IBRA bioregion and the Bathurst IBRA subregion. No other regions or subregions occur within the assessment area.
NSW Landscape Regions (Mitchell Landscapes)	The Site occurs in the Bathurst Granites Mitchell Landscape. No other Mitchell Landscapes occur within the assessment area.
Native Vegetation Cover	Native vegetation cover is calculated as a percentage cover in the assessment area. Cover estimates are based on the cover of native woody and non-woody vegetation relative to the approximate benchmarks for the PCT, considering vegetation condition and extent. The non-woody areas of vegetation in the assessment area (i.e. derived grassland) were considered to be native as a precautionary measure. The native vegetation cover within the assessment area is estimated at 84% (see previous **Figure 1-2**).
Patch Size	Patch size is used to describe an area of intact native vegetation, that includes native vegetation with a gap of less than 100 m from the next area of moderate to good condition native vegetation. This gap is less than or equal to 30 m for non-woody ecosystems. The native vegetation in the locality consists of patches of woody native vegetation interspersed with derived grassland. The woodland is connected to a series of linear riparian corridors through the locality. Overall, the patch size is considered to be >100 ha.
Watercourses	An ephemeral 2nd order watercourse runs through the north-east corner of the Site. This connects with a 3rd order ephemeral watercourse just offsite to the north, which eventually drains to Evans Plains Creek (approx. 2 km south-west) and then the Macquarie River (approx. 5.5 km north-west). See previous **Figure 1-2** for the watercourses within the assessment area.
Important Wetlands	The Site is not within or near any important wetlands or Ramsar wetlands. See previous **Figure 1-2** for the wetlands within the assessment area.
Habitat Connectivity	The grassy woodland on the northern side of the Site is connected to a series of linear riparian corridors that weave through the locality. This would provide habitat connectivity for fauna able to inhabit disturbed and semi cleared habitat. See previous **Figure 1-2** for the habitat connectivity within the assessment area.
Karst, caves, crevices, cliffs and areas of geological significance	No Karst, caves, crevices, cliffs or areas of geological significance are present within the Site or assessment area.
Areas of Outstanding Biodiversity Value (AOBV)	No AOBV declared by the BC Act occur within the Site or assessment area.

3. NATIVE VEGETATION

3.1 Native Vegetation Extent within the Site

The native vegetation extent within the Site was assessed and groundtruthed by Principal Ecologist Bart Schiebaan, during a site visit on 19 November 2025. The majority of the Site contains managed derived grassland, with a heavy dominance of exotic flora species. There is also a patch of landscape plantings (exotic and native trees) and a native grassy woodland occurs just north of the Site, along an ephemeral watercourse. This woodland comes just within the northern boundary of the Site.

The Site's derived grassland and grassy woodland are both included in the mapped native vegetation extent within the Site and combined, they total 3.28 ha (see previous **Figure 1-1**). The area of planted vegetation has been assessed in accordance with the Appendix D of the BAM (Streamlined assessment module – Planted native vegetation), as detailed in the following Section 3.2.

3.2 Planted Native Vegetation

Appendix D of the BAM (Streamlined assessment module – Planted native vegetation) provides a framework for the assessment of planted native vegetation using the BAM. Where only part of a subject land contains planted native vegetation, this module may be used to assess that part of the development. The standard BAM is then used to assess the remaining areas. The following is an assessment of the Site's planted vegetation under the D.1 Decision-making key of the module.

1. ***Does the planted native vegetation occur within an area that contains a mosaic of planted and remnant native vegetation and which can be reasonably assigned to a PCT known to occur in the same IBRA subregion as the proposal?***

   No (*go to 2*) – the planted vegetation contains a mix of exotic (*Pinus halapensus*) and native (*Eucalyptus sideroxylon*) planted trees, with a managed grassy groundlayer of exotic species (such as *Bromus hordeaceus, Hordeum leporinum* and *Trifolium arvense*) (see data for BAM plot 1 In **Appendix A**) . While *E. sideroxylon* is a native species, it does not occur locally and would not constitute remnant native vegetation.

2. ***Is the planted native vegetation:***
   a. ***planted for the purpose of environmental rehabilitation or restoration under an existing conservation obligation listed in BAM Section 11.9(2.), and***
   b. ***the primary objective was to replace or regenerate a plant community type or a threatened plant species population or its habitat?***

   No (*go to 3*) – the planted native vegetation was planted at the Site for landscaping purposes only.

3. ***Is the planted/translocated native vegetation individuals of a threatened species or other native species planted/translocated for the purpose of providing threatened species habitat under one of the following:***
   a. ***a species recovery project***
   b. ***Saving our Species project***
   c. ***other types of government funded restoration project***

d. condition of consent for a development approval that required those species to be planted or translocated for the purpose of providing threatened species habitat

e. legal obligation as part of a condition or ruling of court. This includes regulatory directed or ordered remedial plantings (e.g. Remediation Order for clearing without consent issued under the BC Act or the Native Vegetation Act)

f. ecological rehabilitation to re-establish a PCT or TEC that was, or is carried out under a mine operations plan, or

g. approved vegetation management plan (e.g. as required as part of a Controlled Activity Approval for works on waterfront land under the NSW Water Management Act 2000)?

No (*go to 4*) – the planted native vegetation was planted at the Site for landscaping purposes only and no threatened species occur.

4. Was the planted native vegetation (including individuals of a threatened flora species) undertaken voluntarily for revegetation, environmental rehabilitation or restoration without a legal obligation to secure or provide for management of the native vegetation?

No (*go to 5*) – the planted native vegetation was planted at the Site for landscaping purposes only.

5. Is the native vegetation (including individuals of a threatened flora species) planted for functional, aesthetic, horticultural or plantation forestry purposes? This includes examples such as: windbreaks in agricultural landscapes, roadside plantings (including street trees, median strips, roadside batters), landscaping in parks, gardens and sport fields/complexes, macadamia plantations or teatree farms?

Yes *(Go to D.2 Assessment of planted native vegetation for threatened species habitat [the use of Chapters 4 and 5 of the BAM are not required to be applied]).*

Under *D2 Assessment of planted native vegetation for threatened species habitat*, the assessor must assess the suitability of the planted native vegetation for use by threatened species and record any incidental sightings or evidence (e.g. scats, stick nests) of threatened species credit species (flora and fauna) using, inhabiting or being part of the planted native vegetation. If there is evidence that threatened species are using the planted native vegetation as habitat, the assessor must apply Section 8.4 of the BAM to mitigate and manage impacts on these species. Species credits are not required to offset the proposed impacts. The steps taken to assess threatened species habitat and any proposed mitigation measures are documented throughout this SBDAR.

3.3 Identifying Plant Community Types

3.3.1 Review of Existing Vegetation Mapping

A review of the NSW State Vegetation Type Map (SVTM) (Current Release C2.0.M2.1, November 2024) was undertaken. The Site's derived grassland and area of planted native vegetation have been mapped as 'not classified' (i.e., not native). The woodland on the northern edge of the Site (which extends along the watercourse) is mapped as PCT 3387 Central West Creekflat Grassy Woodland. Other PCTs mapped nearby include PCT 3366 Central Tableland Clay Apple Box Grassy Forest, PCT 3734 Central

Tableland Dry Slopes Stringybark-Box Forest and PCT 4063 Central and Southern Tableland River Oak Forest.

3.3.2 Plot-based Floristic Vegetation Surveys

Plot-based floristic surveys (BAM plots) were conducted in the Site, in accordance with s.5.2.1.9 of the BAM, on 19 November 2025, by Principal Ecologist Bart Schiebaan. Five survey plots were undertaken, to ensure that the minimum number of plots required by the BAM had been undertaken for each identified vegetation zone (see **Table 3-1**). The survey plots were established around central 50 m transects and each included:

- A 20 m x 20 m plot sampled for the presence of flora species. The plots were carefully examined to identify all flora species present. Data collected for each species included:
    - Stratum and layers in which each species occurs.
    - Growth form for each species.
    - Scientific and common name for each species.
    - Percentage foliage cover (PFC) across the plot, of each species rooted in or overhanging the plot.
    - Abundance rating for each species.
- One 1000 m² (20 m x 50 m) plot to assess the function attributes: number of large trees, number of hollow-bearing trees, stem size class, tree regeneration and length of logs.
- Five 1 m² sub-plots to assess average litter cover (and other groundcover components).

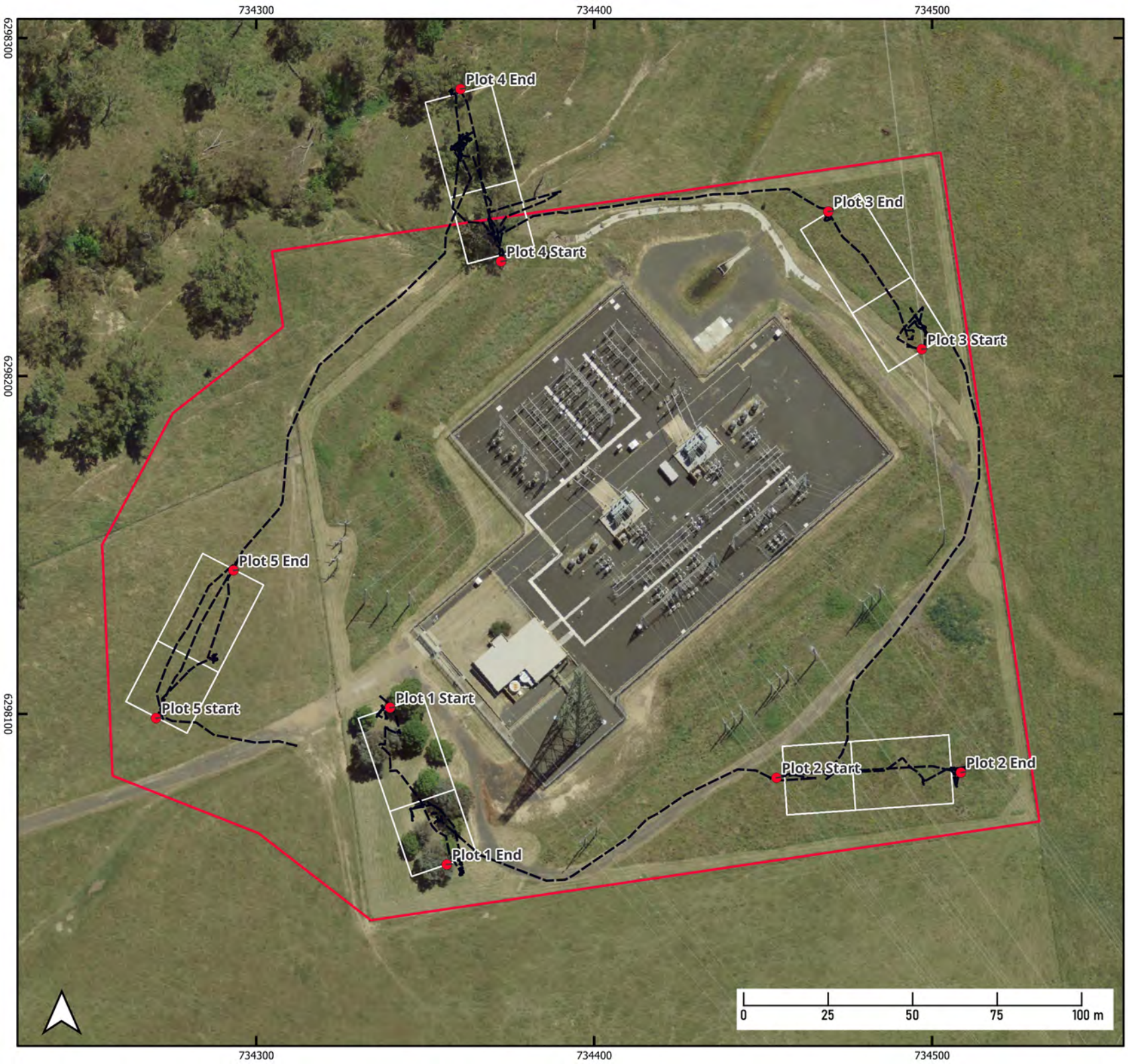
See **Figure 3-1** for the plot locations. Plot data is provided in **Appendix A**. Plot photos are provided in **Appendix B**.

Table 3-1: BAM Plot Summary

Vegetation Zone*	Area	No. of BAM Plots Required**	No. of BAM Plots Undertaken	BAM Plot Ref. No.
3387_1 (woodland)	0.02 ha	1	1	2, 3, 5
3387_2 (derived grassland)	3.26 ha	2	3	4
Planted vegetation	0.14 ha	N/A	1	1

*** See Section 3.3.3 for information on vegetation zones.**

**** As per BAM section 4.3.4.**



Hunter Ecology

Figure 3-1: Survey Effort

Panorama Transgrid BESS
Bathurst Windfarm

Legend

- Site Boundary / Development Footprint
- BAM Plot Start/End Locations
- Survey Tracks

Date: 28/11/2025
Map Version: 1.1
CRS: GDA 2020 Zone 55
Imagery: SixMaps

3.3.3 Plant Community Types and Vegetation Zones

As part of the BAM, an assessor must identify the distribution of Plant Community Types (PCTs) according to the NSW PCT classification described in the NSW BioNet Vegetation Information System (BioNet VIS). The Site's woodland and derived grassland were both identified as PCT 3387 Central West Creekflat Grassy Woodland. This PCT was concluded to be the 'best fit', based on observations made during the flora survey, a comparison of the PCT descriptions in BioNet VIS and the SVTM review. **Table 3-2** provides a summary of the identified PCT and vegetation zones. See **Figure 3-2** for its distribution in the Site and photos in Section 3.4.

Table 3-2: PCT 3387 Central West Creekflat Grassy Woodland

Attribute	Description
Vegetation Formation	Grassy Woodlands
Vegetation Class	Western Slopes Grassy Woodlands
TEC status	Associated with the NSW BC Act listed White Box - Yellow Box – Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highlands, NSW South Western Slopes, South East Corner and Riverina Bioregions. Also associated with the Commonwealth EPBC Act listed White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland, but only where it meets the condition criteria as per section 4 of the Commonwealth DCCEEW (2023) Conservation Advice. See Section 3.2.5 of this report for assessment of the Site's vegetation against these criteria.
PCT Percent Cleared	79.05%
Vegetation Zones / Condition States	The community was found to occur in two condition states across the Site, being a disturbed grassy woodland and a derived grassland. These two vegetation zones are referred respectively to in this report as 3387_1 (woodland) and 3387_2 (derived grassland). Note that the grassy woodland vegetation zone only comes just within the Site's northern boundary.
Description	<u>3387_1 (woodland):</u> Upper Stratum – 15 m high with a PFC of 20%. Dominated by *Eucalyptus melliodora*. Other canopy trees observed external to Site and floristic plot included *E. blakelyi, E. bridgesiana, E. goniocalyx* and *E. viminalis.* Mid stratum – 1-2 m high with a PFC of <5%. The shrub layer is cleared and only contains occasional exotic *Rosa rubignosa*. Lower Stratum - <1 m high with a PFC of 50%. Dominated by exotic species such as *Holcus lanatus, Bromus hordeaceus* and *Plantago lanceolata*. The native grasses, *Austrostipa scabra* and *Poa sieberian*a are sub-dominant and other occasionally occurring native species include *Lomandra filiformis* and *Acaena ovina.* <u>3387_2 (derived grassland):</u> Upper stratum – Absent. Mid stratum – 1-2 m high with a PFC of 1-10%. The shrub layer contains occasional exotic *Rosa rubignosa* and *Rubus fruticosus*.

	Lower Stratum – <1 m high with a PFC of 85-100 Heavily dominated by exotic species such as *Avena barbata, Bromus hordeaceus, Medicago polymorpha, Lolium perenne, Salvia verbenaca* and *Trifolium angustifolium.* Native species, such as *Austrostipa scabra*, *Poa labillardierei* and *P. sieberiana* also occur and are often sub-dominant.
Justification for PCT Selection	The Site's vegetation is highly modified (largely derived grassland) and thus, the nearby vegetation along the watercourse, in combination with the SVTM, was reviewed to provide context. The structure of the woodland on the Site's northern boundary and along the adjacent creek fits with the Grassy Woodlands Vegetation Formation. The canopy in the survey area is dominated by *Eucalyptus melliodora*, with some other species observed further north, including *E. blakelyi, E. bridgesiana, E. goniocalyx* and *E. viminalis*. Multiple grassy woodland PCTs have been mapped on the SVTM in the vicinity, and it is likely that the vegetation along the creekline contains a mosaic of these. PCT 3387 however, was concluded to be the 'best fit' for the vegetation on the Site's northern boundary, mainly due to the dominance *Eucalyptus melliodora* and the presence of *E. blakelyi*. PCT 3387 was also applied to the derived grassland as it is adjacent to the grassy woodland and contains a similar soil and landscape position. The two other PCTs considered, but ruled out, are summarised as follows: • PCT 3366 Central Tableland Clay Apple Box Grassy Forest – this PCT tends to be dominated by *E. bridgesiana*. As discussed above, this species was observed however *E. melliodora* was clearly dominant in the survey area. • PCT 3376 Southern Tableland Grassy Box Woodland – this PCT is usually dominated by *E. melliodora, E. blakelyi and E. bridgesiana* and would thus floristically fit well with the community. However, the community's association with the creekline leans it more towards PCT 3387 (which is distinguished partly by its location on deep soils, along intermittent drainage lines in gentle valley floors).

3.3.4 Threatened Ecological Communities

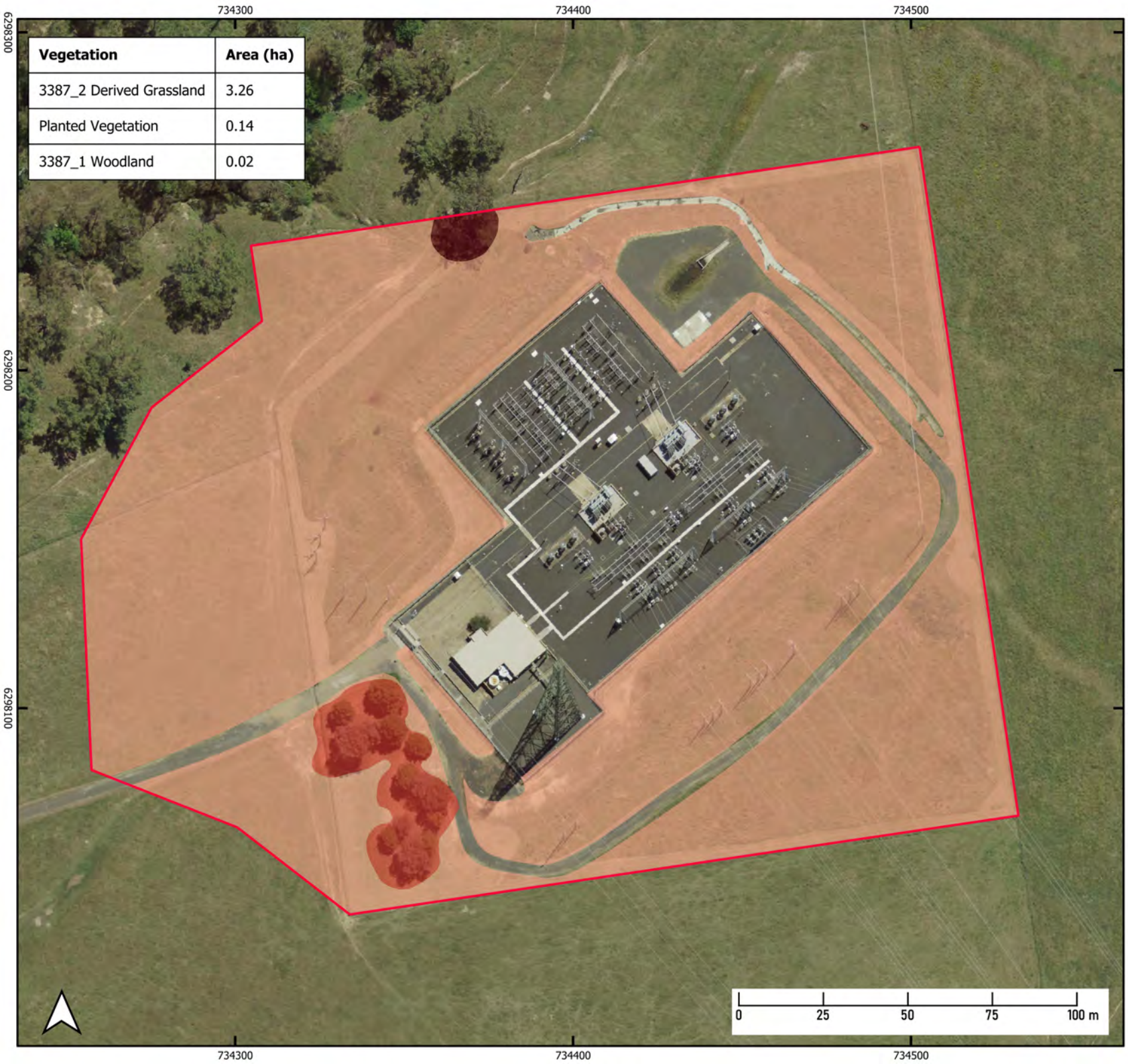
PCT 3387 is associated with the NSW BC Act listed, White Box - Yellow Box – Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highlands, NSW South Western Slopes, South East Corner and Riverina Bioregions. It is also associated with the Commonwealth EPBC Act listed, White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland, but only where it meets the condition criteria as per section 4 of the Commonwealth DCCEEW (2023) Conservation Advice. An assessment of the community under these thresholds is provided as follows.

The minimum condition thresholds in the Commonwealth DCCEEW (2023) Conservation Advice centres around factors related to abundance and diversity of native groundcover species, presence of 'important species' in the groundcover, tree density and presence of natural canopy regeneration. The following provides a summary of the how each vegetation zone compares to these criteria:

- Patch size: The community is connected to a network of linear riparian corridors, and the patch size is estimated to be >100 ha.
- Percentage of native species in the perennial groundcover: In 3387_1 (woodland), the perennial vegetation cover in the ground layer is 35% native. In 3387_2 (derived grassland), it is an average of 26%.

- Number of native, non-grass species in the groundlayer (such as forbs, shrubs, ferns and sedges): In 3387_1 (woodland), the groundlayer contained three non-grass species. In 3387_2 (derived grassland), the groundlayer contained zero in all plots.
- Presence of 'important' species (e.g. grazing sensitive, regionally significant, listed threatened or uncommon species) listed in Appendix A of the Conservation Advice: 3387_1 (woodland) contained one important species, being *Poa sieberiana*. 3387_2 (derived grassland) contained two important species, being *P. sieberiana* and *P. labillardieri*.
- Number of mature trees per hectare: 3387_1 (woodland) would contain >20 mature trees per hectare. 3387_2 (derived grassland) does contain any mature trees.
- Natural regeneration of dominant overstorey eucalypts (i.e., saplings ≥5 cm diameter at breast height): 3387_1 (woodland) contains natural regeneration of dominant overstorey eucalypts (particularly *E. melliodora*). Natural regeneration was not observed in 3387_2 (derived grassland).

Based on the above criteria, vegetation zone 3387_1 (woodland) would meet the minimum 'Class C' condition thresholds under the EPBC Act listing. Vegetation zone 3387_2 (derived grassland) however would not meet the minimum condition thresholds and therefore is not included in the EPBC Act listing.



Vegetation	Area (ha)
3387_2 Derived Grassland	3.26
Planted Vegetation	0.14
3387_1 Woodland	0.02

Hunter Ecology

Figure 3-2: Vegetation Map

Panorama Transgrid BESS
Bathurst Windfarm

Legend

- Site Boundary / Development Footprint

Vegetation Zones

- PCT 3387 Central West Creekflat Grassy Woodland (3387_1 Woodland)
- PCT 3387 Central West Creekflat Grassy Woodland (3387_2 Derived Grassland)
- Planted Vegetation

Date: 28/11/2025
Map Version: 1.0
CRS: GDA 2020 Zone 55
Imagery: SixMaps

3.4 Photos

PCT 3387_2 (derived grassland)

PCT 3387_2 (derived grassland)

PCT 3387_1 (woodland)

PCT 3387_1 (woodland)

Planted vegetation

Planted vegetation

3.5 Vegetation Integrity Assessment

As discussed previously, plot-based floristic surveys (BAM plots) were conducted in each vegetation zone, to obtain a quantitative measure of the composition, structure and function attributes listed in Table 3 of the BAM, which are summarised as follows:

- Growth form groups used to assess composition and structure: tree, shrub, grass and grass like, forb, fern and other.
- Attributes used to assess function: number of large trees, tree regeneration, tree stem size class, total length of fallen logs, litter cover, high threat exotic vegetation cover and hollow-bearing trees.

This data was used to undertake a vegetation integrity (VI) assessment. VI is a metric-based assessment used to measure the condition of native vegetation against PCT benchmarks for the composition, structure and function attributes. **Table 3-3** details the composition, structure, function and VI scores. See **Appendix A** for plot data.

Table 3-3: Composition, Structure, Function and Vegetation Integrity Scores

Vegetation Zone	Composition Score	Structure Condition Score	Function Condition Score	VI Score
3387_1 (woodland)	10.7	22	65.6	**26.6**
3387_2 (derived grassland)	2.6	1.8	11.6	**3.8**

4. THREATENED SPECIES

4.1 Habitat Assessment

4.1.1 Field Investigations

An assessment of the relative habitat values of the Site was undertaken by Principal Ecologist, Bart Schiebaan, on 19 November 2025. The habitat assessment focused on the identification of habitat types and resources favoured by all major guilds of native flora and fauna, including threatened species known from the region. The assessment was based on specific habitat requirements regarding home range, feeding, roosting, breeding, movement patterns and corridor requirements. Consideration was given to contributing factors including topography, soil, light and hydrology. Any opportunistic observations of fauna utilising the Subject Site were recorded. This included sightings, calls or signs of fauna presence, such as scats, scratches, sap-feeding scars, diggings, nests, dreys, bones, hair, shed skins, tracks, burrows, chewed cones and feeding pellets. Signs were verified with reference to Triggs (2004).

4.1.2 Identified Habitat Features

Table 4-1 provides a summary of the habitat features in each vegetation zone (including the planted vegetation).

Table 4-1: Assessment of Habitat Features

Habitat Feature	Details		
	3387_1 (woodland)	**3387_2 (derived grassland)**	**Planted vegetation**
Vegetation type, structure and condition	Highly modified grassy woodland. Shrubs are absent, except for occasional exotic Blackberry and Sweet Briar. The groundlayer is heavily grazed and dominated by exotic species. No hollow-bearing trees or rocky features were recorded in the survey area. Some ground timber was recorded in the survey area but not within the Site (i.e. development footprint) itself.	Managed derived grassland, with a heavy dominance of exotic flora species. No canopy trees or shrubs occur (except for occasional exotic Blackberry and Sweet Briar). No rocky features or ground timber occurs. The groundlayer is regularly slashed / mowed.	Exotic (*Pinus halapensus*) and native (*Eucalyptus sideroxylon*) planted trees, with a managed grassy groundlayer of exotic species. No hollow-bearing trees, rocky features or ground timber occurs. The groundlayer is regularly slashed / mowed.
Evidence of feral animals	No feral animals were observed, however species such as *Vulpes vulpes* (Red Fox), *Oryctolagus cuniculus* (European Rabbit) and *Felis catus* (Cat) are likely to occur in the general area.	No feral animals were observed, however species such as *Vulpes vulpes* (Red Fox), *Oryctolagus cuniculus* (European Rabbit) and *Felis catus* (Cat) are likely to occur in the general area.	No feral animals were observed, however species such as *Vulpes vulpes* (Red Fox), *Oryctolagus cuniculus* (European Rabbit) and *Felis catus* (Cat) are likely to occur in the general area.
Evidence of human disturbance	The Site and surrounding area have historically been subject to clearing for agriculture, livestock grazing and pasture improvement.	The Site and surrounding area have historically been subject to clearing for agriculture, livestock grazing and pasture improvement.	The Site and surrounding area have historically been subject to clearing for agriculture, livestock grazing and pasture improvement.
Nectar or fruit resources and perch sites	The trees would provide nectar, fruit resources and perch sites.	No	No
Winter flowering eucalypt species	The tree species within the survey area (*Eucalyptus melliodora*) does not flower in winter. *E. bridgesiana* and *E. goniocalyx* were observed nearby however and these species are known to flower in winter.	No	No

Allocasuarina and Casuarina trees	No	No	No
Proximity to water	The nearest watercourse is an ephemeral, 2nd order watercourse, approx. 50 m north and west of the Site boundary. Farm dams also occur in the area and the closest of these is approx. 120 m north-east of the Site boundary. See **Figure 1-2**.	The nearest watercourse is an ephemeral, 2nd order watercourse, approx. 50 m north and west of the Site boundary. Farm dams also occur in the area and the closest of these is approx. 120 m north-east of the Site boundary. See **Figure 1-2**.	The nearest watercourse is an ephemeral, 2nd order watercourse, approx. 50 m north and west of the Site boundary. Farm dams also occur in the area and the closest of these is approx. 120 m north-east of the Site boundary. See **Figure 1-2**.
Flying fox camp	No	No flying fox camps are located on or near the Site.	No flying fox camps are located on or near the Site.
Evidence of seedling recruitment	Yes – trees in <5 cm DBH (Regrowth) and 5-9 cm DBH size class categories were recorded in the survey area.	No	No
Presence of sap feed trees for glider species	The tree species within the survey area (*Eucalyptus melliodora*) is not typically a glider sap feed tree. *E. viminalis* was observed nearby however and this species is a preferred glider sap feed tree.	No	No
Presence of preferred Koala feed trees	The tree species within the survey area (*Eucalyptus melliodora*) is not considered a preferred Koala feed tree in the Central Tablelands Koala management area. *E. viminalis*, which was observed nearby, is considered a 'secondary' Koala feed tree in the Central Tablelands Koala management area.	No	No
Hollow-bearing trees or large trees with basal cavities	No	No	No

Wetlands, streams, rivers, dams or waterbodies with emergent vegetation	No	No	No
Cliffs or caves, tunnels or disused mine shafts	No	No	No
Bush rocks and rocky outcrops or logs	Some ground timber was recorded in the survey area but not within the Site (i.e. development footprint) itself. No rocky features occur.	No	No
Human made structures that may provide habitat	No	No	No
Areas that can act as corridors/ connectivity to other areas	The grassy woodland on the northern side of the Site is connected to a series of linear riparian corridors that weave through the locality. This would provide habitat connectivity for species able to inhabit disturbed and semi cleared habitat. See previous **Figure 1-2** for the habitat connectivity within the 1.5 km assessment area.	Derived grassland is widespread in the vicinity. The Site's derived grassland is highly modified and unlikely to provide important habitat connectivity.	The planted trees may contribute to connectivity in the area (by providing a 'stepping stone'), although this would be limited to species able to inhabit disturbed and semi cleared habitat.

4.2 Ecosystem Credit Species

Ecosystem credit species are those where the likelihood of occurrence of the species or elements of the species' habitat, can be predicted by vegetation surrogates and landscape features, or for which targeted survey has a low probability of detection. Targeted survey is not required for ecosystem credit species. The NSW DCCEEW BioNet Threatened Biodiversity Profile Data Collection has identified several ecosystem credit species as requiring assessment, for the Project; these are listed in **Table 4-2**.

Table 4-2: Habitat Suitability for Ecosystem Credit Species

Ecosystem Credit Species	Habitat Constraints / Geographic Limitations	Confirmed Predicted Species?
Anthochaera phrygia Regent Honeyeater (Foraging)	Nil	Yes
Artamus cyanopterus cyanopterus Dusky Woodswallow	Nil	Yes
Callocephalon fimbriatum Gang-gang Cockatoo (Foraging)	Nil	Yes
Calyptorhynchus lathami Glossy Black-Cockatoo (Foraging)	Presence of Allocasuarina and casuarina species.	Yes
Chthonicola sagittata Speckled Warbler	Nil	Yes
Circus assimilis Spotted Harrier	Nil	Yes
Climacteris picumnus victoriae Brown Treecreeper (eastern subspecies)	Nil	Yes
Daphoenositta chrysoptera Varied Sittella	Nil	Yes
Dasyurus maculatus Spotted-tailed Quoll	Nil	Yes
Falco subniger Black Falcon	Nil	Yes
Glossopsitta pusilla Little Lorikeet	Nil	Yes
Haliaeetus leucogaster White-bellied Sea-Eagle (Foraging)	Waterbodies Within 1km of a rivers, lakes, large dams or creeks, wetlands and coastlines.	Yes
Hieraaetus morphnoides Little Eagle (Foraging)	Nil	Yes
Hirundapus caudacutus White-throated Needletail	Nil	Yes
Lathamus discolor Swift Parrot (Foraging)	Nil	Yes
Lophoictinia isura Square-tailed Kite (Foraging)	Nil	Yes
Melithreptus gularis gularis Black-chinned Honeyeater (eastern subspecies)	Nil	Yes
Petaurus australis Yellow-bellied Glider	Nil	Yes

Petroica boodang Scarlet Robin	Nil	Yes
Polytelis swainsonii Superb Parrot (Foraging)	Nil	Yes
Stagonopleura guttata Diamond Firetail	Nil	Yes
Varanus rosenbergi Rosenberg's Goanna	Nil	Yes

4.3 Species Credit Species

Species credit species are threatened species for which vegetation surrogates and/or landscape features cannot reliably predict the likelihood of their occurrence or components of their habitat. A targeted survey or an expert report is required to confirm the presence of these species on the Site. Alternatively, for a development activity, clearing or biodiversity certification proposal, the proponent may elect to assume the species is present. For streamlined assessments such as this, only candidate species credit species that are potential SAII entities (or are incidentally recorded) require assessment. The BAM calculator lists several SAII species credit species as associated with the Site and PCT 3387. An assessment of habitat suitability for each species was undertaken, in accordance with Section 5.2 of the BAM and all were excluded from further assessment (see **Table 4-3**).

Table 4-3: Habitat Suitability for Species Credit Species

Species Credit Species	Habitat Constraints / Geographic Limitations	Confirmed Candidate Species?	Justification
Anthochaera phrygia Regent Honeyeater (Breeding)	As per Important Habitat Map.	No	Habitat constraints not present: The Site is not within the Regent Honeyeater Important Habitat Map.
Chalinolobus dwyeri Large-eared Pied Bat	Cliffs Within 2 km of rocky areas containing caves, overhangs, escarpments, outcrops, or crevices, or within 2 km of old mines or tunnels.	No	Habitat constraints not present: the Site does not contain cliffs and is not within 2 km of rocky areas containing caves, overhangs, escarpments, outcrops, or crevices, or within 2 km of old mines or tunnels.
Grevillea divaricata	Nil	No	Habitat degraded: The entire Site has a cleared understorey and the groundlayer is subject to slashing / mowing. As a result, it does not contain any shrubs (except for occasional exotic Blackberry and Sweet Briar).
Lathamus discolor Swift Parrot (Breeding)	As per Important Habitat Map.	No	Habitat constraints not present: The Site is not within the Swift Parrot Important Habitat Map.
Litoria castanea Yellow-spotted Tree Frog	Nil	No	Habitat degraded: This species inhabits large permanent ponds or slow flowing 'chain-of-ponds' streams with abundant emergent vegetation such as bulrushes

Species Credit Species	Habitat Constraints / Geographic Limitations	Confirmed Candidate Species?	Justification
			and aquatic vegetation. Terrestrial and sheltering habitat requires fallen timber, rocks, other debris or thick vegetation. The Site has a cleared understorey and managed groundlayer. No rocky features are present. Some ground timber was recorded in the 3387_1 (woodland) the survey area but not within the Site (i.e. development footprint) itself.
Petrogale penicillata Brush-tailed Rock-wallaby	Land within 1 km of rocky escarpments, gorges, steep slopes, boulder piles, rock outcrops or cliff lines.	No	Habitat constraints not present: the Site is not within 1 km of rocky escarpments, gorges, steep slopes, boulder piles, rock outcrops or cliff lines.
Tympanocryptis mccartneyi Bathurst Grassland Earless Dragon	Nil	No	Habitat degraded: The entire Site is subject to slashing / mowing. No rocky features are present. Some ground timber was recorded in the 3387_1 (woodland) the survey area but not within the Site (i.e. development footprint) itself. While this species is a grassland specialist and is able to withstand some disturbance, it does require structural features such as logs and rocks. In particular, burrows excavated by wolf spiders associated with partially embedded surface rocks are of critical importance.

5. AVOID AND MINIMISE IMPACTS

Section 3 of the *BAM Operational Manual Stage 2* (Department of Planning and Environment, 2023) details the requirement to demonstrate that direct, indirect and prescribed impacts are 'reasonably' avoided and minimised, prior to the offsetting of any residual impacts, and allows consideration of not just environmental factors but also those that are social and economic.

The Project has been designed to largely avoid impacts to areas of woodland in the vicinity, with an overall impact of 3.26 ha on derived grassland and 0.02 ha of woodland. The derived grassland to be impacted is dominated by exotic flora species and contains very little habitat value (e.g., no logs, rocky features and regularly slashed). The 0.02 ha of impacted woodland contains three trees on the northern boundary of the Site, which may be impacted by the proposed access road and retaining wall. These include a mature *Eucalyptus melliodora* tree, a sapling *E. melliodora* and a stag (dead tree). No hollows occur in these trees. The mature *E. melliodora* tree has a DBH of approx. 40 cm (see photo below). These trees are not likely to require removal but are included in the area to be offset with biodiversity credits, as a precautionary measure. In addition to Project design, impacts will be avoided and minimised via several proposed construction and operation phase mitigation measures (see Section 7). Overall, it is concluded that the avoid and minimise provisions of the BAM and BC Act have been complied with.

Trees adjacent to the proposed access road (in yellow) and retaining wall: mature *Eucalyptus melliodora* in the foreground and *E. melliodor*a sapling and stag in the background.

6. ASSESSMENT OF IMPACT

6.1 Direct and Indirect Impacts

See **Table 6-1** for information on nature, extent, frequency, duration, timing and consequences of each potential direct and indirect impact and for the identification of affected threatened entities. As mentioned previously, the Project has been designed to largely avoid direct impacts to woodland, with an overall impact of 3.26 ha on derived grassland and 0.02 ha of woodland. The derived grassland is dominated by exotic flora species and contains very little habitat value (e.g., no logs or rocks and regularly slashed). The 0.02 ha of impacted woodland contains three trees on the northern boundary of the Site, which may be impacted by the proposed access road and retaining wall. These include a mature *Eucalyptus melliodora* tree, a sapling *E. melliodora* and a stag (dead tree). No hollows occur in these trees. The mature *E. melliodora* tree has a DBH of approx. 40 cm. These trees are not likely to require removal but are included in the area to be offset with biodiversity credits, as a precautionary measure.

6.2 Prescribed Impacts

Prescribed impacts are the impacts on biodiversity values that which are not related to, or are in addition to, native vegetation clearing and habitat loss. As detailed in Section 6.1 of the *Biodiversity Conservation Regulation 2017*, prescribed impacts include the following:

- The impacts of development on the following habitat of threatened species or ecological communities
    - karst, caves, crevices, cliffs and other geological features of significance,
    - rocks,
    - human made structures,
    - non-native vegetation,
- The impacts of development on the connectivity of different areas of habitat of threatened species that facilitates the movement of those species across their range,
- The impacts of development on movement of threatened species that maintains their lifecycle,
- The impacts of development on water quality, water bodies and hydrological processes that sustain threatened species and threatened ecological communities (including from subsidence or upsidence resulting from underground mining or other development),
- The impacts of wind turbine strikes on protected animals,
- The impacts of vehicle strikes on threatened species of animals or on animals that are part of a threatened ecological community.

These types of impacts are used by the decision-maker to inform the determination and conditions of consent for developments. The BAM does not provide an approach to determine the number and class of biodiversity credits that are required for a prescribed impact. However, the additional prescribed impacts on biodiversity may be considered by a consent authority when they determine the biodiversity credits required to be retired (or other conservation measures required to be taken)

under a planning approval. See **Table 6-1** for the nature, extent, frequency, duration, timing and consequences of each prescribed impact and for identification of affected threatened entities.

Table 6-1: Summary of Impacts

Impact	Nature	Extent	Frequency, Timing & Duration	Associated Threatened Entities	Consequences
		DIRECT IMPACTS			
Clearing of Native Vegetation	Listed Key Threatening Process (KTP). All strata and growth form groups, plus leaf litter to be removed.	Removal of 0.02 ha of PCT 3387_1 (woodland) and 3.26 ha of 3387_2 (derived grassland)	Once, during construction, permanent.	White Box – Yellow Box – Blakely's Red Gum Grassy Woodland TEC and all ecosystem credit species listed in Table 4-3.	Loss of local vegetation, a disruption of established home ranges and a loss of potential sheltering, foraging and breeding habitat (although this would be extremely minimal as the large majority of the Site is a very low condition derived grassland). Total VI loss for 0.02 ha of 3387_1 (woodland) is 26.6. Total VI loss for 3387_2 (derived grassland) is 3.8.
Removal of Hollow-bearing Trees	N/A – No hollow-bearing trees occur at the Site.				
Removal of Coarse Woody Debris and Bush Rocks	N/A – No coarse woody debris or bush rocks occur at the Site.				
Injury and Death of Fauna	Direct physical harm to fauna during construction.	Unlikely as the Project is not removing any canopy trees or structural habitat features like logs and rocks. Further, mitigation measures to address	Once, during construction, permanent.	All ecosystem credit fauna species listed in Table 4-3.	Direct physical harm to undetected resident fauna, leading to reduced local populations, genetic diversity, and animal welfare issues (although, in reality this is highly unlikely).

Impact	Nature	Extent	Frequency, Timing & Duration	Associated Threatened Entities	Consequences
		the unlikely event that disorientated or injured wildlife are encountered during construction, are provided in Section 7 of this BDAR.			
		INDIRECT IMPACTS			
Inadvertent impacts on adjacent vegetation and habitat	Vegetation and habitat (particularly canopy trees) directly adjacent to the Site has the potential to be inadvertently damaged by construction and operation. For instance, a proposed access road and retaining wall on the northern end of the Site would come within the root zone of a mature *Eucalyptus melliodora* tree. The area containing this tree (i.e., 0.02 ha of 3387_1 (woodland)) would be offset to account for this. There is also scope to implement tree protection measures during construction to at least minimise construction phase impacts.	Extent would be minimal as there are only occasional canopy trees near the project footprint.	During construction, temporarily and operation, permanently (due to the permanent access road and retaining wall).	White Box – Yellow Box – Blakely's Red Gum Grassy Woodland TEC and all ecosystem credit species listed in Table 4-3.	Loss of additional vegetation or potential impacts to the health of adjacent canopy trees.
Reduced viability of adjacent habitat due to edge effects	Increase in edge: core habitat ratio, resulting in edge effects such as light and noise pollution, weed invasion and altered moisture, wind and temperature.	Within approx. 50 m of adjacent vegetation/habitat.	Ongoing and permanent, during the operational phase.	White Box – Yellow Box – Blakely's Red Gum Grassy Woodland TEC and all ecosystem credit species listed in Table 4-3.	Edge effects may reduce habitat quality or affect habitat use or movements of some species; however, the Site is already cleared of a canopy and shrub layer and there would not be a very minimal area (0.02 ha) of woodland impacted. Impacts be minimal.

Impact	Nature	Extent	Frequency, Timing & Duration	Associated Threatened Entities	Consequences
Construction phase disturbance	Construction activities may create disturbance such as noise and dust, which may impact some species roosting or foraging adjacent to the Site.	Within approx. 50 m of adjacent vegetation/habitat.	Once, during construction, temporary.	White Box – Yellow Box – Blakely's Red Gum Grassy Woodland TEC and all ecosystem credit species listed in Table 4-3.	Disturbance from construction may temporarily displace fauna that would otherwise be roosting or foraging near the Site.
Artificial light spill	It is anticipated that BESS may be lit permanently during the night. Light pollution can alter the behaviour of nocturnal fauna or roosting diurnal birds.	Within approx. 50 m of adjacent vegetation/habitat.	Ongoing and permanent, during the operational phase.	All ecosystem credit species listed in Table 4-3.	Nocturnal fauna or roosting diurnal birds may avoid areas adjacent to the BESS lighting.
Loss of Habitat Connectivity	N/A – The Project would not fragment or isolate any patches of habitat.				
Erosion and sedimentation during construction	Erosion and sedimentation (i.e., movement of soil to adjacent/downstream aquatic habitats, particularly during rain events); however suitable mitigation measures would prevent this.	Uncertain, although suitable mitigation measures would prevent this.	Once, during construction, temporary.	White Box – Yellow Box – Blakely's Red Gum Grassy Woodland TEC and all ecosystem credit species listed in Table 4-3.	May decrease downstream water quality.
Increased runoff from non-permeable surfaces	The Project would increase the area of non-permeable surfaces in the Site. This would cause an increase in surface water run-off; however suitable stormwater management measures would prevent significant impacts.	Uncertain, although suitable stormwater management measures would prevent this.	Ongoing and permanent, during the operational phase.	White Box – Yellow Box – Blakely's Red Gum Grassy Woodland TEC and all ecosystem credit	May decrease downstream water quality.

Impact	Nature	Extent	Frequency, Timing & Duration	Associated Threatened Entities	Consequences
				species listed in Table 4-3.	
Fertiliser, Pesticide and Herbicide Drift	N/A – The Project would not be responsible for the introduction or increase in the use of fertilisers, pesticides and herbicides at the Site.				
Transport of weeds and pathogens to and from the Site	Construction works and ongoing operation of the Site have the potential to result in the introduction to the Site or spread from the Site, of weeds and pathogens. This is not likely to be significant however, as the Site already contains a significant abundance of exotic species, including High Threat Weeds.	Within approx. 50 m of adjacent vegetation/habitat.	During construction, temporarily and operation, permanently.	White Box – Yellow Box – Blakely's Red Gum Grassy Woodland TEC and all ecosystem credit species listed in Table 4-3.	Weeds and other pathogens may cause localised impacts to threatened entities. This is not likely to be significant however, as the Site already contains a significant abundance of exotic species, including High Threat Weeds.
Other impacts from anthropogenic disturbance	Various other impacts related to human occupation may include collection of firewood, rubbish dumping and altered fire regime. This is not likely to be relevant to the Project however as the Site is already disturbed and occupied by the existing substation.	Within approx. 500 m of adjacent vegetation/habitat.	Ongoing and permanent, during the operational phase.	White Box – Yellow Box – Blakely's Red Gum Grassy Woodland TEC and all ecosystem credit species listed in Table 4-3.	Anthropogenic disturbance may reduce the viability of adjacent habitat.
PRESCRIBED IMPACTS					
Removal of Rocky Features	NA - This impact is not relevant to the Project as the Site does not contain any rocky features.				
Removal of Human Made Structures	NA – This impact is not relevant to the Project would not remove any human made structures that provide habitat.				

Impact	Nature	Extent	Frequency, Timing & Duration	Associated Threatened Entities	Consequences
Removal of Non-Native Vegetation	The Site contains an area of planted vegetation. This area includes a mix of exotic (*Pinus halapensus*) and native (*Eucalyptus sideroxylon*) planted trees, with a managed grassy groundlayer of exotic species (such as *Bromus hordeaceus, Hordeum leporinum* and *Trifolium arvense*). The area does not contain any hollow-bearing trees, stick nests, rocky features or ground timber. Overall, its habitat value is concluded to be minimal and certainly not important for any threatened entities.	0.14 ha of planted vegetation	Once, during construction, permanent.	None	Loss of potential habitat for fauna; although no threatened fauna are likely to be impacted.
Impacts on Hydrological Processes	Construction phase: Erosion and sedimentation (i.e., movement of soil to adjacent/downstream aquatic habitats, particularly during rain events). Operational phase: increased runoff from non-permeable surfaces (e.g., rooves and pavements).	Uncertain, although suitable mitigation measures would prevent this.	During rainfall events in the construction phase. Ongoing and permanent during the operational phase.	White Box – Yellow Box – Blakely's Red Gum Grassy Woodland TEC and all ecosystem credit species listed in Table 4-3.	May decrease downstream water quality.
Vehicle Strike	The proposal may increase the numbers of vehicles driving to and from the Site; although this is likely to be very minimal.	Uncertain but likely to be very minimal	Ongoing and permanent during the operational phase.	All terrestrial ecosystem credit species listed in Table 4-3.	Death or injury to fauna that may cross roads on the ground (although, in reality this is unlikely).

6.3 Cumulative Impacts

Cumulative impacts refer to the combined effects of multiple impacts on a biodiversity value. The Site is in a locality where there is development pressure for agricultural, residential and infrastructure purposes (such as renewable energy). The Project, however, would not contribute significantly to this as it covers a very small area of mainly low condition derived grassland.

6.4 Serious and Irreversible Impacts

Species and ecological communities with a 'very high' biodiversity risk weighting are potential SAII entities. One potential SAII has been confirmed present at the Site being the TEC, White Box - Yellow Box – Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highlands, NSW South Western Slopes, South East Corner and Riverina Bioregions. This TEC is listed as critically endangered under both the BC Act and the EPBC Act (although note, only vegetation zone 3387_1 (woodland) meets the minimum conditions thresholds to be included in the EPBC Act listing). Further assessment of the Project's potential impacts on this TEC is addressed in this section, in accordance with the criteria in Section 9.1.1 of the BAM.

6.4.1 SAII Assessment for Southern Highlands Shale Woodlands in the Sydney Basin Bioregion

6.4.1.1 Information on the Current Status of the TEC

In NSW, White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland TEC occurs from the Queensland border in the north, to the Victorian border in the south. It occurs in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highlands, NSW South Western Slopes, South East Corner and Riverina Bioregions. It has undergone a very large reduction in geographic distribution, due to mainly extensive clearing for agriculture. Remaining remnants are usually small, isolated, highly fragmented, occur in predominantly cleared landscapes and exhibit highly modified understoreys (NSW Threatened Species Scientific Committee, 2020). The TEC in the Site is indeed highly modified, with a low VI scores of 26.6 for 3387_1 (woodland) and 3.8 for 3387_2 (derived grassland).

The NSW Threatened Species Scientific Committee (2020) estimates that <5% of the original distribution remains, although there is some uncertainty around the current extent and its pre-1750 extent. There is evidence that clearing of the TEC is ongoing and has increased in recent years. For instance, between 2009 and 2016, an average of 395 ha per annum of 'grassy woodland' was lost across NSW to agriculture-related activities and a further 155 ha per annum due to infrastructure developments (NSW Threatened Species Scientific Committee, 2020).

The geographic distribution of the White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland TEC is not restricted. The most recent estimate of the extent of occurrence (EOO) is 702,800 km² and the most recent estimate of the area of occupancy (AOO) is 151,100 km² (NSW Threatened Species Scientific Committee, 2020).

6.4.1.2 Assessment of Impacts

The following provides an assessment of the Project's potential impacts in accordance with the criteria in s.9.1.2. of the BAM:

a. The impact on the geographic extent of the TEC (Principles 1 and 3) by estimating the total area of the TEC to be impacted by the proposal:

i. in hectares, and

ii. as a percentage of the current geographic extent of the TEC in NSW.

The Project would impact a total area of 3.28 ha of the TEC, although 3.26 ha this area is very low condition derived grassland (3387_2 (derived grassland), VI score 3.8). This is 0.000005% of the 702,800 km² (70,280,000 ha) EOO and 0.002% of the 151,100 km² (15,110,000 ha) AOO.

b. the extent that the proposed impacts are likely to contribute to further environmental degradation or the disruption of biotic processes (Principle 2) of the TEC by:

i. estimating the size of any remaining, but now isolated, areas of the TEC; including areas of the TEC within 500 m of the development footprint or equivalent area for other types of proposals

A review of the SVTM and satellite imagery using SDT Explorer v1.2, indicates that approximately 8 ha of the TEC (in woodland form) may occur within 500 m of the Site. The areas of derived grassland are much larger, and it is not possible to ascertain which of these areas would constitute the TEC. The Project would only impact on 0.02 ha of the Site's woodland vegetation zone. The remaining areas of woodland and derived grassland, adjacent to the Project area, are already highly modified from a history of agriculture and clearing (as evidenced by a cleared shrub layer, ongoing livestock grazing, and a very high abundance of exotic species including High Threat Weeds). It is not anticipated the Project would contribute to further environmental degradation or the disruption of biotic processes of the TEC.

ii. describing the impacts on connectivity and fragmentation of the remaining areas of TEC measured by:

- ***distance between isolated areas of the TEC, presented as the average***
- ***distance if the remnant is retained AND the average distance if the remnant is removed as proposed, and***
- ***estimated maximum dispersal distance for native flora species characteristic of the TEC, and***
- ***other information relevant to describing the impact on connectivity and fragmentation, such as the area to perimeter ratio for remaining areas of the TEC as a result of the development.***

The woodland on the northern side of the Site is connected to a series of linear riparian corridors that weave through the locality. This would provide habitat connectivity for fauna able to inhabit disturbed and semi cleared habitat (see previous **Figure 1-2** for the habitat connectivity within the 1.5 km assessment area). There are also some patches of paddock trees in the area, and these are isolated from the riparian corridors by a minimum of approx. 200 m. The canopy species recorded in the Project area included only *Eucalyptus melliodora*. Additional canopy species observed in the surrounding area included *E. blakelyi, E. bridgesiana, E. goniocalyx* and *E. viminalis*. There is no available literature on the dispersal distances specific to those species; however, based on general patterns of eucalypt

species, seed dispersal distances would typically be <20 m to 50 m, or in less common cases, ~100 to 110 m (Booth, 2017).

Regardless, the Project would impact on a very small portion of woodland (0.02 ha), and as this impact is on the edge of the woodland patch, it would not fragment or isolate any areas of woodland. This would also be the case for the derived grassland areas which are widespread in the vicinity.

iii. describing the condition of the TEC according to the vegetation integrity score for the relevant vegetation zone(s) (Section 4.3). The assessor must also include the relevant composition, structure and function condition scores for each vegetation zone.

The TEC in the Project area is highly degraded. The VI score for 3387_1 (woodland) is 26.6 and the VI score for 3387_2 (derived grassland) is 3.8. See previous **Table 3-2** for the composition, structure and function scores.

6.4.1.3 Action and Measures Taken to Avoid the Direct and Indirect Impacts on the TEC at risk of an SAII

The Project has been designed to largely avoid direct impacts to areas of woodland in the vicinity, with an overall impact of 3.26 ha on derived grassland and 0.02 ha of woodland. The derived grassland to be impacted is dominated by exotic flora species and contains very little habitat value (e.g., no logs, rocky features and regularly slashed). The 0.02 ha of impacted woodland contains three trees on the northern boundary of the Site, which may be impacted by the proposed access roads and retaining wall. These include a mature *Eucalyptus melliodora* tree, a sapling *E. melliodora* and a stag (dead tree). No hollows occur in these trees. The mature *E. melliodora* tree has a DBH of approx. 40 cm. These trees are not likely to require removal but are included in the area to be offset with biodiversity credits, as a precautionary measure. In addition to this, Section 7 of this SBDAR details the proposed construction and operation phase mitigation measures that are designed to avoid and minimise residual impacts on the TEC.

7. MITIGATION AND MANAGEMENT OF IMPACTS

In accordance with the BAM, the proponent must identify measures to mitigate and manage impacts in accordance with the guidelines for mitigating and managing impacts on biodiversity values in Subsections 8.4.1 and 8.4.2 of the BAM. **Table 7-1** details the proposed measures to mitigate and manage impacts.

Table 7-1: Measures to Mitigate and Manage Potential Impacts

Impact	Measure	Outcome	Timing	Responsibility
All construction phase impacts	The Construction Environmental Management Plan will include all measures related to flora and fauna management. These should include (but not necessarily be limited to) the following measures outlined in this table.	Construction phase impacts on flora, fauna, their habitats and on downstream wetlands will be minimised.	To be finalised prior to construction and implemented during construction.	Project manager
Inadvertent impacts on adjacent vegetation and habitat	The boundaries of Project area will be clearly demarcated onsite to prevent unauthorised clearing and vehicular or foot traffic.	Impacts on vegetation and habitat will be limited to the minimum necessary for construction works.	During the construction phase.	Project manager
Clearing of Native Vegetation	The three trees on the Site's northern boundary (which are adjacent to the proposed access road and retaining wall) should be retained if possible. These include one mature *Eucalyptus melliodora*, one sapling *E. melliodora* and one stag (dead tree).	Impacts on vegetation and habitat will be limited to the minimum necessary for construction works.	During the construction phase.	Project manager
Inadvertent impacts on adjacent vegetation and habitat	Tree protection measures will be installed around any trees that are to be retained and are immediately adjacent to the Project area. This should include the establishment of Tree Protection Zones around the trees (to protect their structural root zones) in accordance with Australian standard, Protection of the tree on development sites (AS4970 2009).	The risk of damage to adjacent trees will be minimised.	During the construction phase.	Project manager
Erosion and sedimentation during construction; impacts on hydrological process	Appropriate sediment and erosion controls will be installed. No excavated material or fill to be placed in flood prone areas. All stockpiles and material to be secure from a one in ten-year flood level and have effective sediment control works to contain run-off.	Impacts on water quality in downstream wetlands and habitat will be minimised.	During the construction phase.	Project manager

Impact	Measure	Outcome	Timing	Responsibility
Increased runoff from non-permeable surfaces; impacts on hydrological process	Appropriate stormwater management measures will be included in the Project design and will be maintained for the life of the Project.	Impacts on water quality in downstream wetlands and habitat will be minimised.	During the construction and operational phase.	Project manager
Transport of weeds and pathogens to and from the Site	Appropriate weed management protocols will be implemented. All equipment, vehicles and machinery wheels and tracks of excavators and other tracked machinery should be cleaned so that they are completely free of soil, seeds and plant material before entering or leaving the Site.	The risk of weeds or pathogens being spread to and from the Site will be minimised.	During the construction phase.	Project manager
Artificial light spill	Lighting of the BESS should be of the lowest lux possible and should not face out into adjacent woodland.	Impacts of artificial light spill on fauna will be minimised.	During the operational phase	Project manager
All impacts	Any landscaping of the Site should include species typical of PCT 3387 Central West Creekflat Grassy Woodland or the White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland TEC. Plants used in landscaping should be of local provenance and human created cultivars should be avoided.	Landscaping with indigenous flora species can increase the availability of habitat in the area and enhance local habitat connectivity. Using plants of local provenance preserves local genetic flora diversity and maximises the success of plantings (as the plants are adapted to local conditions).	During the construction and operational phase	Project manager and landscaping contractor

8. IMPACT SUMMARY

8.1 Identification of Impacts Requiring Offset

The impacts requiring offset include vegetation zone 3387 (woodland). The area and location of impacts requiring offset is depicted in **Figure 8-1**.

8.2 Identification of Impacts Not Requiring Offset

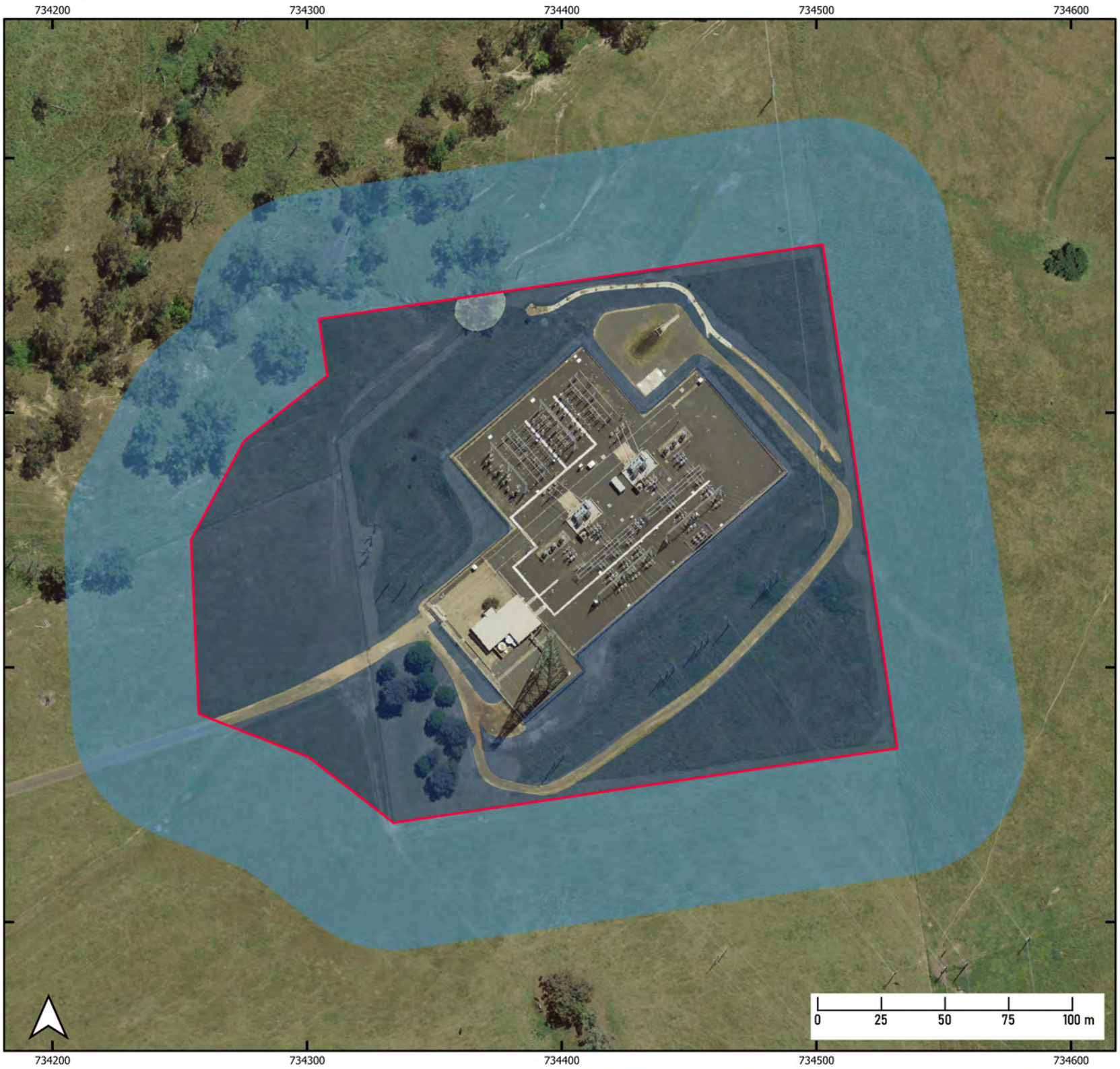
The impacts not requiring offset include the area of planted vegetation and vegetation zone 3387_2 (derived grassland), which has a VI score of 3.8. As per Section 9.2.1 of the BAM, vegetation zones (where the PCT is representative of an endangered or critically endangered TEC) with a VI score of <15 are not required to be offset. The area and location of impacts not requiring offset is depicted in **Figure 8-1**.

8.3 Ecosystem and Species Credits

Table 8-1 outlines the ecosystem credits that measure the direct impact of the development on biodiversity values. The Project would not generate any species credits. See **Appendix C** for the biodiversity credit reports.

Table 8-1: Ecosystem Credits

Vegetation Zone	Area	Total VI Loss	No. of Ecosystem Credits Required
3387_1 (woodland)	0.02 ha	26.6	**1**



Hunter Ecology

Figure 8-1: Impact Summary

Panorama Transgrid BESS
Bathurst Windfarm

Legend

- Site Boundary / Development Footprint

Impact Categories

- Direct impacts not requiring offset
- Direct impacts requiring offset
- Indirect impacts not requiring offset

Date: 02/11/2025
Map Version: 1.1
CRS: GDA 2020 Zone 55
Imagery: SixMaps

9. ASSESSMENTS UNDER ADDITIONAL LEGISLATION AND PLANNING POLICIES

9.1 Environment Protection and Biodiversity Conservation Act 1999

The Commonwealth EPBC Act requires approval for actions that are likely to have a significant impact on Matters of National Environmental Significance (MNES). There are seven MNES that are triggers for Commonwealth assessment and approval. The MNES and study area-specific responses are as follows:

World Heritage Areas – The Site is not within 10 km of any World Heritage Areas.

National Heritage Places – The Site is not within 10 km of any National Heritage places.

Wetlands of International Importance (declared Ramsar wetlands) – The Site is 800-900 km upstream of the 'Banrock Station Wetland Complex', 700-800 km upstream of Riverland, 900-1000 km upstream of the Coorong and Lakes Alexandrina and Albert Wetland, and 300-400 km upstream of the Macquarie Marshes. Due to the minor nature of the Project, it is unlikely to impact on these wetlands, particularly in light of the proposed mitigation measures.

The Great Barrier Reef Marine Park – N/A

Commonwealth Marine Area – N/A

Listed Threatened Ecological Communities – Vegetation zone 3387_1 (woodland) is associated with the EPBC Act listed TEC, White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland (see previous Section 3.3.4 for an assessment of the Site's vegetation zones against the condition criteria in section 4 of the Commonwealth DCCEEW (2023) Conservation Advice). An impact assessment in accordance with the DoE (2013) *Significant Impact Guidelines 1.1 - Matters of National Environmental Significance* was undertaken for this TEC (see section 9.1.1 below), and this concluded that significant impacts are unlikely.

Listed Threatened Species – There are several EPBC Act listed threatened species that may potentially occur in the area (see the EPBC Protected Matters Search Tool results in **Appendix D**). Of these, the following were confirmed as potentially occurring ecosystem credit species:

- *Anthochaera phrygia* (Regent Honeyeater) (foraging only)
- *Callocephalon fimbriatum* (Gang-gang Cockatoo) (foraging only)
- *Climacteris picumnus victoriae* (Brown Treecreeper) (eastern subspecies)
- *Dasyurus maculatus* (Spotted-tailed Quoll)
- *Hirundapus caudacutus* (White-throated Needletail)
- *Lathamus discolor* (Swift Parrot) (foraging only)
- *Petaurus australis* (Yellow-bellied Glider)
- *Polytelis swainsonii* (Superb Parrot) (foraging only)
- *Stagonopleura guttata* (Diamond Firetail)

The Site's habitat is extremely marginal for these species and the native trees on the northern boundary are unlikely to be removed. Impacts on these species are unlikely. It was therefore

concluded that impact assessments in accordance with the DoE (2013) *Significant Impact Guidelines 1.1 - Matters of National Environmental Significance* are not required for these species.

Listed Migratory Species – There are several EPBC Act listed migratory species that may potentially occur in the area (see the EPBC Protected Matters Search Tool results in **Appendix D**). As discussed above, the Site's habitat value is extremely. The Project is unlikely to have any notable impacts on migratory species. It was therefore concluded that an impact assessment in accordance with the DoE (2013) *Significant Impact Guidelines 1.1 - Matters of National Environmental Significance* is not required for this species.

9.1.1 Critically Endangered and Endangered Ecological Community Significant Impact Criteria – White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland

An action is likely to have a significant impact on a critically endangered or endangered ecological community if there is a real chance or possibility that it will:

- ***Reduce the extent of an ecological community***

The Project has been designed to largely avoid impacts to EPBC Act listed areas of the TEC (i.e., 3387_1 (woodland)). The 0.02 ha of impacted woodland contains three trees on the northern boundary of the Site, which may be impacted by the proposed access road and retaining wall. These include a mature *Eucalyptus melliodora* tree, a sapling *E. melliodora* and a stag (dead tree). No hollows occur in these trees. The mature *E. melliodora* tree has a DBH of approx. 40 cm. These trees are not likely to require removal but are included in the area to be offset with biodiversity credits, as a precautionary measure. In addition to Project design, impacts will be avoided and minimised via several proposed construction and operation phase mitigation measures (see Section 7). Overall, it is concluded that the Project is unlikely to reduce the extent of the ecological community in any significant way.

- ***Fragment or increase fragmentation of an ecological community, for example by clearing vegetation for roads or transmission lines***

The woodland on the northern side of the Site is connected to a series of linear riparian corridors that weave through the locality. This would provide habitat connectivity for fauna able to inhabit disturbed and semi cleared habitat (see previous **Figure 1-2** for the habitat connectivity within the 1.5 km assessment area). The Project would impact on a very small portion of woodland (0.02 ha) on the edge of the patch (and as discussed above, the trees are unlikely to be removed). This would not fragment or increase fragmentation on the TEC in the locality.

- ***Adversely affect habitat critical to the survival of an ecological community***

No Critical Habitat, as defined under section 207A of the EPBC Act, has been identified or included in the Register of Critical Habitat for the TEC at this time; however, Commonwealth DCCEEW (2023) state that all areas of the ecological community that meet the minimum condition criteria should be considered critical to the survival of this ecological community. Regardless, due to the very small impact area (0.02 ha) and the nature of the impact (e.g., occurring on the edge of an already highly modified patch), the Project is unlikely to adversely affect critical habitat for the TEC.

- ***Modify or destroy abiotic (non-living) factors (such as water, nutrients, or soil) necessary for an ecological community's survival, including reduction of groundwater levels, or substantial alteration of surface water drainage patterns***

The following impacts on abiotic factors may be associated with the Project:

- Erosion and sedimentation during construction (i.e., movement of soil to adjacent/downstream aquatic habitats, particularly during rain events).
- Increased runoff from non-permeable surfaces, during construction and operation.

Mitigation measures listed in Section 7 are designed to minimise and manage these potential impacts and in light of this, the Project is not likely to modify or destroy abiotic factors necessary for the TEC's survival.

- ***Cause a substantial change in the species composition of an occurrence of an ecological community, including causing a decline or loss of functionally important species, for example through regular burning or flora or fauna harvesting***

The TEC in and near the Site is already heavily modified and exposed to particle clearing, livestock grazing and development. Impacts such as regular burning, firewood collection, flora and fauna harvesting etc, are not likely to be associated with the Project. The Project also includes mitigation measures (see Section 7) which are designed to minimise any impacts to adjacent areas of the TEC. Overall, the Project is not likely to cause a substantial change in the species composition of an occurrence of the TEC.

- ***Cause a substantial reduction in the quality or integrity of an occurrence of an ecological community, including, but not limited to: – assisting invasive species, that are harmful to the listed ecological community, to become established, or – causing regular mobilisation of fertilisers, herbicides or other chemicals or pollutants into the ecological community which kill or inhibit the growth of species in the ecological community***

The Project includes several proposed mitigation measures (see Section 7). These are designed to ensure that the adjacent retained areas of TEC are not indirectly impacted in any significant way. In addition to this, impacts related to invasive species or fertilisers and herbicides, are not likely to be associated with the Project (or are not likely to be newly introduced to the Site by the Project). Overall, the Project is not likely to cause a substantial reduction in the quality or integrity of an occurrence of the TEC.

- ***Interfere with the recovery of an ecological community.***

For the reasons stated above, the Project is not likely to interfere with the recovery of the TEC.

9.1.2 EPBC Act Assessment Conclusion

Overall, it is considered unlikely that any MNES would be significantly impacted by the Project and thus referral to the Commonwealth DCCEEW is not necessary.

9.2 Water Management Act 2000

The NSW WM Act is administered by the NSW Department of Primary Industries Water and establishes an approval regime for activities within waterfront land (within 40 m of the highest bank of a river, lake or estuary). A controlled activity approval is typically required for work on waterfront land. Section 91E of the Act creates an offence for carrying out a controlled activity within waterfront land without approval. The Site is greater than 40 m from the 3rd order ephemeral watercourse to the north. It does however contain a 2nd order ephemeral watercourse in the north-east corner (see previous **Figure 1-1**). The 2nd order watercourse within the Site boundary has been highly modified by the existing substation development; however, consultation with the NSW Department of Primary Industries Water is recommended to determine if a controlled activity approval is required.

9.3 State Environmental Planning Policy (Biodiversity and Conservation) 2021: Chapter 4 – Koala Habitat Protection 2021

The NSW SEPP for Koala habitat protection is contained within the following two chapters of the *SEPP (Biodiversity and Conservation) 2021*:

- Chapter 3 (Koala SEPP 2020) applies to rural zoned land (RU1 Primary Production, RU2 Rural Landscape and RU3 Forestry) in 74 LGAs (including Bathurst).
- Chapter 4 (Koala SEPP 2021) applies to the remaining zones in 74 LGAs (including Bathurst), and to all zones in Metropolitan Sydney (Blue Mountains, Campbelltown, Hawkesbury, Ku-ring-gai, Liverpool, Northern Beaches, Hornsby, Wollondilly) and the Central Coast.

As the Site is within the Bathurst LGA, and the land is zoned as RU1 - Primary Production, the Project requires assessment under Chapter 3 (Koala SEPP 2020). The Koala SEPP 2020 aims to encourage the proper conservation and management of areas of natural vegetation that provide habitat for koalas to ensure a permanent free-living population over their present range and reverse the current trend of koala population decline:

> (a) by requiring the preparation of plans of management before development consent can be granted in relation to areas of core koala habitat, and
>
> (b) by encouraging the identification of areas of core koala habitat, and
>
> (c) by encouraging the inclusion of areas of core koala habitat in conservation zones.

Assessment of the Project under the provisions of the Koala SEPP 2020 (Part 3.2 Development control of koala habitats) is as follows:

Step 1—Is the land potential Koala habitat?

Under the Koala SEPP 2020, potential Koala habitat includes areas of native vegetation where trees of the types listed in Schedule 1 constitute at least 15% of the total number of trees in the upper or lower strata of the tree component. No Schedule 1 tree species were recorded in the Site or survey area however one (*Eucalyptus viminalis*) was observed nearby. Therefore, as a precautionary measure, the woodland in the Site is considered to be potential Koala habitat.

Step 2—Is the land core Koala habitat?

Under the Koala SEPP 2020, core Koala habitat includes an area of land with a resident population of koalas, evidenced by attributes such as breeding females, being females with young, and recent sightings of and historical records of a population. Koala records within 10 km of the Site are rare, but they do occur. Of these, the most include the following:

- A male Koala was recorded calling at the Agricultural Research Station, approx. 3 km east of the Site, in 2025.
- A single Koala was also recorded in a house yard, approx. 3 km north-east of the Site.
- A single Koala was recorded at Mt Panorama, approx. 3.5 km south-east of the Site, in 2023.

All other records date back to the 1970s, 1980s and early 2000s. No records specifically indicate the presence of breeding females or females with young. Further afield, there are dense clusters of recent records from Perthville down to Rockley Mount (10-25 km south of the Site). These records relate to the Rockley Mount Koala population which is known to be the largest population in the Bathurst region and is a key area for Koala conservation in the Bathurst LGA (Central Tablelands Local Land Services, n.d.; Bathurst Regional Council, 2023).

Overall, it is considered that the Site would not constitute core Koala habitat due to the limited records within 10 km of the Site.

Step 3—Can development consent be granted in relation to core koala habitat?

N/A – no further provisions apply.

9.4 Fisheries Management Act 1994

The FM Act includes provisions aimed at conserving, developing and sharing the fishery resources of NSW for the benefit of present and future generations and specifically to

- Conserve fish stocks and Key Fish Habitat (KFH).
- Conserve threatened species, populations and ecological communities of fish and marine vegetation.
- Promote ecologically sustainable development, including the conservation of biological diversity.

The ephemeral watercourse occurring just north of the Site (see previous **Figure 1-1**) is mapped as KFH in the NSW Department of Primary Industries *Fisheries Spatial Data Portal*. The Project is a minimum of 50 away from this watercourse and would not directly impact it. Potential indirect impacts, including for instance sediment runoff and increased runoff from impermeable surfaces, have been assessed and several mitigation measures are proposed to avoid and minimise these impacts (see Section 6 and Section 7). The Project is not expected to cause harm to KFH and compliance with FM Act requirements will be maintained.

10. CONCLUSION

The Project has been designed to largely avoid impacts to areas of woodland in the vicinity, with an overall impact of 3.26 ha on derived grassland and 0.02 ha of woodland. The derived grassland to be impacted is dominated by exotic flora species and contains very little habitat value (e.g., no logs, rocky features and regularly slashed). The 0.02 ha of impacted woodland is also highly modified with a cleared understorey, managed groundlayer dominated by exotic species and lack of hollow-bearing trees. It consists of three trees on the northern boundary, which may be impacted by the proposed access road and retaining wall. These trees are not likely to require removal but are included in the area to be offset with biodiversity credits, as a precautionary measure. An area of planted vegetation was mapped on the Site. This area was assessed under D2 of the BAM (Streamlined assessment module – Planted native vegetation), *Assessment of planted native vegetation for threatened species habitat*. The habitat value of the planted vegetation was considered to be low and not important for any threatened entities. Overall, it is concluded that the avoid and minimise provisions of the BAM and BC Act have been complied with.

An assessment of the direct, indirect, prescribed and cumulative impacts was undertaken, and several mitigation measures have been proposed to address residual impacts. All potential SAII candidate species credit species were excluded from further assessment based on the habitat suitability assessment, in accordance with Section 5.2 of the BAM. One potential SAII entity was confirmed present at the Site, being the TEC, White Box - Yellow Box – Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highlands, NSW South Western Slopes, South East Corner and Riverina Bioregions. Assessment of the Project's potential impacts on this SAII entity was undertaken in accordance with the criteria in Section 9.1.2 of the BAM.

Assessments under additional legislation and planning policies were undertaken and the following was concluded:

- EPBC Act – The Project would be unlikely to significantly impact any MNES and thus, referral to the Commonwealth Government is not necessary.
- WM Act – The Site is greater than 40 m from the 3rd order ephemeral watercourse to the north. It does however contain a 2nd order ephemeral watercourse in the north-east corner. This watercourse has been highly modified by the existing substation development; however, consultation with the NSW Department of Primary Industries Water is recommended to determine if a controlled activity approval is required under the WM Act.
- Koala SEPP 2020 – The Site would not constitute core Koala habitat and no further provisions apply.
- FM Act – The ephemeral watercourse, 50 m north of the Site is mapped as KFH. It will not be directly impacted; however potential indirect impacts have been assessed, and several mitigation measures are proposed to avoid and minimise these impacts. The Project is not expected to cause harm to KFH and compliance with FM Act requirements will be maintained.

The following ecosystem credits would be generated by the direct impacts of the Project:

- 1 ecosystem credit for PCT 3387 Central West Creekflat Grassy Woodland / White Box - Yellow Box – Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highlands, NSW South Western Slopes, South East Corner and Riverina Bioregions.

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APPENDIX A – BAM PLOT DATA

PLOT 1 Field Survey Form

Survey Name	Date	Recorders
Transgrid Panorama Substation BESS	19/11/2025	Bart Schiebaan
Plot ID: **PLOT 1**		PCT/VZ: Planted vegetation

BAM Attribute (400m² plot)	Sum values	
	Count of native richness	Cover
Trees	1	30
Shrubs	0	0
Grasses etc.	0	0
Forbs	0	0
Ferns	0	0
Other	0	0
High threat weed cover		35

Cover: 0.1, 0.2, 0.3….. 1,2,3,……,10, 15, 20, 25, ….. 100% (foliage cover). *Note: 0.1% cover is approx.. 63x63 cm or a circle about 71 cm diameter, 0.5% approx. 1.4 x 1.4m, 2% cover is approx. 2 x 2m, 5% = 4 x 5m, 25% 10 x 10m*

BAM Attribute (1000m² plot)		
DBH	**#Tree Stems Count**	**#Stems with Hollows**
80 + cm	-	-
50 – 79 cm	-	-
30 – 49 cm	✓	-
20 – 29 cm	✓	-
10 – 19 cm	-	-
5 – 9 cm	-	-
<5 cm	-	
Length of logs (m) (≥ 10 cm diameter, >50cm in length)	**Tally:** 0	

Counts apply when the number of tree stems within a size class is ≤ 10. Estimate can be used when > 10 (eg. 10, 20, 30….100, 200). For a multi-stemmed tree, only the largest living stem is included in the count / estimate. Tree stems must be living.

For hollows, count only the presence of a stem containing hollows. For a multi-stemmed tree, only the largest stem is included in the count/estimate. Stems may be dead and may be shrubs.

BAM Attribute (1 x 1 m plots)																				
	Litter cover %					**Bare ground cover %**					**Cryptogam cover %**					**Rock cover %**				
Subplot score % in each	5	15	25	35	45	5	15	25	35	45	5	15	25	35	45	5	15	25	35	45
	50	60	50	70	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Average of the 5 subplots	56					0					0					0				

Litter cover includes leaves, seeds, twigs, branchlets and branches (less than 10cm in diameter)

PLOT 1 Species List

400m² plot: Sheet 2 of 2	Survey Name	Plot ID	Recorders
Date: 19/11/2025	Transgrid Panorama Substation BESS	**PLOT 1**	Bart Schiebaan

GF Code	Top 3 native species in each growth form group: full species name mandatory. All other native and exotic species: full species name where practicable	N, E or HTW	Cover %	Stratum (E,M,S,G)	Voucher or Photo #
	Pinus halepinus	HTW	35		
	Eucalyptus sideroxylon	N	30		
	Trifolium arvense	E	5		
	Hordeum leporinum	E	15		
	Bromus hordeaceus	E	25		
	Plantago lanceolata	E	10		
	Hypochaeris radicata	E	2		
	Echium plantaginum	E	1		
	Atriplex prostrata	E	1		
	Cirsium vulgare	E	0.5		

PLOT 2 Field Survey Form

Survey Name	Date	Recorders
Transgrid Panorama Substation BESS	19/11/2025	Bart Schiebaan
Plot ID: **PLOT 2**		PCT/VZ: 3387_2 (derived grassland)

BAM Attribute (400m^2 plot)	Sum values	
	Count of native richness	Cover
Trees	0	0
Shrubs	0	0
Grasses etc.	1	10
Forbs	0	0
Ferns	0	0
Other	0	0
High threat weed cover		11

Cover: 0.1, 0.2, 0.3….. 1,2,3,……,10, 15, 20, 25, ….. 100% (foliage cover). *Note: 0.1% cover is approx.. 63x63 cm or a circle about 71 cm diameter, 0.5% approx. 1.4 x 1.4m, 2% cover is approx. 2 x 2m, 5% = 4 x 5m, 25% 10 x 10m*

BAM Attribute (1000m^2 plot)		
DBH	**#Tree Stems Count**	**#Stems with Hollows**
80 + cm	-	-
50 – 79 cm	-	-
30 – 49 cm	-	-
20 – 29 cm	-	-
10 – 19 cm	-	-
5 – 9 cm	-	-
<5 cm	-	
Length of logs (m) (≥ 10 cm diameter, >50cm in length)	**Tally:** 0	

Counts apply when the number of tree stems within a size class is ≤ 10. Estimate can be used when > 10 (eg. 10, 20, 30….100, 200). For a multi-stemmed tree, only the largest living stem is included in the count / estimate. Tree stems must be living.

For hollows, count only the presence of a stem containing hollows. For a multi-stemmed tree, only the largest stem is included in the count/estimate. Stems may be dead and may be shrubs.

BAM Attribute (1 x 1 m plots)																				
	Litter cover %					**Bare ground cover %**					**Cryptogam cover %**					**Rock cover %**				
Subplot score % in each	5	15	25	35	45	5	15	25	35	45	5	15	25	35	45	5	15	25	35	45
	30	40	25	25	30	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Average of the 5 subplots	30					2					0					0				

Litter cover includes leaves, seeds, twigs, branchlets and branches (less than 10cm in diameter)

PLOT 2 Species List

400m² plot: Sheet 2 of 2	Survey Name	Plot ID	Recorders
Date: 19/11/2025	Transgrid Panorama Substation BESS	**PLOT 2**	Bart Schiebaan

GF Code	Top 3 native species in each growth form group: full species name mandatory. All other native and exotic species: full species name where practicable	N, E or HTW	Cover %	Stratum (E,M,S,G)	Voucher or Photo #
GG	*Austrostipa scabra*	N	10		
-	*Hirschfeldia incana*	E	2		
-	*Plantago lanceolata*	E	15		
-	*Salvia verbenaca*	E	10		
-	*Avena barbata*	E	55		
-	*Rubus fruticosus*	HTW	8		
-	*Trifolium angustifolium*	E	5		
-	*Rosa rubignosa*	HTW	3		
-	*Phalaris aquatica*	E	8		
-	*Bromus hordeaceus*	E	25		

PLOT 3 Field Survey Form

Survey Name	Date	Recorders
Transgrid Panorama Substation BESS	19/11/2025	Bart Schiebaan
Plot ID: **PLOT 3**		PCT/VZ: 3387_2 (derived grassland)

BAM Attribute (400m^2 plot)	Sum values	
	Count of native richness	Cover
Trees	0	0
Shrubs	0	0
Grasses etc.	1	5
Forbs	1	0.5
Ferns	0	0
Other	0	0
High threat weed cover		4

Cover: 0.1, 0.2, 0.3….. 1,2,3,……,10, 15, 20, 25, ….. 100% (foliage cover). *Note: 0.1% cover is approx.. 63x63 cm or a circle about 71 cm diameter, 0.5% approx. 1.4 x 1.4m, 2% cover is approx. 2 x 2m, 5% = 4 x 5m, 25% 10 x 10m*

BAM Attribute (1000m^2 plot)		
DBH	**#Tree Stems Count**	**#Stems with Hollows**
80 + cm	-	-
50 – 79 cm	-	-
30 – 49 cm	-	-
20 – 29 cm	-	-
10 – 19 cm	-	-
5 – 9 cm	-	-
<5 cm	-	
Length of logs (m) (≥ 10 cm diameter, >50cm in length)	**Tally:** 0	

Counts apply when the number of tree stems within a size class is ≤ 10. Estimate can be used when > 10 (eg. 10, 20, 30….100, 200). For a multi-stemmed tree, only the largest living stem is included in the count / estimate. Tree stems must be living.

For hollows, count only the presence of a stem containing hollows. For a multi-stemmed tree, only the largest stem is included in the count/estimate. Stems may be dead and may be shrubs.

BAM Attribute (1 x 1 m plots)																				
	Litter cover %					**Bare ground cover %**					**Cryptogam cover %**					**Rock cover %**				
Subplot score % in each	5	15	25	35	45	5	15	25	35	45	5	15	25	35	45	5	15	25	35	45
	20	20	15	20	10	0	0	10	5	2	0	0	0	0	0	0	0	0	0	0
Average of the 5 subplots	17					3.4					0					0				

Litter cover includes leaves, seeds, twigs, branchlets and branches (less than 10cm in diameter)

PLOT 3 Species List

400m² plot: Sheet 2 of 2	Survey Name	Plot ID	Recorders
Date: 19/11/2025	Transgrid Panorama Substation BESS	**PLOT 3**	Bart Schiebaan

GF Code	Top 3 native species in each growth form group: full species name mandatory. All other native and exotic species: full species name where practicable	N, E or HTW	Cover %	Stratum (E,M,S,G)	Voucher or Photo #
-	*Avena barbata*	E	40		
GG	*Austrostipa scabra*	N	5		
-	*Trifolium angustifolium*	E	10		
-	*Rosa rubignosa*	HTW	2		
-	*Dactylis glomerata*	E	2		
-	*Hypochaeris radicata*	E	3		
-	*Salvia verbenaca*	E	1		
-	*Plantago lanceolata*	E	5		
-	*Heliotropium amplexicaule*	HTW	1		
-	*Hypericum perforatum*	HTW	1		
FG	*Geranium solanderi*	N	0.5		
-	*Echium vulgare*	E	0.1		
-	*Bromus hordeaceus*	E	15		

PLOT 4 Field Survey Form

Survey Name	Date	Recorders
Transgrid Panorama Substation BESS	19/11/2025	Bart Schiebaan
Plot ID: **PLOT 4**		PCT/VZ: 3387_2 (woodland)

BAM Attribute (400m^2 plot)	Sum values	
	Count of native richness	Cover
Trees	1	20
Shrubs	0	0
Grasses etc.	3	10.1
Forbs	2	0.7
Ferns	0	0
Other	0	0
High threat weed cover		1

Cover: 0.1, 0.2, 0.3….. 1,2,3,……,10, 15, 20, 25, ….. 100% (foliage cover). *Note: 0.1% cover is approx.. 63x63 cm or a circle about 71 cm diameter, 0.5% approx. 1.4 x 1.4m, 2% cover is approx. 2 x 2m, 5% = 4 x 5m, 25% 10 x 10m*

BAM Attribute (1000m^2 plot)		
DBH	**#Tree Stems Count**	**#Stems with Hollows**
80 + cm	-	-
50 – 79 cm	3	-
30 – 49 cm	-	-
20 – 29 cm	-	-
10 – 19 cm	-	-
5 – 9 cm	✓	-
<5 cm	✓	
Length of logs (m) (≥ 10 cm diameter, >50cm in length)	**Tally:** 22 (but none within Site / development footprint)	

Counts apply when the number of tree stems within a size class is ≤ 10. Estimate can be used when > 10 (eg. 10, 20, 30….100, 200). For a multi-stemmed tree, only the largest living stem is included in the count / estimate. Tree stems must be living.

For hollows, count only the presence of a stem containing hollows. For a multi-stemmed tree, only the largest stem is included in the count/estimate. Stems may be dead and may be shrubs.

BAM Attribute (1 x 1 m plots)																				
	Litter cover %					**Bare ground cover %**					**Cryptogam cover %**					**Rock cover %**				
Subplot score	5	15	25	35	45	5	15	25	35	45	5	15	25	35	45	5	15	25	35	45
% in each	20	15	20	30	20	5	5	2	10	0	0	0	0	0	0	0	0	0	0	0
Average of the 5 subplots	21					2.4					0					0				

Litter cover includes leaves, seeds, twigs, branchlets and branches (less than 10cm in diameter)

PLOT 4 Species List

400m² plot: Sheet 2 of 2	Survey Name	Plot ID	Recorders
Date: 19/11/2025	Transgrid Panorama Substation BESS	**PLOT 4**	Bart Schiebaan

GF Code	Top 3 native species in each growth form group: full species name mandatory. All other native and exotic species: full species name where practicable	N, E or HTW	Cover %	Stratum (E,M,S,G)	Voucher or Photo #
TG	*Eucalyptus melliodora*	N	20		
-	*Plantago lanceolata*	E	10		
-	*Rosa rubignosa*	HTW	1		
-	*Avena barbata*	E	2		
-	*Bromus hordeaceus*	E	5		
-	*Salvia verbenaca*	E	1		
FG	*Geranium solanderi*	N	0.5		
-	*Trifolium angustifolium*	E	1		
-	*Hirschfeldia incana*	E	1		
-	*Marrubium vulgare*	E	0.1		
GG	*Austrostipa scabra*	N	5		
GG	*Lomandra filiformis*	N	0.1		
GG	*Poa sieberiana*	N	5		
-	*Erigeron spp*	E	0.1		
FG	*Acaena ovina*	N	0.2		
-	*Holcus lanatus*	E	15		
-	*Taraxacum officinale*	E	5		
-	*Cirsium vulgare*	E	0.5		

PLOT 5 Field Survey Form

Survey Name	Date	Recorders
Transgrid Panorama Substation BESS	19/11/2025	Bart Schiebaan
Plot ID: **PLOT 5**		PCT/VZ: 3387_2 (derived grassland)

BAM Attribute (400m^2 plot)	Sum values	
	Count of native richness	Cover
Trees	0	0
Shrubs	0	0
Grasses etc.	4	4
Forbs	0	0
Ferns	0	0
Other	0	0
High threat weed cover		3

Cover: 0.1, 0.2, 0.3….. 1,2,3,……,10, 15, 20, 25, ….. 100% (foliage cover). *Note: 0.1% cover is approx.. 63x63 cm or a circle about 71 cm diameter, 0.5% approx. 1.4 x 1.4m, 2% cover is approx. 2 x 2m, 5% = 4 x 5m, 25% 10 x 10m*

BAM Attribute (1000m^2 plot)		
DBH	**#Tree Stems Count**	**#Stems with Hollows**
80 + cm	-	-
50 – 79 cm	-	-
30 – 49 cm	-	-
20 – 29 cm	-	-
10 – 19 cm	-	-
5 – 9 cm	-	-
<5 cm	-	
Length of logs (m) (≥ 10 cm diameter, >50cm in length)	**Tally:** 0	

Counts apply when the number of tree stems within a size class is ≤ 10. Estimate can be used when > 10 (eg. 10, 20, 30….100, 200). For a multi-stemmed tree, only the largest living stem is included in the count / estimate. Tree stems must be living.

For hollows, count only the presence of a stem containing hollows. For a multi-stemmed tree, only the largest stem is included in the count/estimate. Stems may be dead and may be shrubs.

BAM Attribute (1 x 1 m plots)																				
	Litter cover %					**Bare ground cover %**					**Cryptogam cover %**					**Rock cover %**				
Subplot score % in each	5	15	25	35	45	5	15	25	35	45	5	15	25	35	45	5	15	25	35	45
	15	20	15	15	20	10	5	5	5	2	0	0	0	0	0	0	0	0	0	0
Average of the 5 subplots	17					5.4					0					0				

Litter cover includes leaves, seeds, twigs, branchlets and branches (less than 10cm in diameter)

PLOT 5 Species List

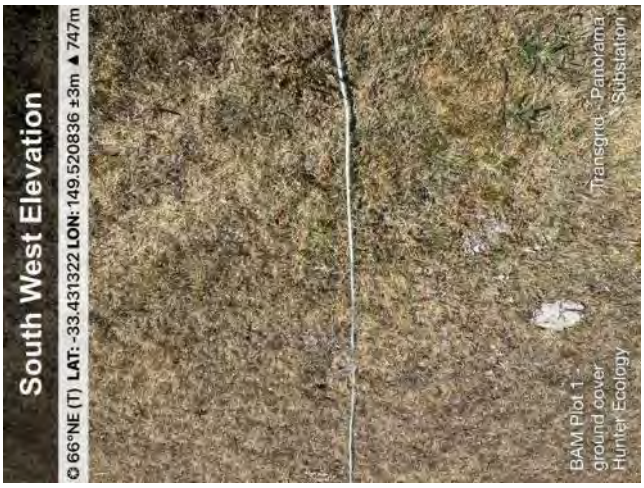
400m² plot: Sheet 2 of 2	Survey Name	Plot ID	Recorders
Date: 19/11/2025	Transgrid Panorama Substation BESS	**PLOT 5**	Bart Schiebaan

GF Code	Top 3 native species in each growth form group: full species name mandatory. All other native and exotic species: full species name where practicable	N, E or HTW	Cover %	Stratum (E,M,S,G)	Voucher or Photo #
-	*Rumex acetosella*	HTW	3		
-	*Bromus hordeaceus*	E	60		
-	*Avena barbata*	E	5		
-	*Plantago lanceolata*	E	5		
-	*Trifolium angustifolium*	E	2		
GG	*Austrostipa scabra*	N	2		
-	*Medicago polymorpha*	E	15		
-	*Lolium perenne*	E	15		
-	*Holcus lanatus*	E	2		
-	*Taraxacum offi cinale*	E	5		
GG	*Eragrostis brownii*	N	1		
GG	*Poa labillardierei*	N	0.5		
GG	*Poa sieberiana*	N	0.5		

APPENDIX B – BAM PLOT PHOTOS

BAM Plot 1 start

BAM Plot 1 end



BAM Plot 1 groundcover

BAM Plot 2 start

BAM Plot 2 end

BAM Plot 2 groundcover

BAM Plot 3 start

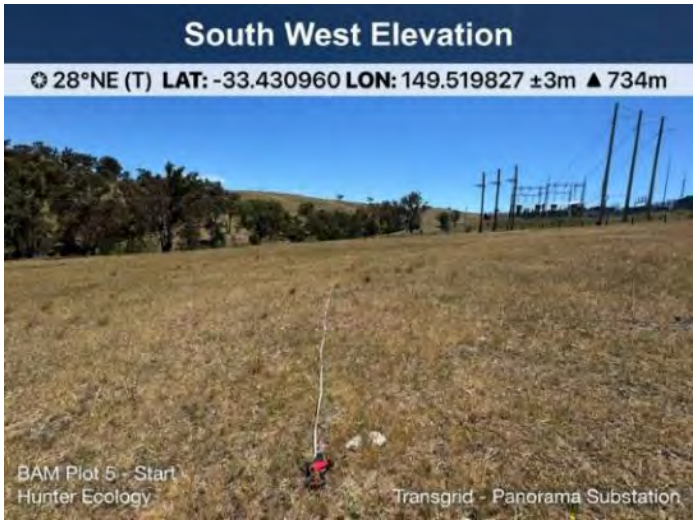
BAM Plot 3 end

BAM Plot 3 groundcover

BAM Plot 4 start

BAM Plot 4 end

BAM Plot 4 groundcover



BAM Plot 5 start

BAM Plot 5 end

BAM Plot 5 groundcover

APPENDIX C – BIODIVERSITY CREDIT REPORTS

BAM Biodiversity Credit Report (Like for like)

Proposal Details

Assessment Id
00061903/BAAS18112/25/00062569

Proposal Name
Transgrid Panorama Substation BESS

BAM data last updated *
05/08/2025

Assessor Name
Lizzie J Bowman

Assessor Number
BAAS18112

BAM Data version *
Current classification (live - default) (82)

Proponent Names

Report Created
05/02/2026

BAM Case Status
Finalised

Assessment Revision
0

BOS entry trigger
BOS Threshold: Area clearing threshold

Assessment Type
Part 4 Developments (Small Area)

Date Finalised
05/02/2026

* Disclaimer: BAM data last updated may indicate either complete or partial update of the BAM calculator database. BAM calculator database may not be completely aligned with Bionet.

Potential Serious and Irreversible Impacts

Name of threatened ecological community	Listing status	Name of Plant Community Type/ID
White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highla	Critically Endangered Ecological Community	3387-Central West Creekflat Grassy Woodland

Species
Nil

Additional Information for Approval

PCT Outside Ibra Added

None added

PCTs With Customized Benchmarks

PCT
No Changes

Predicted Threatened Species Not On Site

Name
No Changes

Ecosystem Credit Summary (Number and class of biodiversity credits to be retired)

BAM Biodiversity Credit Report (Like for like)

Name of Plant Community Type/ID	Name of threatened ecological community	Area of impact	HBT Cr	No HBT Cr	Total credits to be retired
3387-Central West Creekflat Grassy Woodland	White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highla	3.3	0	1	1

3387-Central West Creekflat Grassy Woodland

Like-for-like credit retirement options

Name of offset trading group	Trading group	Zone	HBT	Credits	IBRA region
White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highla This includes PCT's: 74, 75, 83, 250, 266, 267, 268, 270, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 286, 298,	-	3387_1	No	1	Bathurst, or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

	302, 312, 341, 342, 347, 350, 352, 356, 367, 381, 382, 395, 401, 403, 421, 433, 434, 435, 436, 437, 451, 483, 484, 488, 492, 496, 508, 509, 510, 511, 516, 528, 538, 544, 563, 567, 571, 589, 590, 597, 599, 618, 619, 622, 633, 654, 702, 703, 704, 705, 710, 711, 796, 797, 799, 847, 851, 921, 1099, 1303, 1304, 1307, 1324, 1329, 1330, 1332, 1383, 1606, 1608, 1611, 1691, 1693, 1695, 1698, 3314, 3359, 3363, 3373, 3376, 3387, 3388, 3394, 3395, 3396, 3397, 3398, 3399, 3406, 3415, 3533, 4147, 4149, 4150					
	White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New	-	3387_2	No	0	Bathurst, or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

	England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highla This includes PCT's: 74, 75, 83, 250, 266, 267, 268, 270, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 286, 298, 302, 312, 341, 342, 347, 350, 352, 356, 367, 381, 382, 395, 401, 403, 421, 433, 434, 435, 436, 437, 451, 483, 484, 488, 492, 496, 508, 509, 510, 511, 516, 528, 538, 544, 563, 567, 571, 589, 590, 597, 599, 618, 619, 622, 633, 654, 702, 703, 704, 705, 710, 711, 796, 797, 799, 847, 851, 921, 1099, 1303, 1304, 1307, 1324, 1329, 1330, 1332, 1383, 1606, 1608, 1611, 1691, 1693, 1695, 1698, 3314, 3359, 3363, 3373, 3376, 3387, 3388, 3394, 3395,					

	3396, 3397, 3398, 3399, 3406, 3415, 3533, 4147, 4149, 4150					

Species Credit Summary

No Species Credit Data

Credit Retirement Options

Like-for-like credit retirement options

BAM Vegetation Zones Report

Proposal Details

Assessment Id
00061903/BAAS18112/25/00062569

Assessment name
Transgrid Panorama Substation BESS

BAM data last updated *
05/08/2025

Assessor Name
Lizzie J Bowman

Report Created
05/02/2026

BAM Data version *
Current classification (live - default) (82)

Assessor Number
BAAS18112

Assessment Type
Part 4 Developments (Small Area)

BAM Case Status
Finalised

Assessment Revision
0

BOS entry trigger
BOS Threshold: Area clearing threshold

Date Finalised
05/02/2026

* Disclaimer: BAM data last updated may indicate either complete or partial update of the BAM calculator database. BAM calculator database may not be completely aligned with Bionet.

Vegetation Zones

#	Name	PCT	Condition	Area	Minimum number of plots	Management zones
1	3387_1	3387-Central West Creekflat Grassy Woodland	1	0.02	1	
2	3387_2	3387-Central West Creekflat Grassy Woodland	2	3.26	2	

BAM Predicted Species Report

Proposal Details

Assessment Id	Proposal Name	BAM data last updated *
00061903/BAAS18112/25/00062569	Transgrid Panorama Substation BESS	05/08/2025
Assessor Name	Report Created	BAM Data version *
Lizzie J Bowman	05/02/2026	Current classification (live - default) (82)
Assessor Number	Assessment Type	BAM Case Status
BAAS18112	Part 4 Developments (Small Area)	Finalised
Assessment Revision	BOS entry trigger	Date Finalised
0	BOS Threshold: Area clearing threshold	05/02/2026

* Disclaimer: BAM data last updated may indicate either complete or partial update of the BAM calculator database. BAM calculator database may not be completely aligned with Bionet.

Threatened species reliably predicted to utilise the site. No surveys are required for these species. Ecosystem credits apply to these species.

Common Name	Scientific Name	Vegetation Types(s)
Black Falcon	Falco subniger	3387-Central West Creekflat Grassy Woodland
Black-chinned Honeyeater (eastern subspecies)	Melithreptus gularis gularis	3387-Central West Creekflat Grassy Woodland
Brown Treecreeper (eastern subspecies)	Climacteris picumnus victoriae	3387-Central West Creekflat Grassy Woodland
Diamond Firetail	Stagonopleura guttata	3387-Central West Creekflat Grassy Woodland
Dusky Woodswallow	Artamus cyanopterus cyanopterus	3387-Central West Creekflat Grassy Woodland
Gang-gang Cockatoo	Callocephalon fimbriatum	3387-Central West Creekflat Grassy Woodland
Little Eagle	Hieraaetus morphnoides	3387-Central West Creekflat Grassy Woodland
Little Lorikeet	Glossopsitta pusilla	3387-Central West Creekflat Grassy Woodland
Regent Honeyeater	Anthochaera phrygia	3387-Central West Creekflat Grassy Woodland
Rosenberg's Goanna	Varanus rosenbergi	3387-Central West Creekflat Grassy Woodland

Scarlet Robin	Petroica boodang	3387-Central West Creekflat Grassy Woodland
South-eastern Glossy Black-Cockatoo	Calyptorhynchus lathami lathami	3387-Central West Creekflat Grassy Woodland
Speckled Warbler	Chthonicola sagittata	3387-Central West Creekflat Grassy Woodland
Spotted Harrier	Circus assimilis	3387-Central West Creekflat Grassy Woodland
Spotted-tailed Quoll	Dasyurus maculatus	3387-Central West Creekflat Grassy Woodland
Square-tailed Kite	Lophoictinia isura	3387-Central West Creekflat Grassy Woodland
Superb Parrot	Polytelis swainsonii	3387-Central West Creekflat Grassy Woodland
Swift Parrot	Lathamus discolor	3387-Central West Creekflat Grassy Woodland
Varied Sittella	Daphoenositta chrysoptera	3387-Central West Creekflat Grassy Woodland
White-bellied Sea-Eagle	Haliaeetus leucogaster	3387-Central West Creekflat Grassy Woodland
White-throated Needletail	Hirundapus caudacutus	3387-Central West Creekflat Grassy Woodland
Yellow-bellied Glider	Petaurus australis	3387-Central West Creekflat Grassy Woodland

Threatened species Manually Added

None added

Threatened species assessed as not within the vegetation zone(s) for the PCT(s)

Refer to BAR for detailed justification

Common Name	Scientific Name	Justification in the BAM-C

BAM Candidate Species Report

Proposal Details

Assessment Id 00061903/BAAS18112/25/00062569	Proposal Name Transgrid Panorama Substation BESS	BAM data last updated * 05/08/2025
Assessor Name Lizzie J Bowman	Report Created 05/02/2026	BAM Data version * Current classification (live - default) (82)
Assessor Number BAAS18112	Assessment Type Part 4 Developments (Small Area)	BAM Case Status Finalised
Assessment Revision 0	BOS entry trigger BOS Threshold: Area clearing threshold	Date Finalised 05/02/2026

* Disclaimer: BAM data last updated may indicate either complete or partial update of the BAM calculator database. BAM calculator database may not be completely aligned with Bionet.

List of Species Requiring Survey

Name	Presence	Survey Months

Threatened species Manually Added

None added

Threatened species assessed as not on site

Refer to BAR for detailed justification

Common name	Scientific name	Justification in the BAM-C
Bathurst Grassland Earless Dragon	Tympanocryptis mccartneyi	Habitat degraded
Brush-tailed Rock-wallaby	Petrogale penicillata	Habitat constraints
Grevillea divaricata	Grevillea divaricata	Habitat degraded
Large-eared Pied Bat	Chalinolobus dwyeri	Habitat constraints
Regent Honeyeater	Anthochaera phrygia	Habitat constraints
Swift Parrot	Lathamus discolor	Habitat constraints
Yellow-spotted Tree Frog	Litoria castanea	Habitat degraded

BAM Credit Summary Report

Proposal Details

Assessment Id	Proposal Name	BAM data last updated *
00061903/BAAS18112/25/00062569	Transgrid Panorama Substation BESS	05/08/2025
Assessor Name	Report Created	BAM Data version *
Lizzie J Bowman	05/02/2026	Current classification (live - default) (82)
Assessor Number	BAM Case Status	Date Finalised
BAAS18112	Finalised	05/02/2026
Assessment Revision	BOS entry trigger	Assessment Type
0	BOS Threshold: Area clearing threshold	Part 4 Developments (Small Area)

* Disclaimer: BAM data last updated may indicate either complete or partial update of the BAM calculator database. BAM calculator database may not be completely aligned with Bionet.

Ecosystem credits for plant communities types (PCT), ecological communities & threatened species habitat

Zone	Vegetation zone name	TEC name	Current Vegetation integrity score	Change in Vegetation integrity (loss / gain)	Area (ha)	Sensitivity to loss (Justification)	Species sensitivity to gain class	BC Act Listing status	EPBC Act listing status	Biodiversity risk weighting	Potential SAII	Ecosystem credits

Central West Creekflat Grassy Woodland												
1	3387_1	White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highla	26.6	26.6	0.02	Population size	High Sensitivity to Gain	Critically Endangered Ecological Community	Not Listed	2.50	True	1

2	3387_2	White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highla	3.8	3.8	3.3	Population size	High Sensitivity to Gain	Critically Endangered Ecological Community	Not Listed	2.50	True	0
											Subtotal	**1**
											Total	**1**

Species credits for threatened species

Vegetation zone name	Habitat condition (Vegetation Integrity)	Change in habitat condition	Area (ha)/Count (no. individuals)	Sensitivity to loss (Justification)	Sensitivity to gain (Justification)	BC Act Listing status	EPBC Act listing status	Potential SAII	Species credits

APPENDIX D – EPBC PROTECTED MATTERS SEARCH TOOL RESULTS

Australian Government

Department of Climate Change, Energy, the Environment and Water

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 03-Dec-2025

Summary

Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance (Ramsar	4
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	2
Listed Threatened Species:	44
Listed Migratory Species:	8

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at https://www.dcceew.gov.au/parks-heritage/heritage

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Lands:	11
Commonwealth Heritage Places:	None
Listed Marine Species:	19
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None
Habitat Critical to the Survival of Marine Turtles:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have

State and Territory Reserves:	None
Regional Forest Agreements:	None
Nationally Important Wetlands:	None
EPBC Act Referrals:	4
Key Ecological Features (Marine):	None
Biologically Important Areas:	None
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

Wetlands of International Importance (Ramsar Wetlands)		[Resource Information]
Ramsar Site Name	Proximity	Buffer Status
Banrock station wetland complex	800 - 900km upstream from Ramsar site	In feature area
Riverland	700 - 800km upstream from Ramsar site	In feature area
The coorong, and lakes alexandrina and albert wetland	900 - 1000km upstream from Ramsar site	In feature area
The macquarie marshes	300 - 400km upstream from Ramsar site	In feature area

Listed Threatened Ecological Communities			[Resource Information]

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.
Status of Vulnerable, Disallowed and Ineligible are not MNES under the EPBC Act.

Community Name	Threatened Category	Presence Text	Buffer Status
Natural Temperate Grassland of the South Eastern Highlands	Critically Endangered	Community likely to occur within area	In feature area
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland	Critically Endangered	Community likely to occur within area	In feature area

Listed Threatened Species			[Resource Information]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.
Number is the current name ID.

Scientific Name	Threatened Category	Presence Text	Buffer Status
BIRD			
Anthochaera phrygia			
Regent Honeyeater [82338]	Critically Endangered	Breeding known to occur within area	In feature area
Aphelocephala leucopsis			
Southern Whiteface [529]	Vulnerable	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat may occur within area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area	In feature area
Callocephalon fimbriatum Gang-gang Cockatoo [768]	Endangered	Species or species habitat known to occur within area	In feature area
Calyptorhynchus lathami lathami South-eastern Glossy Black-Cockatoo [67036]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Climacteris picumnus victoriae Brown Treecreeper (south-eastern) [67062]	Vulnerable	Species or species habitat known to occur within area	In feature area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat known to occur within area	In feature area
Grantiella picta Painted Honeyeater [470]	Vulnerable	Species or species habitat known to occur within area	In feature area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Leipoa ocellata Malleefowl [934]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Melanodryas cucullata cucullata South-eastern Hooded Robin, Hooded Robin (south-eastern) [67093]	Endangered	Species or species habitat likely to occur within area	In feature area
Neophema chrysostoma Blue-winged Parrot [726]	Vulnerable	Species or species habitat may occur within area	In feature area
Polytelis swainsonii Superb Parrot [738]	Vulnerable	Species or species habitat known to occur within area	In feature area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat known to occur within area	In feature area
Stagonopleura guttata Diamond Firetail [59398]	Vulnerable	Species or species habitat known to occur within area	In feature area
CRUSTACEAN			
Euastacus armatus Murray Crayfish [81537]	Vulnerable	Species or species habitat may occur within area	In feature area
FISH			
Bidyanus bidyanus Silver Perch, Bidyan [76155]	Endangered	Species or species habitat may occur within area	In buffer area only
Maccullochella macquariensis Trout Cod [26171]	Endangered	Species or species habitat may occur within area	In buffer area only
Maccullochella peelii Murray Cod [66633]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Macquaria australasica Macquarie Perch [66632]	Endangered	Species or species habitat may occur within area	In feature area
FROG			

Scientific Name	Threatened Category	Presence Text	Buffer Status
Litoria booroolongensis			
Booroolong Frog [1844]	Endangered	Species or species habitat known to occur within area	In feature area
Litoria castanea			
Yellow-spotted Tree Frog, Yellow-spotted Bell Frog [1848]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
MAMMAL			
Chalinolobus dwyeri			
Large-eared Pied Bat, Large Pied Bat [183]	Endangered	Species or species habitat known to occur within area	In feature area
Dasyurus maculatus maculatus (SE mainland population)			
Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]	Endangered	Species or species habitat known to occur within area	In feature area
Nyctophilus corbeni			
Corben's Long-eared Bat, South-eastern Long-eared Bat [83395]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Petauroides volans			
Greater Glider (southern and central) [254]	Endangered	Species or species habitat may occur within area	In buffer area only
Petaurus australis australis			
Yellow-bellied Glider (south-eastern) [87600]	Vulnerable	Species or species habitat may occur within area	In feature area
Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)			
Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Endangered	Species or species habitat known to occur within area	In feature area
Pteropus poliocephalus			
Grey-headed Flying-fox [186]	Vulnerable	Foraging, feeding or related behaviour may occur within area	In feature area
PLANT			
Dichanthium setosum			
bluegrass [14159]	Vulnerable	Species or species habitat likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Eucalyptus pulverulenta Silver-leaved Mountain Gum, Silver-leaved Gum [21537]	Vulnerable	Species or species habitat known to occur within area	In feature area
Euphrasia arguta [4325]	Critically Endangered	Species or species habitat may occur within area	In feature area
Lepidium aschersonii Spiny Peppercress [10976]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Lepidium hyssopifolium Basalt Pepper-cress, Peppercress, Rubble Pepper-cress, Pepperweed [16542]	Endangered	Species or species habitat known to occur within area	In buffer area only
Leucochrysum albicans subsp. tricolor Hoary Sunray, Grassland Paper-daisy [89104]	Endangered	Species or species habitat may occur within area	In feature area
Swainsona recta Small Purple-pea, Mountain Swainson-pea, Small Purple Pea [7580]	Endangered	Species or species habitat may occur within area	In buffer area only
Thesium australe Austral Toadflax, Toadflax [15202]	Vulnerable	Species or species habitat may occur within area	In feature area
Zieria obcordata Granite Zieria [3240]	Endangered	Species or species habitat known to occur within area	In feature area
REPTILE			
Aprasia parapulchella Pink-tailed Worm-lizard, Pink-tailed Legless Lizard [1665]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Tympanocryptis mccartneyi Bathurst Grassland Earless Dragon [90478]	Critically Endangered	Species or species habitat may occur within area	In feature area

Listed Migratory Species			[Resource Information]
Scientific Name	Threatened Category	Presence Text	Buffer Status
Migratory Marine Birds			

Scientific Name	Threatened Category	Presence Text	Buffer Status
Apus pacificus			
Fork-tailed Swift [678]		Species or species habitat likely to occur within area	In feature area
Migratory Terrestrial Species			
Hirundapus caudacutus			
White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
Motacilla flava			
Yellow Wagtail [644]		Species or species habitat may occur within area	In feature area
Migratory Wetlands Species			
Actitis hypoleucos			
Common Sandpiper [59309]		Species or species habitat may occur within area	In feature area
Calidris acuminata			
Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area	In feature area
Calidris ferruginea			
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area	In feature area
Calidris melanotos			
Pectoral Sandpiper [858]		Species or species habitat may occur within area	In feature area
Gallinago hardwickii			
Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat known to occur within area	In feature area

Other Matters Protected by the EPBC Act

Commonwealth Lands [Resource Information]

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Commonwealth Land Name	State	Buffer Status
Communications, Information Technology and the Arts - Australian Postal Corporation		
Commonwealth Land - Australian Postal Commission [12374]	NSW	In buffer area only
Commonwealth Land - Australian Postal Commission [12373]	NSW	In buffer area only

Commonwealth Land Name	State	Buffer Status
Communications, Information Technology and the Arts - Telstra Corporation Limited		
Commonwealth Land - Australian Telecommunications Commission [12391]	NSW	In buffer area only
Commonwealth Land - Australian Telecommunications Commission [12371]	NSW	In buffer area only
Commonwealth Land - Telstra Corporation Limited [12375]	NSW	In buffer area only
Defence		
Commonwealth Land - Defence Service Homes Corporation [12376]	NSW	In buffer area only
Defence - KELSO ORDINANCE DEPOT [10087]	NSW	In buffer area only
Defence - KELSO ORDINANCE DEPOT [10085]	NSW	In buffer area only
Defence - KELSO ORDINANCE DEPOT [10086]	NSW	In buffer area only
Defence - RACECOURSE DEPOT (BATHURST TRAINING/STORES DEPOT) [10088]	NSW	In buffer area only
Defence - Defence Housing Authority		
Commonwealth Land - Defence Housing Authority [12372]	NSW	In buffer area only

Listed Marine Species [Resource Information]

Scientific Name	Threatened Category	Presence Text	Buffer Status
Bird			
Actitis hypoleucos			
Common Sandpiper [59309]		Species or species habitat may occur within area	In feature area
Apus pacificus			
Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area	In feature area
Bubulcus ibis as Ardea ibis			
Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area	In feature area
Calidris acuminata			
Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area	In feature area
Calidris ferruginea			
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
[Calidris melanotos](#) Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area	In feature area
[Chalcites osculans as Chrysococcyx osculans](#) Black-eared Cuckoo [83425]		Species or species habitat likely to occur within area overfly marine area	In feature area
[Gallinago hardwickii](#) Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area
[Haliaeetus leucogaster](#) White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area	In feature area
[Hirundapus caudacutus](#) White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area
[Lathamus discolor](#) Swift Parrot [744]	Critically Endangered	Species or species habitat may occur within area overfly marine area	In feature area
[Merops ornatus](#) Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area	In feature area
[Monarcha melanopsis](#) Black-faced Monarch [609]		Species or species habitat likely to occur within area overfly marine area	In feature area
[Motacilla flava](#) Yellow Wagtail [644]		Species or species habitat may occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area overfly marine area	In feature area
Neophema chrysostoma Blue-winged Parrot [726]	Vulnerable	Species or species habitat may occur within area overfly marine area	In feature area
Pterodroma cervicalis White-necked Petrel [59642]		Species or species habitat may occur within area	In feature area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat likely to occur within area overfly marine area	In feature area
Rostratula australis as Rostratula benghalensis (sensu lato) Australian Painted Snipe [77037]	Endangered	Species or species habitat known to occur within area overfly marine area	In feature area

Extra Information

EPBC Act Referrals				[Resource Information]
Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
McPhillamys Gold Project - Modification 1	2023/09704		Assessment	In buffer area only
Controlled action				
Mount Panorama Second Circuit, Bathurst, NSW	2019/8474	Controlled Action	Assessment Approach	In feature area
Not controlled action				
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed	In feature area
Not controlled action (particular manner)				
Aerial baiting for wild dog control	2006/2713	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only

Caveat

1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data is available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance on the contents of this report.

3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions when time permits.

4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded breeding sites; and
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

Acknowledgements

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-Office of Environment and Heritage, New South Wales
-Department of Environment and Primary Industries, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment, Water and Natural Resources, South Australia
-Department of Land and Resource Management, Northern Territory
-Department of Environmental and Heritage Protection, Queensland
-Department of Parks and Wildlife, Western Australia
-Environment and Planning Directorate, ACT
-Birdlife Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-South Australian Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Canberra
-University of New England
-Ocean Biogeographic Information System
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-Museum and Art Gallery of the Northern Territory
-Australian Government National Environmental Science Program
-Australian Institute of Marine Science
-Reef Life Survey Australia
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-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania
-Tasmanian Museum and Art Gallery, Hobart, Tasmania
-Other groups and individuals

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Please feel free to provide feedback via the Contact us page.

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