

September 2026

Zinfra Pty Ltd

Biodiversity Management Plan

Mount Piper to
Wallerawang
Transmission Line
Upgrade

wsp



Question today *Imagine tomorrow* Create for the future

Biodiversity Management Plan

Mount Piper to Wallerawang Transmission Line Upgrade

Zinfra Pty Ltd

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WSP acknowledges that every project we work on takes place on First Peoples lands.
We recognise Aboriginal and Torres Strait Islander Peoples as the first scientists and engineers and pay our respects to Elders past and present.

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Glossary

Affected species	A species that is likely to be affected through direct and/or indirect impacts as a result of the Project.
Assessment area	The assessment area includes the Project footprint and the area of land within the 1500 m buffer zone surrounding the Project footprint.
Avoid	Measures taken by a proponent such as careful site selection or actions taken through the design, planning, construction and operational phases of the Project to completely avoid impacts on biodiversity values, or certain areas of biodiversity.
Biodiversity	The biological diversity of life is commonly regarded as being made up of the following three components: genetic diversity – the variety of genes (or units of heredity) in any population species diversity – the variety of species ecosystem diversity – the variety of communities or ecosystems.
Biodiversity Assessment Method Calculator (BAM-C)	The web application that provides decision support to assessors and proponents by applying the BAM, and which calculates the number and class of biodiversity credits required to offset the impacts of a project or created at a biodiversity stewardship site.
Biodiversity credits	Ecosystem credits or species credits
Biodiversity Credit Report	The report produced by the Biodiversity Assessment Method Calculator (BAM-C) that sets out the number and class of biodiversity credits required to offset the remaining adverse impacts on biodiversity values at a development site, or on land to be biodiversity certified, or that sets out the number and class of biodiversity credits that are created at a biodiversity stewardship site.
Biodiversity offsets	Management actions that are undertaken to achieve a gain in biodiversity values on areas of land to compensate for losses to biodiversity values from the impacts of project.
Biodiversity risk weighting	The BAM uses a biodiversity risk weighting to evaluate the ecological risks of threatened entities from the Biodiversity Offsets Scheme (BOS). The biodiversity risk weighting comprises two parts: sensitivity to loss considers the increased threat posed to an entity from offsetting the loss of habitat or population sensitivity to gain considers the ability of a species to respond to improvements in habitat condition at a biodiversity stewardship site. The biodiversity risk weighting for determining the credit requirement for ecosystem credits is based on: the sensitivity to loss for the listed TEC identified on the Project footprint, or if the vegetation is not a TEC, the sensitivity to loss for the PCT identified on the Project footprint (i.e. threat status of the TEC takes precedence to determine the sensitivity to loss, regardless of the estimated percent cleared value for the PCT) the highest sensitivity to gain ranking for the ecosystem credit species associated with that TEC or PCT.

The BAM-C will apply the biodiversity risk weighting to each vegetation zone based on the survey data the assessor collected from the Project footprint in Stage 1 and the impact assessment outcomes determined by the assessor in Stage 2.

Biodiversity value	Are the following values: vegetation integrity – being the degree to which the composition, structure and function of vegetation at a particular site and the surrounding landscape has been altered from a near natural state habitat suitability – being the degree to which the habitat needs of threatened species are present at a particular site biodiversity values, or biodiversity-related values, prescribed by the regulations under the BC Act.
Clearing Block	The area represented by a Clearing permit. Refer to section A1.8 for a list of the planned clearing blocks
Clearing Permit	The document which must be completed and approved by Zinfra prior to the performance of any clearing on the project. A permit is to be allocated to each block.
Construction	The carrying out of works associated with the approved development, including commissioning trials, temporary facilities, site establishment, vegetation clearing, access tracks, compounds, laydown areas and all associated activities undertaken to deliver the approved development. Construction may overlap with operation where development is staged.
Controlled Action	Actions that the Minister decides have, will have or are likely to have a significant impact on one or more protected matters and therefore require assessment and approval under the Act.
Development Area	The area approved for the development and associated activities, including all permanent and temporary disturbance areas required for construction and operation of the Project. For the purposes of this BMP, the term Project Footprint is used.
Dual credit species	In some circumstances the TBDC may identify a threatened species that requires assessment for ecosystem credits and species credits (referred to as dual credit species). For dual credit species, part of the habitat is assessed as a species credit (e.g. breeding habitat or land mapped on an important habitat map for a species). The remaining habitat components for the species are assessed as an ecosystem credit (e.g. foraging habitat). Dual credit species are generally either highly mobile species that rely on particular habitat components for breeding, such as maternity caves for bats, tree hollows for some large forest owls or cockatoos; or are species for which particular areas in the landscape are important for their survival, such as selected beaches for migratory shorebirds.
Ecosystem credit	A measurement of the value of threatened species habitat for species that can be reliably predicted to occur with a PCT.
Ecosystem credit species	Ecosystem credit species are threatened species whose occurrence can generally be predicted by vegetation surrogates and/or landscape features, or that have a low probability of detection using targeted surveys.

Groundwater	Water found in the subsurface in the saturated zone below the water table or piezometric surface i.e. the water table marks the upper surface of groundwater systems.
Hazard tree	A tree assessed by a suitably qualified arborist as presenting an unacceptable risk to the safety, integrity or operation of transmission infrastructure due to its condition, structural stability, likelihood of failure, or potential to fall within a transmission line, access track, work area or other operational asset. Hazard trees may require management, pruning or removal to address safety requirements.
High Threat Weed	A High Threat Weed is a vascular plant that, if not controlled, will invade and outcompete native plant species. Plants considered to be high threat weeds are listed on the high threat weeds list published in the BAM-C.
IBRA region	A bioregion identified under the Interim Biogeographic Regionalisation for Australia (IBRA) system, which divides Australia into bioregions on the basis of their dominant landscape-scale attributes.
IBRA subregion	A subregion of a bioregion identified under the IBRA system.
Indirect impact	An impact on biodiversity values that occurs when project related activities affect threatened species, threatened species habitat, or threatened ecological communities in a manner other than direct impact.
Locality	The area within 10 kilometres of the Project footprint.
Local population	The population that occurs in the Project footprint. In cases where multiple populations occur in the Project footprint or a population occupies part of the Project footprint, impacts on each subpopulation must be assessed separately.
Migratory species	Species listed under international agreements to which Australia is a signatory (i.e. Ramsar, JAMBA, CAMBA and ROKAMBA conventions)
Minimise	A process applied throughout the development planning and design life cycle which seeks to reduce the residual impacts of the Project on biodiversity values.
Mitchell landscape	Landscapes with relatively homogeneous geomorphology, soils and broad vegetation types, mapped at a scale of 1:250,000.
Mitigation	Action to reduce the severity of an impact.
Mitigation measure	Actions, procedures and controls implemented to avoid, minimise, manage, mitigate or monitor actual or potential impacts on biodiversity values arising from the development.
Native vegetation	Means any of the following types of plants native to New South Wales: trees (including any sapling or shrub or any scrub) understorey plants groundcover (being any type of herbaceous vegetation) plants occurring in a wetland.

Operation	The carrying out of the approved purpose of the development following completion of construction. Operation does not include commissioning trials of equipment or the use of temporary facilities, which are considered part of construction.
Patch size	An area of intact native vegetation that: — occurs on the Project footprint or biodiversity stewardship site — includes native vegetation that has a gap of less than 100 m from the next area of moderate to good condition native vegetation (or ≤ 30 m for non-woody ecosystems). Patch size may extend onto adjoining land that is not part of the Project footprint or biodiversity stewardship site.
Plant community type	A NSW plant community type identified using the PCT classification system.
Population	A group of organisms, all of the same species, occupying a particular area.
Project	The CSSI project “Mount Piper to Wallerawang Transmission Line Upgrade Project”, which is the subject of the Environmental Impact Statement. The Project involves the construction and operation of high voltage transmission lines between the Mount Piper and Wallerawang 330 kV substations.
Project footprint	The area that would be directly affected by construction and the location of operational infrastructure. Includes the easement and route of the new transmission line (including transmission structures), substations, new and existing access tracks to/from the easement and temporary construction compounds and laydown areas.
Residual impact	The remaining impact after all reasonable measures are made to avoid, minimise and mitigate the impacts of the Project. These impacts were subject to calculation of species and ecosystem credits.
Sensitivity to gain/loss class	Sensitivity to gain/loss considers the ability of a species to respond to improvements in habitat condition at a biodiversity stewardship site or the increased threat posed to an entity from offsetting the loss of habitat or population. Sensitivity to gain/loss are two parts of the Biodiversity Risk Weighting.
Species credits	The class of biodiversity credits created or required for the impact on threatened species that cannot be reliably predicted to use an area of land based on habitat surrogates. Species that require species credits are listed in the Threatened Biodiversity Data Collection.
Species credit species	Threatened species that are assessed in accordance with section 6.4 of the BAM. 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 Project footprint. Alternatively, a species may be assumed present within the Project footprint.
Stage 1: Biodiversity Assessment	Stage 1 of the Biodiversity Assessment Method. It establishes a single consistent approach to assessing the biodiversity values on land subject to the Project.

Stage 2: Impact Assessment	Stage 2 of the Biodiversity Assessment Method. It provides for an impact assessment on biodiversity values on land subject to the Project.
Study Area	The area investigated for this assessment includes the Project footprint and a 250 m buffer from the Project footprint, which includes areas with the potential to be directly or indirectly affected by the project. This buffer incorporates areas that may be subject to edge effects and allows for assessment of nest tree buffers for hollow-breeding species.
Threatened Biodiversity Data Collection	Part of the BioNet database, published by the Department and accessible from the BioNet website at www.bionet.nsw.gov.au .
Threatened ecological community	Means a critically endangered ecological community, an endangered ecological community or a vulnerable ecological community listed in Schedule 2 of the BC Act or any additional ecological community listed under Part 13 of the EPBC Act as critically endangered, endangered or vulnerable.
Threatened species	Critically endangered, endangered or vulnerable threatened species as defined by Schedule 1 of the BC Act, or any additional threatened species listed under Part 13 of the EPBC Act as critically endangered, endangered or vulnerable.
Unexpected finds	A threatened species, ecological community, habitat feature, Aboriginal object, heritage item, or environmental value not previously identified, assessed or anticipated in the Revised BDAR or associated project documentation.
Vegetation class	A level of classification of vegetation communities defined in (Keith 2004). There are 99 vegetation classes in NSW.
Vegetation formation	A broad level of vegetation classification as defined in (Keith 2004). There are 16 vegetation formations and sub-formations in NSW.
Vegetation integrity	The condition of native vegetation assessed for each vegetation zone against the benchmark for the PCT.
Vegetation integrity score	The quantitative measure of vegetation condition.
Vegetation type	A NSW plant community type (PCT).
Vegetation zone	A relatively homogenous area of native vegetation that is the same PCT and broad condition state.

Abbreviations

APZ	asset protection zone
BAM	Biodiversity Assessment Method
BAM-C	Biodiversity Assessment Method Calculator
BC Act	<i>Biodiversity Conservation Act 2016</i> (NSW)
BC Regulation	Biodiversity Conservation Regulation 2017 (NSW)
BDAR	Biodiversity Development Assessment Report
BMP	Biodiversity Management Plan
BOAMS	Biodiversity Offsets and Agreement Management System
BOS	Biodiversity Offsets Scheme
CEEC	critically endangered ecological community
CEMP	Construction Environmental Management Plan
CPHR	Conservation Programs, Heritage and Regulation Group
DBH	diameter at breast height over bark
DPHI	Department of Planning, Housing and Infrastructure (New South Wales)
EEC	Endangered Ecological Community listed under the BC Act or EPBC Act
EIS	Environmental Impact Statement
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Cwlth)
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i> (NSW)
Environmental BP	Environmental Business Partner
EWMS	Environmental Work Method Statements
FCZ	Full clearance zones
GDE	Groundwater Dependent Ecosystems
Ha	Hectares
HBT	Hollow-bearing Tree
HTW	High threat weed
IBRA	Interim Biogeographic Regionalisation for Australia
km	Kilometres
kV	Kilovolt
LGA	Local Government Area
LLS Act	<i>Local Land Services Act 2013</i> (NSW)

MNES	matters of national environmental significance under the EPBC Act
NEPA	National Environmental Protection Agency
NPW Act	<i>National Parks and Wildlife Act 1974</i> (NSW)
NPWS	National Parks and Wildlife Service (New South Wales)
NSW	New South Wales
NSW DCCEEW	NSW Department of Climate Change, Energy, Environment and Water
PCT	plant community type
PCZ	Partial clearance zones
REZ	Renewable Energy Zone
SAII	serious and irreversible impact
SEARs	Secretary's Environmental Assessment Requirements
SWMP	Soil and Water Management Plan
TBDC	Threatened Biodiversity Data Collection
TEC	threatened ecological community
VEC	vulnerable ecological community
VRZ	Vegetated Riparian Zones

1 Introduction

The Commonwealth and New South Wales governments have set net-zero emission goals for 2050. Meeting these commitments will require the roll-out of renewable and low-emission technologies across multiple sectors of the economy, with a strong focus on electricity generation. To support the shift from fossil-fuel-based power to renewable sources, the NSW Transmission Infrastructure Strategy (DPE 2018) was introduced to drive private investment in large-scale energy infrastructure. A key component of this strategy is the establishment of five Renewable Energy Zones (REZs), intended to enable the delivery of renewable energy and lower wholesale electricity costs for customers in New South Wales. The Project is located within the Central-West Orana REZ, the first of these zones to be created.

The NSW government's Electricity Infrastructure Roadmap (DPIE 2020) further clarified that expanding transmission capacity across the state is essential to accommodate growing levels of renewable energy and to support progress toward net-zero emissions. Additional transmission routes will be needed to transport energy generated in inland REZs to densely populated, high-demand regions. Forecast energy generation within the Central-West Orana REZ is expected to surpass the capacity of several existing network sections. In particular, the transmission corridor between the Mount Piper and Wallerawang 330 kV substations has been identified in the NSW Network Infrastructure Strategy (EnergyCo 2023) as requiring upgrades to handle new generation projects anticipated to come online. The Mount Piper to Wallerawang Transmission Line Upgrade Project (the Project) will enable increased transmission capacity from the Central-West Orana REZ to the Greater Sydney area.

1.1 Purpose

WSP Australia Pty Limited (WSP) has been engaged by Zinfra Pty Ltd to prepare a Biodiversity Management Plan (BMP) for the Mount Piper to Wallerawang Transmission Line Upgrade. This BMP addresses the Conditions of Infrastructure Approval SSI-70279722, which require the Project Proponent, Transgrid, to prepare and implement a BMP. Under the Conditions of Approval (Section 2.2), the BMP must satisfy a set of requirements including protecting vegetation and habitats outside the approved disturbance areas and minimising impacts to fauna within the Project footprint (area of direct disturbance).

Management measures and procedures contained in this BMP provide a framework for managing biodiversity values in the Project footprint, while protecting adjacent vegetation and habitat throughout construction of the Project. The BMP applies to all activities associated with the construction phase of the Project.

This BMP has been prepared in the context of, and is intended to be read alongside, other project-specific management plans, policies and procedures developed for the Project. These include the Construction Environmental Management Plan (CEMP) and relevant heritage, traffic, noise, and safety management plans. Where requirements overlap, this BMP provides biodiversity-specific measures that are to be implemented in coordination with these plans. In the event of any inconsistency between this BMP and other project documentation, the requirements of relevant statutory approvals and conditions of approval will prevail, and the inconsistency will be resolved through consultation with Transgrid and, where required, the relevant regulator prior to implementation and this BMP will be updated accordingly.

1.2 Objectives

The primary objectives of the BMP are to provide procedures and protocols that are practical, adaptable and effective in the minimisation of impacts to the environment as a potential result of project activities.

The Project will undertake the following activities:

- Ensure environmental controls outlined in procedures and protocols are implemented, as required, throughout the duration of construction to minimise impacts to identified biodiversity value within the Project footprint.
- Ensure relevant project approval conditions are implemented detailed in the Project associated Biodiversity Development Assessment Report (BDAR) (GHD 2025).

- Ensure measures are taken to comply fully with all relevant federal, state and local legislation as detailed in Section 2.1 of this BMP.

1.3 Author qualifications and experience

This BMP has been prepared by suitably qualified and experienced biodiversity professionals, in accordance with Condition of Approval (Section 2.2).

Table 1-1 Author qualifications

Name	Role in BMP	Qualifications	Relevant experience
Tim Garvey	Lead author / Senior Ecologist	PhD (Ecology), MRes (Bioscience), BSc (Zoology, Hons)	10+ years ecological experience
Imogen Merlo	Author / Ecologist	MEnv, BSc	11+ years ecological experience
Amber Button	Author / Ecologist	MEnv (Conservation and Restoration), BSc (Zoology)	5+ years ecological experience
Rodney van der Ree	Technical reviewer, connectivity expert	PhD (Ecology), BSc (Hons)	31+ years ecological experience
Lukas Clews	Technical reviewer	MSc (Scientific studies), BSc, Dip. Conservation & Land Management, GradCert Applied Science	15+ years ecological experience
Nic McCaffrey	Technical reviewer / Quality control	BASc	24+ years ecological experience

1.4 Consultation

A consultation meeting was held with CPHR on 2 June 2026 to discuss the proposed management measures, connectivity requirements and replacement hollow / nest box strategy. A subsequent consultation meeting was held with NPWS on 9 June 2026 to discuss project-specific management requirements relating to the Gardens of Stone State Conservation Area (SCA), connectivity measures and hollow replacement.

Written comments on the draft BMP were subsequently received from NPWS on 1 July 2026 and CPHR on 6 July 2026. Comments received from both agencies have been reviewed and addressed throughout the development of the BMP.

The Project was approved under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) as EPBC 2024/09855. Compliance with the EPBC Approval, including requirements relating to condition compliance, document submission, notification, reporting, spatial data, incidents, non-compliances and independent audits, will be managed in accordance with the conditions of that approval and the compliance framework described in Section 2.2.3 and Table 2-3.

Details of consultation undertaken, including the agencies consulted, dates, format of consultation and outcomes, are documented in the Consultation Report prepared for the BMP.

Any further comments received from regulatory authorities during the review and approval process will be considered and incorporated into the BMP, where required.

Updates or revisions to this Plan will be carried out in accordance with Section 6.8.

1.5 Project Staging

A Staging Report has been developed in accordance with Conditions C4-C6. Revision 2.1 of the Staging Report was endorsed by the Environmental Representative (ER) on 8 September 2026.

The Staging Report identified 3 stages. These Stages have the same meaning as the terms defined in the Infrastructure Approval. The Stages are:

- Pre-Construction
- Construction
- Operation

Future stages, including upgrading and decommissioning will be addressed through future revisions of the Staging Report, as required. Following endorsement of the Staging Report, Transgrid submitted a Staging Request to the Planning Secretary for staging specific to the BMP in accordance with Condition C7 which was approved by DPHI on 28 August 2026.

In accordance with the Staging Request, this BMP addresses the construction stage only. As such, operational impacts to biodiversity and operational measures and monitoring do not fall within the scope of this BMP and are not addressed within the processes contained within this Plan. Requirements applicable to the remaining stages, including operation, upgrading and decommissioning, will be addressed in a separate document prior to commencement of the relevant stage.

The Staging Report and Staging Request are subject to update where the project staging arrangements are revised or further stages are progressed.

2 Environmental requirements

2.1 Legislative & policy context

Legislation relevant to this BMP includes:

- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)
 - *Biodiversity Conservation Act 2016* (BC Act)
 - *National Parks and Wildlife Act 1974*
 - *Biosecurity Act 2015*
 - *Environmental Planning and Assessment Act 1979* (EP&A Act)
 - *Fisheries Management Act 1994*; and
 - *Local Land Services Act 2013*.
 - *Biosecurity Regulation 2017* (NSW)
 - *Pesticides Act 1999* (NSW)
 - *Pesticides Regulation 2017* (NSW)
-

2.2 Statutory approvals

The Project has been approved under both the NSW and Commonwealth environmental approval frameworks.

Compliance with the Infrastructure Approval and EPBC Approval will be managed collectively through this BMP and the broader Project compliance management system and associated project management documents. Where the approvals contain overlapping biodiversity requirements, the relevant measures will be implemented to satisfy both approvals. Where requirements differ, each applicable requirement will be implemented.

2.2.1 NSW Infrastructure Approval

The Project comprises the construction and operation of electricity transmission infrastructure as described in Section 1. This BMP has been prepared to address the conditions of Infrastructure Approval SSI-70279722 issued by the Minister for Planning and Public Spaces. Table 2.1 identifies the conditions relevant to biodiversity management and cross-references the sections of this BMP where each condition is addressed.

Table 2-1 Conditions of Approval relevant to Biodiversity

CoA No.	Requirements	Document reference	How addressed
Terms of Approval			
A2	The development must be carried out: (c) generally in accordance with the EIS; and (d) generally in accordance with the Development Layout in Appendix 1.	Table 2.1; Section 5.1; Section 5.4; Section 5.6; Appendix A; Appendix C	Biodiversity management including clearing of vegetation in relation to the development will be generally in accordance with the EIS and the Development Layout in Appendix 1 of the Infrastructure Approval.
Erosion and Sedimentation			
B14	The Proponent must: (a) minimise erosion and control sediment generation; and (b) ensure all land disturbances have appropriate drainage and erosion and sediment controls designed, installed and maintained in accordance with <i>Best Practice Erosion and Sediment Control</i> (IECA, 2008), <i>Managing Urban Stormwater – Soils and Construction Volume 1</i> (Landcom, 2004), <i>Managing Urban Stormwater – Soils and Construction Volume 2A Installation of Services</i> (DECC, 2008) and <i>Managing Urban Stormwater – Soils and Construction Volume 2C Unsealed Roads</i> (DECC, 2008), or their latest versions.	Section 5.8; Section 5.9; Construction Environmental Management Plan; Soil and Water Management Plan	Erosion and sediment controls will be implemented as per the approved Soil and Water Management Plan. Site-specific Erosion and Sediment Control Plans will be prepared and implemented for locations where soil disturbance will occur. These are discussed in further detail under Section 5.8.
Riparian Areas			
B17	The Proponent must ensure all activities on waterfront land are constructed in accordance with the <i>Guidelines for Controlled Activities on Waterfront Land</i> (DPE 2022), <i>Why do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings</i> (NSW Fisheries 2003) and the <i>Policy and Guidelines for Fish Habitat and Conservation and Management</i> (NSW Fisheries, 2013), unless Water Group and DPIRD Fisheries agrees otherwise.	Section 3.2.4; Section 4.2.5; Section 5.9; Section 5.4.2; Appendix A Soil and Water Management Plan	Activities within Riparian areas will be managed as per the approved Soil and Water Management Plan, the Riparian vegetation clearing methodology included in Vegetation Clearing Procedure (Appendix A) and in accordance with the

CoA No.	Requirements	Document reference	How addressed
			management measures identified in Section 5.14.
Restrictions of Clearing and Habitat			
B20	Unless otherwise agreed with the Planning Secretary, the Proponent must:		
	(a) ensure that the vegetation and habitat clearing limits specified in Table 2-1, Table 2-2 and Table 3-3 of Appendix 2 are not exceeded; and	Section 4.2.1; Tables 4.1 to 4.3; Section 5.2; Section 5.4; Section 5.1.4.1; Section 6.2; Table 6.4; Sections 6.4 to 6.6; Appendix A	Vegetation and habitat clearing will be managed through the detailed design of the Project and in accordance with the Vegetation Clearing Procedure (Appendix A). Progressive monitoring of vegetation and habitat clearing quantities will occur to ensure that impacts will not exceed the limits prescribed in Condition B20. Vegetation and habitat clearing management measures are discussed in Section 5.4 and Appendix A.
	(b) minimise: i. the impacts of the development on hollow-bearing trees; ii. the impacts of the development on threatened species; and iii. the clearing of native vegetation and key habitat.		The management measures identified in Section 5.14 will be implemented to ensure that clearing minimises impacts of the development on hollow-bearing trees, threatened species, native vegetation and key habitat.
Biodiversity Offsets			
B21	Prior to undertaking any development activities that would directly or indirectly impact on biodiversity values requiring offset, the Proponent must retire biodiversity credits of the number and classes specified in Table 2-1, Table 2-2 and Table 2-3 of Appendix 2.	This table	On 21 August 2026, the Proponent executed a Strategic Offset Delivery Agreement (SODA) that satisfies the requirements of conditions B21 and B22.

CoA No.	Requirements	Document reference	How addressed
B22	Condition B21 must be carried out in accordance with sections 6.4 and 6.29A of the Biodiversity Conservation Act 2016 and section 6.2 of the Biodiversity Conservation Regulation 2017.	This table	On 21 August 2026, the Proponent executed a Strategic Offset Delivery Agreement (SODA) that satisfies the requirements of conditions B21 and B22.
B23	Prior to carrying out any development activities that would directly or indirectly impact on biodiversity values required to be offset, evidence must be provided to the Planning Secretary that conditions B21 and B22 have been met. If the approval provides for stages of development and specifies staged retirement of biodiversity credits, the Planning Secretary may approve the retirement of credits in stages, if adequate evidence is provided for the relevant stage.	This table	The SODA referenced above at Conditions B21 and B22 was provided to the Planning Secretary on 27 August 2026.
Biodiversity Management Plan			
B24	Prior to carrying out any development that could impact biodiversity values that require offsetting, the Proponent must prepare a Biodiversity Management Plan for the development to the satisfaction of the Planning Secretary. This plan must:	This plan	This BMP has been prepared to satisfy Condition B24.
	(a) be prepared by a suitably qualified and experienced biodiversity expert/s;	Section 1.3	The BMP has been prepared by a suitably qualified and experienced biodiversity expert. Author qualifications and experience are detailed in Section 1.3.
	(b) be prepared in consultation with CPHR and NPWS;	Section 1.4	The BMP has been prepared in consultation with CPHR and NPWS. Consultation evidence is detailed in Section 1.4.
	(c) be prepared generally in accordance with the BDAR;	Section 1.2; Section 2.2; Section 3; Section 4	The BMP has been prepared generally in accordance with the Revised BDAR. Section 4 details the environmental aspects

CoA No.	Requirements	Document reference	How addressed
			and impacts considered in the Revised BDAR.
	(d) include a description of the measures that would be implemented for:		
	(i) meeting the biodiversity mitigation requirements in condition B20	Section 3; Section 4; Sections 5.1–5.14; Appendices A–E	The management measures identified in Section 5.14 will be implemented to ensure the Project complies with the biodiversity mitigation requirements in Condition B20.
	(ii) minimising: — the amount of vegetation clearing on site; — the loss of key fauna habitat (including tree hollows); — the impacts to fauna on site, including undertaking pre-clearance surveys; and — potential indirect or prescribed impacts on threatened flora and fauna species.	Section 4.2.1; Section 5.1.1; Section 5.1.2; Section 5.2; Section 5.4; Section 5.4.1.1; Appendix A Section 3.2.3; Section 4.2.2; Section 4.2.3; Section 5.4.5; Section 5.4.7; Section 5.4.8; Section 5.5; Section 5.6.8; Section 5.7; Appendices B & D Section 5.4.1; Section 5.4.3; Section 5.6.1-3; Section 5.6.7; Appendices A & C Section 3.1.3; Section 3.1.4; Section 4.2; Section 4.2.1.2; Section 4.2.5; Section 5.4.6; Section 5.6.5; Section 5.6.6; Section 5.8; Section 5.9; Section 5.11; Section 5.13; Appendix E	The mitigation hierarchy will be employed by the Project to avoid and minimise impacts to biodiversity where practical. The management measures identified in Section 5.14 will be implemented to ensure the Project minimises the amount of vegetation clearing on site, the loss of key fauna habitat (including tree hollows), the impacts to fauna on site (including undertaking pre-clearance surveys), and potential indirect or prescribed impacts on threatened flora and fauna species. Potential impacts to biodiversity are further minimised through management of biosecurity risks.
	(iii) ensuring the development does not adversely affect the native vegetation and habitat outside the development area	Section 5.4.2–5.4.4; Appendix A; Section 5.9	The Vegetation Clearing Procedure, including demarcation and exclusion zones, will be implemented to ensure the development does not adversely affect the native vegetation and habitat outside of the development area.

CoA No.	Requirements	Document reference	How addressed
	(iv) protocols for unexpected finds of threatened species and threatened ecological communities within the development area including the requirements for: — all work in the associated location to stop to prevent further impact, and — notification to the Planning Secretary and CPHR in writing on any additional mitigation measures to be implemented; and — relevant agencies to be consulted and the Planning Secretary to endorse recommencement of work.	Section 3; Section 4; Section 5.6.4; Section 6.6; Appendix C	In an event of an unexpected species finds, the Unexpected Species Finds Protocol (Appendix C – Part C1.5) will be implemented as required. Monitoring and reporting requirements associated with unexpected species finds are detailed in Sections 5.6 and 6.6.
	(v) connectivity strategy for the potentially impacted species identified in the BDAR.	Section 3.2; Section 4.2.3; Section 5.5; Section 6.2; Section 6.6; Appendix B	A Habitat Connectivity Strategy has been prepared and is included under Appendix B. The habitat connectivity actions will be implemented as required and in accordance with the Habitat Connectivity Strategy.
	(vi) rehabilitation of temporary disturbance areas to facilitate natural regeneration with suitable native species	Section 4.1; Section 5.6.6; Section 5.12; Section 6.2 Soil and Water Management Plan	Rehabilitation of temporary disturbance areas to facilitate natural regeneration with suitable native species, will be integrated with erosion and sediment control measures, weed management procedures and biosecurity controls.
	(vii) maximising the salvage of resources within the approved development area – including vegetative and soil resources – for beneficial reuse (such as fauna habitat enhancement) during the rehabilitation and revegetation of the site.	Section 4.1; Section 5.4.5; Section 5.12; Appendix A; Appendix D	Timber removed during clearing works will be retained for re-use in habitat restoration works throughout the project footprint. The proposed placement of salvaged timber will be determined by the Project Ecologist.

CoA No.	Requirements	Document reference	How addressed
	(viii) collecting and propagating seed (where relevant).	Section 3.1; Section 5.4.6; Section 5.12	Opportunities to collaborate with local Landcare groups on seed collection are being considered. Seed collection within the Gardens of Stone SCA will be undertaken only after the applicable permissions are obtained.
	(ix) controlling erosion, weeds and feral pests.	Section 3.5.2; Section 4.2.5; Section 5.8; Section 5.11.1; Section 5.11.2; Appendix E	Site specific Erosion and Sediment Control Plans and the Soil and Water Management Plan will be implemented to manage erosion. Where suitable topsoil is disturbed, it will be stripped separately and stored to avoid erosion and away from drainage lines and riparian buffers. The Biosecurity Management Plan will be implemented to manage the introduction and spread of weeds, pests and pathogens.
	(x) bushfire management.	Section 4.2.5; Section 5.10	The Project's Bushfire Emergency Management Plan will be implemented to manage fire response, evacuation and incident notification. Bushfire prevention will include control of hot works, monitoring of weather conditions and vegetation management.
	(xi) minimising impacts on entities at risk of a serious and irreversible impact (SAII), including the Large-eared Pied Bat; and	Table 3-1; Section 4.2; Section 5.4.2; Section 5.6.1; Section 5.6.5; Section 6.2; Appendix C.	Pre-clearing fauna inspections, including of the rocky overhang that has the potential to provide roosting opportunities for the Large-eared Pied Bat, will be undertaken to identify the presence of threatened species. Measures to minimise clearing and exclusion zones also serve to minimise impacts on threatened fauna.

CoA No.	Requirements	Document reference	How addressed
	(e) include a program to monitor, evaluate and publicly report on the effectiveness of these measures.	Section 6.2; Tables 6.2 and 6.3; Table 6.4; Section 6.3; Section 6.7; Appendices B, D and E	A program to monitor, evaluate and publicly report on the effectiveness of the biodiversity management measures contained in this BMP is discussed in Section 6.2.
	Following approval, the Proponent must implement the Biodiversity Management Plan.	Section 1.1; Section 6.1	Roles and responsibilities for implementation and compliance with the BMP are outlined in Table 6.1.
C11	Prior to commencing construction, the Proponent must submit detailed plans of the final layout of the development to the Department via the Major Projects website. The final layout plans must include: (a) details on siting of transmission towers and ancillary infrastructure and / or ancillary facilities; (b) and showing comparison to the approved layout and approved vegetation clearing.	Table 2.1; project compliance procedures	Detailed final layout plans will be submitted to DPHI in accordance with Table 2.1.

2.2.2 Revised Mitigation Measures

The Revised Mitigation Measures applicable to biodiversity management for the Project are reproduced in Table 2-2. The measures are derived from Appendix B of the Submissions Report and include the timing for implementation and the sections of this BMP where each requirement is addressed.

The Revised Mitigation Measures are separate from the conditions of the NSW Infrastructure Approval presented in Table 2-1 and the conditions of EPBC Approval 2024/09855 presented in Table 2-3. Where requirements overlap, the applicable management measures will be implemented to satisfy each relevant approval or commitment.

Table 2-2 Biodiversity Revised Mitigation Measures

No.	Category	Environmental measure	Document Reference	How addressed
B01	Avoid and minimise impacts	Opportunities to avoid and minimise impacts on biodiversity will be investigated during detailed design with consideration to retaining vegetation and trees, where possible, to improve connectivity values and/or minimise impacts on threatened species and their habitats, such as threatened <i>Eucalypts</i> and hollow-bearing trees.	Section 5.1; Section 5.1.1; Section 5.1.2; Section 5.5; Appendix A; Appendix B	Avoidance and minimisation measures for detailed design, including micro-siting of structures, access tracks and laydown areas, retention of threatened <i>Eucalypts</i> and hollow-bearing trees and establishment of no-go and exclusion zones, are provided in Sections 5.1.1 and 5.1.2 and implemented through Appendix A and Appendix B.
B02	General biodiversity impacts	A BMP will be prepared by a qualified ecologist in consultation with NSW DCCEEW. The BMP will: — include biodiversity values on the site, measures for indirect, prescribed and uncertain impacts, processes and procedures, and responsibilities to minimise the potential for biodiversity impacts during construction — outline induction requirements prior to starting work on site, which will inform the workforce on the biodiversity values of the site, protection measures to be implemented to protect native biota and penalties for breaches — be based on SMART principles (Specific, Measurable, Achievable, Realistic, Timebound) — include a plan for implementing, evaluating and reporting on the effectiveness of all mitigation measures outlined in the BDAR — include an adaptive management approach based on performance triggers for remedial action — include a monitoring and/or auditing process to confirm that clearing during construction remains within the predicted	— Section 3; Section 3.1.4; Section 4.2.5.1; Section 5; Section 6.1; Appendix A; Appendix C; Appendix D; Appendix E — Section 5.3.1 — Section 2.2.2.1; Section 5.1.4; Sections 6.1 to 6.3; Table 6.2; Table 6.3; Table 6.4; Appendices A to E — Section 6.1; Section 6.2;	This BMP has been prepared by qualified ecologists (Section 1.3) in consultation with the relevant Groups and Services within DCCEEW (CPHR and NPWS). It addresses biodiversity values and impacts (Sections 3 and 4.2.5.1), management measures and responsibilities (Section 5, Appendices A to E), inductions (Section 5.3.1), SMART principles (Section 2.2.2.1), effectiveness monitoring (Section 6.2, Tables 6-2 to 6-4), adaptive management (Section 6.7), clearing tracking via the Clearing Register (Section 5.4.1) and clearing and exclusion zone mapping (Appendix A) and Hollow-bearing Tree mapping (Appendix D).

No.	Category	Environmental measure	Document Reference	How addressed
B03	Removal of vegetation and habitat resources	clearing of native vegetation and threatened species identified in the BDAR	Section 6.3; Section 6.7	
		— include a map with co-ordinates showing areas to be cleared and areas to be protected, including exclusion zones and protected habitat features in the vicinity of work areas.	— Section 6.7 — Section 4.2; Section 5.2; Section 5.4.1; Section 6.2; Table 6.4; Section 6.7; Appendix A — Section 5.4.2; Section 5.4.3; Appendix A; Appendix D	
B03	Removal of vegetation and habitat resources	Prior to the commencement of any work in or adjoining areas of native vegetation, a survey will be carried out to identify threatened plants and threatened species habitat within and adjacent to the Project footprint that are to be avoided or impacts to be minimised. The survey will focus on identifying occurrences of <i>Eucalyptus cannonii</i> and <i>Eucalyptus aggregata</i> as well as hollow-bearing trees directly adjacent to the works area. The BMP will include a Vegetation Clearing Procedure, which will require the limit of clearing and construction boundary to be surveyed and clearly demarcated using high visibility tape. All vegetation outside the boundary will be clearly sign posted and marked on plans as an exclusion zone. Signage will be maintained for the duration of the construction period. Clearing of native shrub and ground layer vegetation will be minimised as far as possible.	Section 5.4; Section 5.4.1; Section 5.4.2; Section 5.4.3; Section 5.4.4; Section 5.4.6; Appendix A	Pre-clearing surveys by a qualified ecologist identify and mark threatened flora, hollow-bearing trees and habitat features prior to clearing (Sections 5.4.1 and 5.4.6). The Vegetation Clearing Procedure (Appendix A) requires clearing limits to be surveyed, demarcated and signposted, with vegetation outside the boundary managed as exclusion zones (Section 5.4.2), demarcation maintained throughout construction (Sections 5.4.3 and 5.4.4) and shrub and ground layer clearing minimised through partial-clearance zones (Section 5.2).

No.	Category	Environmental measure	Document Reference	How addressed
B04	Impacts on riparian vegetation	The BMP will identify opportunities to minimise impacts on shrub or ground stratum vegetation within riparian zones when reviewing final construction methods and staging. Riparian vegetation clearing methods will retain root balls and trunk bases in situ and undertaken in a manner that minimises ground disturbance. Riparian buffers will be clearly marked onsite in accordance with recommended VRZs from the <i>Guidelines for riparian corridors on waterfront land</i> (DPE 2022) and the <i>Policy and Guidelines for Fish Habitat Conservation and Management</i> (Update 2013). Riparian areas within the project footprint and not within construction work zones will be delineated and managed as exclusion zones wherever possible in accordance with mitigation measure B03.	Section 5.9; Section 5.4.2; Appendix A	Riparian buffers will be marked onsite in accordance with recommended Vegetated Riparian Zones, with riparian areas not required for construction managed as exclusion zones (Section 5.9.1). Appendix A (Section A1.7) requires trees to be cut above the root collar with root balls and trunk bases retained in situ, clearing limited to the tree stratum and understorey retained to minimise ground disturbance.
B05	Unexpected direct impacts to threatened flora and fauna	An Unexpected Species Finds Protocol will be prepared to detail measures to be undertaken if threatened flora and fauna not previously recorded on site are detected during clearing or construction activities.	Section 5.6.4; Section 6.6; Appendix C	An Unexpected Species Finds Protocol is provided in Appendix C (Section C1.5), with the stop-work, demarcation, assessment, notification and recommencement pathway summarised in Sections 5.6.4 and 6.6. CPHR will be notified of any unexpected find regardless of whether an impact is considered likely.
B06	Impacts on threatened flora	A pre-clearing survey will confirm all Black Gum and Capertee Stringybark trees that will be removed. Visual markings will be employed prior to any clearing to identify Black Gum and Capertee Stringybark trees that will be removed and retained. Tree protection measures are to be installed and maintained and may include establishment of no-go zones and other practicable measures from AS 4970-2025 – <i>Protection of Trees in Development Sites</i> throughout construction.	Section 5.4.6; Section 5.1.1; Section 5.4.1; Appendix A	Section 5.4.6 requires pre-clearing surveys to verify Black Gum and Capertee Stringybark individuals, marking of trees for removal or retention, and tree-protection measures consistent with AS 4970-2025. Clearing is tracked against the individual limits in Appendix 2 of the Infrastructure Approval through the Clearing Register

No.	Category	Environmental measure	Document Reference	How addressed
B07	Impacts on threatened fauna – SAIH entity	Any additional removal of native vegetation, including threatened Eucalypts, above the number of individuals identified in the project's BDAR will be avoided wherever possible. In the instance, where additional impact on trees or vegetation cannot be avoided, this will require survey to determine the number of trees, realign tree protection areas and demarcation, and identify the additional credits to be purchased and retired. The BMP will consider measures to work with local Landcare for seed collection from Black Gum and Capertee Stringybark trees to be grown for local restoration projects.	Section 5.6.5; Section 5.4.2; Section 5.6.1; Appendix C	(Section 5.4.1), with additional impacts requiring further assessment and offset approval before clearing. Seed collection with local Landcare groups is being considered, subject to licensing within the Gardens of Stone SCA.
		Piling for structure foundations within 80 m of the rock outcrop will be conducted outside the breeding period for the Large-Eared Pied Bat (November to January), wherever possible, within the required work program. Biodiversity exclusion zones including a minimum 10 m buffer around the rock outcrop will be established. The boundary this is to be delineated using a method that does not restrict access for microbats to potential habitat. Pre-clearing targeted surveys by a qualified ecologist will be conducted of the rocky outcrop to confirm the presence/ absence of active roosts prior to construction. Weekly inspections of potential breeding habitat within the rocky outcrop will be conducted by an Environment Officer during construction where this includes the breeding period (November - January). Re-routing of light vehicles will be undertaken to avoid the adjacent access track during the breeding season, if any microbats are recorded in pre-clearance or weekly inspections.		Section 5.6.5 and management measures BD14 to BD16 require pre-works inspection of the rocky overhang by a qualified ecologist, a 10 m exclusion zone fenced so as not to restrict microbat access, and piling within 80 m undertaken outside the November to January breeding period wherever practicable. Weekly inspections apply where works occur during the breeding period, with light vehicle re-routing if microbats are recorded, and lower-impact piling methods will be considered during detailed design Where breeding-season piling is proposed, the timing and methodology must be justified and documented in the relevant construction methodology or EWMS before works commence.

No.	Category	Environmental measure	Document Reference	How addressed
		Alternative lower impact piling methods and foundation designs will be considered during detailed design, subject to geotechnical constraints. This will consider the use of smaller drill rigs and methods of piling with lower noise and vibration impact.		
B08	Fauna management	A Fauna Handling and Rescue Procedure for the management of fauna and habitats will be included in the BMP. These will include: – a procedure for the felling of hollow-bearing trees to prevent or minimise mortality of fauna, and the salvage of hollows and logs where practicable – supervision of hollow-bearing tree removal and salvage by a qualified ecologist – management of any trenches or drill sites to prevent fauna from becoming trapped or injured.	Section 5.6.2; Section 5.6.3; Section 5.4.5; Appendix C	A Fauna Handling and Rescue Procedure is provided at Appendix C (management measure BD12). Appendix A requires hollow-bearing trees to be felled individually using controlled lowering under Project Ecologist supervision, agitated before felling, inspected after felling and left in place for 24 hours. Hollow, log and debris salvage is addressed in Section 5.4.5, and trench and drill site entrapment controls in Section 5.6.3.
B09	Pre-clearing surveys	Pre-clearing surveys will be undertaken prior to construction by a suitably qualified ecologist. The surveys and inspections, and any subsequent relocation of species, will be undertaken in accordance with the BMP. Specific surveys include: – surveys for roosting microbats or occupied nests for any man-made structures to be removed – searches for nests in vegetation to be removed – identification of fauna refuge sites potentially requiring fauna management during removal, including woody debris as well as human made material such as metal sheets.	Section 5.6.1; Section 5.4; Appendix A Appendix C	Section 5.6.1 and Appendix C require pre-clearing fauna surveys by a qualified ecologist no more than 48 hours prior to clearing or ground disturbance, covering nests, hollows, roosting birds and arboreal mammals, and fauna refugia including fallen timber, bark, rock piles, burrows and artificial debris (Appendix A, Section A1.5). Fauna encountered will be relocated under the Fauna Handling and Rescue Procedure (Appendix C).
B10	Post-clearing report	A post-clearing report will be prepared documenting all animals that are handled or managed within the site during vegetation clearing.	Section 6.3.2.3; Section 5.4.5;	Section 6.3.2.3 requires the Project Ecologist to prepare a Post-clearing Report documenting the area cleared, threatened

No.	Category	Environmental measure	Document Reference	How addressed
		Data to be recorded includes: – date and time of the fauna interaction or sighting and details of the observer – species (if known) or a photograph number of individuals recorded – adult/juvenile – condition of the animal (living/dead/injured/sick) – management action undertaken (e.g. captured, handled, taken to vet) – results of any management actions (e.g. released, placed in a nest box, euthanised, placed with carer). The post-clearing report is also to include and maintain an inventory of hollows and fallen timber that have been salvaged and relocated.	Section 5.7; Appendix C	flora and hollow-bearing trees removed, habitat resources salvaged and relocated, and fauna affected. Fauna details are recorded in the Fauna Handling and Rescue Register (Appendix C, Section 6.3.2.7) and salvaged hollows and timber in the Salvage Register and Table A.5.
B11	Fauna habitat strategy	The BMP will include a Nest Box Strategy for tree hollows impacted during the clearing of vegetation, developed in consultation with NPWS. The strategy would include (at a minimum): – reuse of hollows, where appropriate – identification of target species that best benefit from installation of nest boxes – identification of alternative methods of replacing or creating hollows, cavity sizes – the number required when assessed against retained hollows – monitoring	Section 5.7; Section 6.2; Section 6.3.2.5; Appendix D	A Nest Box Strategy prepared in consultation with CPHR and NPWS is provided at Appendix D and summarised in Section 5.7. It applies a tiered replacement hollow program (retention, salvage and re-mounting, carved hollows, then nest boxes), with target species, hollow classes, replacement ratios and cavity dimensions in Tables D.1 and D.2 and Section D4.2, and monitoring and adaptive management in Sections D4.3 to D4.5 and Table 6-3. Temporary nest boxes may be used for fauna relocation under Appendix C.

No.	Category	Environmental measure	Document Reference	How addressed
		the use of nest boxes as an immediate measure (i.e. for rescue and relocation of fauna during clearing).		
B12	Rehabilitation of vegetation subject to temporary disturbance	A Rehabilitation Management Plan (RMP) will be prepared to guide rehabilitation planning, implementation, monitoring and maintenance of the following disturbed areas within the construction footprint: - construction compounds and laydown areas - brake and winch areas - areas of the easement where vegetation is allowed to regrow.	Section 5.12; Section 6.2.4	Section 5.12 requires a standalone Rehabilitation Management Plan covering disturbed areas within the construction footprint, together with a Rehabilitation Management Plan - State Conservation Area under Condition B54, both prepared within six months of the commencement of construction. Rehabilitation monitoring and performance requirements are provided in Sections 6.2.3 and 6.2.4 and Table 6-3.
B13	Pathogen spread and establishment	All machinery entering the site will be appropriately washed down to be vegetation-and-soil free prior to work on site, to prevent the potential spread of disease in accordance with the Protocols to protect priority biodiversity areas in NSW (DPIE 2020d). Protocols to prevent introduction or spread of chytrid fungus will be included in the BMP and implemented following the Hygiene guidelines for wildlife (DPIE 2020d).	Section 5.11.2; Appendix E	Section 5.11.2 and Appendix E require all vehicles and machinery to arrive clean and free of soil and plant material, with a Hygiene Inspection Form completed before site entry and wash-down where standards are not met (Appendix E, Section E3). Chytrid controls, including boot-wash facilities, frog habitat exclusion zones, restrictions on water transfer and approved disinfectants, are provided in Section E5, with Phytophthora and Myrtle Rust controls in Section E6.
B14	Spread of weeds	Declared priority weeds will be managed according to requirements of the NSW Biosecurity Act 2015. Soil material and stripped groundcover vegetation with the potential to contain priority weeds will not be removed from the project footprint. Soil disturbance would be avoided as much as	Section 5.11.1; Section 6.2; Appendix E	A Biosecurity Management Plan is provided at Appendix E and summarised in Section 5.11.1, with declared priority weeds managed under the Biosecurity Act 2015. A pre-construction weed assessment

No.	Category	Environmental measure	Document Reference	How addressed
		possible to minimise the potential for spreading weeds. Declared priority weeds will be managed according to requirements of the Biosecurity Act 2015. The BMP will include a Biosecurity Management Plan to outline measures for managing declared priority weeds during construction. Weed control strategy during the operational stage of the project will be guided by existing Transgrid operational weed management procedures. During maintenance activities, general biosecurity duty obligations will be implemented as per existing Transgrid procedures. Biosecurity risks within the works footprint, such as weeds, will also be assessed and control measures implemented, as required, to manage existing or emerging issues.		establishes baseline distribution, with quarterly monitoring, event-based inspections and targeted treatment under the response framework in Table E.2. Disturbed vegetation and soil will not be removed from site, and operational weed management will follow Transgrid's easement maintenance procedures.
B15	Habitat connectivity	A Habitat Connectivity Strategy will be prepared for all affected threatened fauna species with a focus on threatened species including Squirrel Glider and other arboreal species that rely predominately on mature trees and canopy to move through the landscape. The strategy will: • identify measures to provide equal or improved connectivity than is provided by the current maintained easement • include designated exclusion zones and tree retention as well as partial clearance zones as a first priority before other measures, including opportunities for revegetating to retain vegetation associated with creek lines with vegetation of an appropriate height within the Gardens of Stone SCA and/or considering the feasibility of installing crossing structures. This would include: – Modelling of existing and post construction glider crossing opportunities. –	Section 5.5; Section 4.2.3; Section 6.2; Section 6.3.2.6; Appendix B	A Habitat Connectivity Strategy is provided at Appendix B and summarised in Section 5.5, with connectivity context in Section 4.2.3. It prioritises exclusion zones, tree retention and partial clearance zones, with supplementary ground-based and arboreal structures (including glider poles) where these are insufficient. Glide-feasibility modelling and field validation identified nine potential connectivity pathways, with structures installed within three months of loss of a pathway and monitoring and adaptive management provided in Appendix B, Sections B7 and B8.

No.	Category	Environmental measure	Document Reference	How addressed
		– Assessment of fauna species recorded or considered likely to occur and review of suitable crossing structures and their effectiveness for these particular species. – Assessment of projected line clearance requirements and opportunities to install connectivity structures below the transmission line focussing on riparian areas where topography allows greater clearance. The Connectivity Strategy will be implemented together with Vegetation Clearance Requirements for the maintenance and operation of the transmission line.		
B16	Injury or mortality from transmission line collision, entanglement, or electrocution	Use of fauna deterrent devices, consisting of the flapper variety, will be used within areas of open habitat along the Coxs River, to minimise impacts on the threatened bird fauna and bat species, such as raptors which includes the White-bellied Sea Eagle. The positioning and the deterrent model will be developed as part of the habitat connectivity strategy.	Section 5.6.7	Section 5.6.7 and management measure BD15 require a Conductor Line Marking Plan identifying high-risk spans, device type, spacing and installation timing, with flapper-type deterrent devices installed as a minimum in open habitat along the Coxs River. The Plan will be finalised following detailed design and consultation with CPHR before conductor stringing, with devices installed prior to energisation and triggers provided in Table 5-1.
B17	Removal of riparian vegetation around Coxs River	Following construction, consider initiatives to improve riparian zones for aquatic biota, such as revegetation, in consultation with DPIRD-Fisheries and WaterNSW (for flooding perspective) and other relevant stakeholders. Where feasible and reasonable initiatives exist, they are to be implemented during post-construction site restoration. .	Section 5.9; Rehabilitation Management Plan	Section 5.9.2 requires opportunities to improve riparian condition for aquatic biota to be considered post-construction in consultation with DPIRD-Fisheries, WaterNSW and other stakeholders, with feasible initiatives delivered through the applicable Rehabilitation Management Plan. Measures may include riparian

No.	Category	Environmental measure	Document Reference	How addressed
B18	Instream works in minimal key fish habitat of watercourses	Construction activities occurring in or adjacent to watercourses providing key fish habitat, including Class 1 (major) 'Coxs River' to Class 3 (minimal) fish habitat 'Unnamed tributaries of Wangcol Creek (a) and (c)', are to minimise any additional restriction to fish passage from current conditions and be undertaken in accordance with: – the Policy and guidelines for fish habitat conservation and management (DPI 2013) – the Controlled activities – Guidelines for watercourse crossings on waterfront land (DPE 2022b).	Section 5.9.3	revegetation, groundcover re-establishment and bank stabilisation. Section 5.9.3 and management measure BD19 require works in or adjacent to key fish habitat to be undertaken in accordance with DPI (2013) and DPE (2022b), minimising additional restriction to fish passage and avoiding unnecessary disturbance to bed, banks and instream habitat. No instream works are proposed within the Coxs River (Section 3.2.4).
B19	Spread of invasive fish species	Any invasive fish will not be discharged to a natural watercourse as required under the <i>Fisheries Management Act 1994</i> and <i>Biosecurity Act 2015</i> .	Section 5.9.4 Appendix E	Section 5.9.4 and management measure BD30 prohibit the discharge or entry of invasive fish species to natural waterways, consistent with the Fisheries Management Act 1994 and Biosecurity Act 2015, supported by the hygiene and water transfer controls in Appendix E.
B20	Surface water dewatering at culvert crossings	Consult with DPIRD on the management of aquatic biota for any proposed dewatering of the Coxs River oxbow for construction of the culvert crossing, and any proposed discharge of surface water to/ from waterways.	Section 5.9.5	Section 5.9.5 and management measures BD21 and BD31 require consultation with DPIRD Fisheries and other relevant state bodies on aquatic-biota management before any dewatering of the Coxs River oxbow or associated waterbodies. Consultation will be coordinated by the Environmental Business Partner (BP) once the

No.	Category	Environmental measure	Document Reference	How addressed
B21	Threatened fauna species – Purple Copper Butterfly	Prior to the operational phase, an environmental assessment will be prepared that considers up-to- date records of the NSW BioNet data for the Purple Copper Butterfly. Transgrid will implement its established procedures for working in areas with Purple Copper Butterfly presence or potential.	Section 5.6.6; Section 5.12	methodology, location, extent and duration are confirmed, with resulting requirements incorporated into the relevant EWMS and water-management documentation before dewatering commences. Section 5.6.6 requires an updated environmental assessment prior to operational activities using the most recent BioNet records for the species and its larval host plant. Where new records or potential habitat are identified, NPWS and CPHR will be consulted and Transgrid's protocols applied, including briefings, targeted Bursaria checks, no-disturbance buffers and the Unexpected Species Finds Protocol. Bursaria spinosa subsp. lasiophylla will be included in easement rehabilitation (Section 5.12).
NV1	Construction noise and vibration management	A Construction Noise and Vibration Management Plan (CNVMP) will be developed in consultation with NSW EPA and implemented as part of the CEMP. The CNVMP will generally follow the approach outlined in the ICNG and include: – identification of sensitive receivers, including sensitive, threatened fauna and their nearby habitats in consultation with a qualified ecologist, and heritage structures (i.e. Wallerawang Rail Bridges over Coxs River (SHR #01064), the St John the Evangelist Church (SHR #01702, LEP#1112), Braemai (LEP #1193)) and underground utilities including the Fish River Water Supply Scheme	Construction Noise and Vibration Management Plan; Section 4.2; Section 5.13 Section 5.6.5; Section 6.2; Section 6.7	Section 5.13 provides the biodiversity-related noise, vibration and lighting controls, implemented through the Project's Construction Noise and Vibration Management Plan with Project Ecologist input where threatened fauna or habitat may be affected. Measures include scheduling high-noise activities outside sensitive breeding or roosting periods and siting and maintaining plant to minimise noise. Species-specific controls for the Large-eared Pied Bat roost are in Section 5.6.5,

No.	Category	Environmental measure	Document Reference	How addressed
		– an updated construction noise and vibration assessment based on final construction staging, compound locations and details, selected equipment types and proposed OOHW periods – all potentially high noise and vibration generating activities associated with the construction of the project – standard and additional mitigation measures to manage identified impacts as required in accordance with the CNVG Construction Noise and Vibration Guideline (Roads), including safe working distances when working near heritage structures to avoid vibration damage and measures to protect underground utilities including the Fish River Water Supply Scheme – a monitoring program to assess performance against relevant noise and vibration criteria – arrangements for consultation with affected neighbours and sensitive receivers where exceedances are predicted of NMLs, including notification and complaint handling procedures – details of the process and actions to be taken in the event of non-compliance with noise and vibration criteria.		with additional controls applied through adaptive management (Section 6.7).
LU8	Land degradation	Vegetation clearance is to be minimised to prevent further degradation of land. Vegetation clearing methods will be determined based on vegetation.	Section 5.1.2; Section 5.2; Section 5.4; Appendix A	Section 5.1.2 requires clearing to be reduced to the smallest practicable footprint with vegetation outside the disturbance zone retained. Section 5.2 establishes exclusion, partial clearance and full clearance zones, and Appendix A specifies stratum-specific clearing methods for each

No.	Category	Environmental measure	Document Reference	How addressed
LU9	Land rehabilitation	Woody material from vegetation clearing that is weed free will be considered for beneficial reuse as part of rehabilitation works.	Section 5.4.5; Section 5.12; Appendix A; Appendix E	category in Table A.2, with additional minimisation measures within the Gardens of Stone SCA (Section A1.6). Section 5.4.5 requires timber removed during clearing to be retained for re-use in habitat restoration, with placement determined by the Project Ecologist having regard to habitat suitability, connectivity, bushfire risk and access. Weed-infested material is identified before Stage 1 clearing and segregated under Appendices A and E, and will not be relocated to retained habitat unless assessed as presenting no weed risk. Reuse during rehabilitation is addressed in Section 5.12.
LU10	Land rehabilitation	Topsoil would be scraped off, stockpiled separately for possible reuse in resurfacing and rehabilitation at end of the construction work.	Section 5.8; Section 5.12; Soil and Water Management Plan; Rehabilitation Management Plan	Section 5.8 requires topsoil to be stripped separately from subsoil and retained for reuse during rehabilitation, stored within approved disturbance areas away from drainage lines, riparian buffers and exclusion zones, and managed to minimise compaction, erosion and weed establishment. Long-term stockpiles are inspected monthly and after significant rainfall, with site-specific requirements documented in the relevant EWMS, Soil and Water Management Plan and Rehabilitation Management Plan.

2.2.2.1 Application of SMART principles

In accordance with Revised Mitigation Measure B02, the management measures contained in this BMP have been developed using SMART principles. For the purposes of this BMP, SMART means:

- **Specific:** each measure identifies the biodiversity value or risk being managed, the required action and, where relevant, the location or activity to which the measure applies;
- **Measurable:** implementation and effectiveness can be assessed using defined limits, quantities, inspection requirements, monitoring results, performance indicators, trigger levels or completion records;
- **Achievable:** measures are capable of being implemented using available construction methods, suitably qualified personnel, established project systems and applicable environmental controls;
- **Realistic:** measures are proportionate to the biodiversity risk, site conditions, construction activities, regulatory requirements and practical constraints of the Project; and
- **Timebound:** measures identify when an action must occur, including before clearing or construction, during specified activities, at defined monitoring frequencies, following a trigger event or within a specified completion or reporting timeframe.

The SMART principles have been incorporated into the implementation, monitoring and evaluation framework for this BMP. Mitigation measures identify the required action and responsible personnel, the timing, frequency and required records for monitoring and implementation.

The SMART framework does not remove the need to comply with any more prescriptive requirement of the Infrastructure Approval, EPBC Approval or Revised Mitigation Measures. Where an approval or mitigation measure establishes a specific requirement, limit, frequency or timeframe, that requirement applies.

2.2.3 EPBC Act Approval

The Project was determined to be a controlled action under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and was assessed under the Commonwealth–NSW bilateral assessment agreement. The Project was subsequently approved under EPBC 2024/09855 on 9 July 2026 for the controlling provision relating to listed threatened species and communities under sections 18 and 18A of the EPBC Act.

The Project will be implemented in accordance with the conditions of EPBC Approval 2024/09855, in addition to the requirements of the NSW Infrastructure Approval and the Revised Mitigation Measures. Table 2-3 identifies the EPBC Approval conditions relevant to biodiversity management and the sections of this BMP and project compliance records through which the requirements will be addressed.

Where requirements under the EPBC Approval and NSW Infrastructure Approval overlap, the applicable management measures will be implemented to satisfy both approval frameworks.

Table 2-3 EPBC Approval 2024/09855 compliance matrix

No.	Requirement Category	EPBC Approval Requirement	Document Reference	How addressed
1	Avoidance and Mitigation Measures	The approval holder must undertake clearing and construction activities in accordance with conditions A2(c) and A2(d) of the NSW Approval to the extent that they relate to protected matters.	Table 2.1; Section 5.1; Section 5.4; Section 5.6; Appendix A; Appendix C	Condition A2 is addressed in Table 2-1. The mitigation hierarchy (Section 5.1), Vegetation Clearing Procedure (Appendix A), clearing controls (Section 5.4) and wildlife protection measures (Section 5.6 and Appendix C) ensure clearing affecting protected matters remains within the approved footprint and clearing extents.
2	Avoidance and Mitigation Measures	The approval holder must comply with conditions B20 and B24 of the NSW Approval, to the extent that they relate to protected matters.	Table 2.1; Sections 3–6; Appendices A–E	This BMP satisfies Condition B24 and addresses each matter required under Conditions B20 and B24, as set out in Table 2-1. Clearing is managed under Appendix A and tracked against the limits in Appendix 2 of the Infrastructure Approval through the Clearing Register (Section 5.4.1), with management measures in Section 5.14 and Appendices A to E minimising impacts on protected matters.
3	Biodiversity Offsets	The approval holder must comply with conditions, B21, B22, and B23 of the NSW Approval, to the extent that they relate to protected matters.	Table 2.1; biodiversity offset documentation	Conditions B21 to B23 are addressed in Table 2-1 and management measure BD3. Activities impacting biodiversity values requiring offset will not commence until the applicable credits have been retired and evidence provided to the AG DCCEEW.
4	Final Layout Plans	The approval holder must submit the detailed final layout plans as required by condition C11 of the NSW Approval to the department prior to commencement of construction.	Table 2.1; project compliance procedures	Detailed final layout plans will be prepared under Condition C11 (Table 2-1) and submitted to the department before construction commences, through the Project compliance procedures.
5	Modifications to State or Territory Approval	The approval holder must notify the department in writing of any proposed change to the NSW Approval that may relate to protected matters within 5 business days of formally proposing such a change	Section 6.3; Section 6.4; project change-	Proposed changes affecting protected matters are identified through the change-management and document-control procedures in Sections 6.3 and 6.8, with written notification

No.	Requirement Category	EPBC Approval Requirement	Document Reference	How addressed
		and within 10 business days of becoming aware of any proposed change.	management procedures	provided to the department within the required timeframes and records retained under Section 6.3.1.
6	Modifications to State or Territory Approval	The approval holder must notify the department in writing of any change to the NSW Approval conditions that may relate to protected matters, within 5 business days of such a change to conditions coming into effect. Such notification must include a copy of the changed NSW Approval conditions showing what changes have been made.	Section 6.3; Section 6.4; project change-management procedures	Condition changes are tracked through the change-management and document-control procedures in Sections 6.3 and 6.8. Written notification including a copy of the changed conditions showing the changes made will be provided within the required timeframe, and this BMP revised where needed under Section 6.8.
7	Commencement of the Action	The approval holder must notify the department electronically of the date of commencement of the Action, within 5 business days following commencement of the Action.	Project compliance procedures	The commencement date will be recorded through the Project compliance procedures and notified electronically within the required timeframe, with the submission receipt retained under Section 6.3.1.
8	Commencement of the Action	The approval holder must not commence the Action later than 5 years after the date of this approval decision.	Project compliance procedures	EPBC Approval 2024/09855 was granted on 9 July 2026 (Section 2.2.3). Commencement will be tracked through the Project compliance procedures to confirm it occurs within five years of that date.
9	Compliance Records	The approval holder must maintain accurate and complete compliance records and document the procedure for recording and storing compliance records.	Section 6.2; Section 6.3; project document-control procedures	Section 6.3.1 identifies the records, registers, checklists and reports required under this BMP, including pre-clearing checklists, the Clearing Register, Clearing Permits, inspection records, fauna handling records, incident records and monitoring reports. These are prepared at the frequencies in Tables 6-2 and 6-3 and Appendices A to E and retained under the Project document-control procedures.

No.	Requirement Category	EPBC Approval Requirement	Document Reference	How addressed
10	Compliance Records	If the department makes a request in writing, the approval holder must provide electronic copies of compliance records to the department within the timeframe specified in the request.	Section 6.3; project compliance procedures	Records maintained under Section 6.3.1 are retrievable through the document-control system and will be provided electronically within the timeframe specified in any written request, with correspondence and receipts retained.
11	Monitoring and Spatial Data	The approval holder must ensure that any monitoring data, surveys, maps, and other spatial and metadata required under the conditions of this approval are prepared in accordance with the <i>Guidelines for biological survey and mapped data</i> , Commonwealth of Australia 2018, or as otherwise specified by the Minister in writing.	Section 6.2; Section 6.3; Appendices A–E	Monitoring and survey requirements are specified in Section 6.2 and Tables 6-2 and 6-3, with methods and records in Appendices A to E. Data, surveys, maps and metadata will be prepared in accordance with the applicable Commonwealth guideline, with GIS quality-assurance records retained under Section 6.3.2.8.
12	Monitoring and Spatial Data	The approval holder must ensure that any monitoring data, surveys, maps, and other spatial and metadata required under the conditions of this approval are prepared in accordance with the <i>Guide to providing maps and boundary data for EPBC Act projects</i> , Commonwealth of Australia 2021, or as otherwise specified by the Minister in writing.	Section 6.2; Section 6.3; Appendix A; project spatial-data procedures	Maps, boundary data, shapefiles, projection files and metadata will be prepared in accordance with the applicable Commonwealth guide through the Project spatial-data procedures (Section 6.3.2.8). Approved clearing mapping is maintained under Appendix A and verified through the Clearing Register and Post-clearing Report (Sections 5.4.1 and 6.3.2.3).
13	Monitoring and Spatial Data Submission	The approval holder must submit all monitoring data, surveys, maps, other spatial and metadata and all species occurrence record data (sightings and evidence of presence) electronically to the department within 20 business days of the next anniversary of the date of this approval decision except where otherwise specified in a plan.	Section 6.2; Section 6.3; Appendices A–E	Monitoring data, surveys, maps, spatial data, metadata and species occurrence records generated under this BMP and Appendices A to E will be consolidated under Sections 6.2 and 6.3 and submitted electronically within the required timeframe (Section 6.3.2.8), with receipts and anniversary-date tracking records retained.

No.	Requirement Category	EPBC Approval Requirement	Document Reference	How addressed
14	Annual Compliance Reporting	The approval holder must prepare a compliance report for each Annual Compliance Report period (ACR period).	Section 6.3; project compliance-reporting procedures	Section 6.3.2.8 requires a compliance report for each ACR period, prepared through the Project compliance-reporting procedures using the records, registers and reports described in Sections 6.3.1 and 6.3.2.
15	Annual Compliance Report Contents	The approval holder must ensure each compliance report includes:	Section 6.3; project compliance-reporting procedures	Content requirements are addressed in Section 6.3.2.8 and verified through a content checklist applied before finalisation and publication.
15(a)	Compliance and Non-compliance Details	accurate and complete details of compliance and any non-compliance with:	Section 6.3; Section 6.4; Section 6.5	Compliance and non-compliance details are drawn from the compliance register and the non-compliance and incident records maintained under Sections 6.4 and 6.5, and reported under Section 6.3.2.8.
15(a)(i)	NSW Approval Conditions	each condition imposed under NSW Approval, if a condition attached to this approval decision requires compliance with that NSW Approval condition,	Table 2.1; Section 6.3; project compliance procedures	The Infrastructure Approval conditions incorporated by EPBC Conditions 1 to 3 (A2, B20, B21, B22, B23 and B24) are identified in Table 2-1 with the BMP sections addressing each, and reported on under Section 6.3.2.8.
15(a)(ii)	EPBC Approval Conditions	each condition attached to this approval decision, and	Table 2.3; Section 6.3	Each EPBC Approval condition is identified in Table 2-3 with the relevant BMP sections and verification methods, and reported on under Section 6.3.2.8.
15(a)(iii)	Plan Commitments	all commitments made in each plan,	Sections 5–6; Appendices A–E; Section 6.3	BMP commitments are consolidated in Table 5-2 and Appendices A to E, verified through the monitoring and record requirements in Section 6.2 and Tables 6-2 and 6-3, and reported under Section 6.3.2.8.
15(b)	Schedule of Plans	a schedule of all plans in effect in relation to these conditions during the ACR period,	Section 6.3; project document-control procedures	Plan revision requirements are provided in Section 6.8 and document control in Section 6.3.1. A schedule of plans in effect

No.	Requirement Category	EPBC Approval Requirement	Document Reference	How addressed
				during each ACR period will be maintained and included in the compliance report under Section 6.3.2.8.
15(c)	Plan Implementation	accurate and complete details of how each plan was implemented during the ACR period, and	Section 6.2; Section 6.3; Sections 5–6; Appendices A–E	Implementation is evidenced through the records, registers and checklists in Section 6.3.1 and the monitoring and inspection requirements in Section 6.2 and Tables 6-2 and 6-3, and reported under Section 6.3.2.8.
15(d)	Incidents	if any incident occurred, accurate and complete details of each incident.	Section 6.3; Section 6.4; Section 6.5	Incident management and reporting requirements are provided in Section 6.5, with all incidents reported to Transgrid and entered into OMNIA within 24 hours. Incident details, investigation outcomes and corrective actions are reported under Section 6.3.2.8.
16	Annual Compliance Report Standard	The approval holder must ensure each compliance report is completed to the satisfaction of the Minister and is consistent with the <i>Annual Compliance Report Guidelines</i> , Commonwealth of Australia 2023.	Section 6.3; project compliance-reporting procedures	Compliance reports will be prepared under Section 6.3.2.8, including a guideline checklist, internal quality review and approval-holder endorsement prior to submission, to confirm consistency with the applicable Commonwealth guidelines.
17	Publication of Annual Compliance Information	The approval holder must, within 20 business days following the end of each ACR period, in a format that is easily accessible and downloadable, publish on the website:	Section 6.3; project compliance-reporting procedures	Section 6.3.2.8 requires the compliance report and clearing shapefile to be published on the Project website in an accessible and downloadable format within the required timeframe, consistent with Section 6.10.
17(a)	Publication of Compliance Report	each compliance report, and	Section 6.3	Each compliance report will be published on the Project website under Sections 6.3.2.8 and 6.10, with the publication date and web address recorded.
17(b)	Publication of Clearing Shapefile	a shapefile showing all clearing of protected matters, and their habitat, undertaken within the ACR period.	Section 5.4; Section 6.2; Section 6.3; Appendix A	Clearing is recorded in the Clearing Register and verified through post-clearing survey data and the Post-clearing Report (Sections 5.4.1 and 6.3.5). An annual shapefile of clearing of

No.	Requirement Category	EPBC Approval Requirement	Document Reference	How addressed
18	Sensitive Biodiversity Data	The approval holder must:	Section 6.3; project compliance-reporting and spatial-data procedures	protected matters will be prepared from these records and published under Section 6.3.2.8.
18(a)	Public Release of Sensitive Biodiversity Data	Exclude or redact sensitive biodiversity data from each compliance report and shapefile published on the website or otherwise provided to a member of the public.	Section 6.3; project compliance-reporting procedures	Section 6.3.2.8 requires sensitive biodiversity data to be excluded or redacted from public reports and shapefiles. A sensitive-data review is undertaken prior to publication, with both public and full versions retained under document control.
18(b)	Redacted Compliance Report	If sensitive biodiversity data is excluded or redacted from a version of a compliance report published or otherwise provided to a member of the public, submit the full compliance report to the department within 5 business days of its publication on the website and notify the department in writing what exclusions and redactions have been made in the version published on the website or otherwise provided to a member of the public.	Section 6.3; project compliance-reporting procedures	Where information is redacted, Section 6.3.2.8 requires the full report and details of the redactions to be provided to the department within the required timeframe, with notification, receipts and date records retained.
18(c)	Redacted Shapefile	If sensitive biodiversity data is excluded or redacted from a version of a shapefile published or otherwise provided to a member of the public, submit the full shapefile to the department within 5 business days of its publication on the website and notify the department in writing what exclusions and redactions have been made in the version published	Section 6.3; Appendix A; project spatial-data procedures	Where a published shapefile is redacted, the full shapefile and metadata and written notification of the redactions will be provided to the department within the required timeframe under Section 6.3.2.8. Underlying clearing spatial data is maintained under Appendix A and the Clearing Register.

No.	Requirement Category	EPBC Approval Requirement	Document Reference	How addressed
19	Publication Notification	on the website or otherwise provided to a member of the public. The approval holder must notify the department electronically, within 5 business days of each date of publication that the compliance report has been published on the website. In this notification, the approval holder must provide the department with the web address for where the compliance report and related shapefile are published on the website.	Section 6.3; project compliance-reporting procedures	Publication of each compliance report and related shapefile will be notified electronically within the required timeframe, including the web address, under Section 6.3.2.8, with publication dates and receipts retained.
20	Publication Retention	The approval holder must keep each compliance report and related shapefile published on the website from the first date which that compliance report must be published and until the expiry date of this approval.	Section 6.3; project compliance-reporting and document-retention procedures	Transgrid will maintain the Project website and keep published material current (Section 6.10). Compliance reports and shapefiles will be retained until the approval expiry date, with periodic verification under the procedures in Section 6.3.
21	Incident Notification	The approval holder must notify the department electronically, within 2 business days of becoming aware of any incident. The approval holder must specify in each notification:	Section 6.4; Section 6.5.2	Sections 6.5.1 and 6.5.2 require incidents to be reported to Transgrid immediately and entered into OMNIA within 24 hours, providing the mechanism for tracking notification timeframes. Electronic notification to the department will be made within the required timeframe (Section 6.5.2), with receipts and awareness-date records retained.
21(a)	Condition or Plan Commitment	any condition or commitment made in a plan which has not been, or may have not been, complied with,	Section 6.4; Section 6.5.2	Notifications will identify the EPBC approval condition or BMP commitment that has not been, or may not have been, complied with, based on the assessment undertaken under Sections 6.4 and 6.5.

No.	Requirement Category	EPBC Approval Requirement	Document Reference	How addressed
21(b)	Incident Description	a short description of the incident, and	Section 6.4; Section 6.5.2	Notifications prepared under Sections 6.5.2 and 6.3.2.8 will include a brief description of what occurred and why it is classified as an incident.
21(c)	Incident Location and Timing	the location (if applicable, including co-ordinates), date and time of the incident.	Section 6.4; Section 6.5.2; Appendix A	Notifications will record the date, time and location, including GPS coordinates where applicable (Sections 6.5.2 and 6.7.1), supported by approved clearing mapping (Appendix A), site plans, photographs and the Project Manager's Diary.
22	Detailed Incident Report	The approval holder must provide to the department in writing, within 12 business days of becoming aware of an incident, the details of that incident. The approval holder must specify:	Section 6.4; Section 6.5; Section 6.5.3	Section 6.5.3 requires a subsequent incident report to be provided to the department in writing within the required timeframe.
22(a)	Corrective Measures and Investigations	all corrective measures and investigations which the approval holder has already taken in respect of the incident,	Section 6.4; Section 6.5.3; Section 6.7	Investigations are undertaken under Section 6.5.4 using the ICAM methodology, with corrective actions identified, assigned and verified through the adaptive management process in Section 6.7.1 and documented in the incident report.
22(b)	Potential Impacts	the potential impacts of the incident,	Section 6.4; Section 6.5.3	The cause, extent and potential consequences of each incident will be investigated by the Project Ecologist, with the broader investigation and documentation coordinated by the Environmental BP, in accordance with Sections 6.5.4 and 6.7.1. The investigation will include a site inspection and assessment against the EPBC Approval and this BMP, with the findings documented in the incident report.
22(c)	Proposed Corrective Measures	the method and timing of any corrective measures that the approval holder proposes to undertake to address the incident, and	Section 6.4; Section 6.5; Section 6.7	Corrective actions are assigned a responsible person, completion timeframe and verification requirement under Section 6.7.1, with the proposed method and timing documented in the incident report.

No.	Requirement Category	EPBC Approval Requirement	Document Reference	How addressed
22(d)	Approval or Plan Revision	any variation of these conditions or revision of a plan that will be required to prevent recurrence of the incident and/or to address its consequences.	Section 6.4; Section 6.5; Section 6.7; document-control procedures	Section 6.7.1 requires approval, consultation and document-control implications to be reviewed before a corrective action is implemented, including whether BMP revision under Section 6.8 is required. Section 6.8 requires documents to be revised and submitted to the Planning Secretary to implement incident report findings.
23	Independent Audit	The approval holder must ensure that an independent audit of compliance with the conditions is conducted for every audit period.	Section 6.9.2; independent audit and project compliance procedures	Independent Audits will be undertaken under Section 6.9.2 and Conditions 23-31 of the EPBC Approval with audits scheduled and tracked through the Project compliance procedures and findings implemented as they relate to this BMP.
24	Independent Auditor Nomination	The approval holder must submit details of the proposed independent auditor and their qualifications to the department within 10 business days following the end of each audit period.	Section 6.9.2; independent audit and project compliance procedures	Proposed auditor details, qualifications and independence records will be submitted within the required timeframe.
25	Independent Audit Scope	The approval holder must ensure the scope of each independent audit is sufficient to determine the compliance status for each condition of approval, and each commitment made in each plan.	Section 6.9.2; independent audit procedures	Audit scope will cover each condition of the EPBC Approval, using the condition tables in Section 2.2.3 and the management measures in Table 5-2 as criteria. Audit intervals are provided in Sections 6.9.2.
26	Independent Audit Criteria	The approval holder must ensure the criteria for each independent audit and the undertaking of each independent audit are consistent with the Independent Audit and Audit Report Guidelines.	Section 6.9.2; independent audit procedures	Audits will be conducted in accordance with the applicable audit guidelines (Section 6.9.2), with criteria and methodology confirmed against a guideline checklist before the audit is undertaken.
27	Submission of Audit Report	The approval holder must submit an audit report to the department for written agreement from the department within 3 months following the end of	Section 6.9.2; independent audit procedures	Audit reports will be submitted for written agreement within the required timeframe, with receipts, audit-period end dates and correspondence retained under Section 6.3.

No.	Requirement Category	EPBC Approval Requirement	Document Reference	How addressed
		each audit period, or as otherwise directed by the Minister in writing.		
28	Audit Report Standard	The approval holder must ensure each audit report is completed to the satisfaction of the Minister and is consistent with the Independent Audit and Audit Report Guidelines to the extent that the Independent Audit and Audit Report Guidelines are consistent with these conditions.	Section 6.9.2; independent audit procedures	Each audit report is subject to quality-assurance review and a guideline checklist under Section 6.9 to confirm consistency with the applicable audit guidelines before submission for written agreement.
29	Publication of Audit Report	The approval holder must publish each audit report on the website, in a format that is easily accessible and downloadable, within 10 business days of the date the department agrees to that audit report in writing.	Section 6.9.2 and 6.10; independent audit procedures	Audit reports will be published on the Project website in an accessible, downloadable format within the required timeframe following written agreement, consistent with Sections 6.9.2 and 6.10, with publication dates recorded.
30	Audit Publication Notification	The approval holder must notify the department within 5 business days of the date the audit report is published on the website. In this notification, the approval holder must provide the department with the web address for where the audit report is published on the website.	Section 6.9.2 and 6.10; independent audit procedures	Publication of each audit report will be notified within the required timeframe, including the web address, under the procedures in Section 6.9.2, with notifications, receipts and publication dates retained under Section 6.3.
31	Audit Report Retention	The approval holder must keep each audit report published on the website from the first date which that audit report must be published and until the expiry date of this approval.	Section 6.9.2 and 6.10; project document-retention procedures	Transgrid will make Project documentation available and keep it current (Section 6.10). Audit reports will be retained on the website until the approval expiry date, with periodic verification under the procedures in Section 6.2.9.
32	Completion of the Action	Within 20 business days after the completion of the Action, and, in any event, at least 20 business days prior to the expiry date of this approval, the approval	Section 6.3; project completion and	Completion will be notified electronically within the required timeframe through the Project completion and compliance procedures. Completion data, including spatial data submitted

No.	Requirement Category	EPBC Approval Requirement	Document Reference	How addressed
33	Approval Expiry Notification	holder must notify the department electronically of the date of completion of the Action and provide completion data. The approval holder must submit any spatial data that comprises completion data as a shapefile.	compliance procedures	as a shapefile, will be compiled from the Clearing Register and Post-clearing Report (Sections 5.4.1 and 6.3.5) and prepared under Section 6.3.2.8.
		The approval holder must notify the department electronically at least 60, but not more than 70, business days prior to the expiry date of this approval, that the approval is due to expire.	Project completion and compliance procedures	The approval expiry date is recorded in the expiry-date register maintained under the Project completion and compliance procedures, with electronic notification provided within the required timeframe and receipts retained under Section 6.3.

3 Existing environment

This section describes the regional setting, landscape context, vegetation, habitat connectivity, ecological communities, and flora and fauna present within the Study Area, comprising the Project footprint and a 250-metre surrounding buffer. The details provided below are derived from the Mount Piper to Wallerawang Transmission Line Upgrade Technical Report 2 – Revised Biodiversity Development Assessment Report (GHD, 2025b) and Technical Report 3 – Aquatic Ecology Assessment (GHD, 2025c).

3.1 Regional and landscape context

This section describes the regional setting, landscape context, vegetation, habitat connectivity, ecological communities, terrestrial and aquatic habitat, and flora and fauna present within the Study Area, comprising the Project footprint and a 250-metre surrounding buffer. The information presented below is derived from Technical Report 2, the Revised Biodiversity Development Assessment Report (GHD, December 2025b), Technical Report 3, the Aquatic Ecology Assessment (GHD, 2025c), and other relevant environmental assessment documentation prepared for the Project.

3.1.1 Regional setting

The Project is located within the Central West region of New South Wales, approximately 14 kilometres north-west of the city of Lithgow, within the Lithgow City Council Local Government Area (LGA). The Project footprint is situated in proximity to several notable regional features, including:

- Castlereagh Highway to the north
- Mount Piper Power Station to the north-west
- Former Wallerawang Power Station site to the east
- Gardens of Stone SCA to the south and north-west.

3.1.2 Existing land uses

Land use within the Project footprint and buffer area is diverse and includes:

- energy generation at Mount Piper Power Station
- electricity transmission infrastructure between Mount Piper and Wallerawang substations
- mining operations associated with Ivanhoe Coal Mine and Springvale Coal Services
- agricultural land, predominantly livestock grazing
- state and local road infrastructure including Castlereagh Highway and Boulder Road
- rail infrastructure, comprising the active Main Western Rail Line and a disused rail corridor near Brays Lane
- These land uses contribute to a mosaic of modified and semi-natural landscapes across the Study Area.

3.1.3 Prescribed-impacts

The Revised BDAR assessed prescribed impacts in accordance with the Biodiversity Conservation Regulation 2017 and the Biodiversity Assessment Method. Prescribed impacts are impacts on biodiversity values that are additional to, or not directly associated with, native vegetation clearing and habitat loss.

Prescribed-impact features relevant to the Project include:

- rocky habitat features, including bushrock, rock crevices and the rocky overhang identified as potential Large-eared Pied Bat roosting habitat;

- habitat provided by human-made structures and other artificial fauna refuges;
- non-native vegetation that may provide foraging, shelter or movement habitat for fauna;
- habitat-connectivity and fauna-movement corridors, including habitat used by the Squirrel Glider and other arboreal fauna;
- waterways, riparian habitat, waterbodies and hydrological processes that support aquatic and terrestrial biodiversity values; and
- areas where construction traffic may create a risk of fauna vehicle strike.

The location and ecological context of the relevant prescribed-impact features are described in Section 3 and shown on the applicable biodiversity and environmental-constraint mapping.

3.1.4 *Uncertain impacts*

The Revised BDAR provides the primary assessment of known and reasonably foreseeable biodiversity impacts associated with the Project. However, uncertainty may remain where biodiversity values, habitat use or impact pathways cannot be fully confirmed until detailed design, pre-clearing surveys, construction or post-construction monitoring is completed.

Potential sources of uncertainty include:

- the presence of previously inaccessible or unsurveyed habitat;
- occupancy of hollows, nests, rocky habitat, or human-made structures at the time of construction;
- additional threatened flora, threatened fauna or habitat features identified during pre-clearing surveys;
- the final extent of vegetation retention within partial-clearance zones;
- the effectiveness of habitat-connectivity and replacement-hollow measures;
- changes in weed, pest or pathogen distribution resulting from construction disturbance; and
- biodiversity responses to rehabilitation and revegetation.

These matters will be managed through detailed design review, pre-clearing surveys, ecological supervision, the Unexpected Species Finds Protocol, monitoring, performance triggers, corrective action and adaptive management.

3.2 Vegetation and habitat types

3.2.1 *Bioregional and local habitat context*

The Project is located within the South Eastern Highlands bioregion and the Capertee Uplands subregion. Habitat condition and connectivity vary substantially across the Project footprint. Areas adjoining the Gardens of Stone SCA support extensive, intact forest and woodland habitat, while areas more distant from the SCA particularly in the south-east of the Project footprint are characterised by greater fragmentation and historical disturbance.

No significant wetlands occur within the Project footprint; however, ephemeral wetland features were recorded within the Wallerawang Power Station area along sections of the alignment.

3.2.2 *Native vegetation description*

Native vegetation within the Project footprint primarily comprises woodland and dry sclerophyll forest, shrubland and sedgeland, riparian woodland and wetland communities, and derived shrubland and grassland. Additional habitat values are provided by scattered paddock trees, planted vegetation, and areas of non-native vegetation.

Six Plant Community Types (PCTs) were mapped across 14 vegetation zones within the Study Area, with the following areas of predicted direct (and where applicable, indirect) impact:

- PCT 3369 – Central Tableland Ranges Peppermint-Gum Grassy Forest (6.95 ha direct impact)
- PCT 3385 – Southern Tableland Creekflat Swamp Woodland (10.55 ha direct impact; 1.08 ha indirect impact)
- PCT 3735 – Central Tableland Peppermint Shrub-Grass Forest (9.22 ha direct impact)
- PCT 3747 – Southern Tableland Western Hills Scribbly Gum Forest (22.97 ha direct impact)
- PCT 3749 – Western Blue Mountains Scribbly Gum Forest (2.99 ha direct impact)
- PCT 3932 – Central and Southern Tableland Swamp Meadow Complex (2.39 ha direct impact).

The Plant Community Types and threatened-species polygons identified in the Revised BDAR are shown in Figures 3.1-6. These figures provide the spatial context for the biodiversity values within the Project footprint and identify the locations of vegetation communities and threatened-species habitat that may be affected by the Project.

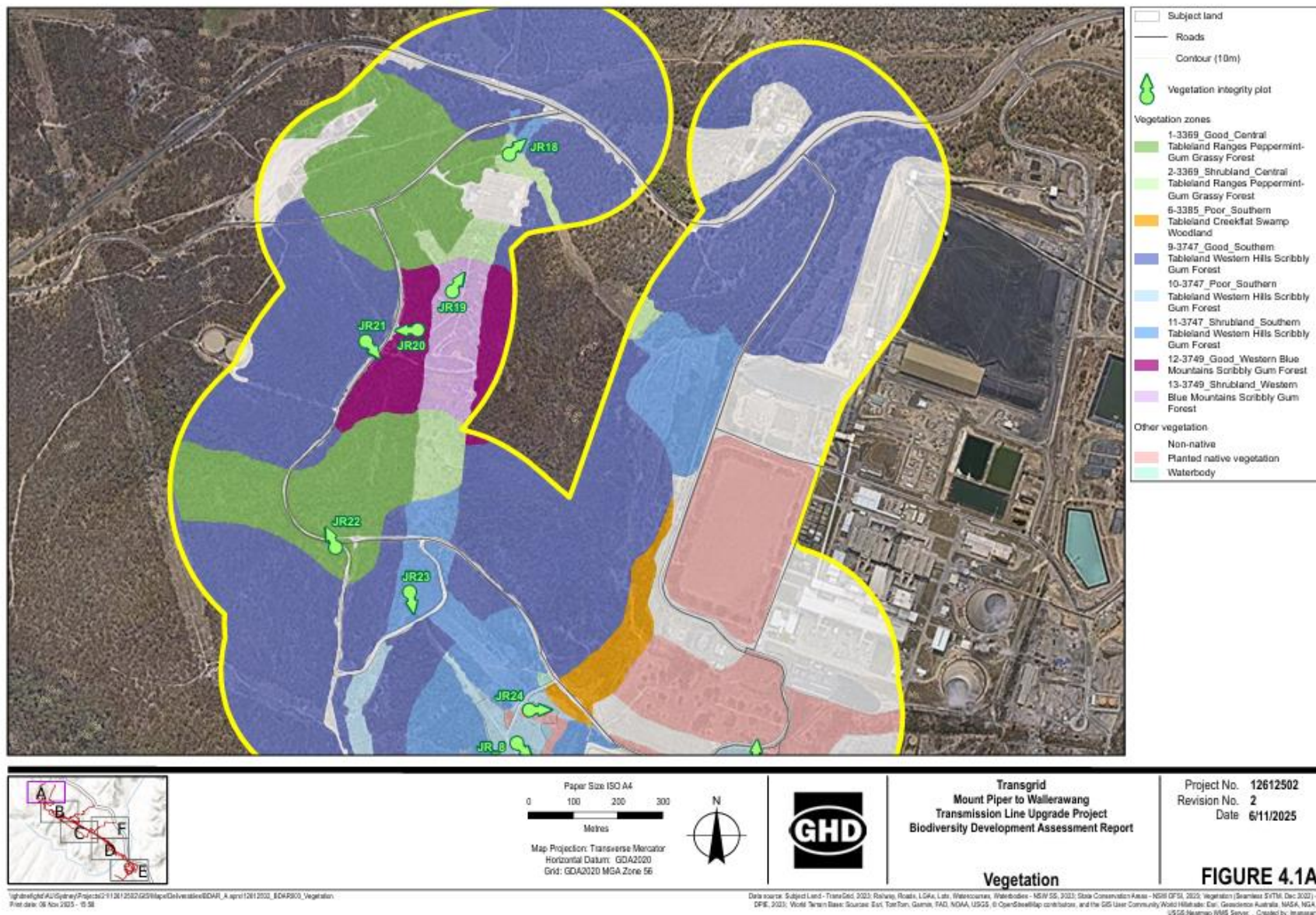


Figure 3-1 Plant Community Types and vegetation zones within the Project footprint

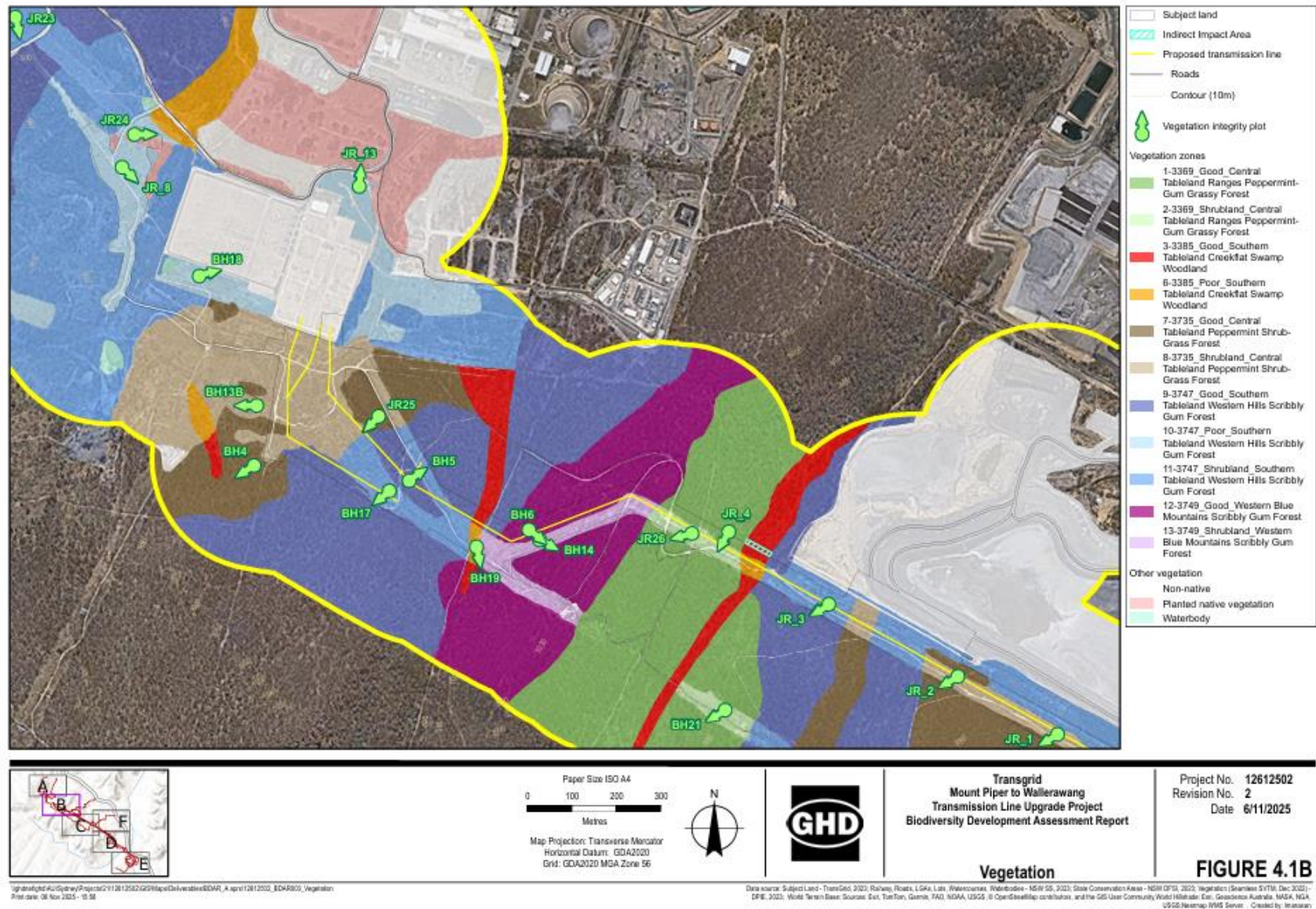


Figure 3-2 Plant Community Types and vegetation zones within the Project footprint

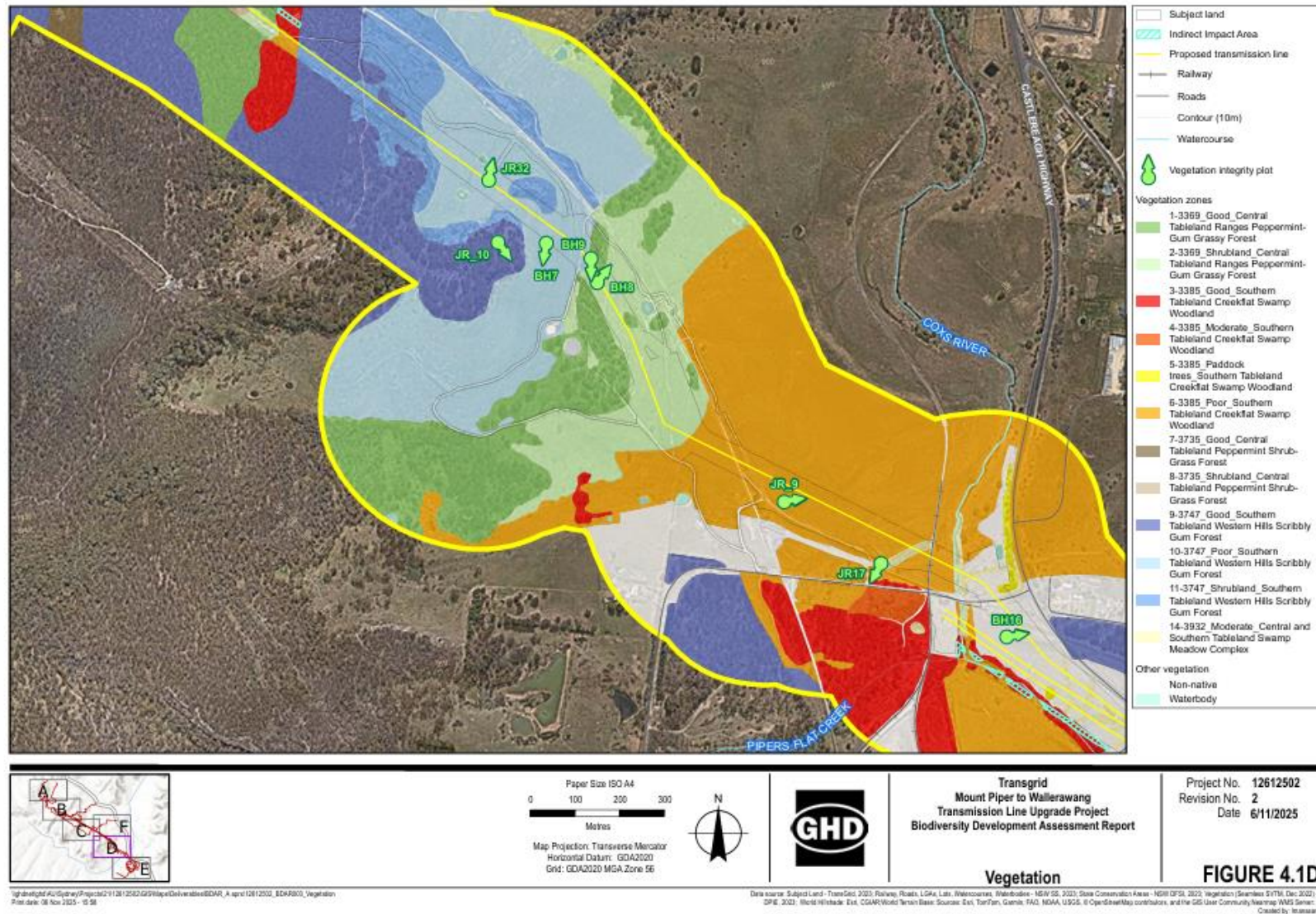


Figure 3-4 Plant Community Types and vegetation zones within the Project footprint

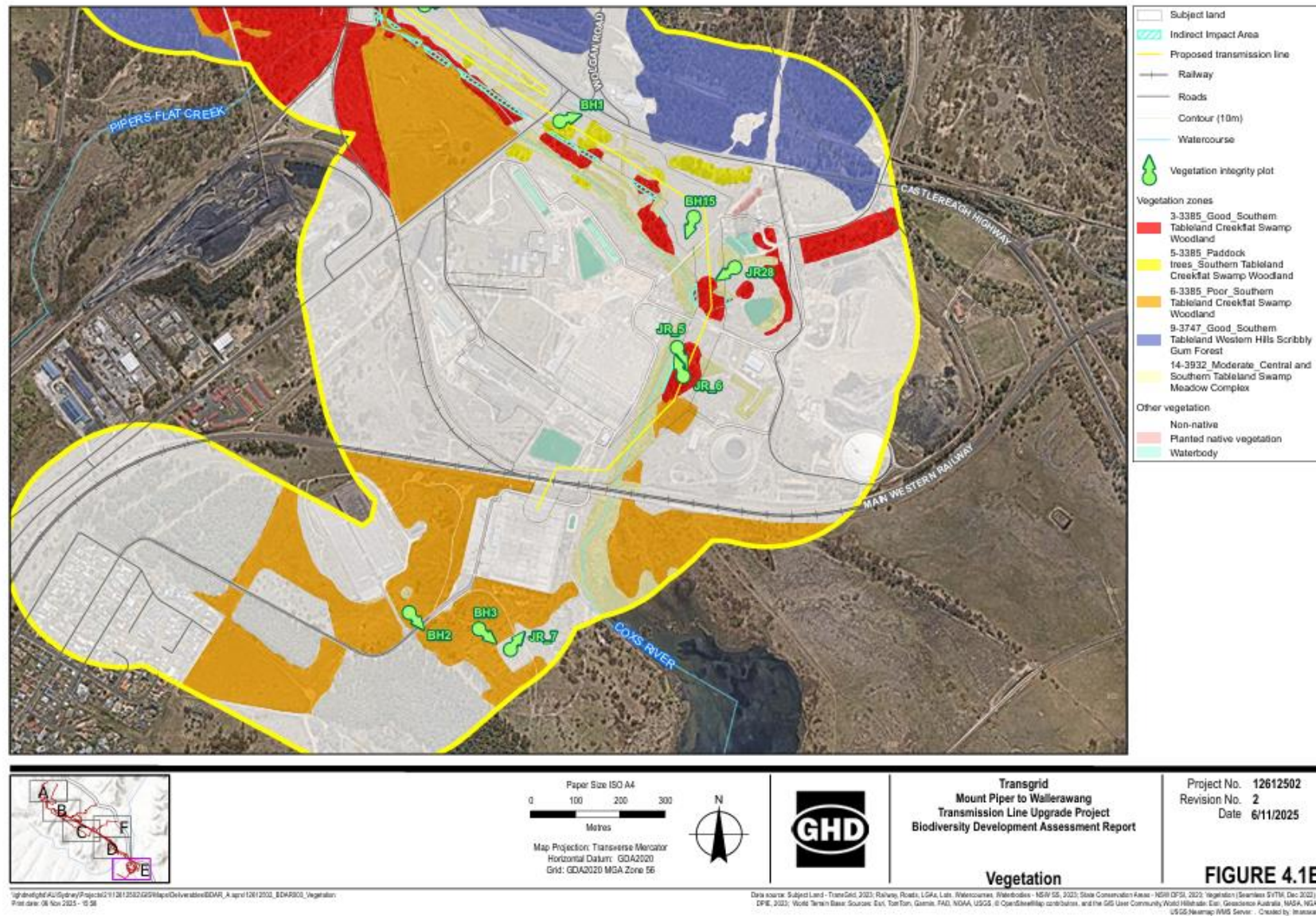


Figure 3-5 Plant Community Types and vegetation zones within the Project footprint

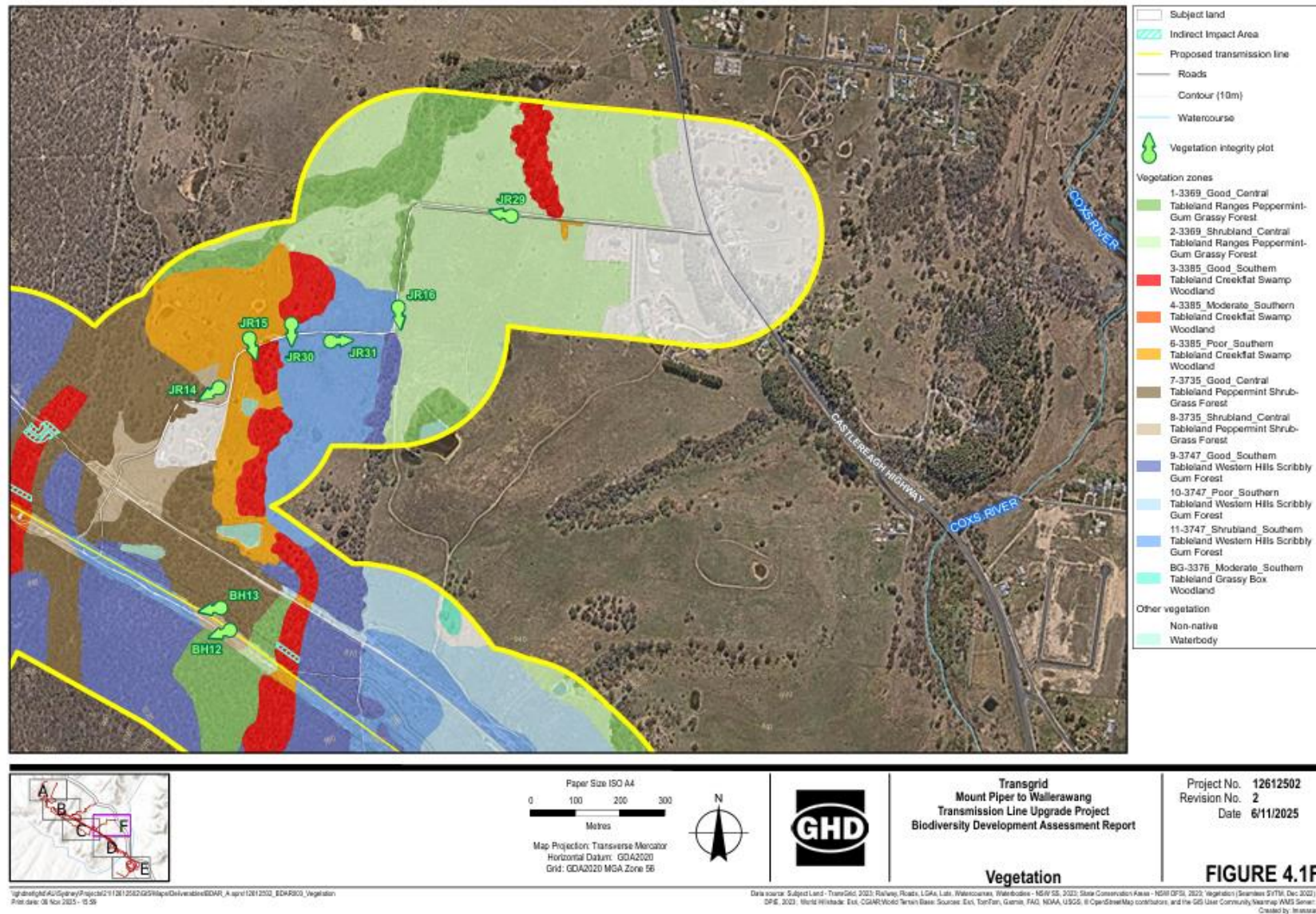


Figure 3-6 Plant Community Types and vegetation zones within the Project footprint

3.2.3 Habitat corridors and hollow-bearing trees

Surveys did not identify any trees that could serve as potential nesting sites for threatened eagle or kite species. The assessment also confirmed that the area does not include any habitat recognised under the EPBC Act as significant for threatened or migratory fauna.

Removal of vegetation will occur along the northern margin of the existing easement, comprising a 15 m expansion of the corridor to accommodate the new transmission structures and conductors. Vegetation on the southern margin of the easement will be retained. Along the majority of the alignment where the easement adjoins the Gardens of Stone SCA, the northern expansion will result in the removal of approximately 7.5 m of vegetation within the SCA. At both ends of the alignment, the full 15 m of widening will occur within the SCA. Additional localised clearing associated with the expansion and maintenance of access tracks will also occur.

Clearing of forest and woodland vegetation will result in the removal of up to 179 hollow-bearing trees identified through pre-construction surveys as occurring within the proposed Project footprint, containing an estimated 331 individual hollows. These trees provide nesting, roosting or shelter opportunities for several threatened species that occur or are expected in the area, including certain cockatoos, owl species, microbats and Squirrel Gliders.

Pre-clearing surveys undertaken immediately prior to vegetation removal may identify additional hollow-bearing trees not previously recorded, particularly in areas where survey access was limited or where hollow features have developed since the initial assessment. Where additional hollow-bearing trees are identified within the approved Project footprint, they will be recorded, assessed and managed in accordance with the Hollow-bearing Tree Clearing Protocol and included within the Nest Box Strategy (Appendix D). Any identified hollow-bearing trees located outside the approved Project footprint will be retained and protected in accordance with Section 5.4.

Although numerous hollow-bearing trees (HBTs) occur within and beside the Project footprint, impacts in some areas may consist solely of pruning where existing tracks are sufficient for access. Figure 5.2 of the Revised BDAR (GHD, 2025b) shows the hollow-bearing trees identified during assessment proposed for removal as well as those recorded nearby, noting that surveys outside the Project boundary were limited in scope.

Details of the potential impacts and mitigation measures for the removal of HBTs are provided in Appendix D.

3.2.4 Riparian zones and aquatic ecology

The Project is located within the upper Coxs River catchment and intersects or adjoins the Coxs River, tributaries of Wangcol Creek and Pipers Flat Creek, minor drainage lines and swamp-associated vegetation communities. These aquatic and riparian environments provide habitat for fish and aquatic invertebrates and contribute to habitat connectivity and biodiversity values within the broader landscape.

Waterways intersecting the Project footprint are generally highly disturbed by existing transmission infrastructure, mining, agriculture, access tracks, waterway diversions and other surrounding land uses. With the exception of the Coxs River, the waterways are predominantly small first- to third-order waterways with low water availability.

The waterways within or adjacent to the Project footprint identified as key fish habitat are:

- Coxs River: Class 1, Major fish habitat and Type 2, Moderately sensitive key fish habitat;
- Unnamed tributary of Wangcol Creek: Class 3, Minimal fish habitat and Type 3, Minimally sensitive key fish habitat; and
- Unnamed tributary of Wangcol Creek : Class 3, Minimal fish habitat and Type 3, Minimally sensitive key fish habitat.

Other assessed waterways were classified as Class 4, Unlikely key fish habitat, due to factors including water scarcity, absence of defined banks, limited ponding, restricted fish passage and the absence of aquatic habitat.

No threatened fish, aquatic invertebrate species, populations or ecological communities are expected to occur within waterways in or adjacent to the Project footprint. Macquarie Perch (*Macquaria australasica*) and Australian Grayling (*Prototroctes maraena*) were assessed as highly unlikely to occur.

The aquatic ecology assessment concluded that the Project is expected to result in localised and minor impacts to key fish habitat and minor or negligible impacts to aquatic biota. Potential impacts include:

- disturbance of minimally sensitive habitat within unnamed tributaries of Wangcol Creek,
- removal of riparian vegetation
- erosion and sedimentation
- temporary changes to water quality
- disturbance associated with waterway crossings
- potential impacts to aquatic biota during dewatering of the disconnected Coxs River oxbow.

No instream works are proposed within the Coxs River.

Measures to avoid and minimise impacts on riparian vegetation, waterways and aquatic habitat are provided in Sections 5.8, 5.9, 5.11 and 5.12 and Appendices A and E.

3.2.5 Rocky habitat and bushrock

The Project footprint contains rocky habitat features, including a rocky overhang that has the potential to provide roosting habitat for the Large-eared Pied Bat, although no confirmed roost has been identified. Further assessment and management requirements for this feature are provided in Section 5.6.5.

Surface rock features, including loose bushrock, rock piles, boulders and rock crevices, may also provide shelter, refuge, basking and breeding habitat for native fauna. The habitat value of individual rock features varies according to their size, configuration, surrounding vegetation and evidence of fauna use. Potential fauna refuge habitat associated with bushrock and other surface rock features will be identified during pre-clearing inspections.

3.2.6 Groundwater Dependent Ecosystems

The Technical Report 1 – Water Impact Assessment (GHD, 2025a) identified areas mapped by the Bureau of Meteorology Groundwater Dependent Ecosystem Atlas as having low, moderate or high potential to support terrestrial or aquatic groundwater dependent ecosystems within 5 km of the Project.

This assessment returned a mapped high-potential terrestrial GDE and the Coxs River, identified as a potential aquatic GDE, within the Project footprint (GHD, 2025a). However, further investigation identified a low potential for GDEs to exist within the boundary of the established EIS easements.

The closest high-priority GDE listed under the relevant Water Sharing Plan is the Portland karst environment, approximately 3.5 km west of the Project footprint. Construction-related groundwater drawdown is predicted to extend approximately 76 m from an open excavation and is therefore not predicted to affect any listed high-priority GDE (GHD, 2025a).

Predicted groundwater take during construction would also be negligible relative to flows in the Coxs River (GHD, 2025a). Accordingly, the Water Impact Assessment concluded that construction and operation of the Project are not predicted to result in changes to groundwater levels at surrounding GDEs and would satisfy the Level 1 Minimal Impact Considerations of the NSW Aquifer Interference Policy (GHD, 2025a).

3.3 Threatened Ecological Communities

No Threatened Ecological Communities (TECs) listed under the Biodiversity Conservation Act 2016 or the EPBC Act are present within the Project footprint.

PCT 3376 Southern Tableland Grassy Box Woodland, which is potentially associated with the White Box–Yellow Box–Blakely’s Red Gum Grassy Woodland and Derived Native Grassland TEC, occurs within the broader Study Area but will not be impacted by the Project.

PCT 3932 Central and Southern Tableland Swamp Meadow Complex is potentially associated with the Temperate Highland Peat Swamps on Sandstone TEC. However, the Study Area does not contain the geology required for this TEC under the approved conservation advice. Accordingly, this TEC does not occur within the Study Area.

3.4 Threatened species

A total of 21 threatened flora and fauna species listed under the BC Act and/or the EPBC Act were recorded within the Study Area. These comprise 13 ecosystem-credit species and eight species-credit species identified in the Revised BDAR.

Table 3-1 Threatened flora and fauna identified as present within the Study Area

Species name	Common name	BC Act	EPBC Act	SAIL	Indicative breeding period
<i>Falco subniger</i>	Black Falcon	v	-	-	June - Dec
<i>Climacteris picumnus</i>	Brown Treecreeper	v	-	-	May - Dec
<i>Artamus cyanopterus cyanopterus</i>	Dusky Woodswallow	v	-	-	Aug - Jan
<i>Glossopsitta pusilla</i>	Little Lorikeet	v	-	-	July - Jan
<i>Calyptorhynchus lathami lathami</i>	South-eastern Glossy Black-cockatoo	v	V	-	Mar - Aug
<i>Petroica boodang</i>	Scarlet Robin	v	-	-	Aug - Jan
<i>Chthonicola sagittata</i>	Speckled Warbler	v	-	-	Aug - Jan
<i>Daphoenositta chrysoptera</i>	Varied Sittella	v	-	-	July-Dec
<i>Haliaeetus leucogaster</i>	White-bellied Sea-eagle	v	-	-	June - Dec
<i>Falsistrellus tasmaniensis</i>	Eastern False Pipistrelle	v	-	-	Jan - Mar
<i>Miniopterus orianae oceanensis</i>	Large Bent-winged Bat	v	-	-	Spring - summer
<i>Saccolaimus flaviventris</i>	Yellow-bellied Sheath-tail Bat	v	-	-	Dec - Mar
<i>Eucalyptus aggregata</i>	Black Gum	v	V	-	N/A
<i>Eucalyptus cannonii</i>	Capertee Stringybark	v	-	-	N/A
<i>Ninox connivens</i>	Barking Owl	v	-	-	July - Nov
<i>Callocephalon fimbriatum</i>	Gang-gang Cockatoo	e	E	-	Oct - Jan
<i>Ninox strenua</i>	Powerful Owl	v	-	-	June - Sep
<i>Myotis macropus</i>	Southern Myotis	v	-	-	Nov - Dec
<i>Chalinolobus dwyeri</i>	Large-eared Pied Bat	e	E	Yes*	Nov - Jan
<i>Petaurus norfolcensis</i>	Squirrel Glider	v	-	-	Oct - Jan
<i>Hieraaetus morphnoides</i>	Little Eagle	v	-	-	July - Oct

*Notes: E = Endangered; V = Vulnerable; SAIL = serious and irreversible impact; - = not listed or not applicable.

*The Large-eared Pied Bat is identified in the Revised BDAR as an entity at risk of SAIL under Principle 4. -

The Revised BDAR considered migratory species listed under the EPBC Act and concluded that they would not be significantly impacted by the Project. Accordingly, migratory species were not considered further in the Revised BDAR.

During preparation of the relevant EWMS and Clearing Permit, the Project Ecologist will review the proposed timing and location of vegetation clearing, hollow-bearing tree removal, piling and other high-impact activities against the indicative breeding periods in Table 3-1 derived from NSW BioNet (www.bionet.nsw.gov.au) Environment and Heritage (www.environment.nsw.gov.au) webpages. This review will identify potentially affected species and the pre-clearing surveys, ecological supervision, exclusion zones and species-specific measures required before works commence.

Where a threatened species is confirmed or suspected to be occupying an active nest, breeding hollow, roost or nursery site, then the appropriate protocols as detailed in Section 5.6.2, 5.6.4, and Appendix C.

3.5 Weeds, pests and pathogens

Given the existing development presence and extent of human access across the Study Area, it is assumed that the likelihood of substantial or new impacts as a result of the spread of weeds, pests and pathogens as a result of the upgrades would be relatively low.

There are moderate numbers of high threat exotic species and priority weeds across the Project footprint. The Project has the potential to result in the further spread of these weeds into areas where they are not established, or where they occur at low densities. Furthermore, the Project footprint adjoins sensitive areas of native vegetation in the Gardens of Stone SCA, that may be impacted if weeds spread into these areas.

The construction phase of the Project poses the highest biosecurity risk, when there is potential for weeds and pathogens to be introduced or spread through the increased movement of personnel, vehicles and machinery across the Project footprint, and disturbance from vegetation clearing and ground disturbance. Soil erosion and runoff from construction works may also contribute to the spread of soil-borne biosecurity hazards.

3.5.1 Weeds

The Revised BDAR identified species of weeds within the Project footprint, with moderate numbers of priority weeds and high threat exotics in the areas surveyed as part of the assessment.

The Central West region priority weeds (Central West Local Land Services 2023) and Weeds of National Significance (WoNS) (Australian Weeds Committee 2015) identified in the Revised BDAR are listed below in Table 3.2.

Table 3-2 Priority and high threat weeds

Common name	Scientific Name	CWR priority weeds	WoNS
St John's wort	<i>Hypericum perforatum</i>	Yes	No
Chilean needle grass	<i>Nassella neesiana</i>	Yes	Yes
Serrated tussock	<i>Nassella trichotoma</i>	Yes	Yes
Blackberry	<i>Rubus fruticosus spp.agg.</i>	Yes	Yes
Johnson grass	<i>Sorghum halepense</i>	Yes	No

3.5.2 Pest animals

The following pest animals were identified within the Project footprint:

- Red Fox *Vulpes vulpes*;
- Rabbit *Oryctolagus cuniculus*;
- Pig *Sus scrofa*;
- Common Myna *Acridotheres tristis*; and
- Common Starling *Sturnus vulgaris*.

These species may adversely affect native flora and fauna through predation, competition for habitat resources, vegetation disturbance and habitat degradation.

Pest-animal observations and any evidence of increased pest activity attributable to the Project will be recorded and assessed. Where control is required, measures will be developed and implemented by appropriately qualified or authorised personnel in consultation with relevant land managers and adjoining landholders.

3.5.3 Pathogens

Soil disturbance and the movement of vehicles, personnel and machinery have the potential to spread the following diseases across the Project footprint:

- Phytophthora
- Myrtle Rust *Puccinia psidii*
- Chytridiomycosis *Batrachochytrium dendrobatidis*.

4 Environmental aspects and impacts

4.1 Construction activities

The Project description and construction activities presented in this BMP are based on the updated Project Description provided in Appendix 1 of the Amendment Report and the Project amendments documented in the Amendment Report. Biodiversity impact values are based on the Revised BDAR. Where subsequent designs or construction refinements occur, the change will be assessed against the Infrastructure Approval, EPBC Approval and applicable biodiversity impact limits before implementation.

4.1.1 *Transmission line and easement*

Upgrades in the transmission line and easement between the existing Mount Piper and Wallerawang substations would include (in order from north-west to south-east):

- In proximity to the Mount Piper 330 kV substation: widening of approximately 0.5 km of existing easements by up to 40 m to accommodate the new 330 kV transmission line and adjustments to the existing 132 kV and 330 kV lines
- widening of 4.8 km of the existing 132 kV easement from 45 m to 60 m to allow for the establishment of double circuit transmission structures for the new 330 kV transmission line, and the existing 132 kV transmission line
- establishment of two 132 kV pole structures to restring the existing 132 kV transmission onto new double circuit transmission structures
- establishment of 1.2 km of new 330 kV transmission line from the existing 132 kV transmission line south-east to the intersection of Main Street and the Castlereagh Highway on a 60 m wide easement
- establishment of 1.5 km of new 330 kV transmission line on a 40 m easement, running parallel to the existing 330 kV transmission lines for approximately 1.1 km, then diverging and widening to 60 m for the remaining 0.4 km to the Wallerawang 330 kV substation.

Standard easement widths are 45 m for 132 kV transmission lines and 60 m for 330 kV transmission lines. However, easement widths may vary where multiple transmission lines converge or diverge, or where they overlap with an existing easement.

4.1.2 *Transmission structures*

Approximately 28 new steel lattice towers and four steel and /or concrete pole structures are required for the Project. The height of transmission structures ranges between 14 and 60 m, with 60 m being the maximum height. Steel transmission structures would generally be spaced between 100 m and 550 m apart, and the pole structures 30 m to 50 m apart.

For the new 330 kV and existing 132 kV lines, new earth wires, conductors and optical ground wire will be installed on the new transmission structures. Local adjustment of existing transmission structures will be necessary in proximity to the Mount Piper substation, to minimise the crossover of transmission lines. Redundant transmission structures, including the gantry immediately north of the Main Western Rail Line, would be removed and recycled, where possible.

4.1.3 *Access tracks*

To facilitate efficient construction access, the following is required:

- upgrading and widening of approximately 20 km of existing access tracks to at least 6 m, with some sections widened up to 10 m due to local topography
- construction of approximately 2.5 km of new 6 m wide access tracks
- use of approximately 12 kilometres of existing track not requiring upgrades.

An additional 4.3 km of the existing tracks are only to be used by light vehicles during the construction process. These tracks may require minor repairs prior to use but would not be graded or widened.

The project footprint would be accessed from public roads at 12 access points, with the majority of these being existing property access points.

Existing access tracks would be used in preference to new tracks wherever possible. Access track upgrades and widening would include required drainage.

4.1.4 Temporary work areas

Three temporary construction compounds will be established: one adjoining the Mount Piper substation and two within the former Wallerawang Power Station site. Temporary laydown areas for materials and equipment will also be established at specified locations along the easement, particularly near transmission structure locations.

Temporary work areas will be located within the approved Project footprint and, where practicable, within previously disturbed or cleared areas. Applicable biodiversity constraints and controls will be identified through construction mapping, and EWMS before establishment. Temporary work areas will be stabilised and rehabilitated following completion of their use in accordance with Section 5.12 and the applicable Rehabilitation Management Plan.



Figure 4.1 Study Area

4.2 Ecological impacts

The Project may result in prescribed impacts in addition to direct native vegetation clearing and habitat loss. Potential prescribed impacts include:

- disturbance of karst, caves, crevices, cliffs, rocks and other geological features of significance, including bushrock, rock crevices and the rocky overhang identified as potential Large-eared Pied Bat habitat;
- disturbance of threatened-species habitat associated with human-made structures and artificial refuge features;
- removal or disturbance of non-native vegetation that provides habitat for threatened species;
- impacts on areas connecting threatened-species habitat, including movement corridors and flight paths;
- impacts on water quality, waterbodies and hydrological processes that sustain threatened species and their habitat; and
- injury or mortality of threatened species or fauna forming part of a TEC from vehicle strike.machinery.

These impacts may result in injury, mortality or displacement of fauna, loss or modification of refuge habitat, reduced habitat connectivity, reduced access to foraging or breeding resources, and degradation of aquatic or riparian habitat.

Prescribed impacts will be avoided and minimised through detailed design, pre-clearing inspections, exclusion zones, fauna-management procedures, habitat-connectivity measures, monitoring and adaptive management, described in Sections 5 and 6 and Appendices A to E.

4.2.1 Native vegetation clearing

The Project is predicted to directly impact approximately 55.08 ha of native vegetation during the construction phase. A further 33.21 ha of non-native vegetation, 0.27 ha of planted native vegetation and 0.78 ha of waterbody occur within the disturbance footprint. In total, the Project disturbance footprint extends across 89.34 ha. Details of the affected Plant Community Types are provided in Section 4.3 of the Revised BDAR (GHD, 2025b).

The total vegetation clearing area of 89.34 ha result in direct and indirect effects to targeted threatened species identified as present within the site area, and critical habitat features such as hollow-bearing trees. The duration and intensity of vegetation clearing differ across the Project extent.

4.2.1.1 Approved vegetation and habitat clearing limits

In accordance with Condition B20(a) of the Infrastructure Approval, the vegetation and habitat clearing limits specified in Appendix 2 must not be exceeded. These limits are reproduced in Tables 4.1 to 4.3 and are maximum approved impact limits and do not represent clearing targets.

The Project will continue to avoid and minimise impacts wherever practicable. Clearing and biodiversity impacts will be tracked progressively against the applicable limits through approved spatial mapping, pre-clearing records, the Clearing Register and the Post-clearing Report.

Table 4-1 Clearing limits for native vegetation

Plant Community Type (PCT)	Condition	Conservation significance		Direct Impact (hectares)	Indirect Impact (hectares)	Impact (hectares)	Credit liability
		BC Act	EPBC Act				
3369 Central Tableland Ranges Peppermint-Gum Grassy Forest	Good	-	-	1.43	-	1.43	53
	Shrubland	-	-	5.52	-	5.52	72
3385 Southern Tableland Creekflat Swamp Woodland	Good	-	-	2.57	1.02	3.59	111
	Poor	-	-	6.53	-	6.53	-
	Moderate	-	-	0.83	0.05	0.88	20
	Paddock trees	-	-	0.62	-	0.62	11
3735 Central Tableland Peppermint Shrub-Grass Forest (condition)	Good	-	-	1.69	-	1.69	68
	Shrubland	-	-	7.53	-	7.53	126
3747 Southern Tableland Western Hills Scribbly Gum Forest	Good	-	-	4.57	-	4.57	164
	Poor	-	-	5.96	-	5.96	48
	Shrubland	-	-	12.45	-	12.45	238
3749 Western Blue Mountains Scribbly Gum Forest	Good	-	-	1.64	-	1.64	53
	Shrubland	-	-	1.35	-	1.35	20
3932 Central and Southern Tableland Swamp Meadow Complex	Moderate	-	-	2.39	-	2.39	51

Source: Appendix 2, Table 2-1 of Infrastructure Approval SSI-70279722. Reproduced without amendment.

Table 4-2 Clearing limits for threatened flora species

Species	Common name	Conservation significance		Impact (hectares)	Credit liability
		BC Act	EPBC Act		
<i>Eucalyptus aggregata</i>	Black Gum	V	V	276	552
<i>Eucalyptus cannonii</i>	Capertee Stringybark	V	V	142	213

Source: Appendix 2, Table 2-2 of Infrastructure Approval SSI-70279722. Reproduced without amendment.

Table 4-3 Clearing limits for threatened fauna species

Species	Common name	Conservation significance		Impact (hectares)	Credit liability
		BC Act	EPBC Act		
<i>Callocephalon fimbriatum</i>	Gang-gang Cockatoo	E	E	10.79	438
<i>Chalinolobus dwyeri</i>	Large-eared Pied Bat	E	E	56.15	1,834
<i>Myotis macropus</i>	Southern Myotis	V	-	27.29	542
<i>Ninox connivens</i>	Barking Owl	V	-	1.28	54
<i>Ninox strenua</i>	Powerful Owl	V	-	9.33	378
<i>Petaurus norfolcensis</i>	Squirrel Glider	V	-	23.24	710

Source: Appendix 2, Table 2-3 of Infrastructure Approval SSI-70279722. Reproduced without amendment.

Clearing and biodiversity impacts will be reviewed against the applicable limits in Tables 4.1 - 3. The proposed clearing extent will be compared with the cumulative area and number of threatened flora individuals previously cleared and the remaining approved allowance.

Where this review identifies that proposed clearing may approach or exceed the provided limits, clearing in the affected area will not commence. The Project Ecologist will assess the proposed clearing and its potential biodiversity impacts, the Environmental BP will verify compliance with the approved Project footprint and applicable impact limits, and the Manager will confirm that clearing is authorised to proceed. Clearing may proceed only where the review confirms that the activity remains within the approved Project footprint and all applicable impact limits.

4.2.1.2 Impacts to bushrock and rocky habitat

Disturbance, removal or relocation of bushrock, rock piles, boulders and other surface rock features may result in the loss or modification of fauna shelter, refuge, basking and breeding habitat. Fauna sheltering beneath or within these features may also be injured, killed or displaced during clearing, excavation and other ground-disturbing activities. Associated impacts may include soil disturbance, erosion, sediment movement, compaction and damage to adjoining native vegetation.

The Large-eared Pied Bat is the SAI entity relevant to the Project. Potential impacts on the species include the loss or modification of foraging habitat through vegetation clearing and edge effects, and disturbance of potential rocky roosting habitat from construction-related noise and vibration. Species-specific avoidance, mitigation and monitoring measures are provided in Section 5.6.5.

4.2.2 Impacts to tree hollows

The removal of forest and woodland habitat within the Project footprint includes the loss of up to 179 identified HBTs. HBTs within the Project footprint provide nesting and roosting opportunities to a range of species that are known or considered likely to occur, including hollow-dependent birds, microbats and Squirrel Gliders. Several threatened cavity-dependent species have been recorded within or adjacent to the Project footprint (GHD, 2025b) including Brown Tree creeper, Gang-gang Cockatoo, Barking Owl, Powerful Owl, Southern Myotis, Large-eared Pied Bat, Eastern Bent-wing Bat and Squirrel Glider. Possible indirect evidence of Glossy Black-cockatoo was also recorded through the observation of chewed *Allocasuarina* cones, though the presence of this species was unconfirmed. HBTs that would be removed are illustrated in Figure 5.2 of the Revised BDAR (GHD, 2025b).

Targeted surveys within the Gardens of Stone SCA recorded the Powerful Owl on several occasions, while a Barking Owl was observed responding to call playback on privately leased agricultural land north of Brays Lane. Habitat assessments conducted between August–October 2023 and May–July 2024 identified numerous trees with suitable hollows (>20 cm diameter) for forest owls. Given these results, the Masked Owl was considered unlikely to occur within or around the site, as it was not detected during targeted surveys, including five replicates at monitoring location ID 4.

Table 4-4 Cavity dependent species recorded within the Study Area

Common name	Scientific name	Hollow / cavity size / tree requirement*
Glossy Black-cockatoo	<i>Calyptrorhynchus lathamii</i>	Potential nest trees contain hollows that are; (i) at least 8 m above the ground; and (ii) in stems with a diameter of at least 30 cm; and (iii) hollow diameter is at least 15 cm; and (iv) stem angle is at least 45 degrees, and may be near-vertical or vertical (DCCEEW (NSW) 2025)
Gang-gang Cockatoo	<i>Callocephalon fimbriatum</i>	Potential nest trees are forest and woodland eucalypts containing hollows that are; (i) at least 3 m above the ground and (ii) with hollow diameter of 7 cm or larger (DCCEEW (NSW) 2025)
Brown Treecreeper	<i>Climacteris picumnus</i>	Estimate: small tree hollow, likely entrance < ~10 cm. No Bionet specifications.
Powerful Owl	<i>Ninox strenua</i>	A living or dead tree with a hollow >20cm diameter that occurs >4 m above the ground (DCCEEW (NSW) 2025)
Barking Owl	<i>Ninox connivens</i>	A living or dead tree with a hollow >20cm diameter that occurs >4 m above the ground (DCCEEW (NSW) 2025)
Masked Owl	<i>Tyto novaehollandiae</i>	A living or dead tree with a hollow >20cm diameter that occurs >4 m above the ground (DCCEEW (NSW) 2025)
Squirrel Glider	<i>Petaurus norfolcensis</i>	Den entrances varied in size (2.5–12 cm wide) but most were <5 cm in diameter (Beyer, Goldingay and Sharpe 2008)

Tree hollows are naturally occurring cavities that typically develop in trees over 100 years old and provide habitat for over 300 cavity-dependent species of Australian vertebrate fauna, including arboreal mammals, birds, amphibians and reptiles (Gibbons 2000) (Gibbons 2002). Competition for nesting resources in many disturbed areas can be high due to the loss of hollow-bearing trees and artificial structures can be installed to provide replacement nesting resources. The size, type, shape and material of artificial structures often influence their useability as many species have particular requirements that will affect occupancy of the cavity.

4.2.3 Landscape connectivity

Connectivity within the Project footprint is strongest where vegetation adjoins the Gardens of Stone SCA, forming large, continuous areas of forest and woodland that support a wide range of species. These extensive habitat patches exceed 100 hectares and maintain substantial connectivity with forested areas on adjacent public, private and conserved lands, including the Gardens of Stone SCA (Figure 4.2 A-C). Although the Project footprint contributes to local habitat continuity, it is not considered a critical link for regional connectivity within the broader landscape of thousands of hectares of surrounding native woodland and forest.

Connectivity is reduced where existing transmission line corridors intersect habitat areas, particularly in the south-west, where 45-metre and 60-metre-wide easements create canopy gaps that disrupt south-west to north-east movement pathways for arboreal fauna. Additional gaps in inter-patch connectivity have resulted from landscape modification for agricultural grazing, particularly between the Gardens of Stone SCA and the Wallerawang Power Station, where conversion to exotic pasture limits fauna movement. Partially cleared easements intersecting the Gardens of Stone SCA and land held by Energy Australia may further deter movement by less mobile species.

Despite these interruptions, extensive woodland and forest cover across the Project footprint continues to support connectivity for arboreal mammals such as Squirrel Gliders and common possums and gliders, as well as for a variety of ground-dwelling fauna. Frog habitat occurs along small creek lines intersecting the area, and although fragmented, the Coxs River and its tributaries provide additional movement corridors along riparian zones. The Coxs River, which crosses the south-eastern part of the Project footprint, is bordered by contiguous riparian vegetation that facilitates east-

west fauna movement and provides cover and foraging opportunities for aquatic and semi-aquatic species, including amphibians. However, this riparian corridor is not considered significant for regional faunal movement due to limited vegetation cover and a lack of key habitat features such as HBTs.

4.2.4 Widened easements

The Project proposes to increase the existing easement from 45 m to 60 m, which will require the removal of vegetation to accommodate the new transmission structures and conductors. Vegetation removal associated with easement widening will occur along the northern margin of the existing easement, comprising a 15 m expansion of the corridor, while vegetation on the southern margin will be retained. Along the majority of the alignment where the easement adjoins the Gardens of Stone State Conservation Area (SCA), the northern expansion will result in the removal of approximately 7.5 m of vegetation within the SCA. At the eastern and western ends of the alignment, where the easement is wholly contained within the SCA, the full 15 m widening will occur within the reserve. Additional localised vegetation clearing associated with the expansion and maintenance of access tracks will also be required. The location and extent of easement widening and associated disturbance relative to the SCA boundary and adjoining land tenure are shown in Figure 4.2 A–C.

While this will expand the existing gap between forested areas within the Project footprint, it is not considered to significantly increase fragmentation for most species recorded within the Study Area. Ancillary activity associated with the construction phase of the Project is expected to have a negligible impact being sited in areas of prior disturbance. Species considered most at-risk from the increased distance in habitat gaps are Squirrel Gliders (BC Act vulnerable) which will be prevented from safely gliding across the expanded gap due to their limited glide distance, which is based on body size and launch height from the tree, with the individual needing to land 2 m above the ground to complete a safe glide. A glide of 60 m presents a significant barrier to movement, with individuals likely to land on the exposed ground and be required to complete the movement terrestrially, leaving them vulnerable to predation. While scrubland within the easement will be retained and allowed to regenerate naturally, potentially providing ground-level cover for fauna, additional measures may be required to maintain safe gliding opportunities. Potential impacts to glider connectivity, and the measures proposed to address them, are discussed in greater detail in Appendix B. Small woodland birds including the Brown Treecreeper (BC Act vulnerable; EPBC Act Vulnerable) might also face behavioural barriers to movement due to a lack of cover between forested habitats.

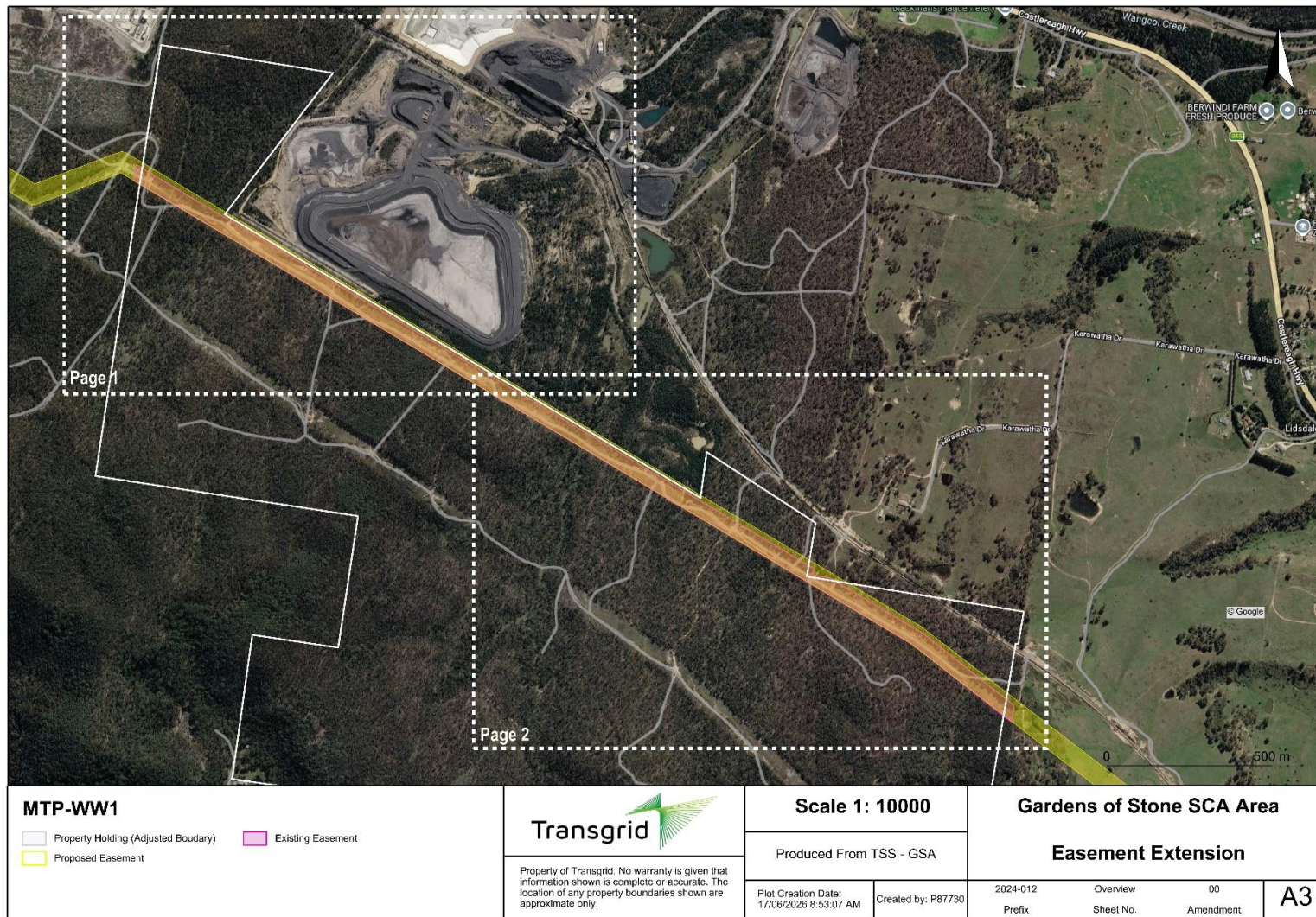


Figure 4.2 A Location of the Project footprint in the context of the Gardens of Stone State Conservation Area (white boundary)(Transgrid, 2026

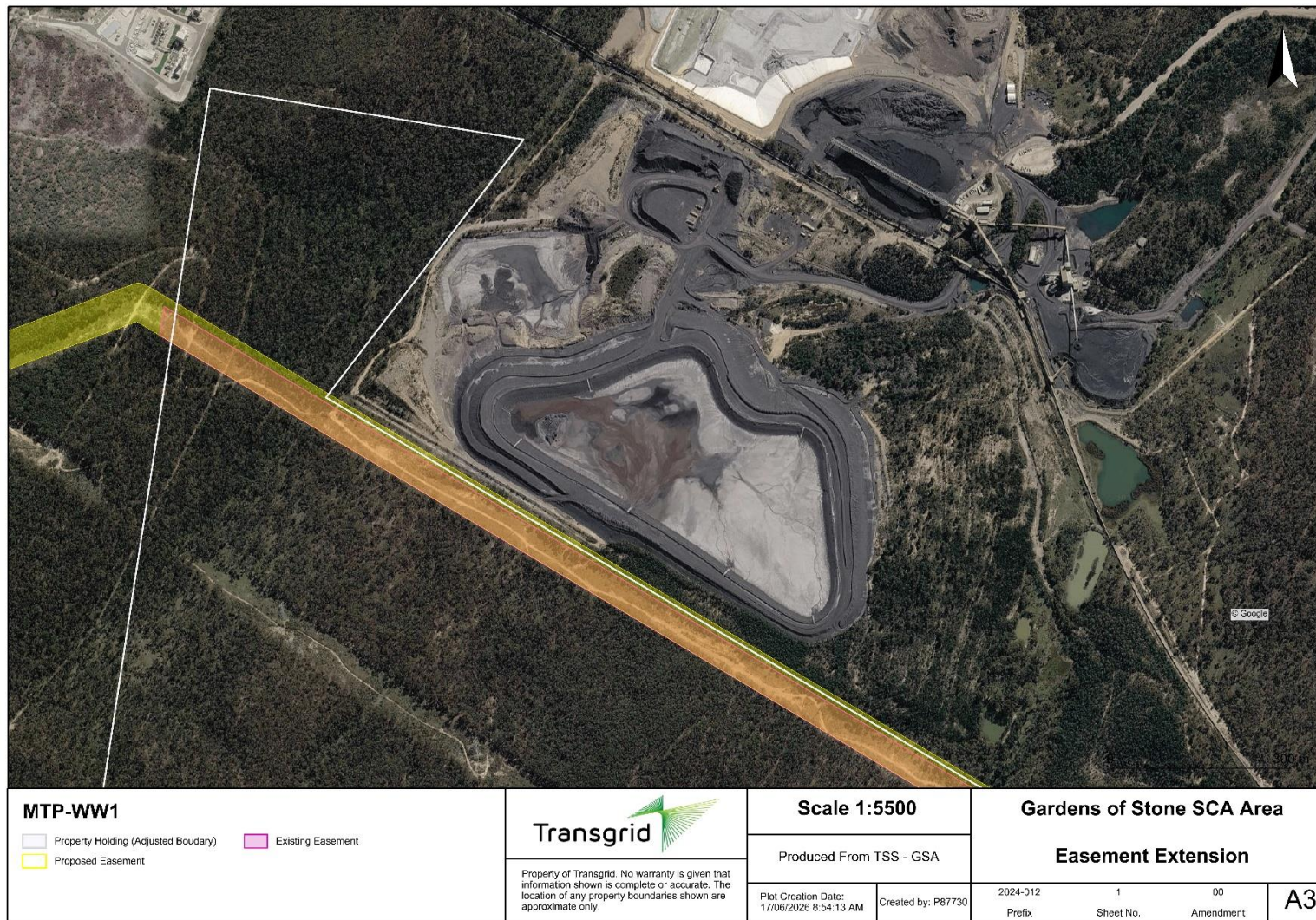


Figure 4.2 B Location of the Project footprint in the context of the Gardens of Stone State Conservation Area (white boundary)(Transgrid, 2026)

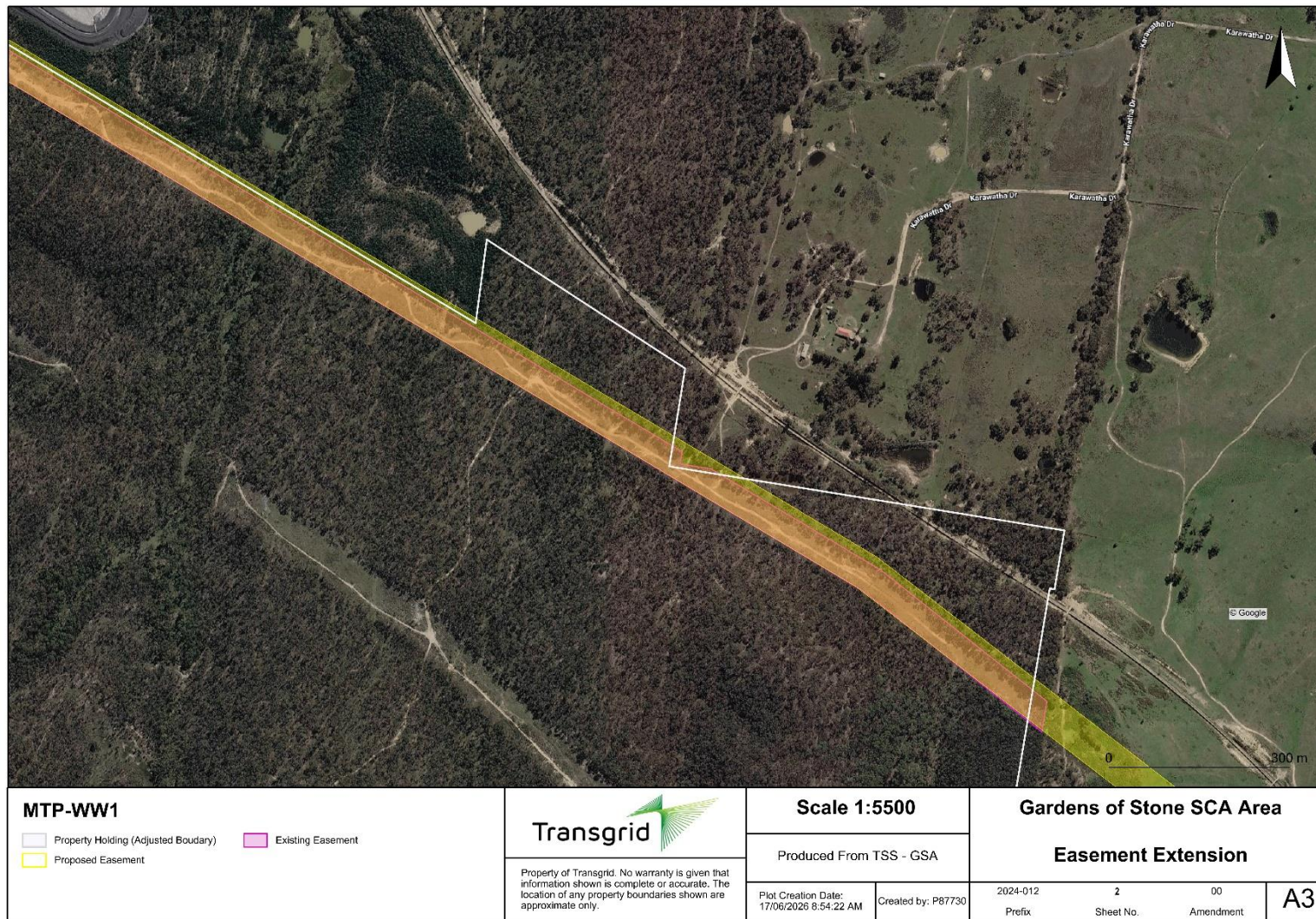


Figure 4.2 C Location of the Project footprint in the context of the Gardens of Stone State Conservation Area (white boundary)(Transgrid, 2026)

4.2.5 Other biodiversity impacts (direct and indirect)

Proposed construction activities may result in habitat loss, fragmentation and disturbance to native flora and fauna. Table 4.5 summarises the key direct and indirect biodiversity impacts associated with construction activities identified for the Project.

Table 4-5 Key identified impacts

Construction activity	Direct impact	Indirect impacts
Site establishment, vegetation clearing, bushrock removal	Injury and mortality of wildlife during clearing operations Removal of hollow-bearing trees Removal of threatened flora	Limited access to available habitats - foraging, refuge, breeding - increased competition Loss of potential foraging and nesting habitat Reduction in habitat connectivity Vegetation dieback due to edge effects Introduction of pathogens, weed spread Potential increases in predation of native fauna by pest species accessing newly disturbed or fragmented habitat. Increased competition from pest species for shelter, nesting sites and other habitat resources.
Erection of temporary fencing	Entrapment / injury or death of wildlife Damage to fencing	Land-locking / barrier to movement of fauna Entrapment or exclusion of fauna from habitat Interruption of wildlife movement pathways
Operation of vehicles, heavy machinery	Injury or death of wildlife Injury or death of motorists / plant operators Injury or death of accessory motorists or pedestrians Damage to vehicle Increased noise pollution leading to: — Inability of wildlife to hear predators — Inability of wildlife to hear mating calls (reduced breeding success) Increased vibration pollution	Damage to associated infrastructure Attraction of pest and scavenger species to fauna carcasses, food waste or other resources associated with construction activities. Increased levels of local predation by predatory species drawn to the area Increased incidence of Wildlife Vehicle Collisions (WVC) where invasive plant species attract wildlife to the margins of roadways. Increased WVC involving predator species due to a higher number of individuals in the area. Chemical run-off from roadways and tracks A reduction in available habitat due to avoidance (noise, vibration) Wildlife expending greater energy attempting to call louder than the sound and frequency of construction noise, leading to decreased survival rates and fecundity.

Construction activity	Direct impact	Indirect impacts
Construction and civil structure activity	Reduction in local wildlife populations due to habitat loss, disturbance and displacement associated with construction activities.	A reduction in available foraging grounds or places for refuge. Heightened stress of local species – increasing susceptibility to disease. Increased weed invasion leading to: - Reduction in local flora and increased in exotic species - Decline in available foraging habitat Risk of chemicals reducing available foraging or breeding habitat due to contamination of waterways.
Artificial lighting during construction	Increased light pollution leading to: — an avoidance of habitat — disorientation of individuals — attraction to light increasing the risk of mortality for native fauna	Increased rates of predation for local species which are increasingly visible for nocturnal predatory species.
Excavation and ground disturbance	Entrapment of fauna within trenches, excavations and open pits Injury or mortality of wildlife during excavation activities Loss of soil microhabitat during clearing, excavation and construction. Increase in injury or mortality, reduction in life span, to local wildlife due to consumption or inhalation of sediment, dust.	Decline in available aquatic habitat due to sedimentation. Reduced photosynthesis due to dust occlusion on leaves Modification of local drainage patterns Sedimentation of waterways Loss of soil microhabitat
Works in riparian corridor	Disturbance or removal of riparian vegetation Disturbance of aquatic and semi-aquatic habitat Injury and mortality from the spread of Chytridiomycosis	Increased erosion and sedimentation Reduced water quality Disturbance to aquatic fauna Injury and mortality from predation by terrestrial and aquatic introduced species Weed and pathogen spread along watercourses

4.2.5.1 Management of uncertain impacts

Where detailed design, pre-clearing surveys, construction activities or monitoring identify a biodiversity value or impact pathway that was not previously identified, the potential impact will be assessed by the Project Ecologist and the response coordinated by the Environmental BP before it proceeds. Where there is a risk of additional impact, work in the affected area will cease or not commence until the nature and significance of the potential impact have been assessed and appropriate avoidance, mitigation, consultation and approval requirements have been identified.

4.2.6 Cumulative impacts

The Revised BDAR considered the cumulative biodiversity impacts of the Project together with other relevant projects within 20 km of the project footprint. Eleven projects were identified for consideration, of which six had sufficient

information to quantify known impacts. The combined cumulative impact of the Project and these six projects on native vegetation was assessed as 153.47 ha, with the Project identified as making a major contribution to cumulative native vegetation loss.

The total identified cumulative direct impact on species credit entities are as follows:

- Black Gum: 69 individuals, increased to 345 individuals as a result of this project
- Large-eared Pied Bat: 17.98 ha, increased to 73.06 ha as a result of this project
- Southern Myotis: 6.00 ha, increased to 32.35 ha as a result of this project
- Squirrel Glider: 0.78 ha, increased to 23.50 ha as a result of this project
- Gang-gang Cockatoo: 1.15 ha, increased to 11.42 ha as a result of this project
- Six hollow-bearing trees, increased to 185 as a result of this project.

This BMP manages the Project's contribution to cumulative biodiversity impacts through the avoidance, minimisation, mitigation, monitoring and adaptive management measures described in Sections 5 and 6 and Appendices A to E.

5 Environmental management measures

5.1 Mitigation hierarchy

The Project will apply a structured mitigation hierarchy consistent with the BMP and relevant biodiversity legislation to minimise impacts on biodiversity values. The mitigation hierarchy requires impacts to be avoided where practicable, then minimised and mitigated, with residual impacts offset in accordance with the applicable approvals.

5.1.1 Avoidance

Wherever practicable, impacts will be avoided through:

- micro-siting and design refinements undertaken in accordance with the Infrastructure Approval and applicable project change-control and approval requirements
- adjusting access tracks, construction compounds and laydown areas to avoid threatened flora, HBTs, riparian zones and other identified biodiversity values;
- retention of vegetation and habitat features located outside the approved Project footprint;
- establishment of no-go zones and exclusion zones around high-value ecological features, delineated through flagging and demarcation prior to the commencement of works.

Avoidance is prioritised due to the ecological importance of intact habitat and the long timeframes required for natural recovery.

Design refinements must remain within the approved Project footprint shown in Appendix 1 of the Infrastructure Approval and within the applicable vegetation and habitat clearing limits, unless the proposed refinement has been assessed and authorised through the applicable design-change, consistency-assessment, approval or modification process before the affected works commence. Any refinement must comply with the Infrastructure Approval and must not result in biodiversity impacts exceeding the applicable approved limits unless separately assessed and authorised.

5.1.2 Minimisation

Where impacts cannot be avoided, they will be minimised by:

- reducing vegetation clearing extents to the smallest practicable footprint.
- retaining native vegetation outside the immediate disturbance zone, even if partially encroached.
- preserving habitat features where practicable, rather than removing them entirely.
- timing works outside key breeding seasons for sensitive fauna where:
 - where practicable, vegetation clearing, hollow-bearing tree removal, piling and other activities that may disturb breeding fauna will be scheduled outside the indicative breeding periods identified in Table 3-1.
 - during preparation of the relevant EWMS and Clearing Permit, the Project Ecologist will review the proposed timing and location of works against Table 3-1 and identify any required pre-clearing surveys, ecological supervision, exclusion zones and species-specific management measures.

- breeding periods are species-specific and will be identified by the Project Ecologist for threatened species identified in the Revised BDAR and this BMP (Section 3.4), with reference to the BioNet Threatened Biodiversity Data Collection and relevant species-specific survey guidelines.
- where works cannot be scheduled outside the relevant breeding period, implementing pre-clearance surveys, exclusion zones, ecological supervision and species-specific management measures.

Minimisation reduces the overall extent of impact and helps maintain existing habitat structure.

5.1.3 Mitigation

Mitigation involves active management to reduce impacts during works and ensure fauna safety:

- pre-clearing surveys by a qualified ecologist to identify fauna presence and species-specific risks.
- staged vegetation clearing to encourage fauna dispersal.
- ecologist or fauna spotter supervision during clearing to safely capture, relocate, or release fauna encountered.
- salvage of habitat features where practicable for reuse or relocation.
- provision of supplemental connectivity structures / features (Appendix B)

Mitigation ensures that impacts to individual animals and habitat features are minimised where disturbance is unavoidable.

5.1.4 Implementation

The management measures contained in this BMP will be implemented through:

- project planning and activity-specific construction documentation.
- preparation and implementation of Environmental Work Method Statements (EWMSs) for activities with the potential to affect biodiversity values.
- workforce inductions, pre-start meetings and toolbox talks.
- survey, mapping and demarcation of approved clearing boundaries, retained vegetation, exclusion zones and sensitive habitat features.
- pre-clearing inspections and ecological supervision.
- routine environmental inspections, compliance monitoring and corrective actions.
- implementation of the procedures and strategies contained in Appendices A to E.

Consistent with the SMART framework described in Section 2.2.2.1, biodiversity measures will be implemented through clearly defined actions, responsibilities, timing, records and verification requirements. Implementation and effectiveness will be monitored against Tables 6.2 to 6.4 and the applicable requirements of Appendices A to E.

5.1.4.1 Detailed design

Detailed design will apply the avoidance and minimisation hierarchy to reduce biodiversity impacts wherever practicable. The Design Team, with ecological advice from the Project Ecologist and environmental compliance input from the Environmental BP, will consider:

- micro-siting of structures, access tracks, laydown areas and other temporary work areas;
- opportunities to avoid threatened flora, HBTs, riparian areas, rocky habitat and other identified biodiversity values;

- application and refinement of full-clearance, partial-clearance and exclusion zones;
- retention of native vegetation and habitat features;
- habitat-connectivity requirements, including the location and design of supplementary connectivity measures; and
- rehabilitation and habitat-salvage requirements associated with temporary disturbance areas.

Design refinements will remain within the approved Project footprint and applicable biodiversity impact limits unless any additional assessment, consultation or approval requirements have been completed. Any avoidance or minimisation to environmental impacts which occurs as a result of changes made during detailed design should be documented in Design Reports.

5.1.4.2 Environmental Work Method Statements

EWMSs will provide the primary mechanism for translating the requirements of this BMP into activity- instructions for personnel undertaking the works.

Relevant EWMSs will identify:

- applicable biodiversity risks and environmental controls.
- approved clearing boundaries, exclusion zones and sensitive-area mapping.
- pre-clearing, ecological supervision and fauna-management requirements.
- environmental hold points and responsibilities.
- unexpected-find, incident and emergency response procedures.
- any additional site-specific controls identified by the Project Ecologist and Environmental BP.

Applicable EWMSs will be reviewed with personnel before the relevant activity commences and updated where site conditions, construction methods, environmental risks or management requirements change. EWMSs do not replace the requirements of this BMP but provide the instructions through which those requirements will be implemented.

5.2 Clearing framework

The Project adopts a spatial clearing framework comprising exclusion zones, partial clearance zones and full clearance zones, which collectively implement the mitigation hierarchy by avoiding, minimising and managing impacts to native vegetation and fauna habitat. The spatial extent of these areas are detailed in Appendix A.

- **Exclusion zones** are locations where no vegetation disturbance is permitted and all habitat values are retained. These areas are established to avoid impacts to high-value vegetation, sensitive habitats, and key ecological features, and to maintain habitat integrity and connectivity.
- **Partial clearance zones (PCZ):** are locations where selective vegetation management is undertaken to meet safety and operational requirements while retaining as much vegetation as practicable. This approach prioritises the retention of mid-storey and ground layer vegetation, maintaining structural habitat and supporting connectivity outcomes.
- **Full clearance zones (FCZ):** are limited to locations where complete vegetation removal and ground disturbance are required for construction of infrastructure and associated works. These areas are minimised through design and micro-siting to confine impacts to the smallest practicable footprint.

Further detail on clearing categories, spatial controls and implementation requirements is provided in Appendix A (Vegetation Clearing Procedure).

Mapping of the impacted areas and the extent of the clearing intended are provided in Appendix A.

5.3 Training

5.3.1 Site induction

Before commencing any work on site, all Project personnel, including subcontractors and visitors undertaking work activities, will complete the Project site induction. The induction will include the biodiversity values, risks, controls and individual responsibilities relevant to this BMP.

Before works commence, the Environmental BP will coordinate preparation and delivery of the general biodiversity induction content, with the technical ecological content reviewed by the Project Ecologist.

- Key fauna species likely to be encountered and/or impacted during works, and an overview of environmentally sensitive areas and important habitat linkages.
- Vegetation and habitat clearance procedures and protection of important habitats (e.g. HBTs).
- Location of all No-go Zones throughout the Project footprint, and the importance of adhering to No-go Zone procedures for habitat protection.
- Importance of erecting and maintaining wildlife fencing, and procedures for reporting damage to fences.
- Importance of adhering to hygiene protocols for weed control to help prevent the spread of weeds and pathogens such as Chytrid Fungus *Batrachochytrium dendrobatidis*.
- Procedures for dealing with injured fauna within the Project footprint, and the need for site personnel to contact the appropriate bodies immediately and engage a qualified ecologist or wildlife specialist for fauna capture and release in the event that fauna is found during construction activities.
- The induction will explicitly outline the consequences of non-compliance with this BMP, including potential regulatory, contractual and disciplinary actions.

The Project Ecologist will deliver, or contribute to, additional activity-specific training or workshops for supervising personnel and personnel undertaking activities with higher biodiversity risks. This will include, where relevant, vegetation clearing, fauna handling, works near threatened flora or sensitive habitat, implementation of exclusion zones and management of habitat features.

The Contractor Supervisors (e.g. Environment Officer) are to conduct mandatory on-site inductions with all site personnel based on information provided in the toolkit. All on-site inductions are to be run such that all personnel understand their obligations under this BMP, and personnel are to sign an acknowledgement of induction showing their understanding of these requirements. Induction records are to be provided to Transgrid upon request.

Key information from the toolkit, particularly relating to fauna procedures, is to be printed and displayed in site compounds. A qualified ecologist is to review induction materials annually for the duration of construction.

5.3.2 Toolbox talks

Toolbox talks will be used as a key mechanism to communicate environmental requirements, site-specific risks and mitigation measures to personnel involved in construction activities.

Toolbox talks will be:

- delivered prior to the commencement of works and as required throughout construction;
- undertaken when new activities commence, work practices change, or new environmental risks are identified;
- following an incident or non-compliance related to biodiversity; and
- used to reinforce key environmental obligations and controls relevant to upcoming works.

Toolbox talks will cover, where relevant:

- environmental sensitivities within and adjacent to the work area, including areas of native vegetation, waterways and other features of environmental value;
- fauna protection measures, including pre-clearing checks, fauna handling and rescue procedures and requirements for reporting unexpected fauna encounters;
- weed hygiene, biosecurity and vehicle or equipment wash-down requirements;
- erosion and sediment control measures;
- rehabilitation objectives and requirements for stabilisation of disturbed areas; and
- roles, responsibilities and reporting pathways for environmental incidents or non-compliance.

Toolbox talks will be delivered by the Environmental Manager or suitably qualified personnel, and attendance will be recorded. Content of toolbox talks will be informed by the CEMP, BMP and other relevant sub-plans.

5.4 Vegetation clearing procedure

Vegetation clearing will be undertaken in accordance with the approved Project footprint and Infrastructure Approval requirements. Clearing limits will be surveyed, clearly demarcated on the ground, and maintained for the duration of works to prevent unauthorised clearing and off-footprint impacts.

The approved Project footprint will be subdivided into full clearance, partial clearance and exclusion zones, which will be delineated on the ground during survey set-out using fencing, flagging and signage, consistent with the spatial extent shown on in the Figures provided in Appendix A.

Vegetation clearing will be undertaken in a staged manner to minimise impacts to fauna. This will include initial removal of non-habitat vegetation, followed by controlled removal of habitat features no less than 24–48 hours later to allow fauna dispersal. Further detail on staged clearing procedures is provided in Appendix A. Detailed clearing methods and step-by-step requirements are provided in Appendix A (Vegetation Clearing Procedure) and Appendix D (Nest Box Strategy), with fauna handling and relocation requirements provided in Appendix C.

Prior to works in or adjoining native vegetation, a licensed surveyor will delineate the approved clearing limits. The boundary will be fenced and/or marked using high-visibility temporary construction fencing and signage. All vegetation outside the marked boundary will be treated as an exclusion zone in accordance with Section 5.4.2.

Remaining native ground vegetation and any individual trees nominated for retention will be protected by fencing and an appropriate tree protection/root protection zone as determined by the Project Ecologist and/or arborist. Fencing and signage will be maintained throughout the construction period and designed, where practicable, to allow fauna to exit the clearing area during works.

The Environmental BP will include perimeter fencing and demarcation integrity checks within routine environmental inspections (e.g. Environmental Site Inspection Checklist) and will record and rectify any damage or encroachment in accordance with the incident and non-compliance procedures.

5.4.1 *Protection of vegetation and habitat*

Prior to any vegetation removal, a suitably qualified ecologist will undertake a pre-clearance inspection to confirm clearing limits, identify and mark retained vegetation and habitat features (including hollows), and implement fauna protection requirements consistent with Section 5.5 and Appendix C.

Trees nominated for removal and retention (including threatened flora and HBTs where relevant) will be clearly marked and mapped prior to the commencement of clearing.

Pre-clearance fauna assessment of habitat trees will be undertaken no more than 48 hours prior to the commencement of clearing and, where practicable, immediately before clearing commences. The assessment will be conducted by the Project Ecologist, supported by a suitably qualified arborist where required.

Where the pre-clearance assessment identifies no fauna present within a hollow, the hollow entrance will, where practicable, be temporarily blocked or excluded to prevent re-occupation prior to clearing. Exclusion measures will be applied by the Project Ecologist or arborist under ecological supervision.

Where an occupied hollow is identified, the tree will not be excluded and, where practicable, the Project Ecologist and arborist will apply appropriate measures to reduce the risk of fauna injury or mortality in accordance with the Fauna Handling and Rescue Procedure (Appendix C). Where a threatened species or active breeding hollow is identified, clearing will be deferred and CPHR will be notified in accordance with Section 5.4.7.

Pre-clearance checks will include active searches and walkthroughs immediately prior to clearing, and targeted checks of likely refuge habitat (including soil and vegetation, where relevant).

Following completion of clearing activities, a post-clearing inspection of the demarcated area will be undertaken to identify, capture and release any animals remaining within the cleared area. Fauna salvage and release requirements are detailed in Appendix C.

Salvageable habitat features (including hollows and timber nominated for reuse) will be flagged prior to clearing and managed in accordance with the relevant reuse and salvage requirements (Appendix A; Appendix D).

5.4.1.1 Tracking of clearing limits

Clearing will be progressively tracked against the vegetation and habitat clearing limits specified in Appendix 2 of the Infrastructure Approval and reproduced in Section 4. Clearing will be recorded by clearing block, clearing category, Plant Community Type, threatened-species habitat polygon and threatened-flora individuals, including Black Gum and Capertee Stringybark.

Before clearing commences in each clearing block, the approved clearing extent and applicable biodiversity constraints will be confirmed through the current Appendix A mapping, and pre-clearing records. The Clearing Register will record, as applicable:

- the clearing block identification and location;
- the applicable full-clearance, partial-clearance or exclusion zones;
- the proposed and actual clearing area by Plant Community Type and vegetation condition;
- the proposed and actual area affected within each threatened-species habitat polygon;
- the number of Black Gum and Capertee Stringybark individuals approved for removal and actually removed;
- the number of hollow-bearing trees approved for removal and actually removed;
- the applicable Appendix 2 limit;
- the cumulative impact recorded to date; and
- the remaining approved allowance.

The Project Ecologist will provide clearing information for inclusion in the Clearing Register, with the Environmental BP verifying the ecological values and clearing outcomes.

The Clearing Register will be updated progressively during clearing and reviewed against the remaining approved allowance before subsequent clearing blocks are released. Post-clearing survey information, spatial data and the Post-clearing Report will be used to verify the final clearing undertaken.

A subsequent clearing block will not be released where the cumulative impact and proposed clearing cannot be demonstrated to remain within the approved Project footprint and the applicable PCT, threatened flora and threatened fauna habitat limits. Where tracking indicates that an applicable limit may be approached or exceeded, further clearing will not proceed until the records and remaining allowance and opportunities for avoidance or reduced clearing have been reviewed.

Any actual or potential exceedance will be managed in accordance with Sections 6.4 to 6.7.

5.4.2 Exclusion zones

Exclusion zones, also known as ‘No-Go’ zones, to be established along the edges of the total clearing areas to protect native vegetation and fauna habitat outside the Project footprint, particularly in the Gardens of Stone SCA, from unintentional impact during construction. Figures illustrating the exclusion zones are provided in Appendix A. Exclusion zones will also be implemented in accordance with Section 5.9.1 (Riparian exclusion zones) where works occur in proximity to waterways.

Exclusion zones will:

- Be established during pre-clearing and maintained for the duration of the construction period.
- Include temporary physical barrier (Section 5.4.3) and signage to be used to clearly mark exclusion zones and protected habitat features, and to exclude personnel and vehicles from native vegetation outside the Project footprint.
- Be physical barrier conservatively (i.e. with a vegetative buffer of at least two metres) where possible.
- Include fencing around the Notional Root Zones (NRZs) of trees to be retained.
- Include a minimum 10 m buffer around the rock outcrop containing a small cave, ensuring placement of the exclusion zone fencing does not restrict access for microbats to the cave opening.

The construction workforce are to be supplied with sensitive area maps (showing clearing limits, exclusion zones and the location of threatened flora or vegetation which is to be retained) as part of the induction.

The relevant maps will also be included with applicable Environmental Work Method Statements (EWMS) and attached to the Clearing Register for each work area, where required, to ensure that current clearing limits and environmental constraints are available to personnel undertaking the works.

Further details on exclusion zones and partial clearance zones are provided in Appendix A.

5.4.2.1 Activity Restrictions

The following activities are prohibited within exclusion zones, unless otherwise approved by the Project Ecologist or arborist:

- Vehicle or plant access, including tracking, parking or turning.
- Stockpiling of materials, soil, spoil or equipment.
- Trenching, excavation or grading.
- Placement of temporary infrastructure, services or laydown areas.
- Soil compaction or disturbance.
- Storage or discharge of fuels, chemicals or wastewater.

Where works are required adjacent to exclusion zones, clearing and trimming will be undertaken using low-impact methods, such as hand clearing with chainsaws, to minimise the risk of root or trunk damage.

5.4.2.2 Inspection, Monitoring and Maintenance

- Exclusion zones will be checked and confirmed by a suitably qualified ecologist or arborist prior to works commencing in the vicinity.
- exclusion zones fencing and signage will be regularly inspected and maintained for the duration of works.
- Any proposed encroachment into an exclusion zone, or any damage to fencing or protected trees, will be treated as an environmental incident or non-compliance and managed in accordance with the project’s incident reporting and corrective action procedures.

5.4.2.3 Training and Awareness

- The purpose, location and requirements of exclusion zones will be communicated to all relevant personnel through site inductions and pre-start briefings.
- Site personnel will be informed of the legal and approval requirements associated with vegetation protection and the consequences of unauthorised disturbance within exclusion zones.

5.4.3 Temporary fencing

Continuous fencing of the alignment is not proposed and is not considered practicable given, the length of the corridor, the need to maintain existing access, and the low likelihood of it providing meaningful biodiversity benefits along the majority of the alignment.

Clearing zones and retained vegetation will be demarcated using survey pegs, tree marking, distinguishable flagging or ropes and signage, as appropriate. Demarcation will correspond with the current Appendix A clearing maps. The primary demarcation approach will comprise:

- Survey pegs placed along the approved easement clearing extents by the project surveyor at regular intervals (typically 10 m apart);
 - clear pegging and flagging or rope of boundaries between full-clearance, partial-clearance and exclusion zones, with the applicable clearing category identified on work area mapping or signage;
- Marking of hollow-bearing trees for retention or removal by the Project Ecologist prior to any clearing;
- Marking of remaining trees nominated for removal by the Project Ecologist following identification of hollow-bearing trees; and
- Flagging of retained vegetation, exclusion zones and sensitive habitat features to clearly delineate clearing boundaries during works.
- Demarcation of Tree Protection Zones in cases where trees identified to be retained extend partially into work areas.
- Clearing will be tracked against the approved vegetation and habitat clearing limits, including those identified in Appendix 2 of the Infrastructure Approval.
- Clearing information recorded by the Project Manager or delegate and verified by the Project Ecologist will be used to maintain an up-to-date record of clearing undertaken.

The management-zone demarcation will be verified before the clearing block is released. Damaged, missing or unclear marking will be reinstated before clearing proceeds.

Locations requiring temporary fencing or other physical demarcation will be identified by the Project Ecologist during pre-clearing planning and inspections, in consultation with the Construction Manager. These locations will be shown on the relevant construction mapping or approved work-area figures and incorporated into the applicable EWMS and Clearing Permit before works commence.

Temporary fencing will, be installed on a targeted basis where required to:

- restrict public access to active work areas in proximity to residential areas, roads and public land;
- cover or exclude access to open trenches (Section 5.6.3), pits or excavations to reduce fauna entrapment risk; and
- provide localised exclusion where sensitive habitat features (e.g. threatened flora, retained hollow-bearing trees or riparian zones) adjoin active clearing or construction areas.

Fencing requirements include the following:

- No transparent materials to minimise the risk of collision for birds with fencing.

- No chain-mesh fencing, mesh-made of knotted or woven braided polyethylene / polyester can be used with mesh size between 15 x 15 mm and 25 x 25 mm.
- If there is no other material available other than chain mesh, cover the top of the fence with alternatives including one or more:
 - sheet metal band
 - shade-cloth
 - netting
 - mesh or other visible feature (e.g. hanging deterrent, flagging)
 - tension that will not permit the mesh to fold or form a pocket around fauna.

All fauna exclusion fencing is to be inspected and approved by the Project Ecologist prior to the commencement of works.

Temporary fauna exclusion fencing will be inspected daily during active construction works, and following significant weather events, to identify any breakages, gaps or defects that could allow fauna to enter the construction area. Any defects identified will be repaired as soon as practicable.

During these inspections, any observed changes in local fauna behaviour associated with the installation of temporary fencing will be documented and considered as part of the adaptive management process. Examples may include:

- Attempted road or track crossings at the ends of fencing resulting in an increased risk of injury or mortality.
- Increased interactions between fauna and construction plant, vehicles or active work areas.
- Evidence of fauna attempting to access, circumvent or become trapped by fencing works.

5.4.4 Signage

Signage will be installed on temporary fencing, exclusion fencing and other clearing boundary demarcation measures used to identify sensitive environmental areas and construction limits. Signage will state:

- The importance of riparian vegetation, remnant vegetation communities and fauna habitat within the Project footprint.
- Penalties associated with unauthorised damage to threatened ecological communities, threatened species habitat and other protected biodiversity values under the BC Act.

5.4.5 Timber salvage

Any weed free timber removed during clearance works must be retained for re-use in habitat restoration works throughout the Project footprint. Logs and coarse woody debris provide micro-habitat and protective cover for many ground-dwelling mammal species, and their retention on-site supports the maintenance of habitat values within and adjacent to the Project footprint.

Salvaged timber and coarse woody debris will preferentially be distributed within the following areas, in order of priority:

- Partially cleared areas within the easement located near the point of tree felling, provided placement does not compromise operational access, safety clearances or vegetation management requirements;
- Excluded wooded areas immediately adjoining the easement, including areas that will not be subject to further disturbance, where placement supports habitat continuity between retained vegetation and the easement corridor; and
- Rehabilitation and revegetation areas identified within the Project footprint, where coarse woody debris can contribute to ground-layer habitat complexity and support fauna recolonisation.

Placement will be undertaken in consideration of:

- Ground stability for mechanical plant used during placement;
- Protection of retained trees, understorey vegetation and other sensitive habitat features from damage during placement;
- Avoidance of threatened flora locations and riparian buffers;
- Fire management requirements, including avoidance of fuel load concentrations in high fire-risk areas; and
- Maintenance access requirements along the easement.

The proposed placement of salvaged timber will be determined by the Project Ecologist during pre-clearing planning and confirmed following clearing, having regard to habitat suitability, connectivity objectives, proximity to the source location, land access, bushfire risk and construction constraints. Placement will occur as soon as practicable following salvage, or the material will be temporarily stored in an approved location until the receiving site is available. The location, type and quantity of salvaged timber will be recorded in the Post-clearing Report and salvage register.

Woodchips should not be spread outside of the Project footprint or within Exclusion Zones as they can smother native vegetation; however, they may be used where appropriate in revegetation beds to suppress weeds during establishment and for erosion and sediment control. Any salvaged weed free soil can be stockpiled where it is generated (within cleared areas only), for later use in site rehabilitation.

Trunks will be assessed for their capacity for re-use as naturalised glider poles as described in Appendix B. The management of hollow-bearing trees, including salvage for reinstatement as replacement habitat features, is described in Section 5.7 and Appendix D.

5.4.6 Threatened Flora

Native vegetation, including threatened eucalypt species Black Gum (*Eucalyptus aggregata*) and Capertee Stringybark (*Eucalyptus cannonii*), located outside the approved Project footprint will be avoided. No clearing, ground disturbance or other Project works may occur outside the approved Project footprint unless the proposed change has been assessed and all applicable consultation, approval and document-control requirements have been completed.

Pre-clearing surveys will be undertaken to verify the location and extent of Black Gum and Capertee Stringybark individuals that may be affected. Before clearing, trees will be clearly marked to distinguish individuals approved for removal from those to be retained. Tree-protection measures, including no-go zones and other relevant controls consistent with AS 4970-2025, Protection of Trees on Development Sites, will be installed and maintained during construction.

Clearing of Black Gum and Capertee Stringybark will be progressively tracked against the applicable individual limits specified in Appendix 2 of the Infrastructure Approval. The number and location of individuals approved for removal and actually removed will be recorded in the applicable Clearing Register and verified by the Project Ecologist, with the register maintained by the Environmental BP.

Where proposed impacts cannot be demonstrated to remain within the approved Project footprint and applicable threatened-flora limits, clearing will not proceed. Any additional impact will require further ecological assessment and completion of all applicable consultation, biodiversity offset, approval and document-control requirements before clearing occurs.

Micro-siting and design refinements, including adjustments to access-track alignments, may be undertaken to respond to site-specific constraints or avoid impacts on threatened flora, hollow-bearing trees and other biodiversity values, unless the proposed refinement has been assessed and authorised through the applicable design-change, consistency-assessment, approval or modification process before the affected works commence. Any refinement must comply with the Infrastructure Approval and must not result in biodiversity impacts exceeding the applicable approved limits unless separately assessed and authorised. The Project Ecologist will assess proposed refinements for potential biodiversity impacts, and the Environmental BP will verify applicable compliance and document-control requirements before the affected works proceed.

Opportunities to collaborate with local Landcare groups on seed collection will also be considered to support propagation and restoration of Black Gum and Capertee Stringybark within the local area. Seed collection within the Gardens of Stone SCA will be undertaken only after the applicable licences and permissions have been obtained.

5.4.7 Pre-breeding hollow exclusion

Where vegetation clearing is scheduled to commence prior to the primary breeding period (typically spring for key hollow-nesting species), there is an increased risk that hollow-bearing trees proposed for removal may become occupied by threatened hollow-nesting birds as the breeding season commences. To minimise the likelihood of nesting in hollows that are scheduled for removal (and to reduce the potential for injury, mortality, or the need for nest removal/handling), preventative hollow exclusion measures will be implemented, focusing on hollows that have the potential to support priority hollow-nesting birds (cockatoo and large owls). This measure is intended to encourage selection of retained hollows within surrounding habitat where available, while maintaining alignment with the pre-clearing survey and fauna handling protocols.

Preventative exclusion will be applied only following inspection by a suitably qualified ecologist and, where access to hollows requires climbing, elevated work platforms or assessment of tree safety and structural integrity, a suitably qualified arborist. The inspection will confirm the hollow is not occupied, and will be implemented using durable, heavy-duty mesh/exclusion covers sized to prevent entry and nesting in targeted hollows. Where a hollow is identified as occupied, the HBT will not be cleared until the relevant fauna handling and HBT clearing protocols have been implemented under the supervision of a suitably qualified ecologist. Where practicable and appropriate, exclusion may be undertaken at night to prevent fauna re-entering the hollow prior to clearing.

If a threatened species or active breeding hollow is identified, clearing will cease in the vicinity (stop work zone to be determined by the Project Ecologist on case by case basis) and CPHR will be notified. The HBT will remain undisturbed until breeding has concluded and dependent young have dispersed or fledged, unless otherwise agreed in consultation with CPHR. All excluded hollows will be re-checked as part of the pre-clearing survey protocol (including checks for nests) prior to tree removal, to confirm that no nesting activity has occurred.

5.4.8 Hazard Tree Inspections

Potential hazard trees will be identified during pre-clearing inspections and where otherwise observed during construction. The Project Ecologist will assess the biodiversity and habitat values of each potential hazard tree. A suitably qualified arborist will be consulted where specialist advice is required regarding tree condition, structural stability or safety risk. The assessment will determine whether the tree can be retained, pruned or otherwise managed while maintaining its habitat value, or whether removal is required.

5.5 Habitat connectivity strategy

Further detail regarding Squirrel Glider connectivity, including connectivity mapping, habitat linkage assessment, movement pathway identification, implementation methodology, monitoring requirements, and proposed mitigation and enhancement measures, is provided in the Habitat Connectivity Strategy (Appendix B). The strategy establishes the framework and requirements for the design and implementation of connectivity measures; however, the final locations and specifications of connectivity structures will be confirmed following detailed field assessment and consultation with relevant stakeholders and land managers in accordance with project approval requirements. Information relating to Squirrel Glider connectivity has been consolidated within Appendix B for clarity and ease of reference.

5.6 Wildlife protection measures

The following wildlife protection measures will be implemented to avoid and minimise the risk of harm to fauna during construction of the Project, where interactions with vegetation clearing, excavation works and mobile plant may occur.

5.6.1 Pre-clearing fauna survey protocol

A suitably qualified ecologist must undertake pre-clearing fauna surveys immediately prior to any vegetation clearing or ground-disturbing activities to identify the presence of native fauna and determine whether additional management measures are required before works commence. Surveys are required to identify fauna presence, nests, hollows, refuge sites and any other features that may result in fauna injury or mortality if disturbed.

Pre-clearing fauna surveys must be completed no more than 48 hours prior to vegetation clearing and apply throughout the widened alignment and all associated disturbance areas.

Detailed pre-clearing fauna survey methods, timing requirements, seasonal considerations and inspection procedures are provided in Appendix C and must be followed at all times.

5.6.2 Fauna handling and removal

Fauna handling and removal procedures apply where fauna are encountered during pre-clearing surveys, vegetation clearing, trenching, drilling or other construction activities. All fauna handling must be undertaken by suitably qualified and licensed ecologists and prioritise the avoidance of injury or mortality.

Detailed procedures for fauna capture, handling, relocation, hollow inspection, seasonal clearing, unexpected fauna finds and euthanasia are provided in Appendix C and form a mandatory component of this BMP.

5.6.3 Trench and drill site management

To minimise the risk of fauna becoming trapped, injured or killed in open trenches, pits or drill sites, all excavations associated with construction will be managed using a precautionary approach consistent with the fauna-safe excavation procedures.

Measures will include installing physical covers whenever trenches or drill holes are unattended including

- steel plates
- geofabric
- shade cloth.

Fauna escape mechanisms will also be provided such as gently sloped egress ramps or secured wooden/plastic escape ladders at intervals no greater than 10–15 m. Excavations that cannot be covered will be surrounded by temporary fauna-exclusion fencing or barrier mesh to deter entry, following the same principles used for exclusion zones in Section 5.4.2.

All open trenches and drill sites will be inspected at least twice daily, early morning and late afternoon, by a Project Ecologist or suitably qualified person, reflecting daily inspection triggers. Any fauna located will be rescued and relocated in accordance with the BMP's fauna-handling protocol (Appendix C), and all incidents will trigger a reassessment of controls consistent with the adaptive-management framework.

5.6.4 Unexpected species finds protocol

The purpose of the Unexpected Species Finds Protocol is to ensure that any previously unrecorded threatened flora, fauna or Ecological Communities (TECs) encountered during construction is managed in a precautionary, compliant and timely manner.

If an unexpected threatened species is identified and is likely to be affected by construction activities:

- All works within the vicinity must cease immediately.
- The area must be demarcated and protected to prevent further disturbance.
- The Project Manager will notify Transgrid and the Project Ecologist without delay.

- The Project Ecologist will assess the find and determine appropriate management measures in consultation with Transgrid.
- Where an impact is likely, relevant regulatory authorities will be consulted, and any required licences, permits or approvals will be obtained prior to recommencement of works.
 - CPHR will be informed of any unexpected finds, regardless of whether an impact is deemed as likely to occur or not
- Works must not recommence until the area is confirmed safe and all required approvals have been obtained.

Detailed procedures for responding to unexpected threatened species finds, including fauna handling, relocation, soft-felling, decision pathways and post-incident actions, are provided in Appendix C and must be followed at all times.

5.6.5 Large-eared Pied Bat (*Chalinolobus dwyeri*)

The Study Area contains a rocky overhang in the upper section of the Project footprint that has the potential to provide roosting opportunities for the Large-eared Pied Bat *Chalinolobus dwyeri*. Although no confirmed roosts have been identified within the Project footprint, the species is known to shift roosts frequently and may utilise even small or isolated rock features such as overhangs.

A suitably qualified ecologist will inspect the overhang prior to the commencement of works that have the potential to directly or indirectly impact the rocky overhang, or to assess its suitability as a potential roost site for the Large-eared Pied Bat. The assessment will involve a detailed examination of the structure for features known to support the species, including the presence of crevices, cracks, roof indentations, small cavities, or shaded recesses that may provide appropriate thermal conditions for day-roosting or night sheltering.

Prior to construction, a 10 m biodiversity exclusion zone shall be established around the rock outcrop, ensuring that fencing does not impact the bats. Piling for structure foundations within 80 m of the rock outcrop will be conducted outside the breeding period for the Large-eared Pied Bat (November to January), wherever possible, within the required work program. . The Project will not use impact piling at this or any other location. Alternative lower impact piling methods and foundation designs will be considered during detailed design, subject to geotechnical constraints. This will consider, including the use of smaller drill rigs and piling methods of piling with lower noise and vibration impact.

The preferred piling method and timing will be determined by the Construction Manager in consultation with the Project Ecologist, before the relevant piling methodology is approved. The decision will consider the final foundation design, construction sequencing, access and time constraints, safety, and the potential noise and vibration effects on the rock outcrop.

Where piling within 80 m of the rock outcrop is proposed during November to January, the Project Ecologist will document the reasonable opportunities considered to avoid the breeding period or use a lower-impact method. Piling during this period will only proceed where seasonal avoidance or a lower-impact alternative is demonstrated to be not reasonably practicable. The justification, selected controls and Project Ecologist's advice will be recorded in the relevant construction methodology or EWMS before works commence.

Where it is not practicable to limit construction adjacent to the overhang to out-side the breeding season, surveys of the overhang will be conducted by the Environment BP or ecologist prior to the commencement of works and thereafter at weekly intervals while works are occurring within the vicinity of the overhang, to confirm the presence or absence of the species.

The ecologist will evaluate the orientation and microclimatic properties of the overhang, inspect for guano, staining, discard piles, or other field evidence of bat use, and conduct dusk or dawn observations or acoustic scans if required based on structural suitability. If the feature is assessed as having roost potential or if signs of bat activity are detected, it will be designated as a sensitive habitat feature. Where construction occurs during the Large-eared Pied Bat breeding period (November to January), inspections of potential breeding habitat within the rocky outcrop will be undertaken weekly during works by a suitably qualified Project Ecologist to confirm the presence or absence of breeding activity and to inform the implementation of any required mitigation measures including rerouting light vehicles to avoid the adjacent

access track during the breeding season. If evidence of roosting or breeding activity is detected, works that may affect the rock outcrop will cease and the Unexpected Species Finds Protocol will be implemented.

5.6.6 Purple Copper Butterfly (*Paralucia spinifera*)

Targeted surveys undertaken for the Purple Copper Butterfly (PCB) did not detect any individuals and found no suitable occupied habitat within the Project footprint. Although *Bursaria spinosa* subsp. *lasiophylla* is present in small patches, the Revised BDAR concludes that these plants do not currently provide suitable habitat for the species, and the operational impacts are assessed as negligible, with no offsets required.

In accordance with the Revised BDAR findings and current Transgrid procedures, an updated environmental assessment will be undertaken prior to the commencement of operational activities and will incorporate the most recent records from the NSW BioNet Atlas for the PCB and its larval host plant. Where new records or additional areas of potential habitat are identified, consultation will be undertaken with relevant stakeholders, including NPWS and CPHR as appropriate, to confirm management requirements and any additional mitigation measures prior to the commencement of works. If new records or new areas of potential habitat are identified, Transgrid will apply its established protocols for working in areas with possible PCB presence, including:

- pre-work environmental briefings,
- targeted checks of *Bursaria spinosa* subsp. *lasiophylla* patches,
- establishment of precautionary no-disturbance buffers, and
- application of the Unexpected Species Finds Protocol.

Given the Revised BDAR conclusion that the species is absent and that habitat is not currently suitable, these measures will be implemented only if new information indicates a change in species status or habitat condition in proximity to the easement.

Following consultation with NPWS, Transgrid has committed to the use of *Bursaria spinosa lasiophylla* in rehabilitation where suitable. The Rehabilitation Management Plan (RMP) will include the use of *Bursaria spinosa lasiophylla* within suitable locations of the easement as part of post-construction restoration works, having regard to aspect, altitude, species requirements and Transgrid maintenance constraints. Where feasible, this will provide potential habitat for PCB.

5.6.7 Collision risk to flying and gliding species

Construction of transmission lines presents a potential risk of collision for birds, gliders and bats, particularly within structurally complex forested corridors, riparian crossings and areas with high aerial fauna activity e.g. Coxs River. Existing transmission infrastructure within the region already contributes to baseline collision levels, and the Project may incrementally increase this risk for species that fly within the height envelope of transmission conductors.

Collision risk varies by species group and ecology. Large, slower-flying or manoeuvrability-limited birds (e.g., cockatoos), along with high-mobility species such as migratory birds, have an elevated risk of line strike. Large raptors, such as the White-bellied Sea-Eagle (Recorded flying in the vicinity of the Coxs River and Lake Wallace), are recognised as being at increased risk of collision with transmission line conductors due to their large wingspan, soaring flight behaviour and frequent use of riparian corridors and open landscapes. For microbats the risk is generally lower but species flying above the canopy or foraging across cleared land may be exposed under certain conditions. Gliding mammals may be exposed where canopy gaps exceed natural glide distances.

To minimise collision risk, the Project will apply a suite of avoidance and mitigation measures consistent with contemporary transmission-line practice, including targeted use of conductor line-marking devices. Procedures to minimise the risk of transmission line collisions require:

- review and identification of high-risk spans and potential “high-risk” aerial pathways,
- development of a Conductor Line-Marking Plan specifying device type, spacing, locations and implementation timeframes,

- The Plan will be finalised following detailed design and consultation with relevant stakeholders, including CPHR, prior to commencement of conductor stringing.
 - Approved line-marking devices will be installed as part of transmission line construction and prior to energisation of the line.
- adaptive deterrent strategies such as bird flappers and perching deterrents,
 - monitoring of efficacy, which may include behavioural observations or trial use of strike-detection technologies where appropriate.

These measures are intended to reduce collision risk at identified high-risk spans and maintain fauna movement opportunities across the easement.

5.6.7.1 Identification of “high-risk” pathways

Potential areas of elevated collision risk will be identified and confirmed during detailed design, taking into account final tower locations, conductor heights, span geometry, adjacent landforms, riparian corridors and recorded fauna activity. Spatial identification of high-risk spans and the placement of collision deterrent measures will be documented through the Conductor Line Marking Plan and associated design documentation.

5.6.7.2 Conductor line-marking devices

The Conductor Line Marking Plan will identify the high-risk spans, device type, spacing, installation location and implementation timing. At a minimum, fauna deterrent devices of the flapper variety will be installed in the open habitat areas along the Cocks River identified under RMM B16, subject to final design and safety requirements.

Any alternative device or monitoring method will be selected by the Design Team in consultation with the Project Ecologist, having regard to the target species, span design, manufacturer specifications, safety requirements and evidence of effectiveness.

5.6.7.3 Monitoring and Evaluation Tools

Monitoring outcomes will be reviewed to determine whether additional mitigation is required. Where monitoring identifies repeated collision events, mortality of threatened species, or evidence that installed line-marking devices are not effectively reducing collision risk, additional management measures may be implemented. These may include increased behavioural monitoring, adjustment of diverter spacing, installation of alternative line-marking devices, or other measures recommended by a suitably qualified ecologist.

- Vibration-Detection Sensors (e.g., BSI strike-detectors) – used to detect and quantify collisions and evaluate diverter performance,
- Behavioural Flight Observation Methods – pre- and post-installation observation of avian responses to diverters.
- Before-After-Control-Impact – comparing carcass records or strike detections pre- and post-installation.

Table 5-1 Triggers and Required Actions for Collision Risk and Connectivity Management

Trigger	Required action	Responsibility
High-risk spans identified, including riparian crossings and connectivity corridors	Install conductor line markers consistent with the Conductor Line-Marking Plan, including flappers, spirals or perching deterrents. Approved devices will be installed as part of transmission-line construction and before completion of Project works.	Project Manager with input from Design Manager and Project Ecologist

Commencement of stringing without approved collision-mitigation locations	Suspend stringing activities in affected spans until high-risk location mapping and device specifications are confirmed.	Construction Manager
Detection of bird or bat strike through monitoring or observation	Inspect device placement and assess whether corrective measures are required, including increasing diverter density, modifying spacing or changing device type.	Project Ecologist
Repeated bird or bat mortality or collision detections at the same location or span	Undertake targeted monitoring and assess the need for additional diverters, modified spacing or alternative diverter types.	Project Ecologist
Clearing creates or increases a canopy gap within an identified glider connectivity pathway	Assess and implement the connectivity measures specified in Appendix B, including glider poles where required, and retain tree canopy wherever practicable.	Project Manager

5.6.8 Bushrock and surface rock habitat

Bushrock, rock piles, boulders and other surface rock features will be retained in situ where practicable. Where disturbance cannot be avoided, the Project Ecologist will inspect suitable rock features immediately before disturbance for sheltering fauna. Features will be moved carefully and progressively to allow fauna to escape, with any fauna encountered managed in accordance with the Fauna Handling and Rescue Procedure in Appendix C.

Where suitable and safe to do so, salvaged bushrock will be relocated to retained habitat or rehabilitation areas under the direction of the Project Ecologist. Relocation sites will be selected to maintain habitat function while avoiding damage to existing native vegetation, threatened-species habitat, cultural heritage values and drainage features. The source and receiving locations will be recorded using GPS coordinates and photographic records.

5.7 Nest box strategy

Hollow-bearing trees provide critical breeding, roosting and shelter resources for a wide range of native fauna, including several threatened species recorded or considered likely to occur within the Study Area. Construction activities associated with the widened easement will result in the unavoidable removal of 179 identified HBTs, containing up to 331 individual hollows across a range of size classes, representing a significant loss of habitat resources. Pre-clearing surveys undertaken immediately prior to vegetation removal may identify additional hollow-bearing trees not previously recorded, which will be managed in accordance with the Fauna Handling and Rescue Procedure (Appendix C) and included within the Nest Box Strategy (Appendix D).

Impacts to HBTs will be managed through the implementation of a tiered, risk-based replacement hollow program that has been developed in consultation with CPHR and NPWS. . The program prioritises avoidance and retention of hollow resources wherever practicable, followed by salvage and reuse of natural hollows, and the installation of carved hollows and purpose-designed nest boxes where necessary. Detailed replacement ratios, installation procedures, monitoring requirements, performance criteria and adaptive management provisions are provided in the Nest Box Strategy (Appendix D).

Key measures to be implemented include:

- retention and protection of HBTs wherever safety, clearance and design constraints allow;
- salvage of natural hollows from unavoidably removed HBTs for reinstallation in retained habitat;
- installation of carved hollows and species-specific nest boxes to replace lost hollow resources, tailored to the size class and species dependencies identified during pre-clearing assessments;

- progressive installation of replacement hollows during the clearing program, with all required replacement hollows installed within three months of the loss of the associated hollow resource;
- monitoring of installed replacement hollows to assess structural condition, occupancy, breeding activity and performance against program objectives; and
- annual reporting of monitoring outcomes to CPHR and the local NPWS Area Office to inform ongoing adaptive management of the program.

All replacement hollow installation, monitoring and adaptive management actions will be undertaken in accordance with the procedures and performance requirements detailed in Appendix D.

5.8 Soil stabilization and erosion control

Erosion and sedimentation associated with construction activities will be managed to minimise soil disturbance, prevent offsite sediment movement, and protect adjoining land and downstream waterways. This BMP establishes biodiversity-related objectives relevant to erosion and sediment control, including preventing sediment-laden runoff from entering waterways and riparian zones and avoiding indirect impacts to aquatic and riparian habitat values.

Where suitable topsoil is disturbed, it will be stripped separately from subsoil and retained for reuse during rehabilitation to preserve soil structure, seed resources and biological material. Topsoil will be stored within approved disturbance areas, away from drainage lines, riparian buffers, retained vegetation and exclusion zones, and managed to minimise compaction, erosion, sediment loss, weed establishment and unnecessary disturbance. Suitable topsoil will be reused as close as practicable to its source location and applied progressively as rehabilitation areas become available. Topsoil affected by priority weeds, pathogens or contamination will be segregated and will not be reused in rehabilitation areas.

Where topsoil is retained in stockpiles for an extended period, stockpiles will be inspected monthly and following significant rainfall events for compaction, erosion, sediment loss, waterlogging, weed establishment and other evidence of deterioration. Stockpiles will not be trafficked or used for storage of plant, equipment or other materials, and unnecessary handling or repeated reworking will be avoided. Where practicable, weed-free vegetative cover or another suitable stabilisation treatment will be established to protect soil structure and biological condition. Corrective actions will be implemented where inspections identify deterioration that may affect the suitability of the topsoil for rehabilitation.

Detailed design, installation, inspection, and maintenance requirements will be addressed through the CEMP, the Soil and Water Management Plan and site-specific Erosion and Sediment Control Plans. Site-specific topsoil stripping, storage, handling and reuse requirements will also be documented in the relevant EWMS, Soil and Water Management Plan and Rehabilitation Management Plan. Controls will be designed and implemented in accordance with relevant NSW guidelines and standards, be commensurate with site conditions and the nature of works, installed prior to or concurrent with ground-disturbing activities, and maintained until disturbed areas are stabilised, with routine and post-rainfall inspections and corrective actions undertaken as required under the CEMP and SWMPs.

5.9 Riparian habitat management

The removal of riparian vegetation around the Coxs River will be limited to the extent necessary for construction, and opportunities will be investigated to minimise impacts to riparian vegetation will be investigated to minimise impacts within the riparian zone when reviewing final construction methods and staging. Following completion of works, opportunities to enhance the riparian corridor will be investigated, including targeted revegetation to stabilise banks, improve shading, and promote aquatic habitat values. These initiatives will be developed in consultation with DPIRD-Fisheries, WaterNSW (particularly regarding potential flooding behaviour and hydraulic performance), and any other relevant stakeholders to ensure that restoration works support long-term ecological function and waterway resilience.

5.9.1 Riparian Buffer/Exclusion Zones

Riparian buffer and exclusion zones will be established and managed to protect waterways, riparian vegetation and associated aquatic habitat from direct and indirect impacts during construction and post construction activities. These zones form part of the project's broader biodiversity avoidance and impact minimisation measures.

Riparian buffers will be delineated onsite in accordance with the recommended Vegetated Riparian Zones (VRZs) outlined in the Guidelines for Riparian Corridors on Waterfront Land (DPE, 2022) and the Policy and Guidelines for Fish Habitat Conservation and Management (DPI, 2013). Buffer widths will be applied having regard to stream order, riparian condition and ecological sensitivity.

Prior to the commencement of works in proximity to waterways:

- Riparian buffers will be identified by the Project Ecologist, pegged and physically marked onsite.
- Buffer extents will be shown on site plans, sensitive area plans and clearing diagrams.
- Temporary fencing and signage will be installed where required to clearly communicate buffer boundaries and access restrictions.

5.9.1.1 Riparian Exclusion Zones

Riparian areas within the project footprint that are not required for construction activities will be delineated and managed as exclusion zones wherever practicable, in accordance with relevant mitigation measures.

Within riparian buffer and exclusion zones:

- Native riparian vegetation will be retained and protected.
- Vehicle and machinery access will be prohibited.
- Stockpiling of materials, soil or spoil will not be permitted.
- Storage, refuelling or handling of fuels, chemicals, concrete washout or other hazardous substances will not be permitted.
- Trenching, excavation and ground disturbance will be avoided.
- Unauthorised access will be prevented through physical barriers or fencing, where required.

Where construction activities are required adjacent to riparian buffers, works will be undertaken using low-impact construction methods to minimise risks of erosion, sedimentation, vegetation damage and changes to hydrological function. Low-impact construction methods will be identified during detailed construction planning and documented within the relevant Environmental Work Method Statements (EWMSs), Soil and Water Management Plans and other construction management documentation, as applicable.

5.9.1.2 Compliance, inspection and monitoring

Riparian buffers and exclusion zones will be verified by a suitably qualified ecologist prior to works commencing nearby and will be regularly inspected for the duration of construction. Any unauthorised disturbance within riparian buffers or exclusion zones will be treated as an environmental incident or non-compliance and managed in accordance with project reporting and corrective action procedures.

5.9.2 Post-construction riparian restoration around Coxs River

Post-construction restoration within riparian areas, including along the Coxs River, will be undertaken in accordance with the project approval conditions, including Condition B17 (Riparian Areas) and Condition B53 (Rehabilitation).

In line with Condition B17, opportunities to improve riparian condition for aquatic biota will be considered following construction, in consultation with DPIRD-Fisheries, WaterNSW, and other relevant stakeholders. Where feasible and reasonable, identified initiatives will be incorporated into the post-construction site restoration program.

Rehabilitation activities will be implemented in accordance with the principles and requirements outlined in Condition B53 and associated rehabilitation planning and will be targeted to stabilise disturbed areas and support the recovery of riparian vegetation and function.

Where applicable and consistent with approval conditions, measures to improve riparian condition may include revegetation using locally appropriate native riparian species, re-establishment of riparian groundcover, and stabilisation of disturbed banks and riparian soils. These measures will be designed to support the recovery of riparian structure and function and enhance aquatic habitat values, where feasible and in accordance with approved rehabilitation objectives.

5.9.3 Instream works in minimal key fish habitat of watercourses

Construction activities occurring within or adjacent to watercourses that provide key fish habitat will be undertaken in a manner that avoids any additional restriction to existing fish passage.

Works will be planned and executed in accordance with:

- Policy and Guidelines for Fish Habitat Conservation and Management (DPI 2013).
- Controlled Activities – Guidelines for Watercourse Crossings on Waterfront Land (DPE 2022b).

Construction methods will minimise additional restriction of fish passage relative to existing conditions and avoid unnecessary disturbance to bed, banks and instream habitats.

5.9.4 Spread of invasive fish species

Construction activities in or adjacent to watercourses providing key fish habitat, including the Coxs River and associated tributaries, will be undertaken in accordance with Condition B18 and Condition B19 and will minimise any additional restriction to fish passage relative to existing conditions. Works will be carried out in accordance with:

- the Policy and Guidelines for Fish Habitat Conservation and Management (DPI 2013)
- the Controlled Activities – Guidelines for Watercourse Crossings on Waterfront Land (DPE 2022b).

No invasive fish species will be discharged or permitted to enter natural waterways during Project activities. Any water transfer, dewatering, aquatic-biota handling or other activity with the potential to move invasive fish will be managed to prevent their release or spread, in accordance with the Fisheries Management Act 1994, Biosecurity Act 2015 and RMM B19.

5.9.5 Surface water dewatering at culvert crossings

Any proposed dewatering of the Coxs River oxbow or associated waterbodies to allow construction of culvert crossings will be undertaken only following consultation with relevant state bodies on the appropriate management of aquatic biota. Consultation will occur once the requirement for dewatering and the proposed construction methodology, location, extent and anticipated duration of dewatering have been confirmed through detailed design and construction planning. At the time of preparing this BMP, this information has not been sufficiently developed to enable the potential impacts and aquatic-biota management requirements to be meaningfully assessed in consultation with the relevant agencies.

The Environmental BP will coordinate consultation with DPIRD Fisheries and other relevant state bodies once sufficient design and construction information is available and early enough for agency advice to inform the proposed construction methodology before works commence. Consultation will include provision of the proposed dewatering methodology and supporting design and environmental information, with meetings held where required.

Consultation will be completed, and any resulting management requirements incorporated into the relevant EWMS and water management documentation, before dewatering commences. Where consultation identifies a need to amend the measures contained in this BMP, the BMP will be updated in accordance with Section 6.8 before the relevant dewatering activity commences.

5.10 Bushfire management

The project traverses a landscape dominated by dry sclerophyll forests and woodlands (PCTs 3369, 3735, 3747 and 3749), which are characterised by high curing rates, elevated fine-fuel loads and well-developed shrub and sapling layers that can act as ladder fuels. These communities frequently occur on slopes and ridgelines where topography can amplify fire intensity and the rate at which fire spreads.

Conversely, lower-lying areas containing PCT 3385 (Southern Tableland Creekflat Swamp Woodland) tend to hold moisture for longer periods, though they remain susceptible to ignition during extended drying. Parts of the alignment also fall within or immediately adjacent to the Gardens of Stone SCA, where fire management requirements are heightened due to conservation values, access constraints and NPWS protocols.

5.10.1 Risk sources during construction

Construction activities described in the Revised BDAR inherently introduce bushfire risk. Vegetation removal, excavation of tower pads, upgrades to access tracks and the operation of heavy machinery all have the potential to generate sparks, heat or other ignition sources. Hot works such as cutting, welding and grinding present additional risk, as does vehicle movement over dry vegetation or uneven terrain. Conductor stringing and the presence of fuel, lubricants and chemicals on site also increase the potential for localised ignition if not managed carefully.

5.10.2 Bushfire mitigation measures

Detailed procedures for bushfire risk management, including fire response, evacuation and incident notification, are provided in the Project's Bushfire Emergency Management Plan and are to be implemented in conjunction with the biodiversity-specific measures outlined in this section.

Works will be undertaken in accordance with NSW RFS fire danger ratings. High-risk activities, including hot works, will not be undertaken on Total Fire Ban days, or on days of Extreme or Catastrophic Fire Danger, unless an exemption is obtained. Hot works within or adjacent to the Gardens of Stone SCA will be minimised to the lowest practicable level, with preference given to undertaking such works at the site office compound, an alternative cleared and controlled area, or off-site (e.g. at a manufacturing facility) wherever feasible.

On days forecast as Extreme or Catastrophic Fire Danger, and prior to any hot works or other activities with heightened fire risk being undertaken within or adjacent to the SCA, the relevant NPWS Duty Officer will be contacted to discuss site conditions and any additional risk mitigation measures required.

5.10.3 Machinery, hot works and fuel handling

Where hot works are permitted, they will:

- occur only within a cleared area under close supervision;
- have fire suppression equipment readily available; and
- be followed by a fire watch of no less than 30 minutes after works have ceased.

Plant and equipment will be maintained to prevent exhaust sparks, overheating and fluid leaks, with spark arresters fitted where required. Machinery will not be operated over dry, uncompressed vegetation unless a cleared working pad has first been established.

Vehicles will remain on designated access tracks, which will be routinely inspected for fine-fuel build-up or obstructions. Parking on grass or other combustible material will be avoided. Fuel, oils and other flammable liquids will be stored in bunded, shaded areas, and refuelling will occur in cleared locations with spill kits and supervision available at all times.

5.10.4 Vegetation management

Vegetation clearing will be staged to ensure that fine fuels are not unnecessarily stockpiled in areas of elevated fire risk. Cleared material will either be mulched promptly or transported to safe stockpile locations. Around compounds, laydown areas, tower pads and brake-and-winch sites, fuel loads will be kept low to provide defensible working areas without requiring broadscale clearing. All vegetation management will remain consistent with the ecological mitigation measures described elsewhere in the BMP.

5.10.5 Weather monitoring and trigger points

Weather conditions will be monitored continually during high-risk works. Staff will review NSW RFS fire danger ratings and real-time alerts, including the Hazards Near Me application at the start of each shift and throughout the day. Should temperatures, winds or humidity reach thresholds at which fire behaviour may escalate, high-risk activities will cease. Real-time alerts from the “Fires Near Me” service will also guide when works must be paused or personnel evacuated.

5.10.6 Fire response protocol

If a fire is detected, all works will stop immediately. The Project Manager or Construction Manager will be notified and emergency services (000) contacted, with the location, safest access route and any relevant hazards communicated promptly. Initial suppression may be attempted only where safe to do so, using on-site extinguishers or water supplies. Personnel will evacuate via predetermined routes to safe assembly points. Transgrid Operations, NPWS (where relevant), landholders and the local RFS brigade will be advised in accordance with the communication protocol established for the project.

5.11 Biosecurity Management

A Biosecurity Management Plan is provided in Appendix E. The primary objective of the Biosecurity Management Plan is to describe the management techniques that will be implemented to ensure that biosecurity impacts as a result of the Project are minimised and in accordance with the requirements of the *Biosecurity Act 2015* and the Conditions of Approval.

To meet these objectives, the plan describes:

- the existing and potential weeds, pest animals and pathogens identified within the Study Area during the preparation of the Biodiversity Development Assessment Report
- the practical management techniques to be applied to manage the introduction and spread of weeds, pests and pathogens; and
- how these management techniques would be applied during the construction phase of the Project to avoid the introduction of new invasive species and minimise the spread of existing invasive species.

5.11.1 Weed management procedures

Weed and pest species pose a risk to biodiversity values through competition with native vegetation and degradation of habitat. Construction activities, including vegetation clearing, vehicle and machinery movement, and soil disturbance, have the potential to introduce and spread weeds within the Project footprint and adjacent areas, including the Gardens of Stone SCA.

Weed and pest risks for the Project will be managed through the implementation of a site-wide weed hygiene and control framework, supported by Transgrid (2022) Maintenance Plan – Easement and Access Tracks. Detailed weed

management requirements, monitoring, thresholds and treatment procedures are provided in the Weed Management Procedure (Appendix E).

Key measures to be implemented include:

- vehicle, plant and equipment hygiene controls prior to site entry and between work areas;
- monitoring for weed incursions during construction, particularly during periods of active ground disturbance;
- timely treatment of identified weed infestations by appropriately trained personnel; and
- induction of all personnel, contractors and visitors on weed hygiene responsibilities and procedures prior to accessing the site.

All weed management actions will be undertaken in accordance with the procedures and performance requirements detailed in Appendix E.

5.11.2 Pathogen management

Activities associated with the Project have the potential to spread pathogens within the Project footprint to other sites. These pathogens threaten identified biodiversity values. Three pathogens were identified as risk factors for the Project footprint.

- Chytrid fungus, *Batrachochytrium dendrobatidis*
- Phytophthora, *Phytophthora cinnamomi*
- Myrtle rust, *Austropuccinia psidii*

Methods to control the spread of pathogens for the project are included in Appendix E.

5.11.3 Response to biosecurity risk or incident

In the event of a newly identified or increased biodiversity risk, or a biodiversity incident, the Project Ecologist will investigate the ecological circumstances and potential impacts, while the Environmental BP will coordinate the broader incident investigation and response. Where a biosecurity risk escalation or impact is identified as resulting from the pest and weed management measures, or a deficiency in their implementation, appropriate corrective actions will be identified, implemented and communicated to the relevant parties.

Where an instance of non-compliance is identified, the Environmental BP will document and monitor the corrective actions, with the Project Ecologist verifying their ecological effectiveness where relevant. The Project Manager will be responsible for ensuring corrective actions are implemented.

All biodiversity incidents, biosecurity risk escalations, corrective actions and instances of non-compliance will be documented and managed in accordance with the monitoring, reporting, incident management and non-compliance procedures outlined in Section 6.3 of this BMP. Records will be maintained on the project file and reported to relevant stakeholders and regulators where required.

5.11.3.1 Pest-animal management

Pest-animal observations will be recorded during routine environmental inspections. Project-related pest control will be considered where monitoring identifies a new or increased pest-animal risk attributable to construction activities, including increased pest activity, predation, competition for replacement hollows or other adverse effects on native fauna.

Where control is required, the appropriate response will be determined by the Project Ecologist will recommend an appropriate response, and the Environmental BP will coordinate in consultation with Transgrid, relevant land managers and other relevant stakeholders. Control measures will be targeted to the identified risk and implemented by appropriately qualified or authorised personnel using methods that minimise risks to native fauna.

5.12 Rehabilitation

Rehabilitation will be undertaken to stabilise disturbed areas, minimise ongoing environmental risks, and support the recovery of native vegetation and habitat values following construction activities. Rehabilitation measures will apply to areas subject to both full clearance and partial clearance, where disturbance cannot be avoided.

Rehabilitation will be implemented progressively where feasible and completed as soon as practicable following the cessation of construction activities. The approach to rehabilitation will be integrated with erosion and sediment control measures, weed management procedures and biosecurity controls to ensure coordinated implementation and effective outcomes.

Key elements of the rehabilitation approach include:

- rehabilitation of temporary disturbance areas to facilitate natural regeneration with suitable native species;
- beneficial reuse of resources salvaged from within the approved development area during the rehabilitation and revegetation of the site;
- management of disturbed substrates to maintain soil integrity and reduce reinfestation risk;
- application for appropriate scientific licences relating to the collection of seeds in the SCA; and
- post-construction monitoring to assess rehabilitation performance and determine the need for follow-up actions.

Detailed rehabilitation methods, revegetation techniques, monitoring requirements and performance criteria will be developed as part of standalone Rehabilitation Management Plan (RMP) which will be prepared to guide rehabilitation planning, implementation, monitoring and maintenance of the following disturbed areas within the construction footprint in accordance with Revised Mitigation Measure B12. In addition to this, an RMP – State Conservation Area will be prepared for the development area within the State Conservation Area in accordance with condition B54 of the Conditions of Approval. Both of these Plans will be prepared within 6 months of the commencement of construction.

5.13 Noise, vibration and artificial lighting

Construction noise, vibration and artificial lighting will be managed to minimise disturbance to threatened fauna and sensitive habitat. Noise and vibration requirements will be implemented through the Construction Noise and Vibration Management Plan, with ecological advice provided by the Project Ecologist and implementation and compliance coordinated by the Environmental BP where activities may affect threatened fauna or their habitat.

Where practicable:

- high-noise and vibration-generating activities near sensitive fauna habitat will be scheduled to avoid sensitive breeding or roosting periods;
- plant and equipment will be maintained and operated in accordance with the applicable construction noise requirements;
- stationary noise-generating equipment will be located away from sensitive habitat or screened where practicable;
- unnecessary idling, use of horns and other avoidable noise will be minimised;
- construction lighting will be limited to the minimum area, intensity and duration required for safe work;
- lights will be directed toward the work area and away from sensitive habitat;
- lighting will be positioned or shielded to minimise light spill and glare outside active work areas; and
- lighting that is no longer required for safety or construction will be switched off.

The Project Ecologist will identify any additional fauna-sensitive noise, vibration or lighting controls required through pre-clearing assessment, work-area review or monitoring, and the Environmental BP will coordinate their implementation. Where monitoring or fauna observations indicate that noise, vibration or lighting is causing unexpected fauna disturbance, the activity will be reviewed and additional controls implemented in accordance with the adaptive management process in Section 6.7.

Species-specific noise and vibration controls applying to the potential Large-eared Pied Bat rocky roost habitat are provided in Section 5.6.5.

5.14 Management measures

Table 5-2 summarises the biodiversity management measures required to manage impacts to biodiversity as a result of the construction of the Project.

Table 5-2 Biodiversity management measures

ID	Measure/Requirement	When to implement	Responsibility	Source	Evidence
General					
BD1	Opportunities to avoid and minimise impacts on biodiversity will be investigated during detailed design, including: — Micro-siting of structures, access tracks, laydown areas and other temporary work areas; — Avoidance of threatened flora, hollow-bearing trees, riparian areas and rocky outcrops — Establishment of no-go zones and exclusion areas — Minimising clearing extents to the smallest practicable footprint — Preserving habitat features, where practicable.	Detailed design Construction	Construction Manager; Design Manager; Project Ecologist; Environmental BP	Conditions B20, B24(d)(i), B24(d)(ii), B24(d)(iii) RMM B01, LU8 EPBC 1, 2	• Design reports • Design refinement / micro-siting register • Final layout plans) • Clearing and exclusion zone mapping
BD2	Training will be provided to project personnel, including relevant sub-contractors, on biodiversity values of the site, biodiversity management practices and potential penalties for breaches. Training will be provided through inductions, toolbox talks and activity specific training. Toolbox talks to be undertaken prior to commencement of works, when new activities commence or work practices change, when new environmental risks are identified, and following any biodiversity incident or non-compliance, with attendance recorded. A qualified ecologist is to review induction materials annually for the duration of construction.	Pre-construction Construction	Proponent; Project Ecologist; Environmental BP	RMM B02	• Induction materials • Induction records • Toolbox talk records • Annual ecologist review record of induction materials

					• Photos of procedures displayed in compounds
BD3	Do not undertake any development activities that would directly or indirectly impact on biodiversity values requiring offset, until appropriate biodiversity credits are retired and evidence is provided to the Planning Secretary.	Pre-construction	Construction Manager; Project Ecologist; Environmental BP	Condition B21, B22, B23 EPBC 3	• Credit retirement certificates • Submission of retirement evidence to Planning Secretary
BD4	Where detailed design, pre-clearing surveys, construction activities or monitoring identify a biodiversity value or impact pathway that was not previously identified, the potential impact will be reviewed by the Project Ecologist, in consultation with the Environmental BP, before the relevant activity proceeds. Where there is a risk of additional impact, work in the affected area will cease or not commence until the nature and significance of the potential impact has been assessed and appropriate avoidance, mitigation, consultation and approval requirements have been identified.	Pre-construction Construction	Construction Manager; Project Ecologist; Environmental BP	Condition B24(d)(ii, iii)	• Ecologist impact review record • Assessment and mitigation determination • Consultation / approval records where required
Vegetation clearing and management					
BD5	Environmental Work Method Statements (EWMS) will be prepared and implemented for activities with potential to affect biodiversity values. EWMS to be prepared include: — Clearing and grubbing — Working within and near sensitive areas.	Pre-construction Construction	Construction Manager; Project Ecologist; Environmental BP	Best practice	• Approved EWMS

BD6	Unless otherwise agreed with the Planning Secretary, clearing is not to exceed the limits identified in Table 4-1, Table 4-2 and Table 4-3 of this BMP.	Pre-construction Construction	Project Ecologist; Environmental BP	Condition B20(a) EPBC 1, 2	• Clearing Register • Post-clearing Report • Planning Secretary agreement (if limits varied)
BD7	Prior to any vegetation clearing, a suitably qualified ecologist will undertake a pre-clearance inspection to confirm clearing limits, identify and mark retained vegetation and habitat features (including hollows), and implement fauna protection requirements consistent with and the Fauna Handling and Rescue Procedure (Appendix C of this BMP). The pre-clearance inspection will occur no more than 48 hours prior to clearing. The limit of clearing will be surveyed and clearly demarcated on the ground in accordance with the Vegetation Clearing Procedure (Appendix A). Within the approved Project footprint, areas will be identified for: — Full clearance — Partial clearance — Exclusion zones Areas will be delineated on the ground during survey set-out using fencing, flagging and signage.	Pre-construction Construction	Project Ecologist; Environmental BP	Condition B20(b), B24(d)(ii), B24(d)(iii) RMM B03, B09 EPBC 1, 2	• Completed Pre-clearing Checklist • Pre-clearance inspection record • Surveyor set-out records • Photographs
BD8	Pre-clearing surveys will verify the location and extent of Black Gum (<i>Eucalyptus aggregata</i>) and Capertee Stringybark (<i>Eucalyptus cannonii</i>) individuals that may be affected. Trees will be clearly marked to distinguish individuals approved for removal from those to be retained. Tree-protection measures, including no-go zones and controls	Pre-construction; Construction	Construction Manager; Project Ecologist; Environmental BP	Condition B24(d)(ii), B24(d)(viii) RMM B06	• Threatened flora survey records • Tree marking photos

	consistent with AS 4970-2025, will be installed and maintained throughout construction. Clearing will be tracked against the individual limits in Appendix 2 of the Infrastructure Approval, with any additional impact requiring further ecological assessment and completion of applicable consultation, offset and approval requirements. Opportunities to collaborate with local Landcare groups on seed collection will be considered.				• Tree-protection zone photos and inspections • Clearing Register • Landcare correspondence • Seed collection licence (if in SCA)
BD9	Prior to the commencement of vegetation clearing, a Clearing Permit shall be issued for the relevant work area. The Clearing Permit will confirm that all applicable pre-clearing requirements have been completed, including completion of required surveys, implementation of exclusion measures where required, establishment of environmental controls and authorisation of the proposed clearing extent. The Clearing Permit will be signed by the Project Ecologist and the Environmental BP prior to clearing commencing.	Pre-construction Construction	Construction Manager; Project Ecologist; Environmental BP	Condition B20, B24(d)(i, ii, iii) EPBC 1, 2	• Clearing Permits • Stage 1 and Stage 2 hold point releases • Clearing Permit register"
BD10	Vegetation clearing will be undertaken in a staged approach to minimise impacts on fauna and habitat features in accordance with the Vegetation Clearing Procedure (Appendix A).	Pre-construction Construction	Project Ecologist; Environmental BP	Condition B24(d)(i, ii, xi) RMM LU8	• Stage 1 and Stage 2 dates • Ecologist attendance records • Temperature records • Site diary

BD11	A Clearing Register will be prepared and updated progressively during clearing and reviewed against the remaining approved allowance before subsequent clearing blocks are released. Post-clearing survey information, spatial data and the Post-clearing Report will be used to verify the final clearing undertaken.	Construction	Project Manager; Construction Manager; Project Ecologist; Environmental BP	Condition B20, B24(d)(i, ii, xi) EPBC 1, 2	• Clearing Register • Pre-release allowance review records • Post-clearing Report
BD12	A Post-clearing Report will be prepared by the Project Ecologist following completion of clearing operations, documenting the final area cleared, threatened flora individuals and hollow-bearing trees removed, and all animals handled or managed during clearing (date and time of interaction, observer, species or photograph, number of individuals, adult/juvenile, condition, management action and result). The report will include and maintain an inventory of hollows and fallen timber salvaged and relocated.	Construction	Construction Manager; Project Ecologist; Environmental BP; appropriately licensed fauna handler, where required	Condition B24(e) RMM B10	• Post-clearing Report • Fauna Handling and Rescue Register • Salvage Register • Submission to Project Manager and Transgrid
BD13	The Unexpected Species Finds Protocol in Appendix C will be implemented where a threatened ecological community or threatened flora or fauna species not assessed in the biodiversity assessment is identified within the development area. All work in the affected location will cease to prevent further impact. The Planning Secretary and CPHR will be notified in writing of any additional mitigation measures, relevant agencies will be consulted, and work will not recommence at the affected location until endorsement has been obtained from the Planning Secretary .	Construction	Construction Manager; Environmental BP; Project Ecologist, where required	Condition B24(d)(iv) RMM B05	• Unexpected Find Register • Ecologist assessment • Notification records • Planning Secretary endorsement to recommence

BD14	The Fauna Handling and Rescue Procedure (Appendix C) will be implemented during all construction activities, where required.	Construction	Project Ecologist; Environmental BP	Condition B24(d)(ii) RMM B09	• Fauna Handling and Rescue Register • Spotter-catcher qualifications • Wildlife carer / vet notification and records • Relocation records provided to NPWS
Wildlife management					
BD15	To minimise the risk of fauna becoming trapped, injured or killed in open trenches, pits or drill sites, all excavations associated with construction will be managed using a precautionary approach consistent with the fauna-safe excavation procedures. Measures will include installing physical covers whenever trenches or drill holes are unattended including: — steel plates — geofabric — shade cloth	Construction	Design Manager; Construction Manager; Project Ecologist; Environmental BP	RMM B08	• Trench inspection records • Site Diary • Photos • Fauna rescue records
BD16	A suitably qualified ecologist will inspect the rocky overhang prior to the commencement of works that have the potential to directly or indirectly impact the rocky overhang, or to assess its suitability as a potential roost site for the Large-eared Pied Bat. The assessment will involve a detailed examination of the structure for features known to support the species, including the presence of	Pre-construction Construction	Construction Manager; Environmental BP	Condition B24(d)(xi) RMM B07	• Rocky overhang inspection report (pre-works) • Photos and field notes

	crevices, cracks, roof indentations, small cavities, or shaded recesses that may provide appropriate thermal conditions for day-roosting or night sheltering.				• Acoustic / dusk-dawn survey data (if undertaken) • Ecologist qualifications
BD17	Prior to construction, a 10 m biodiversity exclusion zone shall be established around the rock outcrop, ensuring that fencing does not impact the bats.	Pre-construction Construction	Construction Manager; Environmental BP	Condition B24(d)(xi) RMM B07	• Photos exclusion fencing • Ecologist sign-off that bat access not restricted • Inspection records
BD18	Piling for structure foundations within 80 m of the rock outcrop will be conducted outside the breeding period for the Large-eared Pied Bat (November to January), wherever possible, within the required work program. Where it is not practicable to limit construction adjacent to the overhang to out-side the breeding season, surveys of the overhang will be conducted prior to the commencement of works and thereafter at weekly intervals while works are occurring within the vicinity of the overhang, to confirm the presence or absence of the species.	Construction	Project Ecologist; Environmental BP	Condition B24(d)(xi) RMM B07	• Construction program • Justification where Nov–Jan piling unavoidable • Weekly overhang survey records • Light vehicle re-routing records (if bats recorded)
Soil and water quality					

BD19	Soil and water quality management measures will be implemented in accordance with the Soil and Water Management Plan to minimise erosion during vegetation clearing activities.	Construction	Construction Manager; Project Ecologist; Environmental BP	Condition B14; B24(d)(ix)	• Site-specific ESCPs • ESC inspection records • Corrective action records
BD20	All machinery entering the site will be appropriately washed down to be vegetation-and-soil free prior to work on site, to prevent the potential spread of disease in accordance with the Protocols to protect priority biodiversity areas in NSW (DPIE 2020d).	Construction	Design Manager; Construction Manager; Environmental BP; Project Ecologist, where required	Condition B24(d)(iii, ix) RMM B13	• Completed Hygiene Inspection Forms • Wash-down records • Wheel-wash photos • Non-compliant plant rejection records
BD21	The Biosecurity Management Plan (Appendix E) will be implemented to manage declared priority weeds in accordance with the Biosecurity Act 2015. A pre-construction weed assessment will establish baseline weed distribution, with quarterly monitoring during construction, event-based inspections and targeted treatment in accordance with the weed management response framework. Soil material and stripped groundcover vegetation with the potential to contain priority weeds will not be removed from the Project footprint, and soil disturbance will be minimised. Ongoing weed management will be undertaken in accordance with Transgrid's established easement maintenance framework and operational weed management procedures.	Pre-construction; Construction	Construction Manager; Project Ecologist; Environmental BP	Condition B24(d)(ix) RMM B14	• Pre-construction weed assessment and baseline mapping • Quarterly weed monitoring reports • Event-based inspection records • Weed treatment records (licensed operator)

					• Weed and Pest Register • Post-construction weed assessment
BD22	Where suitable topsoil is disturbed, it will be stripped separately from subsoil and stockpiled for reuse in resurfacing and rehabilitation at the end of construction works. Topsoil will be stored within approved disturbance areas away from drainage lines, riparian buffers, retained vegetation and exclusion zones, and managed to minimise compaction, erosion, sediment loss and weed establishment. Stockpiles retained for extended periods will be inspected monthly and following significant rainfall events.	Construction	Construction Manager; Project Ecologist; Environmental BP	Condition B24(d)(ix) RMM LU10	• Stockpile register with locations • Monthly and post-rainfall stockpile inspections • Photos of stockpile stabilisation • Topsoil reuse records
BD23	Prior to the commencement of works in proximity to waterways: — Riparian buffers will be identified by the Project Ecologist, pegged and physically marked onsite. — Buffer extents will be shown on site plans, sensitive area plans and clearing diagrams. — Temporary fencing and signage will be installed where required to clearly communicate buffer boundaries and access restrictions. Riparian buffer and exclusion zones will be established onsite in accordance with the recommended Vegetated Riparian Zones (VRZs) outlined in the Guidelines for Riparian Corridors on Waterfront Land	Construction	Construction Manager; Project Ecologist; Environmental BP; suitably qualified arborist or installation contractor, where required	Condition B17, B24(d)(ix) RMM B04	• Ecologist buffer delineation record • Site / sensitive area plans showing buffers • Photos • Inspection records

	(DPE, 2022) and the Policy and Guidelines for Fish Habitat Conservation and Management (DPI, 2013).				
BD24	All activities on waterfront land are to be constructed in accordance with the Guidelines for Controlled Activities on Waterfront Land (DPE 2022), Why do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings (NSW Fisheries 2003) and the Policy and Guidelines for Fish Habitat and Conservation and Management (NSW Fisheries, 2013), unless Water Group and DPIRD Fisheries agree otherwise.	Detailed design Construction	Design Manager; Construction Manager; Project Ecologist; Environmental BP	Condition B17, B24(d)(iii) RMM B18	• Waterway crossing designs • EWMS for waterfront works • Photos • Water Group / DPIRD agreement (if varied)
BD25	Any proposed dewatering of the Coxs River oxbow or associated waterbodies to allow construction of culvert crossings will be undertaken only following consultation with relevant state bodies on the appropriate management of aquatic biota. Following consultation, any additional resulting management requirements will be incorporated into the relevant EWMS and water management documentation, before dewatering commences.	Pre-construction Construction	Construction Manager; Project Ecologist; Environmental BP	RMM B20	• DPIRD consultation • EWMS • Dewatering records
BD26	Following construction, initiatives to improve riparian zones for aquatic biota, such as revegetation, will be considered in consultation with DPIRD-Fisheries and WaterNSW (including from a flooding perspective) and other relevant stakeholders. Where feasible and reasonable initiatives exist, they are to be implemented during post-construction site restoration through the applicable Rehabilitation Management Plan.	Post construction	Construction Manager; Project Ecologist; Environmental BP; Rehabilitation Contractor, where required	Condition B17 RMM B17	• Consultation records • Feasibility assessment of initiatives • RMP including riparian works • Revegetation completion

Habitat retention, connectivity and rehabilitation

BD27	The Nest Box Strategy (Appendix D) will be implemented to ensure that habitat values associated with hollow-bearing trees are retained or replaced where impacts from the Project cannot be avoided, as required.	Pre-construction Construction	Construction Manager; Environmental BP	Condition B24(d)(ii, iii, vi) RMM B11	• Hollow & Nest Box Asset Register • Installation records • Photos • Annual monitoring reports to CPHR / NPWS
BD28	The Habitat Connectivity Strategy in Appendix B will be implemented to identify, manage and protect Squirrel Glider movement corridors. Before clearing affects an identified connectivity pathway, the pathway and applicable connectivity measures will be field validated by the Project Ecologist and incorporated into the relevant clearing mapping, EWMS and Clearing Permit. Measures to be implemented during construction include: – minimising vegetation clearing within identified connectivity corridors; – retaining canopy trees, understorey and lower-growing native vegetation within connectivity corridors where consistent with electrical clearances, safety and construction requirements;	Construction	Construction Manager; Environmental BP	Condition B24(d)(v, vii) RMM B15, B16	• Field validation and glide assessment records • Final connectivity design provided to CPHR / NPWS • Pathway loss dates • Glider pole install dates

- applying partial clearance rather than full clearance where identified in the approved clearing mapping;
- avoiding unnecessary disturbance, grading, soil compaction, material storage and vehicle access within retained connectivity areas;
- undertaking habitat salvage and reuse in accordance with the Vegetation Clearing Procedure in Appendix A;
- installing glider poles or other approved replacement connectivity measures within three months of vegetation clearing breaking the relevant identified connectivity pathway; and
- installing monitoring infrastructure, including cameras where required, within three months of installing the connectivity structures.

Construction works affecting an identified connectivity pathway will be undertaken in accordance with the field-validated connectivity requirements and Appendix B.

- Camera install dates
- Connectivity Report

BD29	Woody material from vegetation clearing that is weed free will be retained for beneficial reuse in habitat restoration and rehabilitation works throughout the Project footprint. Placement will be determined by the Project Ecologist having regard to habitat suitability, connectivity objectives, bushfire risk and maintenance access. Weed-infested material will be segregated prior to Stage 1 clearing and will not be relocated to retained habitat unless assessed as presenting no risk of weed spread. The location, type and quantity of salvaged timber will be recorded in the Salvage Register and Post-clearing Report.	Construction	Construction Manager; Environmental BP	Condition B24(d)(vii); RMM LU9	• Salvage Register • Ecologist placement determinations • Weed segregation records • Post-clearing Report • Placement photos
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BD30	Temporary work areas will be stabilised and rehabilitated progressively, where feasible. A detailed Rehabilitation Management Plan will be prepared and implemented. A specific Rehabilitation Management Plan for the State Conservation Area will also be prepared and implemented.	Construction	All personnel; Construction Manager; Environmental BP	Condition B24(d)(vi) Condition B54 RMM B12	• RMP and RMP – SCA • Approval / submission records • Rehabilitation completion records and photos • Rehabilitation monitoring reports
Bushfire management					
BD31	Construction activities will be undertaken in accordance with the Bushfire Emergency Management Plan and NSW RFS fire danger ratings.	Construction	Construction Manager; Project Ecologist; Environmental BP	Condition B24(d)(x)	• Daily fire danger rating checks • Hot works permits • NPWS Duty Officer contact records
BD32	Vegetation clearing will be staged to ensure that fine fuels are not unnecessarily stockpiled in areas of elevated fire risk.	Construction	Project Ecologist; Environmental BP	Condition B24(d)(x)	• Clearing staging plan • Mulch / stockpile location records • Inspection photos

BD33	Plant and equipment will be maintained to prevent exhaust sparks, overheating and fluid leaks, with spark arresters fitted where required. Machinery will not be operated over dry, uncompressed vegetation unless a cleared working pad has first been established.	Construction	Construction Manager; Project Ecologist; Environmental BP	Condition B24(d)(x)	• Plant maintenance records • Pre-start plant checks • Working pad photos
BD34	Weather conditions will be monitored continually during high-risk works.	Construction	Project Manager; Construction Manager; Project Ecologist; Environmental BP	Condition B24(d)(x)	• Pre-start records • Records of works ceased at trigger thresholds
BD35	In the event a fire is detected the Fire Response Protocol will be implemented.	Construction	Responsibility	Condition B24(d)(x)	• Fire incident record • 000 call and notifications • Evacuation records • OMNIA incident entry
Biosecurity management					
BD36	No invasive fish species will be discharged or permitted to enter natural waterways at any time, in accordance with the Fisheries Management Act 1994 and Biosecurity Act 2015.	Pre-construction Construction	Construction Manager; Project Ecologist; Environmental BP	Condition B24(d)(iii, ix) RMM B19	• Dewatering / discharge records • EWMS

BD37	Consultation with DPIRD to be undertaken on the management of aquatic biota prior to any proposed dewatering of the Coxs River oxbow for construction of the culvert crossing, and any proposed discharge of surface water to or from waterways.	Construction	Proponent; Project Ecologist; Environmental BP	RMM B20	• Inspection records • DPIRD consultation • EWMS
Species-specific and amenity-related controls					
BD38	Prior to the operational phase, an environmental assessment will be prepared that considers up-to-date records of the NSW BioNet Atlas for the Purple Copper Butterfly and its larval host plant. Where new records or additional areas of potential habitat are identified, consultation will be undertaken with NPWS and CPHR and Transgrid's established protocols applied, including pre-work environmental briefings, targeted checks of <i>Bursaria spinosa</i> subsp. <i>lasiophylla</i> patches, precautionary no-disturbance buffers and application of the Unexpected Species Finds Protocol. <i>Bursaria spinosa</i> subsp. <i>lasiophylla</i> will be included within suitable locations of the easement through the Rehabilitation Management Plan.	Construction (assessment prior to commencement of operational activities)	Construction Manager; Project Ecologist; Environmental BP	RMM B21	• Environmental assessment with BioNet search • Consultation (if new records) • RMP planting schedule • Planting records
BD39	Construction noise, vibration and artificial lighting will be managed to minimise disturbance to threatened fauna and sensitive habitat, implemented through the Construction Noise and Vibration Management Plan with ecological input from the Project Ecologist and implementation coordinated by the Environmental BP where activities may affect threatened fauna or their habitat. Measures include identification of sensitive threatened fauna and nearby habitats, scheduling high-noise and vibration-generating activities outside sensitive breeding or roosting periods, siting and maintaining plant to	Pre-construction; Construction	Construction Manager; Project Ecologist; Environmental BP	RMM NV1	• CNVMP • Construction program • Lighting set-up photos • Fauna disturbance observations and adaptive

	minimise avoidable noise, and limiting, directing and shielding construction lighting away from sensitive habitat.				management records
Monitoring and reporting					
BD40	Monitoring will occur in accordance with the monitoring program included in this BMP. The results of the monitoring program will be evaluated and reported to demonstrate the effectiveness of the biodiversity management measures contained in this BMP.	Construction	Project Ecologist; Environmental BP	Condition B24(e); RMM B02; EPBC Condition 15(a)(iii)	• Environmental Inspection Checklists • Monitoring records • FMmal monitoring reports • EPBC Annual Compliance Reports • Website

6 Compliance management

This section sets out the responsibilities and procedures for implementing, monitoring and reporting on the BMP. It includes defined roles and responsibilities, monitoring and inspection programs, performance criteria and triggers for corrective action, annual work planning, and requirements for reporting, non-compliance management and environmental incident response.

6.1 Roles and responsibilities

Roles and responsibilities for implementation and compliance with the BMP are outlined in Table 6.1.

Table 6-1 Roles and Responsibilities for the Project

Roles	Responsibilities
Project Director, or nominated delegate	— Overall accountability for implementation of the BMP; — Engage suitably qualified personnel — Provide necessary resources; — Oversee regulatory reporting and escalation of significant incidents and non-compliances.
Project Manager	— Ensure biodiversity requirements are incorporated into construction planning and implemented by contractors — Ensure corrective actions are completed. — Ensure compliance with applicable approvals;
Design Manager	— Ensure the Connectivity design is produced by a competent person, and on time to meet the needs of this plan — Ensure the full, partial and no clearing zones take into account the requirements of the electrical clearance requirements, and minimise the extent of clearing. — Ensure the bird warning device design is produced in accordance with this plan including reviews and timing. — Ensure the design minimises the impacts on biodiversity and ecology to the maximum practical extent.
Construction Manager	— Implement the BMP, CEMP, and EWMSs — Stop work and report biodiversity incidents, unexpected finds and non-compliances.

Project Ecologist	– Undertake or supervise pre-clearing surveys, habitat assessments and ecological inspections requiring relevant ecological qualifications. – Identify and mark hollow-bearing trees, threatened flora, sensitive habitat features and biodiversity exclusion areas. – Provide ecological advice on clearing, fauna management, habitat salvage, connectivity measures, hollow replacement, rehabilitation and unexpected species finds. – Supervise relevant clearing and fauna-handling activities and verify implementation and effectiveness of biodiversity mitigation measures. – Undertake or oversee biodiversity monitoring assigned to the Project Ecologist in Section 6.2 and the BMP appendices.
Environmental BP	— Coordinate implementation of the BMP across construction activities and relevant project documentation. — Confirm that biodiversity requirements are incorporated into EWMSs, Clearing Permits, work-area mapping, inductions and pre-start briefings. — Maintain or coordinate required environmental records, registers, inspections, monitoring and reporting. — Coordinate consultation, notifications, incident and non-compliance reporting and corrective actions. — Engage the Project Ecologist where an activity requires ecological qualifications or specialist advice. — Coordinate habitat connectivity, hollow-replacement and rehabilitation requirements with the Project Ecologist and relevant project personnel.
Suitably qualified arborist	— Provide specialist advice on tree condition, structural stability, elevated hollow inspections, hazard-tree management and replacement-hollow installation.

Detailed monitoring responsibilities and frequencies are provided in Section 6.2 and the supporting procedures and strategies appended to this BMP.

6.2 Monitoring and inspections

In accordance with Condition B24(e) of the Infrastructure Approval, the Project will implement a program to monitor, evaluate and publicly report on the effectiveness of the biodiversity management measures contained in this BMP.

The monitoring program supports implementation of the SMART framework by defining the matters to be monitored, responsible personnel, monitoring timing and frequency, required records, performance indicators and the process for responding where a management measure is not achieving its intended outcome.

Monitoring and inspections will be undertaken by the Project Ecologist, Environmental BP or other suitably qualified personnel, in accordance with the responsibilities assigned in the relevant monitoring schedule. Activities requiring specialist ecological qualifications or judgement will be undertaken by the Project Ecologist.

During construction, inspections by the Project Ecologist or other suitably qualified personnel will include, as applicable:

- compliance with approved clearing limits and the condition of clearing-boundary demarcation;

- determination of the location of temporary fencing associated with fauna and flora protection areas;
- retained vegetation, habitat trees and other protected habitat features;
- salvaged timber, hollows, bushrock and other habitat resources;
- fauna encounters, injuries, mortality and unexpected finds;
- implementation of connectivity and replacement-hollow requirements;
- baseline, installation monitoring of replacement hollows in accordance with Appendix D; and
- weed monitoring in accordance with Appendix E

During construction, inspections by the Environmental BP or other suitably qualified personnel will include, as applicable:

- erosion and sediment controls;
- bushfire-related controls;
- temporary fencing and exclusion zones, including damage, gaps and evidence of fauna entrapment;
- open trenches, pits and excavations for trapped or injured fauna;
- weed, pest and pathogen risks, including vehicle and machinery hygiene;
- corrective actions arising from previous inspections; and
- rehabilitation establishment in accordance with Section 5.12 and the applicable Rehabilitation Management Plan.

The person undertaking an inspection will record, at a minimum:

- the name and role of the person undertaking the inspection;
- the date, time and location of the inspection;
- the features and management measures inspected;
- inspection observations and outcomes;
- details of any non-compliance, incident or emerging biodiversity risk;
- required corrective or adaptive management actions;
- responsibility and timeframe for completing each action;
- photographic evidence, where relevant; and
- verification that corrective actions have been completed.

Monitoring results will be evaluated by the Project Ecologist or other suitably qualified personnel against the applicable objectives, performance indicators and trigger levels identified in this BMP and Appendices B, D and E. Where

monitoring indicates that a management measure is not achieving its intended outcome, corrective or adaptive management actions will be implemented in accordance with Section 6.7.

Routine inspection records, registers and checklists will be retained as project compliance records. Formal monitoring and compliance reports will consolidate and evaluate relevant results and will be reported where required by Condition B24(e), EPBC Approval 2024/09855 or another applicable project approval.

6.2.1 Monitoring, Inspection and Reporting Summary

Tables 6.2 and 6.3 provide the schedule for implementing and tracking the BMP's biodiversity monitoring, inspection and reporting requirements. The schedules may be updated to reflect construction staging, monitoring outcomes and adaptive management requirements, subject to the applicable approval requirements.

6.2.2 Pre-construction and construction monitoring, inspection and auditing requirements

Table 6-2 Pre-construction and construction environmental monitoring, inspection and auditing requirements

Management Actions	Management Action Description	Reference Records Required	Timing	Roles / Responsibilities
Induction Training	Induction and training will include those requirements outlined in the BMP.	Induction and training records.	Prior to personnel commencing work and refreshed where work activities, biodiversity risks, controls or procedures change.	Proponent; Construction Manager; Environmental BP; Project Ecologist
Vegetation retention (outside Project footprint)	Approved clearing limits, retained vegetation, exclusion zones and sensitive habitat features will be surveyed and delineated using fencing, flagging, survey markers or signage before works commence in the relevant area. Demarcation will be maintained within active work areas and progressively removed when the risk of unauthorised disturbance has ceased.	Survey records; approved clearing mapping; Clearing Register; pre-start records; Site Environmental Inspection Checklist; photographic records	Before works commence in each area; inspected weekly during active works and following significant weather events	Proponent; Construction Manager / Project Manager; Environmental BP; Project Ecologist
Pre-clearing inspection – marking habitat trees / demarcating areas to be cleared	Tree clearing operations will be conducted in accordance with the Vegetation Clearing Procedure in Appendix A. Pre-clearing inspections will identify and mark habitat trees, threatened flora, active nests, fauna refuge habitat, bushrock and other sensitive habitat features. A Clearing Permit must be issued prior to vegetation clearing commencing. The Fauna Handling and Rescue Procedure in Appendix C will be implemented where required.	Pre-clearing checklist; approved clearing mapping; Clearing Permit; Clearing Register; Post-clearing Report; photographic records	Short-term – pre-clearing inspection required within 48 hours of each clearing event	Proponent; Construction Manager / Project Manager; Project Ecologist

Pre-clearing inspection – identification of areas for weed management action.	Baseline mapping of weed extent, distribution and abundance within the Project footprint and adjacent retained vegetation. Identification of priority weed species, high-risk areas and pre-construction treatment or hygiene recommendations.	Pre-construction weed assessment; baseline weed mapping; pre-clearing checklist; treatment recommendations.	Before ground disturbance commences in the relevant area	Proponent; Construction Manager / Project Manager; Project Ecologist; Environmental BP
Unexpected finds (nest, threatened species)	Unexpected finds will be managed in accordance with Section 5.6.4, Section 6.5 and Appendix C. Regulatory notification and consultation will be undertaken where triggered by the Infrastructure Approval, this BMP or applicable legislation.	Unexpected Find Register; assessment record; stop-work record; photographs; consultation and regulator correspondence, where required	As triggered during pre-construction and construction	Proponent; Construction Manager / Project Manager; Project Ecologist; Environmental BP
Vegetation clearing (salvage of timber and hollows)	Habitat features identified for salvage will be managed, stored, relocated or reused under the ecological direction of the Project Ecologist, with implementation and associated records coordinated by the Environmental BP. Source, temporary storage and receiving locations will be recorded where applicable. Photographic evidence and records of salvaged habitat features will be included in the Post-clearing Report.	Post-clearing Report; Salvage Register; GPS coordinates; maps; photographic records.	During clearing and as soon as practicable following salvage	Proponent; Construction Manager / Project Manager; Project Ecologist; Environmental BP
Vegetation clearing	Clearing tracked against approved vegetation and habitat clearing limits, specified in Appendix 2 of the Infrastructure Approval, to verify approved clearing thresholds are not exceeded. Tree clearing operations conducted in accordance with vegetation clearing and grubbing procedure detailed in Appendix A. Project Ecologist present during Stage 1 and Stage 2 clearing.	Clearing Permit, Clearing Register; survey records; Post-clearing Report; Fauna Handling and Rescue Register	During all vegetation clearing activities, with the Clearing Register updated progressively	Proponent; Construction Manager / Project Manager; Project Ecologist; Environmental BP

	Stage 1 and Stage 2 clearing may only proceed following release of the relevant Clearing Permit hold point. Fauna handling and rescue procedure implemented (Appendix C).			
Replacement hollow installation	Installation of all recovered hollows into the retained native vegetation to prevent a decline in habitat feature availability.	Nest Box Register; Replacement Hollow Installation Report; GPS coordinates; asset identifiers; photographic records	Progressively during construction and within three months of loss of the associated hollow resource	Project Ecologist; Environmental BP; suitably qualified arborist; installation contractor
Fauna encounters during construction	Fauna encountered during works will be managed in accordance with the Fauna Handling and Rescue Procedure in Appendix C. Any injury, mortality or unexpected find will trigger stop-work, assessment, corrective action and reporting where required.	Fauna Handling and Rescue Register; Site Environmental Inspection Checklist; incident or unexpected-find records; veterinary or wildlife-carer records, where applicable	Ongoing during construction and as triggered	Construction Manager / Project Manager; Project Ecologist; Environmental BP
Temporary fencing, exclusion zones and excavations	Inspect temporary fencing, exclusion zones, open trenches, pits and excavations for damage, gaps, incorrect demarcation and trapped or injured fauna. Repair or reinstate controls and manage fauna in accordance with Appendix C.	Project Supervisor's Diary; Site Environmental Inspection Checklist; fauna records; photographic records; corrective-action records	Daily within active work areas and following significant weather events	Construction Manager / Project Manager; Project Ecologist; Environmental BP
Erosion and sediment control inspections	Inspect erosion and sediment controls relevant to the protection of retained vegetation, drainage lines, riparian zones, waterbodies and aquatic habitat. Identify erosion, sediment movement, bank instability or sediment-laden runoff and implement corrective action.	Site Environmental Inspection Checklist; SWMP/ESCP inspection records; rainfall inspection records; photographs; corrective-action records	At the frequency required under the SWMP and applicable ESCP, including following triggering rainfall events	Construction Manager / Project Manager; Environmental BP
Bushfire-related biodiversity controls	Inspect biodiversity-related bushfire controls, including vegetation and combustible-material management near	Site Environmental Inspection Checklist;	During the bushfire danger period,	Construction Manager / Project Manager;

	retained habitat, maintenance of required access and compliance with activity restrictions applying during elevated fire danger.	bushfire-control records; pre-start records; incident and corrective-action records	during elevated fire danger and as otherwise required by the CEMP or applicable bushfire procedures	Environmental BP; Project Ecologist
Habitat connectivity validation and implementation	Complete glide-feasibility assessment, field validation, micro-siting, detailed-design input and installation supervision for Squirrel Glider connectivity measures in accordance with Appendix B.	Field-validation records; GPS data; glide assessment; design drawings; consultation records; installation records; Connectivity Report	Before clearing or construction affects an identified pathway, and during installation, in accordance with Appendix B	Project Ecologist; Environmental BP; Design Team; Construction Manager / Project Manager
Construction weed and pest monitoring	Monitor weed extent, distribution and abundance against the pre-construction baseline and record pest-animal observations. Identify new or expanding infestations, hygiene failures or increased pest-related biodiversity risks and recommend treatment or corrective action.	Site Environmental Inspection Checklist; Weed and Pest Register; weed mapping; treatment records; hygiene records; monitoring reports	Quarterly during construction, with additional inspections during active ground disturbance and following relevant trigger events, in accordance with Appendix E	Environmental BP; Project Ecologist; suitably qualified contractor where required
Vehicle and machinery washdown	Hygiene inspections of all vehicle/machine undertaken on entering and exiting the site	Record of hygiene inspection forms being completed throughout the duration of the Project.	Ongoing - through construction	Construction Manager / Project Manager; Environmental BP

Table 6-3 Post-construction environmental monitoring, inspection and auditing requirements

Management Actions	Management Action Description	Reference Records Required	Timing	Roles / Responsibilities
Rehabilitation monitoring	Monitor rehabilitated areas against the objectives and performance criteria established in the applicable Rehabilitation Management Plan. Monitoring will assess vegetation establishment, native species recruitment, groundcover, erosion, weed establishment and the need for corrective or adaptive management actions.	Rehabilitation monitoring reports; fixed-point photographs; vegetation monitoring data; inspection records; corrective-action records.	Quarterly during the first two years post-rehabilitation, then as otherwise specified in the applicable Rehabilitation Management Plan.	Project Ecologist; Environmental BP; Rehabilitation Contractor or suitably qualified consultant, where required
Nest box monitoring	Monitor salvaged natural hollows, carved hollows and nest boxes for structural condition, occupancy, breeding activity, pest occupation and required maintenance or adaptive management actions.	Nest Box Register; replacement-hollow monitoring reports; photographic records; maintenance and corrective-action records.	Six-monthly during Years 0–2 following installation, annually during Years 3–10, and following specified high-risk events, in accordance with Appendix D.	Project Ecologist; Environmental BP; suitably qualified arborist or contractor, where required
Targeted replacement-hollow inspections	Undertake species-specific inspections where annual monitoring, occupancy records or breeding activity indicate that further assessment is warranted. Where practicable, inspections will be coordinated with annual replacement-hollow monitoring.	Targeted inspection records; species observations; photographs; Nest Box Register; adaptive management records.	During Years 3–10 and within the relevant breeding period, where triggered in accordance with Appendix D.	Project Ecologist
Habitat-connectivity monitoring	Monitor installed glider poles and associated connectivity measures for structural condition, fauna use, movement patterns and evidence of successful easement crossings.	Connectivity Report; camera data; structural inspection records; photographic records; annual monitoring reports.	Continuous remote camera monitoring for a minimum of three years following installation, with annual structural inspections and other monitoring in accordance with Appendix B.	Project Ecologist; Environmental BP; suitably qualified contractor, where required

Management Actions	Management Action Description	Reference Records Required	Timing	Roles / Responsibilities
Habitat-connectivity effectiveness assessment	Assess the effectiveness of installed connectivity measures against the objectives of the Revised BDAR and Habitat Connectivity Strategy, including utilisation rates, observed movement, structural performance and achievement of connectivity outcomes.	Connectivity effectiveness assessment report; Connectivity Report; camera-monitoring data; structural inspection records.	Three years following installation of the last connectivity structure, in accordance with Appendix B.	Project Ecologist
Event-based biodiversity inspections	Inspect replacement hollows/nest boxes, connectivity structures, retained habitat features and rehabilitation areas following events with the potential to damage assets or compromise biodiversity outcomes. Identify maintenance, corrective action or adaptive management requirements.	Event-based inspection records; photographic evidence; maintenance records; corrective-action and adaptive management records.	Following relevant trigger events and within the timeframes specified in Appendix B, Appendix D and the applicable Rehabilitation Management Plan.	Project Ecologist; Environmental BP; suitably qualified arborist or contractor, where required
Post-construction weed monitoring	Monitor weed extent, distribution and abundance against the pre-construction baseline, including within rehabilitated areas, access tracks, drainage lines and adjacent retained vegetation. Identify new or expanding infestations and recommend treatment or additional management.	Weed monitoring reports; weed mapping; treatment records; photographic records; corrective-action records.	Quarterly during rehabilitation establishment and thereafter at the frequency specified in Appendix E and the applicable Rehabilitation Management Plan.	Project Ecologist; Environmental BP; qualified weed-control contractor, where required
Weed treatment and maintenance	Undertake targeted weed treatment where monitoring identifies new or expanding infestations, inadequate treatment outcomes or weed-related risks to rehabilitation or retained native vegetation.	Treatment records; contractor reports; chemical-use records; follow-up inspection records.	Spring and autumn, and additionally where triggered by monitoring results.	Environmental BP; qualified weed-control contractor; Project Ecologist, where specialist ecological advice is required
Threatened flora impact monitoring	Track removal of Black Gum and Capertee Stringybark against the applicable individual limits and verify that	Pre-clearing records; Clearing Register;	Before and during relevant clearing, with	Project Ecologist; Environmental BP

Management Actions	Management Action Description	Reference Records Required	Timing	Roles / Responsibilities
Large-eared Pied Bat habitat monitoring	retained individuals and tree-protection controls remain intact.	threatened-flora register; inspection records; photographs; Post-clearing Report	final verification following clearing	
	Inspect the rocky overhang and verify the exclusion zone, seasonal piling controls and evidence of roosting or breeding activity in accordance with Section 5.6.5.	Ecologist inspection records; photographs; exclusion-zone inspection records; EWMS or construction methodology; fauna records	Before relevant works and weekly where works occur within the specified vicinity during November to January	Project Ecologist; Environmental BP
Riparian and aquatic-habitat inspections	Inspect riparian buffers, waterway exclusion zones and aquatic-habitat controls, including any requirements arising from consultation regarding dewatering.	Site Environmental Inspection Checklist; consultation records; EWMS; water-management records; photographs; corrective-action records	Before works near waterways, during relevant works and following applicable rainfall or disturbance events	Environmental BP; Project Ecologist where ecological input is required

6.2.3 Rehabilitation Monitoring and Assessment Frequency

Rehabilitation effectiveness monitoring will be implemented quarterly during the first two years post-rehabilitation and then at five-year intervals for a minimum of 15 years (Years 1 and 2 quarterly, then Years 5, 10 and 15). Baseline conditions will be represented by the first monitoring event following rehabilitation (Year 1, Quarter 1). This monitoring frequency is consistent with current best-practice approaches for long-term ecological rehabilitation monitoring in NSW.

6.2.4 Performance criteria and triggers

Table 6.4 identifies the performance criteria, trigger events and corrective actions relevant to implementation of this BMP. The table provides a framework for identifying non-compliance, incidents and adverse monitoring outcomes, and outlines the required management response to ensure biodiversity values are protected and compliance with the BMP, Conditions of Approval.

Table 6-4 Performance Criteria, Triggers and Corrective Actions

Theme	Trigger Event	Required Response	Relevant section
Vegetation Clearing Compliance	Clearing extends outside mapped clearing limits or approved footprint.	Immediate stop work, notify Project Manager → Project Ecologist and Environmental BP → Transgrid; assess extent; implement corrective action; re-demarcate boundaries.	Section 6.2.4; Section 6.4
	Habitat trees or marked trees are not marked or incorrectly marked at time of clearing.	Suspend clearing in that block; ecologist re-mark trees; toolbox talk to operators; update pre-clearing checklist.	Section 5.4.1; Appendix A
	Clearing begins without pre-clearing inspection completed within required timeframe.	Stop work; undertake pre-clearing survey; verify tree marking and fauna habitat; resume only once complete.	Section 5.4.1; Appendix A; Appendix C
	Review of a proposed clearing mapping identifies that cumulative clearing plus the proposed clearing may approach or exceed an approved limit.	Suspend proposed clearing; verify clearing data and the remaining approved allowance; review avoidance, micro-siting or design-refinement opportunities. Clearing may commence only after confirmation that the proposed activity remains within the approved Project footprint and applicable impact limits.	Section 4.2.1; Section 5.2; Section 5.4; Section 6.2; Appendix A
Threatened Species & Fauna Encounters	Unexpected flora/fauna discovered during works.	Enact Unexpected Species Finds Procedure: stop work, demarcate area, ecologist assessment, notify Transgrid and CPHR	Section 5.6.4; Section 6.5; Appendix C
	Fauna injury or mortality occurs during clearing.	Notify Project Manager, Project Ecologist and Environmental BP; investigate cause; review clearing methodology; implement revised controls; report incident.	Section 5.6.2; Section 6.5; Appendix C

Theme	Trigger Event	Required Response	Relevant section
Hollow-Bearing Trees & Nest Boxes	Fauna remains in a habitat tree during felling attempt.	Delay felling; re-inspect after 24–48 hours; attempt relocation; escalate to specialist carers for bats/birds if needed.	Section 5.6.2; Appendix C
	Fewer replacement hollows/nest boxes installed than ratio agreed with relevant state bodies	Install additional hollow replacements; review supply of hollow material.	Section 5.7; Appendix D
	Annual monitoring finds hollows damaged, unsafe, or occupied by pest species.	Repair/replace hollows; remove bee colonies; relocate damaged materials; update maintenance record.	Section 5.7; Appendix D
Habitat Connectivity (Glider Poles)	Monitoring shows glider poles not used or gliders unable to cross.	Review pole spacing/height; adjust alignment; add poles; retain additional anchor trees; update connectivity calculations.	Section 5.5; Appendix B
	Anchor trees inadvertently removed or damaged.	Install or adjust glider poles; salvage additional timber; consult ecologist on alternate crossing design.	Section 5.5; Appendix B
Weeds & Pathogens (Hygiene and Control)	Weed cover, density or extent increases beyond the pre-construction baseline, or new priority weed infestations are recorded	Initiate targeted weed control; inspect boundaries; review hygiene practices; update inspection frequency.	Section 5.11; Appendix E
	Vehicle/machinery arrives onsite without inspection / is dirty.	Direct vehicle to wash-down; complete hygiene form; audit contractor compliance.	Section 5.11; Appendix E
	Pathogen protocol breach detected (e.g., no boot wash, soil moved between sites).	Immediate containment; disinfect gear; retrain crew; update environmental inspection.	Section 5.11; Appendix E
Riparian Vegetation & Waterway Protection	Root systems or buttresses removed in riparian areas (contrary to method).	Reinstate erosion controls; reinstall woody debris; review contractor performance; increase supervision.	Section 5.9; Appendix A
	Clearing generates sediment risk or bank instability.	Install immediate stabilisation measures; pause work during rain; increase monitoring.	Section 5.8; Section 5.9; Appendix A
Fencing, Signage & Exclusion Zones	Damage to exclusion fencing detected.	Repair immediately; implement temporary measures; investigate cause; update daily checks.	Section 5.4.3; Appendix A

Theme	Trigger Event	Required Response	Relevant section
Monitoring & Reporting Non-Compliance	Signage missing, damaged, or unclear.	Replace signage; brief staff; include in Site Environmental Inspection Checklist.	Section 5.4.4; Appendix A
	Inspection identifies any non-compliance with BMP controls.	Implement corrective action within 48 hours; record in Environmental Site Inspection Checklist; escalate if repeated.	Section 6.4
	Incident or non-compliance meeting the approval's "incident" definition.	Stop work, notify Project Manager; implement containment; follow incident reporting chain to Transgrid and CPHR.	Section 6.5
Effectiveness of biodiversity management measures	Monitoring or inspection results indicate that a biodiversity management measure is not achieving, or is unlikely to achieve, its intended objective or performance criterion.	Implement the adaptive management process in Section 6.7. Investigate the cause; existing measures; implement additional or alternative controls; assign a completion timeframe; and undertake follow-up monitoring.	Section 6.2; Section 6.7; Appendices B, D and E, where applicable

6.3 Reporting

6.3.1 Biodiversity records and reporting framework

In accordance with Condition B24(e) of the Infrastructure Approval, the results of the monitoring program will be evaluated and reported to demonstrate the effectiveness of the biodiversity management measures contained in this BMP.

Reporting will occur through the routine Project records and formal biodiversity monitoring and compliance reports described below. Routine records will provide evidence of implementation, while formal reports will consolidate and evaluate relevant monitoring outcomes. Incident and non-compliance reporting will be undertaken in accordance with Sections 6.4 and 6.5 and the applicable Infrastructure Approval and EPBC Approval requirements. Public reporting requirements are identified in Section 6.3.2.

Biodiversity inspections, monitoring activities and management actions undertaken under this BMP will be documented through either:

- routine project records, checklists and registers; or
- formal biodiversity monitoring or compliance reports.

Routine records will be prepared at the frequency specified in Tables 6.2 and 6.3 and the relevant appendices. These records provide evidence that individual inspections, monitoring activities and management controls have been completed. Routine records may include:

- pre-clearing checklists;
- clearing registers;
- Clearing permit
- Project Supervisor's Diary entries;
- Site environmental inspections records

- vehicle and machinery hygiene forms;
- fauna handling and rescue records;
- unexpected-find and incident records;
- habitat-salvage records;
- replacement-hollow and habitat-connectivity inspection and monitoring records
- weed and pest inspection and treatment records; and
- photographic monitoring records.

Routine records will be retained on the project file but will not be individually published on the Project website unless required by an approval or provided as supporting evidence within a formal report.

Formal reports will consolidate and evaluate routine records and monitoring results. Formal reports will describe the monitoring undertaken, assess outcomes against the applicable objectives and performance criteria, identify trends or emerging biodiversity risks and document required corrective or adaptive management actions.

Reporting requirements, including the type of record or report, timing and responsible personnel, are identified in Tables 6.2 and 6.3 and Appendices A to E.

Tables 6.2 and 6.3, together with Appendices A to E, provide the monitoring and recordkeeping mechanisms for the measures required under Condition B24(d). Each applicable measure will be verified through the nominated inspection, checklist, register, monitoring record or formal report. The resulting records and monitoring outcomes will be evaluated through the formal reporting framework in Section 6.3.2 to determine whether the measures have been implemented and are achieving their intended outcomes. Where a measure is not effective, corrective or adaptive management action will be implemented in accordance with Section 6.7.

6.3.2 Formal biodiversity reports

Collectively, the formal reports identified in Sections 6.3.2.1 to 6.3.2.8 will evaluate the effectiveness of the biodiversity management measures required under Condition B24(d), including measures relating to impact avoidance and minimisation, vegetation clearing, threatened species and habitat protection, fauna management, habitat connectivity, replacement hollows, rehabilitation, aquatic habitat, biosecurity and bushfire-related biodiversity risks. The applicable report will assess whether each relevant measure has been implemented and achieved its intended outcome and will identify any corrective or adaptive management actions required.

Formal biodiversity reports will be prepared where required by this BMP, the applicable monitoring strategy, a Rehabilitation Management Plan or a project approval. Reports will be proportionate to the activity undertaken and will include:

- pre-clearing reports;
- post-clearing reports;
- rehabilitation monitoring reports;
- replacement-hollow installation and monitoring reports;
- Habitat Connectivity Strategy monitoring and effectiveness reports;
- weed and pest monitoring reports;
- fauna incident, capture, handling and release reports;
- investigation reports for reported or observed fauna collisions with transmission infrastructure; and
- annual compliance reports required under the EPBC Approval.

Unless more specific requirements are provided elsewhere in this BMP, a formal biodiversity report will include:

- the purpose and scope of the monitoring or assessment;
- the date, location and personnel undertaking the work;
- the methods and survey effort applied;
- relevant environmental and site conditions;
- observations, results and supporting photographic evidence;
- assessment against applicable objectives, performance indicators or trigger levels;
- effectiveness of relevant mitigation measures;
- identified incidents, non-compliance or emerging biodiversity risks;
- required corrective or adaptive management actions;
- responsibility and timeframe for completing each action; and
- confirmation of the status or effectiveness of actions identified during previous monitoring.

The results of monitoring and evaluation undertaken during each Annual Compliance Report period will be consolidated in the applicable EPBC compliance report, including a summary of the effectiveness of the relevant Condition B24(d) measures implemented during that period. Specialist reports, including post-clearing, rehabilitation, replacement-hollow, habitat-connectivity and fauna-collision reports, will be prepared at the frequencies or trigger points specified in this BMP and its appendices.

The EPBC compliance report will be published on the Project website in accordance with the timing and requirements of the EPBC Approval. Formal rehabilitation, replacement-hollow and habitat-connectivity monitoring and effectiveness reports will also be submitted to Transgrid for publication on the Project website following completion and review. Post-clearing reports, fauna-collision investigation reports and other formal biodiversity reports will be provided to relevant agencies or published where required by an applicable approval or reporting obligation.

Routine Project records, including checklists, Clearing Permits, registers, Project Supervisor's Diary entries, vehicle and machinery hygiene forms, fauna-handling records and individual inspection records, will be retained on the Project file but will not be published separately unless specifically required by an approval. Relevant information from these records will be consolidated into formal biodiversity monitoring or compliance reports where required.

Before publication, reports may be reviewed to redact personal information, culturally sensitive information and precise locations of threatened species or sensitive ecological features. Redaction will not remove information required to demonstrate the implementation or effectiveness of the relevant biodiversity management measures measures.

6.3.2.1 Pre-clearing records and reports

Pre-clearing inspections will be documented through the applicable pre-clearing checklist and supporting survey records. The records will include, where relevant:

- clearing block identification, location and proposed clearing date;
- applicable clearing category and approved clearing extent;
- vegetation communities and threatened flora within or adjacent to the clearing area;
- HBTs, active nests, breeding hollows and other habitat features;
- bushrock, fallen timber and other fauna refuge habitat;

- weed, pest and pathogen risks;
- approved fauna relocation and habitat-salvage locations;
- clearing-boundary and exclusion-zone demarcation;
- environmental hold points and outstanding actions;
- photographic and spatial records; and
- confirmation by the Project Ecologist that clearing may proceed.

Where a separate Pre-clearing Survey Report is required due to the presence of threatened species, active breeding habitat or another significant biodiversity constraint, the report will document the survey findings, impact-avoidance measures, required management response and any consultation or approval required before clearing commences.

Clearing permit

Prior to the commencement of vegetation clearing, a Clearing Permit shall be issued for the relevant work area. The Clearing Permit shall confirm that all applicable pre-clearing requirements have been completed, including completion of required surveys, implementation of exclusion measures where required, establishment of environmental controls and authorisation of the proposed clearing extent. The Permit shall be signed by the Project Ecologist and the Zinfra Environmental BP prior to clearing commencing.

The Clearing Permit process shall incorporate two hold points:

- Authorisation for the removal of non-hollow-bearing vegetation following completion of applicable pre-clearing requirements; and
- Authorisation for the removal of hollow-bearing trees following completion of hollow inspections, fauna exclusion measures (where required), and confirmation by the Project Ecologist that the trees are suitable for removal.

6.3.2.2 Site environmental inspections records

Routine biodiversity inspections during construction will be recorded in the Site Environmental Inspection Checklist or, for daily work area checks, the Project Supervisor's Diary.

The Site Environmental Inspection Checklist will address, where applicable:

- clearing boundaries, clearing categories and exclusion zones;
- retained vegetation and protected habitat features;
- temporary fencing, signage and fauna-exclusion controls;
- open trenches, pits and excavations;
- fauna encounters, injuries, mortality and unexpected finds;
- erosion and sediment controls relevant to biodiversity and riparian habitat;
- bushfire-related biodiversity controls;
- habitat-salvage and stockpile areas;
- replacement hollow/nest box and habitat-connectivity measures;
- weeds, pests, pathogens and vehicle hygiene;
- rehabilitation areas; and
- completion and effectiveness of previous corrective actions.

Daily checks of temporary fauna fencing and open excavations may be recorded in the Project Supervisor's Diary. Where a defect, trapped fauna, incident or non-compliance is identified, the observation and resulting response will also be entered into the relevant environmental, fauna, incident or corrective-action record

6.3.2.3 Post clearing report

The Project Ecologist, or suitably qualified person, will prepare a Post-clearing Report for submission to the Project Manager and Transgrid following completion of clearing operations. The report will verify that clearing was undertaken in accordance with the Vegetation Clearing Procedure in Appendix A and the Fauna Handling and Rescue Procedure in Appendix C. It will document the final area cleared, the identity of all vegetation removed, and the number of hollow-bearing trees felled (if any). The post-clearing report is also to include and maintain an inventory of hollows and fallen timber that have been salvaged and relocated. The report will document:

- the final area cleared, including clearing by management zone and vegetation community;
- clearing undertaken against the applicable limits in Appendix 2 of the Infrastructure Approval;
- the number of threatened flora individuals removed;
- the number of HBTs felled and hollows recorded;
- an inventory of hollows and fallen timber that have been salvaged and relocated;
- the type and quantity of habitat resources salvaged, stored, relocated or reused;
- the source and receiving locations of relocated habitat resources;
- any fauna, nests or breeding habitat affected during clearing, including:
 - date and time of the fauna interaction or sighting and details of the observer
 - species (if known) or a photograph number of individuals recorded
 - adult/juvenile
 - condition of the animal (living/dead/injured/sick)
 - management action undertaken (e.g. captured, handled, taken to vet)
 - results of any management actions (e.g. released, placed in a nest box, euthanised, placed with carer);
- any unexpected finds, incidents or non-compliance;
- corrective actions implemented; and
- supporting maps, GPS coordinates and photographic records.

The Post-clearing Report will be retained as a project compliance record and provided to relevant agencies or published where required by the Infrastructure Approval, EPBC Approval or other applicable project reporting requirements.

6.3.2.4 Rehabilitation monitoring reports

Rehabilitation monitoring will be reported in accordance with the applicable Rehabilitation Management Plan. Reports will assess rehabilitation performance against the relevant objectives, completion criteria and trigger levels and will include:

- vegetation establishment and survival;
- native canopy, understorey and groundcover development;
- natural recruitment and regeneration;
- weed cover and distribution;

- erosion, soil stability and drainage conditions;
- habitat reinstatement outcomes;
- fixed-point photographic monitoring;
- comparison with previous monitoring results; and
- corrective or adaptive management actions.

Rehabilitation monitoring frequency is specified in Section 6.2.3 and the applicable Rehabilitation Management Plan.

6.3.2.5 Replacement-hollow reporting

Replacement-hollow installation and monitoring will be reported in accordance with the Nest Box Strategy Appendix D. Reports will include:

- the number, type and location of installed assets;
- host-tree and installation details;
- structural condition and maintenance requirements;
- occupancy and breeding activity;
- pest occupation;
- assets not located or not able to be inspected;
- performance against the applicable indicators and objectives; and
- required corrective or adaptive management actions.

Installation and monitoring data will also be maintained in the Nest Box Register.

6.3.2.6 Habitat-connectivity reporting

Habitat-connectivity monitoring and effectiveness assessment will be reported in accordance with Appendix B. Reports will include:

- the connectivity measures installed;
- structural condition of glider poles and associated assets;
- species recorded;
- frequency of structure use;
- movement patterns observed;
- evidence of successful easement crossings;
- relevant targeted investigations of adjacent habitat;
- assessment against the connectivity objectives; and
- recommended maintenance or adaptive management actions.

Relevant installation, inspection and monitoring information will also be maintained in the Connectivity Reports.

6.3.2.7 Fauna interactions and collisions

Fauna observed, captured, handled, relocated, injured or killed during Project activities will be documented in the Fauna Handling and Rescue Register in accordance with Appendix C. Where an interaction constitutes an incident or non-compliance, the notification and reporting requirements in Sections 6.4 and 6.5 will also apply.

Any reported or observed fauna collision with transmission infrastructure will be recorded and assessed by the Project Ecologist. The assessment will document the species affected, location, date, available evidence, potential cause and whether corrective or adaptive management measures are required. A separate investigation report will be prepared where the collision involves a threatened species, repeated events or a potential failure of a biodiversity management measure.

6.3.2.8 EPBC compliance reporting

In accordance with EPBC Approval 2024/09855, the approval holder will prepare a compliance report for each Annual Compliance Report period. Each compliance report will address compliance and any non-compliance with the relevant NSW Approval conditions incorporated through the EPBC Approval, each condition of the EPBC Approval, and commitments made in plans implemented under the approval. The report will also identify the plans in effect during the reporting period, describe how those plans were implemented and provide details of any incidents that occurred.

The compliance report and a shapefile showing clearing of protected matters and their habitat during that period will be published on the Project website in an accessible and downloadable format. Sensitive biodiversity data will be excluded or redacted from publicly available reports and shapefiles in accordance with the EPBC Approval. Where information is redacted, the full report or shapefile and details of the redactions will be provided to the department within the timeframes specified in the EPBC Approval.

Monitoring data, surveys, maps, spatial data, metadata and species occurrence records required under the EPBC Approval will be prepared and submitted in accordance with Conditions 11 to 13. Compliance records will be maintained in accordance with Conditions 9 and 10. Incident notification and reporting will be undertaken in accordance with Conditions 21 and 22.

6.4 Non-compliance notification

An environmental non-compliance occurs when a condition of approval, licence condition, or any other statutory requirement relevant to a Project activity or location is breached.

Non-compliances may include incident-related significant non-compliances, which may result from construction activities.

For any non-compliances that are not classified as incidents and are identified through inspections, audits, or observations, in accordance with Condition C15, Transgrid will notify the Department via the Major Projects website within seven (7) days of becoming aware of the non-compliance. Zinfra will provide all necessary information to assist Transgrid in preparing this notification.

- The written notification will include the following details:
- The development, including the development application number and Project name.
- The specific Condition of Approval that has not been met.
- The reasons for the non-compliance, if known; and
- Actions that have been undertaken, or are planned, to address the non-compliance, including expected timing for completion.

6.5 Incidents

6.5.1 Incident management

In accordance with the Infrastructure Approval, an incident is an occurrence or set of circumstances that causes or threatens to cause material harm and which may or may not be or cause a non-compliance. Material Harm is harm that

- involves actual or potential harm to the health or safety of human beings or to the environment that is not trivial, or
- results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$50,000, (such loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment).

This definition excludes “harm” that is authorised under either the Approval or any other statutory approval.

All incidents will be reported immediately to Transgrid and must be entered into OMNIA within 24 hours, Zinfra’s Risk and Compliance Management System, which serves as the project’s incident management database to ensure that actions are tracked and completed within the required timeframes.

With respect to the EPBC Approval for the Project, an incident means any;

- event which has the potential to, or does, harm any protected matter,
- potential non-compliance with the conditions, including the administrative requirements,
- actual non-compliance with the conditions, including the administrative requirements,
- potential non-compliance with one or more commitment made in this Plan, and/or
- actual non-compliance with one or more commitment made in this Plan.

OMNIA supports the management of:

- Enterprise- and Business Unit-level risks, including associated controls, causes, and actions
- Compliance obligations and related documentation

Where an incident has occurred, additional monitoring may be required.

6.5.2 Incident Notification

In accordance with Condition C16, Zinfra (through Transgrid) will notify the Department and NPWS within 24 hours of becoming aware of an incident. The notification to the Department must be made via the NSW planning portal (Major Projects) and address details of the incident, including:

- a. date, time and location;
- b. a brief description of what occurred and why it has been classified as an incident;
- c. a description of what immediate steps were taken in relation to the incident; and
- d. identifying a contact person for further communication regarding the incident.

In addition to the above, where the construction activities result in actual or potential damage to a heritage structure, Zinfra (through Transgrid) will also notify the Heritage Council of NSW within 24 hours of becoming aware of an incident.

In accordance with Condition 21 of the Project’s EPBC Approval, the department must be electronically notified within 2 business days of becoming aware of an incident. This notification must specify;

- a. any condition or commitment made in this Plan which has not been, or may have not been, complied with,

- b. a short description of the incident, and
- c. the location (if applicable, including co-ordinates), date and time of the incident.

6.5.3 Incident Report

In accordance with Condition C17, Zinfra (through Transgrid) will provide the Department and NPWS with a subsequent incident report via the NSW planning portal (Major Projects) within 7 days (or as otherwise agreed by the Planning Secretary) of the incident notification (in accordance with condition C16). The incident report shall

- a. identify how the incident was detected;
- b. identify when the Proponent became aware of the incident;
- c. identify any actual or potential non-compliance with conditions of consent;
- d. identify further action(s) that will be taken in relation to the incident; and
- e. provide a summary of the incident;
- f. provide outcomes of an incident investigation, including identification of the cause of the incident;
- g. detail corrective and preventative actions that have been, or will be, implemented to address the incident and prevent recurrence, including the period for implementing any corrective and/or preventative actions; and
- h. detail any communication with other stakeholders regarding the incident.

Zinfra shall also submit any further reports as directed by the Planning Secretary.

In accordance with Condition 22 of the Project's EPBC Approval, the department must be provided written details of an incident notified under condition 21 within 12 business days of becoming aware of the incident. The following must be specified;

- a. all corrective measures and investigations which the approval holder has already taken in respect of the incident,
- b. the potential impacts of the incident,
- c. the method and timing of any corrective measures that the approval holder proposes to undertake to address the incident, and
- d. any variation of these conditions or revision of this Plan that will be required to prevent recurrence of the incident and/or to address its consequences.

6.5.4 Incident Investigation

An investigation will be initiated promptly following any reported incident. The scope and depth of the investigation will depend on the severity and potential impact of the incident. Key elements may include:

- Determining the cause, extent, and responsibility of the incident.
- Additional monitoring (where appropriate)
- Identifying and implementing corrective actions to prevent recurrence.
- Assigning responsibility for carrying out corrective measures.
- Reviewing and updating controls and procedures as needed.
- Notifying relevant stakeholders, including regulatory authorities, if significant noise or vibration impacts have occurred.

Investigations will follow the ICAM (Incident Causation Analysis Method), in alignment with Transgrid's investigation requirements. The level of investigation, team composition, and reporting obligations will be determined based on the actual and potential severity of the incident.

6.6 Unexpected finds reporting

Unexpected discoveries of threatened species, threatened ecological communities (TECs) or habitat features within the development area must be managed in the same precautionary manner as described above for incidents, regardless of whether the discovery meets the definition of an environmental incident. In accordance with Condition B24(d)(iv), upon making a discovery of this type, the unexpected species finds protocol in Section C1.5 of Appendix C will be followed, noting that:

- all work in the associated location will stop to prevent further impact while the Project Manager and Project Ecologist assess the find.
- where the Project Ecologist or other appropriate specialist determines that the find is not a threatened species, threatened ecological community or habitat feature requiring further management, works may resume without completing the remaining steps of this protocol.
- notification will be made to the Planning Secretary and CPHR in writing on any additional mitigation measures to be implemented
- if the find is made in the Gardens of Stone SCA, notification will also be made to NPWS
- relevant agencies, including DPHI, CPHR and NPWS (if required), will be consulted
- Planning Secretary endorsement will be obtained prior to recommencement of work at the location

6.7 Adaptive management

In accordance with Revised Mitigation Measure B02, the Project will implement an adaptive management approach based on performance triggers for remedial action. The adaptive management process supports continued application of the SMART framework by converting identified performance failures or emerging risks into specific corrective actions with assigned responsibilities, defined completion timeframes and follow-up monitoring to verify effectiveness.

Adaptive management will be used to ensure that the biodiversity management measures contained in this BMP remain effective throughout design, construction, rehabilitation and operation. The process will be initiated where monitoring, inspections, incidents, non-compliances, unexpected finds or other information indicates that:

- a management measure has not been implemented as required;
- a management measure is not achieving, or is unlikely to achieve, its intended biodiversity outcome;
- a performance criterion has not been met;
- a trigger level identified in Table 6.4 or Appendices B, D or E has been reached;
- an unforeseen biodiversity risk or impact has been identified;
- monitoring identifies an adverse trend or repeated management failure; or
- a corrective action previously implemented has not been effective.

Adaptive management will apply, where relevant, to:

- vegetation clearing and compliance with approved vegetation and habitat clearing limits;
- protection of retained vegetation, exclusion zones and habitat features;
- threatened flora and fauna management;
- fauna handling, injury, mortality and unexpected finds;
- habitat salvage and reuse;

- habitat-connectivity measures;
- replacement hollows and nest boxes;
- weed, pest and pathogen management;
- riparian and aquatic habitat protection;
- erosion and sediment controls relevant to biodiversity;
- bushfire-related biodiversity controls;
- rehabilitation and revegetation; and
- biodiversity monitoring and reporting.

Table 6.4 identifies the principal performance triggers and required responses applying to this BMP. Where a trigger is reached, immediate containment or remedial action will be implemented where required. The cause, extent and potential consequences of the issue will then be investigated, and the relevant management measure will be reviewed. Corrective or alternative measures will be implemented within a defined timeframe and verified through follow-up inspection or monitoring.

Where an adaptive management response would result in a material change to the approved Project, an approval requirement, a commitment made in this BMP or another approved management document, the applicable assessment, consultation, notification, approval and document-control requirements will be completed before the revised measure is implemented.

6.7.1 Adaptive management process

Where adaptive management is triggered, the following process will apply:

1. Identify and contain

The trigger event, adverse monitoring result, incident, non-compliance, unexpected find or ineffective management measure will be identified and recorded. Immediate containment measures will be implemented to prevent or minimise further impact, including stop work where required.

2. Notify and record

The Project Manager, Project Ecologist and Environmental BP will be notified. The matter will be escalated to Transgrid and regulatory authorities where required under Sections 6.4 to 6.6 or the applicable project approval.

The record will identify:

- the date, time and location;
- the biodiversity values potentially affected;
- the applicable performance criterion, trigger or management measure;
- the immediate containment actions implemented; and
- the personnel notified.

3. Investigate

The Project Ecologist will investigate the ecological cause, extent and potential consequences of the issue, with the broader investigation and documentation coordinated by the Environmental BP. The investigation may include:

- site inspection;
- review of monitoring, survey and inspection records;
- review of construction methods and environmental controls;

- comparison with baseline or previous monitoring results;
- assessment of compliance with the Infrastructure Approval, EPBC Approval and this BMP; and
- consultation with relevant specialists or regulatory authorities where required.

4. Determine remedial or corrective action

Appropriate remedial or corrective actions will be identified based on the nature and significance of the issue. Actions may include:

- reinstatement or strengthening of environmental controls;
- changes to design, work methods, sequencing or timing;
- amendment of clearing boundaries or exclusion-zone demarcation;
- increased ecological supervision;
- changes to monitoring methods or frequency;
- repair, replacement or relocation of biodiversity mitigation assets;
- additional weed, pest, pathogen, erosion or rehabilitation treatment;
- additional training, induction or toolbox talks; or
- suspension, postponement or relocation of the affected activity.

5. Review approval and consultation requirements

Before the selected action is implemented, the Project Manager, with ecological advice from the Project Ecologist and compliance advice from the Environmental BP, will determine whether the action requires:

- notification or reporting under Sections 6.4 to 6.6;
- consultation with CPHR, NPWS, DPHI, the Commonwealth department or another relevant authority;
- further environmental assessment;
- amendment of an EWMS, design drawing, monitoring program or management plan;
- revision of this BMP under Section 6.8; or
- approval or endorsement before implementation.

6. Assign and implement actions

Each action will be assigned to a responsible person and provided with a completion timeframe and verification requirement. Approved actions will be implemented and communicated to affected personnel through relevant construction documentation, pre-start meetings, toolbox talks, inductions or other work area instructions.

7. Verify effectiveness

Follow-up inspection or monitoring will be undertaken by the Project Ecologist or another suitably qualified person to confirm that:

- the action has been completed;
- the immediate issue has been controlled;
- the action is achieving its intended outcome; and
- no additional or unintended biodiversity impact has resulted.

Where verification identifies that the action has not been effective, the adaptive management process will be repeated and additional or alternative actions will be identified.

8. Document and close out

The trigger, investigation, decision, actions, responsibilities, implementation dates and verification outcomes will be recorded in the applicable inspection, incident, corrective-action, monitoring or compliance record.

An adaptive management action will not be closed until its implementation and effectiveness have been verified. Relevant outcomes will be incorporated into formal biodiversity monitoring or compliance reports in accordance with Section 6.3.

6.8 Plan revision

Ongoing monitoring and review of the performance and implementation of this Plan will be undertaken in accordance with Condition C3 of the Infrastructure Approval.

If updates to an environmental management document are required:

- a. to include new information or changes to the development as a result of:
 - i. a modification of Project approval; or
 - ii. a change in the phase of development as notified under condition C10;
- b. to update risk controls or mitigation measures in response to a change in risk level identified by the annual review of the environmental risk assessment required by condition C1(f);
- c. to address the findings of an Independent Environmental Audit under condition C14;
- d. to implement the findings of an incident report required by condition C16;
- e. to comply with a directive by the Planning Secretary;

the relevant environmental management document(s) must be revised and submitted to the Planning Secretary for approval within three months unless otherwise agreed by the Planning Secretary.

It is noted that the review of this Plan as detailed in the Infrastructure Approval will be undertaken by Zinfra during the construction phase and by Transgrid during the operation of the Project. The review must ensure that the Plan remains consistent with the approved operations. Any revision of this Plan must be approved by the Planning Secretary, unless the revision is purely administrative in nature, in which case, with the agreement of the Planning Secretary and/or the Environmental Representative (per condition A12), a revised strategy, plan or program may be prepared without undertaking consultation with all the parties referred to under the relevant condition of this consent.

6.9 Environmental Audits

Environmental audits are undertaken to verify compliance with the CEMP, Infrastructure Approval, Commonwealth Approval, and any other relevant legal or contractual obligations (e.g., licences, permits, regulations, and contract documentation), while supporting continuous improvement.

6.9.1 Independent Environmental Audits

As per Condition C14 of the Infrastructure Approval, an Independent Audit will be carried out for the Project. The audit will be conducted in accordance with the current *Independent Audit Post Approval Requirements*. The recommendations of the Independent Environmental Audit will be implemented to the satisfaction of the Planning Secretary, as relevant to this Plan.

6.9.2 EPBC Independent Audits

In accordance with Conditions 23 to 31 of EPBC Approval 2024/09855, an Independent Audit of compliance with the conditions of the EPBC Approval will be carried out for each 5-year period following the commencement of construction. The audit will be conducted in accordance with the *Independent Audit and Audit Report Guidelines*. The audit reports from these audits must be;

- submitted to the department within 3 months of the end of each audit period,
- completed to the satisfaction of the Minister, and
- published to the public website of the approval holder within 10 business days of the department agreeing to the report in writing and remain on the website until the expiry date of the EPBC approval.

6.10 Access to this Plan and external reporting

Transgrid will make a copy of this Plan available on its website (<https://www.transgrid.com.au/projects-innovation/mount-piper-to-wallerawang/>) and will ensure that this is kept up to date as per Condition C18 of the Infrastructure Approval.

Transgrid must provide regular reporting on the environmental performance of the Project on its website, in accordance with the reporting arrangements of this Plan.

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Appendix A

Vegetation Clearing Procedure



A1. Vegetation clearing procedure

A monitoring and verification process will be implemented to ensure that all vegetation and habitat clearing remains strictly within the areas and quantities predicted in the Revised BDAR. The Project Ecologist (or suitably qualified person) will confirm clearing limits during pre-clearing inspections and undertake routine audits during construction to verify that no additional native vegetation or threatened species habitat is removed beyond approved limits. Any deviation from the Revised BDAR predicted clearing footprint will trigger an immediate stop work, investigation of the extent and cause of the variation, reporting to DPHI and government agencies as relevant, and implementation of corrective actions in accordance with the incident and non-compliance procedures in Sections 6.4 and 6.5 of this BMP.

Implementation of this Vegetation Clearing Procedure, including compliance with approved clearing limits, pre-clearing requirements, ecological hold points and associated record-keeping requirements, will be subject to inspection and audit in accordance with Section 6.2. Any corrective actions identified through inspection, audit, incident investigation or non-compliance review will be implemented and verified before affected works recommence, where applicable.

When clearing native vegetation within the Project footprint, the following will apply:

- Where vegetation clearing involving hollow-bearing trees cannot be avoided during periods of elevated breeding or roosting risk (notably spring), the Project Ecologist must prepare a written, site-specific assessment justifying the proposed clearing. This assessment must consider the potential presence of threatened hollow-dependent species that may breed, roost or enter torpor outside the spring period. The assessment will be provided to CPHR prior to the commencement of the proposed clearing works.
- Where a threatened species or active breeding hollow is identified during pre-clearing surveys or clearing operations, CPHR will be notified in accordance with Section 5.4.7 and clearing will be deferred until an agreed management approach is confirmed.
- in all cases, the Pre-clearing Hollow-Bearing Tree Assessment in Section D1.2 of the Nest Box Strategy in Appendix D must be completed before clearing or removal of a hollow-bearing tree.
 - The assessment will inform tree-retention decisions, hollow occupancy requirements, fauna-management measures and the Stage 2 Clearing Permit hold point.
- local wildlife organisations (i.e., Australian Wildlife Rescue Organisation (WIRES)) and a local veterinary clinic will be contacted at least seven days prior to the commencement of clearing activities.
- vegetation clearing will occur in a two-stage process detailed below.
- all clearing of native vegetation, inclusive of Stage 1 and Stage 2 (i.e., salvage of fauna habitat, clearing of under-storey, and removal of both habitat and non-habitat trees), will cease when temperatures exceed 35°C.
- all controls as per Section 5.4 must be implemented or executed prior to clearing activities commencing.
- Prior to commencement of vegetation clearing within each clearing block, a Clearing Permit must be issued in accordance with Section 6.3.2.1.

This procedure defines vegetation clearing types, spatial controls (exclusion, partial and full clearance zones), staged clearing processes, fauna protection measures, and specific controls to minimise impacts within sensitive areas including the Gardens of Stone SCA.

Following the two-stage clearing process, The Construction Manager will maximise the salvage of vegetative resources in the Project footprint for the beneficial reuse during rehabilitation of areas subject to temporary construction disturbance (e.g., construction compounds and laydown areas).

A1.1 Clearing types and spatial controls

Vegetation clearing associated with the Project is categorised into defined clearing types that apply across the Project footprint. These include Exclusion, Partial Clearing, and Full Clearing areas, each with specific controls governing the extent and method of vegetation disturbance. The spatial extent of each clearing type is shown on the figures provided in Appendix A, and these categories must be used to guide clearing activities at all times. Management controls, permitted activities and prohibitions differ by clearing category and are summarised in Table A.1, which forms a mandatory framework for implementing and auditing vegetation clearing across the Project footprint.

Table A.1 Vegetation Clearing Types, Definitions and Controls

Clearing Type	Definition	Vegetation Treatment	What is Allowed	What is Not Allowed
Exclusion Zone	Areas where no vegetation disturbance is permitted. Vegetation must remain intact.	All vegetation retained. No removal, trimming, or slashing permitted.	Environmental protection controls only (e.g. fencing, signage).	Vegetation removal or trimming Ground disturbance Storage of plant, equipment, mulch or spoil
Partial Clearing Zone	Areas where selective and minimal vegetation management is permitted to facilitate access or construction while retaining vegetation.	Vegetation generally retained, particularly low vegetation. Vegetation >5 m may be reduced or removed only where necessary and approved.	Removal of all noxious weeds Removal of dead or dying vegetation >5 m, subject to identification by Zinfra and approval by Transgrid Environmental control works Limited trimming/slashing where justified	Wholesale vegetation removal Automatic removal of vegetation >5 m Unapproved clearing Excessive ground disturbance
Full Clearing Zone	Areas where complete vegetation removal is required to accommodate construction infrastructure.	All vegetation removed down to ground level.	Full removal of vegetation where required for infrastructure (e.g. access tracks, crane pads).	Retention of vegetation within designated full-clearing areas

A1.2 Application of full-, partial-clearance and exclusion zones

Partial clearance and exclusion zones have been identified to support the avoidance and minimisation principles of the Biodiversity Assessment Method (BAM) and to reduce impacts to native vegetation and fauna habitat wherever practicable. These areas were initially developed as part of a feasibility assessment to inform potential refinements to the Revised BDAR and have been retained as an impact-minimisation measure, have been retained as an impact minimisation measure, in addition to the impacts assessed in the Revised BDAR.

Clearing area categories (full clearance, partial clearance and exclusion) have been derived by applying the Revised BDAR vegetation mapping to the project footprint and refining this using design parameters, clearance modelling, construction requirements and site-specific constraints. The intent of this approach is to confine the most intensive disturbance to designated full clearance zones, while retaining canopy, shrub and ground-layer vegetation wherever possible within partial clearance zones and avoiding disturbance entirely within exclusion zones.

The determination of clearing areas is based on the following assumptions:

- Full clearance zones include access tracks and buffers, tower pads, brake and winch sites, and laydown areas required for construction activities.

- Partial clearance zones include locations where limited canopy removal is required to maintain conductor clearance, line stringing and decommissioning activities, with the expectation that ground-layer vegetation will be retained.
- Exclusion zones include native vegetation capable of being avoided without material impact on construction, including retained woodland and creek-associated vegetation.
- Small, impractical exclusion zones may be consolidated into partial clearance zones to ensure constructability and effective on-ground management in consultation with Transgrid Environmental BP, in areas where these don't include Threatened Eucalypts and HBT.

Measures to Conserve Understorey Vegetation within Partial Clearance Zones:

- Clearing of partial clearance zones will be conducted from the existing cleared easement to limit impact from access to retained understorey vegetation.
- A forestry mulcher will not be utilised within partial clearance zones to mitigate the effect of mulch smothering understorey

A1.2.1 Clearing limits

Vegetation clearing will be strictly limited to the approved clearing limits specified in the Infrastructure Approval, the Revised BDAR and applicable Project approval documentation. Clearing limits will be surveyed and clearly delineated on the ground using fencing, distinguishable flagging, survey markers or signage before clearing commences.

Demarcation measures will be progressively removed once works in the relevant area have been completed and the risk of unauthorised clearing or encroachment has ceased.

All vegetation outside the approved clearing limits will be treated as an exclusion zone and protected in accordance with this BMP. Demarcation measures will be inspected weekly by the Project Manager and following significant weather events to confirm that approved boundaries remain clearly identifiable. Damaged, displaced or missing fencing, flagging, survey markers or signage will be repaired or reinstated before clearing recommences in the affected area.

Before clearing commences within each clearing block, the boundaries between full-clearance, partial-clearance and exclusion zones will be surveyed and visibly demarcated, using distinguishable survey markers, different coloured flagging to denote each clearing type and relevant signage, corresponding with the current clearing maps.

The Construction Manager / Project Manager will progressively record clearing in the Clearing Register. The Clearing Register will be reviewed against the remaining approved allowance before each subsequent clearing block is released. Release of a clearing block will require issue of a Clearing Permit confirming that pre-clearing requirements have been completed and the proposed clearing remains within approved limits.

Where the review identifies that proposed clearing may approach or exceed an applicable vegetation, threatened-flora or threatened-fauna habitat limit, clearing in the affected area will not commence until the remaining approved allowance has been verified and any required avoidance, micro-siting, design refinement, consultation or approval requirements have been completed.

A1.3 Habitat tree retention hierarchy and alternatives to removal

The Project will prioritise the retention of habitat trees (including HBTs) wherever practicable, recognising their importance for hollow-dependent fauna and landscape connectivity. Removal of habitat trees will be treated as a measure of last resort, and only undertaken where retention is not compatible with safety, clearance or structural requirements. Prior to approving removal of a habitat tree, the following hierarchy of avoidance and minimisation measures will be considered and applied where feasible:

- Full retention: Habitat trees will be retained wherever they do not pose an unacceptable safety risk or conflict with approved infrastructure requirements, as determined by the Project Ecologist and, where relevant, a suitably qualified arborist.

- Pruning or modification: Pruning or reduction of limbs will be preferred over complete removal, where this enables retention of hollows while addressing safety or clearance constraints.
- Partial retention: Where complete retention is not possible, measures to retain the trunk or hollow-bearing sections of the tree in situ will be considered to preserve habitat values.
- Alternative retention methods: In limited circumstances retention of standing dead trees may be used to maintain hollow availability within easements, where supported by ecological advice and safety considerations.

Removal with offsetting measures: Only where the above options are not feasible will removal of habitat trees proceed, accompanied by habitat salvage, replacement hollows and monitoring in accordance with the procedure outlined in this BMP.

The Project Ecologist will advise on the suitability of retention or alternative management options for habitat trees and confirm when removal is unavoidable.

A1.4 Staged clearing

Vegetation clearing will be undertaken using a staged approach to minimise impacts on fauna and habitat features. Stage 1 clearing is limited to the removal of non-habitat vegetation, while Stage 2 clearing involves the controlled removal of habitat trees, including hollow-bearing trees, where approved and only after avoidance and minimisation measures have been exhausted.

Before Stage 1 clearing commences, significant weed infestations within the clearing area will be identified by the Project Ecologist, with the required segregation and management measures coordinated by the Environmental BP. Weed-infested vegetation and other material unsuitable for habitat reuse will be removed or otherwise segregated from material identified for salvage, in accordance with Appendix E. Weed-infested material will not be relocated to retained habitat or used for habitat creation unless it has been assessed as presenting no risk of weed spread.

Stage 1 clearing will not commence until the Stage 1 Clearing Permit hold point has been approved by the Project Ecologist and Environmental BP.

The Pre-clearing Hollow-Bearing Tree Assessment required under Appendix D must be completed before approval of the Stage 2 Clearing Permit hold point.

Stage 2 clearing will not commence until the Stage 2 Clearing Permit hold point has been approved following completion of the Pre-clearing Hollow-Bearing Tree Assessment, required hollow inspections, fauna-management measures and confirmation by the Project Ecologist that the hollow-bearing trees are suitable for removal.

A1.4.1 Stage 1

- All designated habitat trees will be clearly identified and marked before any Stage 1 clearing begins.

Throughout Stage 1 clearing, the Project Ecologist will undertake compliance checks to ensure operators are correctly identifying and avoiding the marked trees.

Standard clearing practices will be used wherever feasible, including excavators, dozers, loaders and trucks.

During Stage 1 clearing, machinery operators will be directed by the Project Ecologist to maximise the recovery of habitat materials.

Operators will be required to salvage as many habitat resources as possible in line with approval conditions. The Project Ecologist will monitor salvage outcomes using transect data collected from the clearing footprint during the clearing extent and site feature survey.

The Project Ecologist will attend all clearing operations to inspect the area immediately beforehand and capture or relocate any fauna encountered. After trees are felled, the Project Ecologist will conduct follow-up inspections to locate, treat, or relocate any injured or remaining animals.

Any vegetation or material not suitable for habitat creation will be stockpiled on-site and disposed following the Waste Management Plan.

Clearing of native vegetation, including Stage 1 and Stage 2 activities such as habitat salvage, understorey removal, and felling of both habitat and non-habitat trees, will be suspended whenever temperatures exceed 35 °C.

A1.4.2 Stage 2 clearing

Stage 2 clearing will commence between 24-48 hours following Stage 1 works.

- Hollow-bearing trees scheduled for removal will be felled using controlled, manual techniques rather than an excavator-mounted closed chipper.

Each hollow-bearing tree will be gently shaken or agitated prior to felling to encourage any animals inside to exit or reveal their presence.

Trees containing hollows will be felled one at a time, with each subsequent tree only felled once the Project Ecologist provides approval to proceed.

Felling will involve a controlled, gradual push and lowering of the tree to minimise the risk of injury to wildlife, avoiding sudden drops.

Once felled, each hollow-bearing tree will be systematically inspected for any remaining animals.

Felled hollow-bearing trees will remain on the ground for at least 24 hours to give any undetected fauna an additional opportunity to escape.

After hollow-bearing trees are cleared, the Project Ecologist will locate and mark natural hollows suitable for salvage as ground-based hollow timber or potential arboreal hollows.

Stage 2 salvage operations will aim to maximise the recovery of habitat resources in line with the Project's approval conditions. The Project Ecologist will track salvage performance using transect data collected from the clearing footprint during the clearing extent and site feature survey.

If a habitat tree is found, or suspected based on fresh scratches, chew marks or scats, to contain wildlife, it will remain standing for a minimum of 48 hours and be reassessed by a suitably qualified ecologist before any felling occurs. Where a threatened species is confirmed or suspected to be occupying a breeding hollow, roost or nursery site, CPHR will be notified and the habitat tree will remain undisturbed until breeding has concluded and dependent young have dispersed or fledged, unless otherwise agreed in consultation with CPHR. Where impacts to the habitat tree cannot be avoided, the proposed management approach and justification for clearing will be discussed with CPHR prior to any impact occurring.

Captured animals will be relocated to pre-identified relocation sites as described in Appendix C. Following fauna relocation, a record will be prepared, including details of:

- Documentation will be kept for all animals observed, captured, released, injured, stunned, or killed during clearing activities or fauna rescue operations.
- Records will be maintained for all fauna relocation locations
- Information will be collected on tree species used by wildlife for breeding or roosting, including the tree's location, size, and the height and depth of any hollows.

The survival or success rates of animals raised or released by wildlife care organisations will be tracked and recorded.

A1.5 Terrestrial clearing checks

As part of the pre-clearing survey, the ecologist will systematically inspect all potential fauna refugia within the proposed disturbance area, including natural and artificial shelter sites. This includes checking for the presence of reptiles, small mammals, amphibians, or roosting microbats in the following potential refugia:

- fallen logs, large limbs, hollow logs / stumps and ground-level timber debris
- slabs of bark and bark sheeting on the ground

- rock piles, boulders, and rock crevices
- dense leaf litter accumulations or deep organic debris piles
- burrows, soil cavities, or erosion hollows formed at tree bases
- piles of stored or discarded timber (cut logs, stacked fencing, sleepers)
- corrugated iron, metal sheeting, roofing panels or old manmade debris
- plastic sheets, tarps, pallets or construction materials.

Where fauna are located, the ecologist will implement appropriate capture and relocation procedures, ensure refuge materials are carefully displaced or removed in a controlled manner, and confirm all fauna-sensitive microhabitats have been inspected before clearing proceeds. The Project Ecologist will confirm that the identified refuge features have been inspected before clearing proceeds.

A1.6 Measures to reduce impacts to the Gardens of Stone SCA

Vegetation clearing within the Gardens of Stone SCA presents heightened environmental sensitivities and will be undertaken in a manner that minimises disturbance to native vegetation, soils and habitat values. In addition to the clearing controls outlined elsewhere in this procedure, the following SCA-specific measures apply to all vegetation clearing undertaken within the SCA.

A1.6.1 SCA-specific clearing controls

Work from existing easement: Where practicable, vegetation clearance and removal will be undertaken from the existing transmission line easement to minimise encroachment into adjacent native vegetation.

- Reuse of access tracks: Existing access tracks will be reused where access to vegetated areas is required, and the creation of new access tracks within native vegetation will be avoided wherever feasible.
- Use of forest harvester: Where clearing is required within vegetated areas of the SCA, a forest harvester will be used to fell and remove trees, with processing (e.g. delimbing and cutting) undertaken back on the existing easement to limit ground disturbance.
- Restrictions on mulching: A forestry mulcher will not be used within partial clearance zones inside the SCA.
- Mulch management: Mulch generated during clearing will not be spread into partial clearance zones within the SCA and will be managed in accordance with approved waste management and rehabilitation procedures.

These controls are mandatory within the SCA and are designed to minimise ground disturbance, vegetation damage and secondary impacts. They must be implemented in conjunction with the staged clearing process and fauna protection protocols set out in this Appendix. This includes the use of staged vegetation removal, pre-clearing surveys and other measures intended to minimise fauna impacts and provide opportunities for wildlife to move away from active clearing areas.

A1.6.2 Vegetation impact minimisation within SCA partial-clearance zones

Within partial clearance zones of the SCA, additional measures will be applied to further minimise impacts to native vegetation and habitat structure, including:

- selection of machinery that maximises reach and reduces the need for repeated access;
- use of access routes and equipment that limit ground disturbance;
- hand felling in areas where machinery access is unsafe or impractical;
- consolidation and minimisation of machinery access paths;

- restriction of machinery movement within environmentally sensitive areas such as wetlands or bogs;
- application of non-lethal vegetation management techniques (e.g. slashing or mulching) where temporary suppression is sufficient; and
- use of targeted lethal control methods (e.g. cut-stump treatment) to avoid impacts to non-target vegetation.

These measures complement the SCA-specific controls above and are consistent with the partial-clearance principles outlined in Appendix B.

A1.7 Riparian vegetation clearing methodology

Clearing of riparian vegetation will be undertaken using methods specifically designed to protect waterway integrity and minimise ecological impacts. Vegetation removal in riparian zones presents elevated risks, including bank destabilisation, sedimentation, pathogen spread, and nutrient-laden runoff, and must therefore follow the precautionary approach outlined below. All works are to be conducted in a manner that maintains soil structure, preserves habitat values, and prevents avoidable disturbance to the waterway.

A1.7.1 *Clearing Approach*

- **Retain Root Systems and Trunk Bases:** Trees will be cut above the root collar, leaving root balls and lower trunk sections in situ. This practice maintains bank stability, supports soil cohesion, and reduces the likelihood of sediment mobilisation into the waterway.
- **Limit Clearing to the Tree Stratum:** Understorey vegetation, including shrubs, groundcovers, and riparian reeds, will be retained wherever practicable, as these layers are critical for filtration of overland flow, pathogen interception, and erosion control.
- **Use Low-Impact Equipment:** Hand tools and small, low-ground-pressure machinery will be prioritised to minimise soil compaction and disturbance. Heavy equipment will only be used where no reasonable alternative exists and with strict controls in place.
- **Avoid Root Severance:** Grubbing, stump removal, and root extraction will not be undertaken unless essential for safety. Intact root networks provide ongoing stabilisation, enhance infiltration, and reduce the transport of sediments and contaminants into waterways.
- **Apply Vertical Mulching and Retained Woody Debris:** Felled trunks and large woody debris will be placed parallel to the waterway to act as micro-erosion barriers, slow overland flow, trap sediment, and provide structural habitat for fauna.
- **Timing of Works:** Clearing will be scheduled during dry periods to reduce soil disturbance, minimise compaction, and lower the risk of sediment and pathogen mobilisation during rainfall events.

The vegetation clearing maps in Appendix A define the spatial application of the approved clearing controls, including full-clearance, partial-clearance, hazard-tree and exclusion or retention areas. The maps will be used with Tables A.2 to A.5 to plan, authorise, implement, verify and document clearing within each clearing block.

Table A.2 specifies the permitted clearing methods and vegetation-retention requirements for each vegetation stratum and clearing category. Table A.3 will be completed by the Project Ecologist for each clearing block to document its location, clearing area, vegetation communities, threatened species, habitat resources and relevant coordinates. Table A.4 provides the pre-clearing checklist used to confirm that personnel, surveys, demarcation, environmental controls, fauna-management requirements and habitat-salvage arrangements are in place before clearing commences.

Following clearing, Table A.5 will be completed by the Project Ecologist, with the associated records coordinated and maintained by the Environmental BP, to document the type and quantity of habitat resources salvaged, including hollow-bearing trees, hollow-bearing limbs, bushrock and natural hollows. The completed salvage record will inform the relocation, reuse and replacement of habitat resources and will be incorporated into the Post-clearing Report and relevant habitat registers.

Together, the Appendix A maps and Tables A.2 to A.5 provide the framework for ensuring that clearing is undertaken using the appropriate method within each mapped management area, that clearing outcomes are tracked against approved vegetation and habitat clearing limits, and that habitat resources identified for salvage are appropriately recorded, relocated or reused.

A1.8 Clearing Blocks

The extent of the clearing blocks would be based upon the planned program of works, to allow the works to progress in accordance with the planned sequence of works, but also to ensure the clearing permitting system can maintain strict controls.

Areas for full clearing and partial clearing to have separate blocks and permits.

The below are therefore the planned clearing blocks for the works.

Clearing for access tracks and foundation/assembly pads – These are all full clearing areas

- Clearing for access tracks and foundation/assembly pads 33A, 30 25C, 28D, 27D, 26D
- Clearing for access tracks and foundation/assembly pads 25D,24D, 23D, 22D
- Clearing for access tracks and foundation/assembly pads 21D, 20D, 19D, 18D
- Clearing for access tracks and foundation/assembly pads 17D, 16D, 15D, 14D, 14A , 13D, 13A, 13D
- Clearing for access tracks and foundation/assembly pads 12D, 11D, 10D
- Clearing for access tracks and foundation/assembly pads 9D, 8C, 7C
- Clearing for access tracks and foundation/assembly pads 6C, 5C, 4C,3C, 2C, 1C

Remaining Clearing Areas. Note these have been split into full or partial based on the planned split. If clearing in any of these can be reduced from full to partial based on assessment from Transgrid on the safe operation of the transmission line, additional blocks/permits may be required.

- Remaining full clearing areas for easement - Substation - 33A, 30 25C
- Remaining partial clearing areas for easement 25D -24D - 23D - 22D – 21D
- Remaining partial clearing areas for easement 21D - 20D - 19D - 18D – 17D
- Remaining partial clearing areas for easement 17D - 16D - 15D - 14D
- Remaining full clearing 14D - 14A - 13D - 13A - 13D – 12D -11D - 10D
- Remaining partial clearing 14D - 14A - 13D - 13A - 13D – 12D -11D - 10D
- Remaining full clearing areas for easement 9D - 8C - 7C -6C
- Remaining full clearing areas for easement 6C - 5C - 4C -3C - 2C - 1C – Substation

The above is the planned clearing blocks, these may however be subject to adjustment as the project evolves and construction progresses, factoring in clearing contractor movements, resource availability. During this evolution its anticipated there would be a larger number of block, as the above get split into constituent parts or partial clearing blocks get added to areas which are currently assessed as full clearing.

Table A.2 Vegetation Stratum–Specific Clearing Methods and Implementation Requirements

Stratum	Clearing Method	Where Applied (BDAR-style terminology)	Notes for Implementation
Large Trees / Hollow-Bearing Trees (HBTs)	— Mechanical felling where safe (excavator, chainsaw crews)	— Full clearing zone – removal of all canopy-forming vegetation	— Pre-clearing fauna inspections required
	— Hand felling in sensitive areas	— Partial clearing zone – removal or height reduction only where required to maintain safety and conductor clearance requirements	— Removal of dead or dying trees >5 m only where identified and subject to Transgrid approval
	— Two-stage hollow-bearing tree removal where required	— Hazard tree zone – selective felling of trees posing a safety or structural risk	— Vegetation >5 m not automatically removed; reduction or removal undertaken only where necessary
	— Trees <200 mm DBH mulched; larger trunks retained on ground where feasible		— Felled logs retained on ground where feasible to provide fauna habitat
Mid-Storey (Small Trees / Tall Shrubs)	— Selective removal using mulcher or chainsaw where required	— Full clearing zone – removed	— Avoidance where practicable of felling HBT in Spring – during bird and arboreal mammal breeding season
	— Hand removal in sensitive areas	— Partial clearing zone – retained by default; removal only where vegetation height or location would infringe approved safety clearances	— Supports vegetation structure and habitat continuity
	— Retain wherever possible	— Exclusion / retention zone – retained	— Removal limited to clearly justified safety or access requirements
Understorey (Shrubs / Young Regrowth)	— Mulching or slashing where required for access or safety	— Full clearing zone – removed as required for construction	— Ground disturbance to be minimised
	— Manual removal in sensitive areas only where necessary	— Partial clearing zone – largely retained; only minimal disturbance permitted	— Partial clearing intent is retention rather than removal
		— Exclusion zone – retained	— Disturbance avoided near sensitive vegetation communities, drainage lines, rocky habitat and TEC edges where practicable
Ground Layer (Grasses, Herbs, Leaf Litter)	— Generally retained	— Full clearing zone – cleared or disturbed as required	— Minimum ground cover to be retained following slashing to enable regeneration
	— Localised disturbance from machinery only where unavoidable	— Partial clearing zone – retained (may be temporarily disturbed but not cleared)	— Critical for erosion and sediment control
	— Excavation limited to approved infrastructure and access requirements	— Exclusion zone – retained	— Erosion and sediment controls implemented where disturbance is unavoidable

Riparian / Wetland Vegetation	— Hand clearing of upper stratum only where required — Retain root mass, mid-storey, and ground layer — Machinery exclusion zones enforced	— Riparian buffers – treated as highly constrained partial clearing areas regardless of vegetation type	— Disturbance limited to areas essential for safe access — No heavy machinery within riparian buffers unless specifically approved — Enhanced erosion and sediment controls applied to protect aquatic and marginal habitats
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Table A.3 Clearing Extent and Site Feature Checklist

Site Features (Project Ecologist) – to be completed for each clearing block			
Clearing block ID			
Clearing block (ha):	:	:	
Clearing Permit no.			
Full-clearance zones (ha)			
Partial-clearance zone (ha)			
Exclusion zone (ha)			
PCT / vegetation community and condition			
Area of each PCT / vegetation community affected (ha)			
Waypoint (GDA2020 / MGA Zone 56) and photo references	E:	E:	E:
	N:	N:	N:
Relevant Appendix 2 clearing limit			
Cumulative impact following clearing			
Remaining approved allowance			
Clearing Register reference			
Quantitative assessment of habitat resources within the clearing block (50 x 20 m transects)			
Transect ID	Transect:	Transect:	
Coordinates (GDA2020 / MGA Zone 56)	E:	E:	
	N:	N:	
Photo references			
Number of Significant trees (DBH >100cm).			
Black Gum (<i>Eucalyptus aggregata</i>) individuals	Number approved for removal:	Number removed:	
Capertee Stringybark (<i>Eucalyptus cannonii</i>) individuals	Number approved for removal:	Number removed:	
Number of hollow-bearing trees			
Hollows <5 cm			
Hollows 5-15 cm			

Hollows 16-25 cm	
Hollows 26-30 cm	
Hollows >30 cm	
Fallen timber (m) - at least 5 cm DBH and 1 m long	

Table A.3 will be completed for each clearing block to record the proposed and actual clearing by management zone, PCT, threatened-species habitat polygon and threatened-flora individuals. The information will be transferred to the Clearing Register and verified through the pre-clearing hold points in Table A.4 before the relevant clearing block is released.

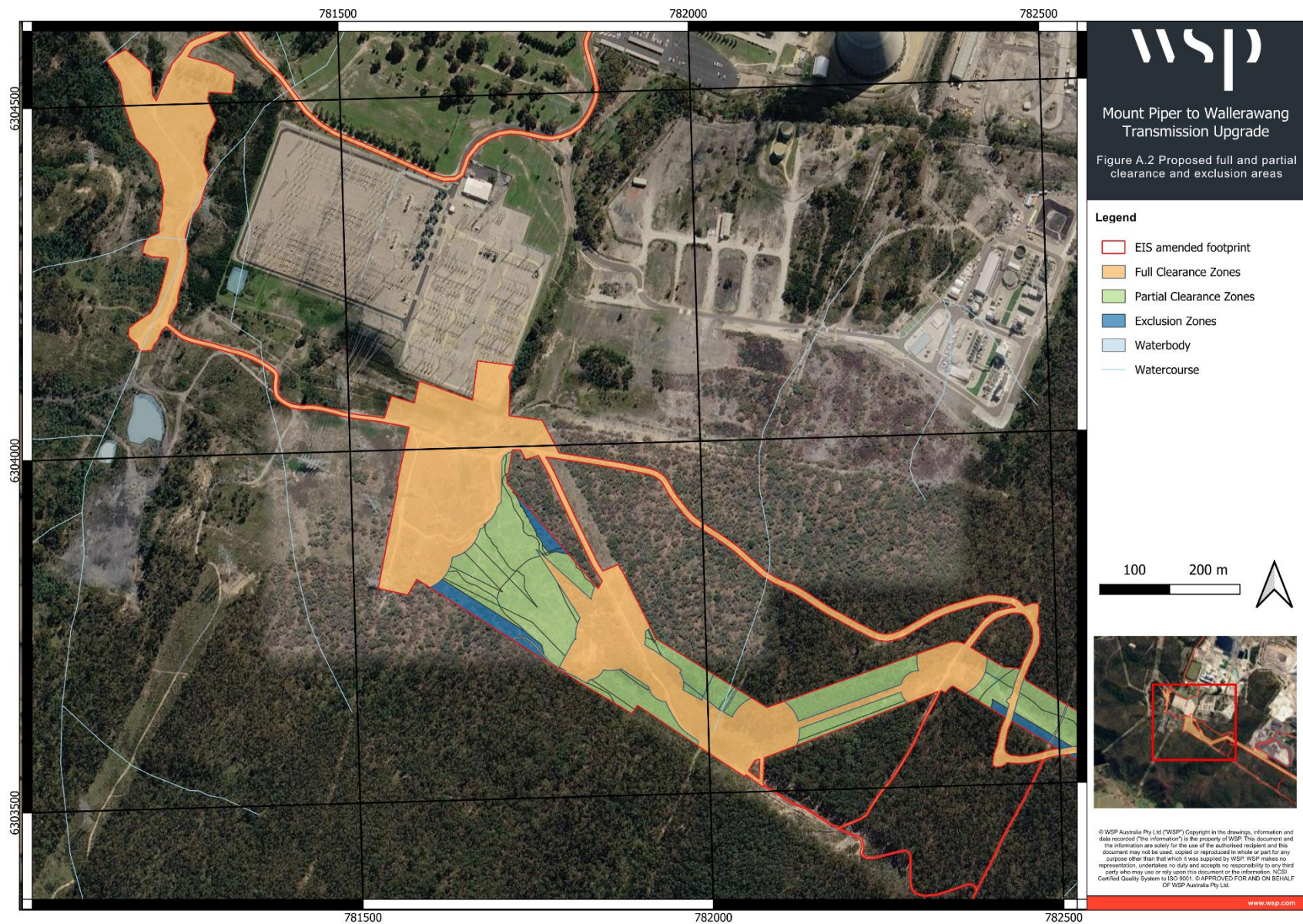
Table A.4 Pre-clearing Checklist (completed for each clearing block)

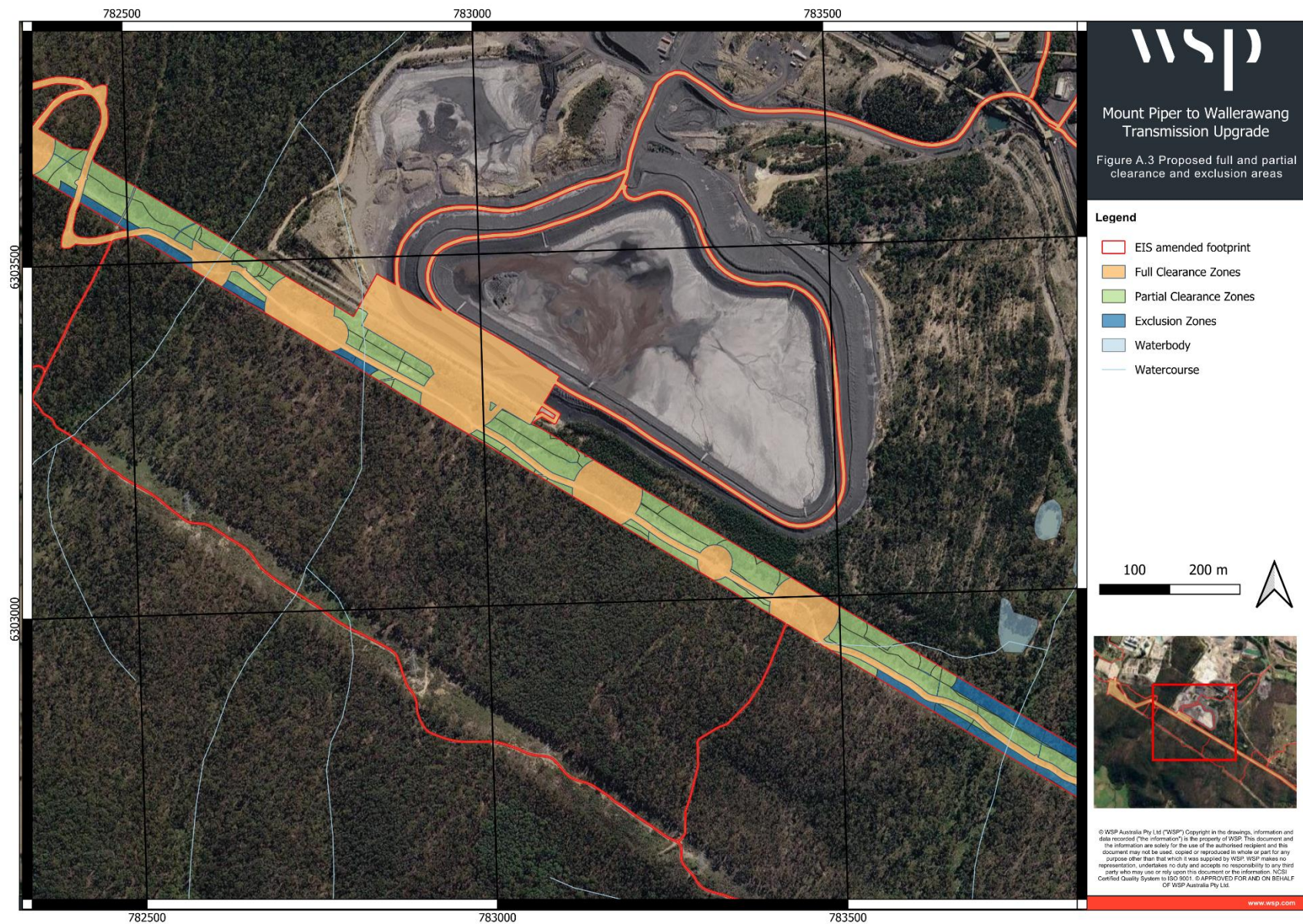
Date form completed: Clearing block ID:	Environment Superintendent: Project Ecologist:		
Proposed Action/Control Measure	Action By	Checked (initial)	Comments
Site Personnel have been adequately trained/inducted to the Project and activity location.	Environmenal Business Partner (BP)or Project Ecologist		
The boundaries between full-clearance, partial-clearance and exclusion zone have been surveyed and visibly demarcated, and the permitted vegetation treatment within each area has been reviewed with the clearing contractor.	Project Ecologist		
All habitat trees / hollow-bearing trees are to be marked using flagging tape or spray and identified on a map quoting the tree number per the arborist assessment	Project Ecologist		
The clearing extent and site feature survey is complete and all boundaries have been marked appropriately. (Limit of clearing is marked with survey pegs and flagging tape at 25 m intervals in areas adjacent to EEC's and in dense areas (where practical). Line of sight between pegs has been used in other areas).	Surveyor		
Environmentally sensitive areas have been identified and appropriate control measures are in place.	Project Ecologist		
Significant areas of weeds and pest infestations have been identified and controlled before clearing, in accordance with the Weed and Pest Management Strategy.	Environmenal Business Partner		
Targeted searches for threat-listed plants have been undertaken. If individuals previously unrecorded are identified, OEH and/or SEWPAC must be contacted prior to any clearing within the subject site.	Project Ecologist		
Appropriate fauna relocation sites have been designated.	Project Ecologist		
Local veterinary surgeries and wildlife organisations have been contacted to confirm the availability of care resources.	Environmenal Business Partner		
The clearing contractor has been directed to salvage natural hollows and any bush rocks, as per the procedures described in Appendix C	Environmenal Business Partner		
Stockpile locations for salvaged resources has been identified and marked out to clearing contractors	Environmenal Business Partner		
Relevant Clearing Permit hold point has been approved prior to commencement of clearing (Stage 1 - non-hollow-bearing vegetation and/or Stage 2 - hollow-bearing tree removal).	Environmenal Business Partner		

Table A.5 Salvage record

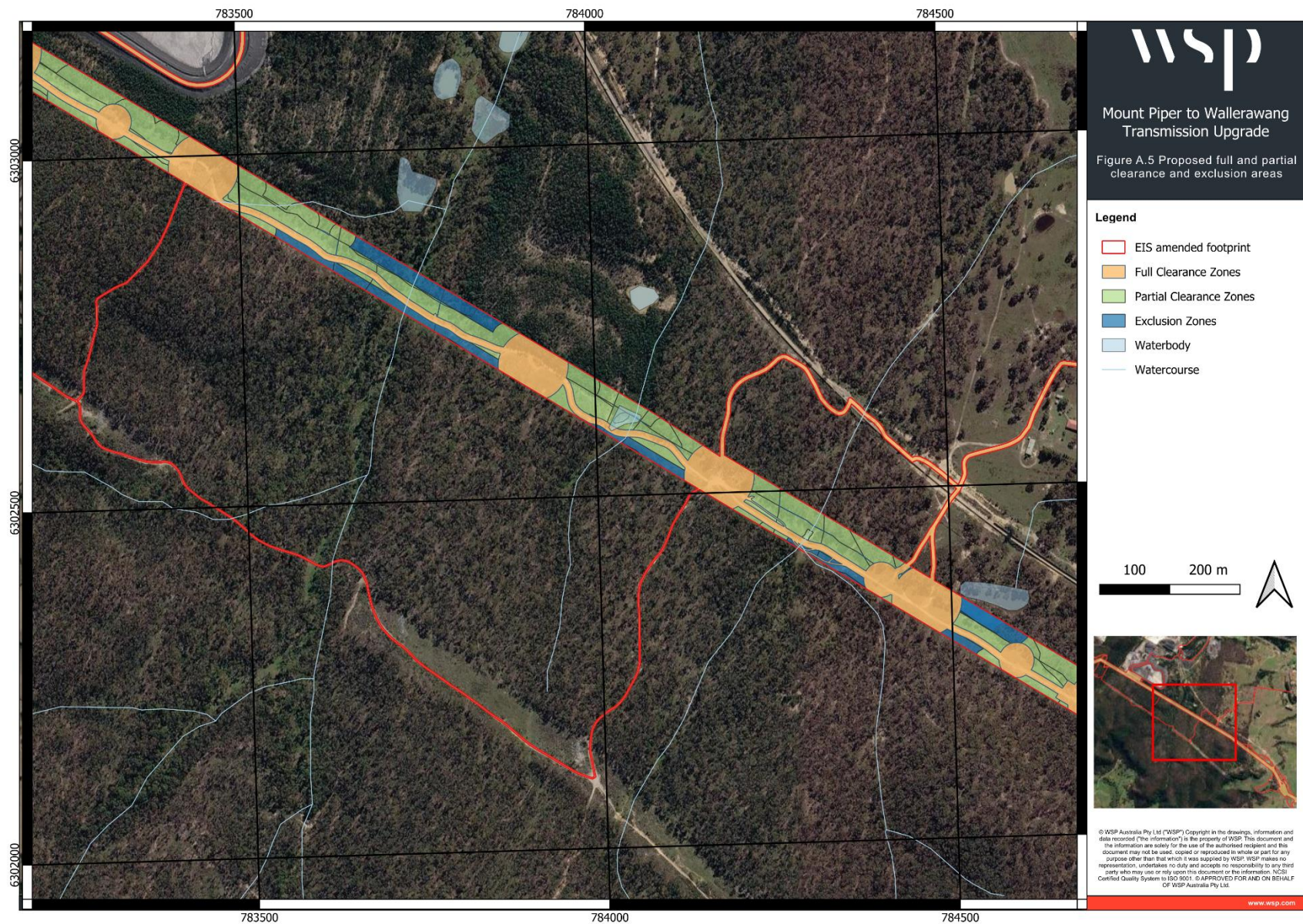
Record of salvaging habitat resources post-clearing	
Number of hollow-bearing trees	
Number of hollow-bearing limbs:	
<5 cm	
5-15 cm	
16-25 cm	
26-30 cm	
>30 cm	
Bush rocks (m ²)	
natural hollows (m) - at least 5 cm DBH and 1 m long	



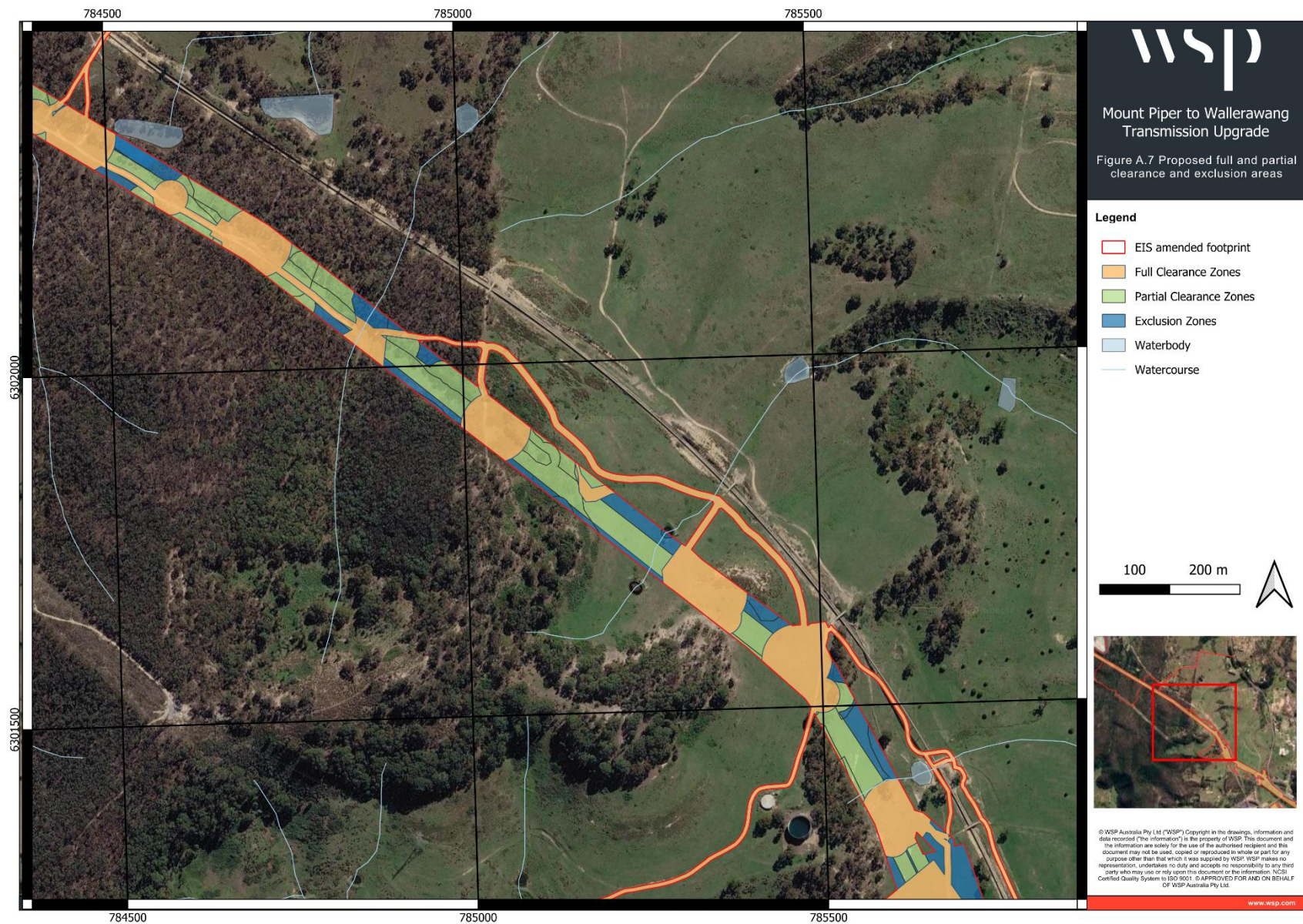


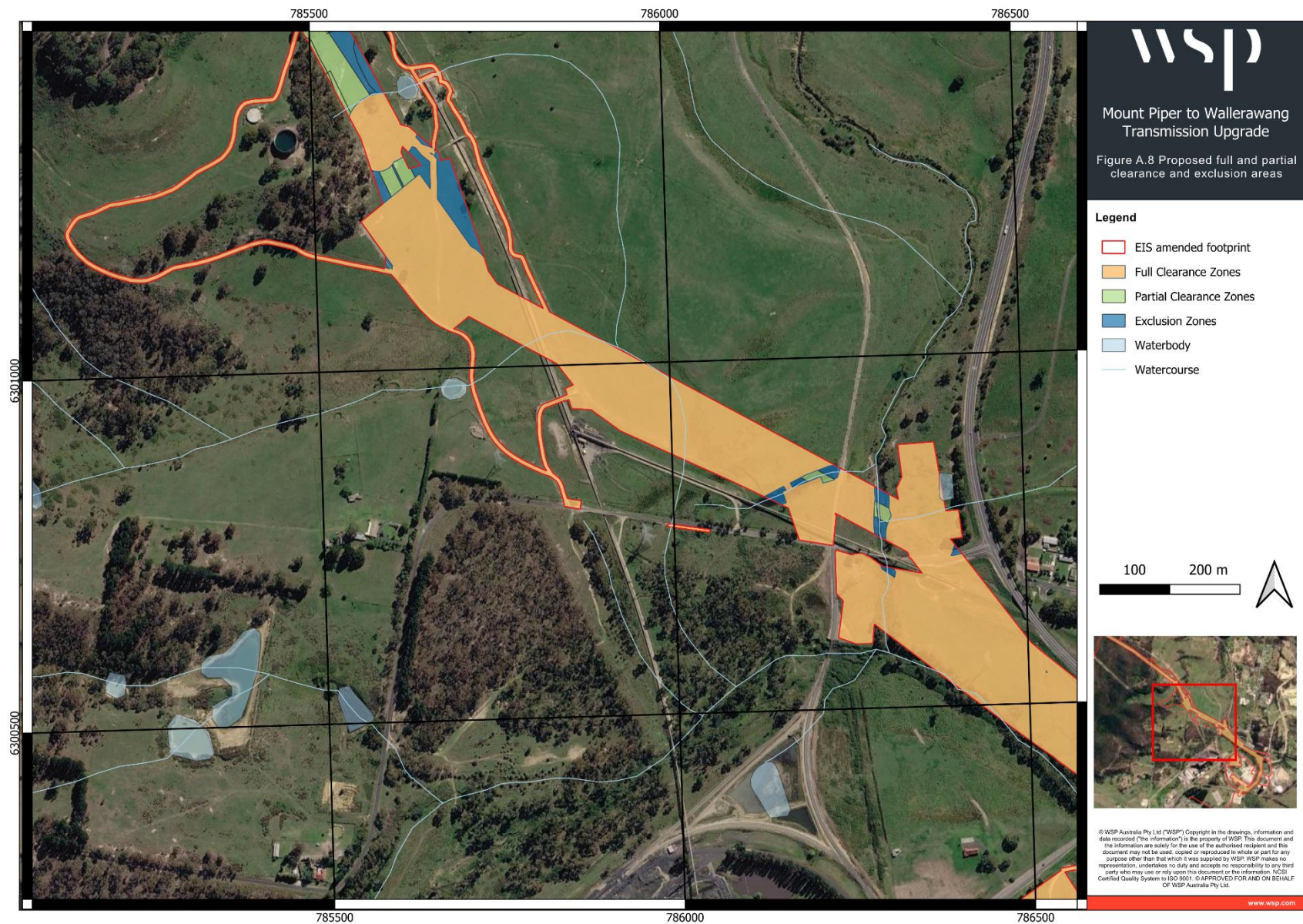


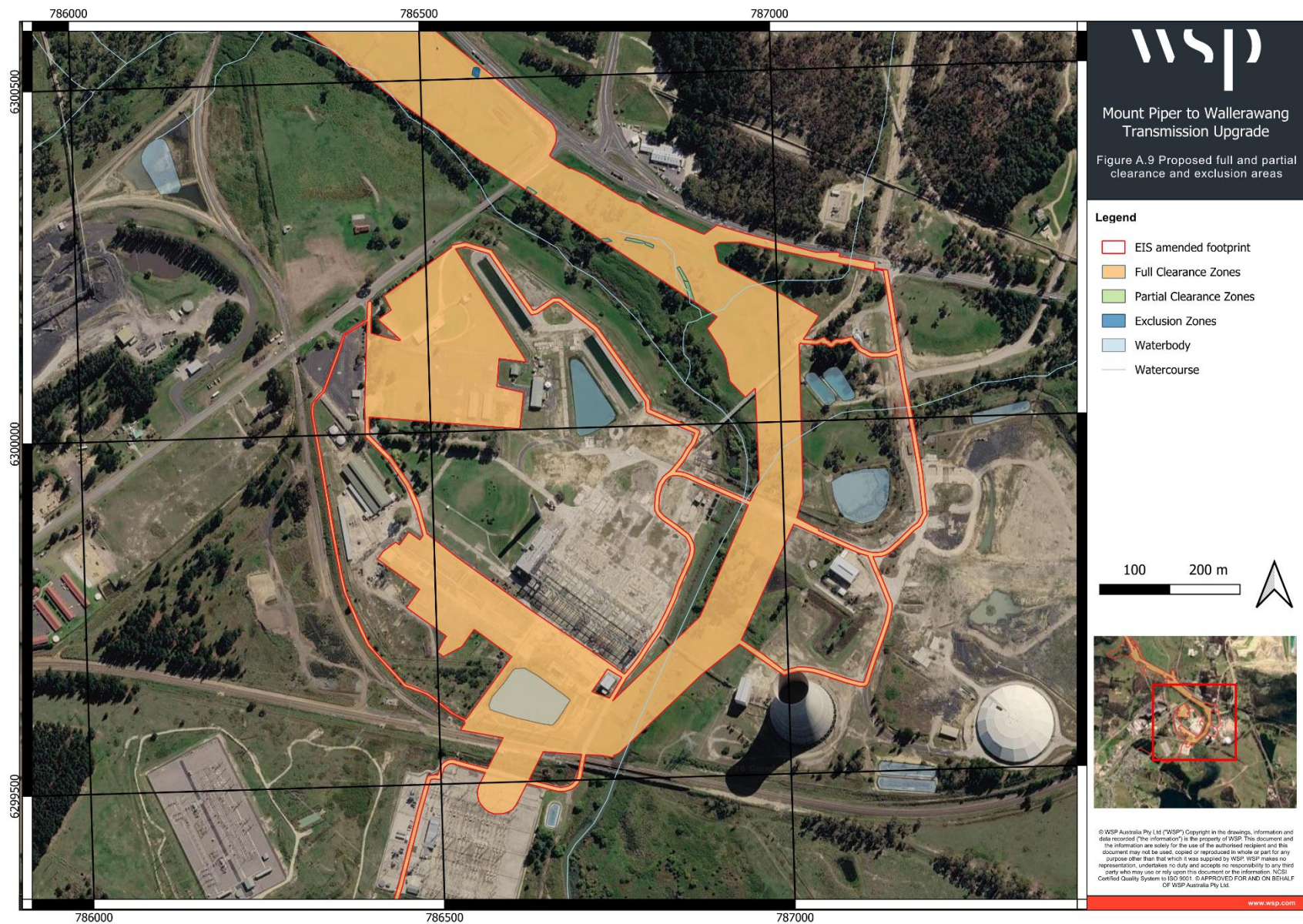


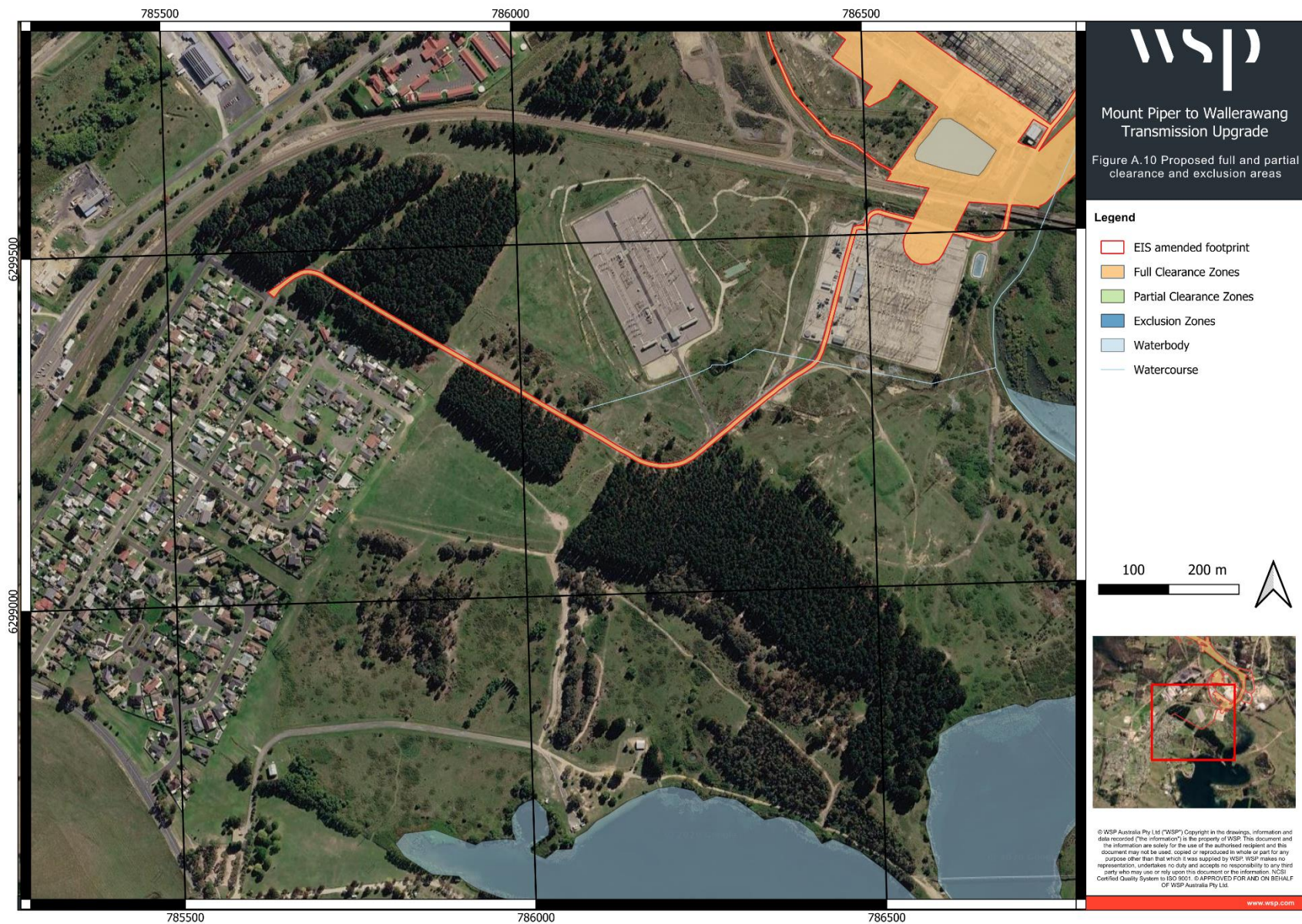












Appendix B

Habitat Connectivity Strategy



B1. Introduction

The Habitat Connectivity Strategy sets out how vegetation structure and functional movement pathways for the Squirrel Glider will be maintained throughout the design, construction and operation of the transmission line upgrade. It provides the framework for ensuring that connectivity considerations are incorporated into all project stages, guiding environmental safeguards and construction methodologies.

This strategy responds to regulatory requirements and Conditions of Approval that mandate the identification, management and protection of fauna movement corridors. It outlines how the project will avoid, minimise and monitor impacts to Squirrel Glider connectivity, and documents the measures the Proponent will implement to maintain equivalent or better levels of functional connectivity across the alignment compared to pre-construction conditions.

The identification, refinement and validation of connectivity corridors will be completed during detailed design and prior to the commencement of any vegetation clearing or construction activities. Final corridor locations and associated connectivity measures will be informed by desktop assessment, glide-feasibility modelling (where relevant) and field-based validation and will be documented before clearing works proceed.

To meet these objectives, this Habitat Connectivity Strategy provides direction for:

- Detailed design – identifying locations where topography, conductor clearances and retained vegetation height support the installation of glider poles.
- Construction management – implementing clearing methods that retain low vegetation where safe and practicable, reducing the severity of open ground barriers, and safeguarding areas with residual connectivity value.
- Implementation – installing glider poles and other approved connectivity measures at locations identified through the detailed design process.
 - Field investigations and detailed design will be completed prior to the commencement of construction,
 - With final glider pole locations and heights confirmed within two months of completion of field investigations.
 - Replacement or alternative connectivity measures for pathways identified in the Revised BDAR will be installed within three months of the loss of the relevant pathway resulting from vegetation clearing.
- Monitoring – assessing whether movement pathways remain functional post-construction and whether implemented measures are performing as intended.
- Adaptive management – revising or augmenting measures where monitoring identifies reduced performance or a need for improved connectivity outcomes.

The strategy establishes the design, implementation, monitoring and adaptive management requirements for maintaining functional Squirrel Glider connectivity across the alignment.

B2. Ecological context

The Revised BDAR describes the landscape surrounding the project as containing extensive connected forest and woodland, particularly where the alignment meets the Gardens of Stone SCA, forming an important region-scale connectivity block. Despite this, the existing easements already act as barriers to canopy continuity for arboreal fauna. Within this context, the Revised BDAR highlights that deeper gullies, riparian vegetation along the Cocks River and areas where local canopy height increases represent the limited natural features that may still offer favourable glide conditions. Seven potential Squirrel Glider crossing points were identified where movement across the current 45 m easement may

have been possible, although the structural attributes underpinning these movements were not documented and require field validation. Connectivity potential across the Project footprint is highly dependent on topography, vegetation height and canopy structure, all of which will be further affected by widening the easement to 60 m.

Squirrel Gliders (*Petaurus norfolcensis*) were recorded within the Study Area during spotlighting and camera-trap surveys and are susceptible to connectivity loss due to their reliance on continuous canopy and their sparse local distribution. Most trees along the easement are 15–20 m tall, with occasional individuals >25 m; while a 25 m tree launching from a downslope position may enable a one-way glide across the existing 45 m span, the expanded 60 m gap would require an approximate 32 m launch height, which exceeds tree heights present in the Study Area. As a result, the widened easement is expected to form a significant barrier to movement, with gliders likely forced to land in exposed areas and complete crossings terrestrially, substantially increasing predation risk, or more commonly, avoid crossing altogether. These biomechanical constraints are supported by published Squirrel Glider glide dynamic (Goldingay & Taylor 2009).

B3. Project approach to connectivity

The Project approach to connectivity is designed to maintain functional movement pathways for Squirrel Gliders across the alignment, consistent with the assumptions of the Revised BDAR and the linear nature of the infrastructure. Connectivity is not reliant on gliding alone; it is supported by the configuration and structure of retained vegetation within and adjacent to the easement, including canopy, mid-storey and shrub layers that facilitate movement without requiring animals to travel on the ground.

Accordingly, the Project's primary connectivity mitigation is the application of the avoid–minimise hierarchy through the clearing framework used across the BMP, specifically:

- Exclusion zone (no clearing), including exclusion zone within the easement where canopy and other vegetation can be retained;
- Partial clearance zone, where tall-growing vegetation is selectively managed to meet Vegetation Clearance Requirements while retaining shrub, mid-storey and ground-layer vegetation wherever practicable; and
- Full clearance zone, where vegetation removal is unavoidable for construction infrastructure and access.

Exclusion zone that allow canopy retention within the easement, and retention of shrub and mid-storey vegetation within partial clearance zones, are key measures to reducing canopy gap width and maintaining movement opportunities. Where clearance requirements constrain canopy-to-canopy movement, retained trees and shrubs can still provide functional connectivity by enabling animals to move between retained structural elements without needing to traverse open ground.

Where the above measures are not sufficient to maintain functional connectivity within a mapped corridor following detailed design and field validation, supplementary measures may be considered and targeted, including ground-based structural habitat features and arboreal crossing structures (e.g. glider poles). The feasibility and need for supplementary measures will be informed by site-specific assessment (including vegetation structure, topography, clearance constraints and field-based validation) rather than modelling alone below

B3.1 Full Clearance Zone

The Full Clearance Zones (FCZ) comprise areas where complete vegetation removal and associated ground disturbance are required to enable construction of the Project, including permanent infrastructure and temporary works areas.

Detailed clearing methods, controls and requirements for vegetation removal within FCZ are provided in Appendix A (Vegetation Clearing Procedure). Where practicable, the use of existing tracks, cleared areas and previously disturbed land will be prioritised to minimise additional vegetation removal and reduce impacts to habitat connectivity.

B3.2 Partial Clearance Zone

The Partial Clearance Zones (PCZ) include land within the proposed transmission line easement where vegetation management is required to maintain safe operating clearances over the life of the Project.

Detailed vegetation management requirements, including selective clearing approaches and retention of lower stratum vegetation, are provided in Appendix A (Vegetation Clearing Procedure). This approach prioritises the retention of mid-storey and ground layer vegetation where practicable, maintaining structural habitat and contributing to the avoidance and minimisation of impacts to ecological connectivity.

B4. Minimisation of vegetation clearance

Vegetation clearing within identified connectivity corridors will be avoided and minimised to the greatest extent practicable, with a particular focus on maintaining functional movement pathways for Squirrel Gliders. Consistent with the Revised BDAR, clearing will be limited to vegetation that either currently infringes, or has the potential to infringe, vegetation clearance requirements under maximum operating conditions. This selective approach to clearing is expected to substantially reduce the extent of habitat fragmentation, particularly within woodland vegetation communities.

Retention of mid-storey, shrub and ground-layer vegetation within partial-clearing areas provides important structural connectivity, reduces the effective width of cleared gaps and assists in maintaining movement opportunities for small woodland fauna, including Squirrel Gliders where gliding is not feasible. Areas supporting intact or higher-quality vegetation will be prioritised for avoidance, with consideration given to maintaining continuity between retained habitat patches both within and adjacent to the Project footprint.

This approach reflects the Revised BDAR findings that connectivity outcomes are strongly influenced by vegetation structure and the configuration of retained habitat, particularly in landscapes already fragmented by existing easements.

B4.1 Ground-based connectivity

Although Squirrel Gliders are primarily arboreal, ground-based structural habitat features can provide a supplementary connectivity function in locations where canopy connectivity or gliding opportunities are constrained. Where appropriate, salvaged habitat features (e.g. logs, coarse woody debris, and suitable hollow sections) may be used to provide shelter and cover across partial clearance zones and to support movement between retained trees and shrubs.

Habitat salvage and reuse will be undertaken in accordance with the Vegetation Clearing Procedure and relevant Section 4 measures within the BMP. Placement of salvaged material will be selective and targeted, with priority given to maintaining continuity of structure while avoiding impacts to retained vegetation.

To ensure operational access, safety and maintenance requirements are not compromised, salvaged logs, hollows and other materials will:

- be placed outside designated access tracks, turning areas and maintenance corridors, and not restrict inspection or emergency access;
- be installed only where compatible with clearance, fire risk and operational requirements; and
- be located and/or configured in consultation with Transgrid's Asset Maintenance team (and adjusted or removed if maintenance constraints are identified).

Where rocky habitat is present, rock features will be retained in situ wherever practicable and incorporated into ground-level structural cover where feasible. The location and extent of any ground-based measures will be confirmed following field validation to ensure they are appropriately targeted and practical to maintain.

B4.2 Arboreal connectivity structures

Where assessment confirms that natural vegetation and partial-clearing measures cannot provide viable canopy connectivity, dedicated arboreal structures such as glider poles may be required to maintain movement opportunities for Squirrel Gliders. These structures are intended to facilitate gliding across cleared spans that exceed the species' natural glide capacity.

For glider poles to be effective, their height, spacing and alignment must be sufficient to allow glide trajectories to remain airborne and avoid ground contact. Retention of mature trees at the margins of the easement is a key factor in improving the effectiveness of such structures, as these trees provide natural launch and landing points and increase the likelihood of use by gliders.

The Revised BDAR and subsequent connectivity assessments identified candidate corridors where Squirrel Glider habitat is present and where connectivity may be constrained by clearing. These locations have been subject to preliminary review; however, final outcomes will be informed by detailed design, final clearing extents and field-based validation. Field validation will be completed prior to the commencement of construction, with glider pole locations and height schematics completed within two months of field investigations. The outcomes of the design will be provided to CPHR within one month of finalisation for comment. The final placement and design of glider poles will be confirmed on site in consultation with suitably qualified ecologists, ensuring alignment with retained vegetation, local topography and habitat features to maximise functional connectivity.

Table B.1 Summary of Squirrel Glider Connectivity Measures by Pathway Type

Pathway Type	Primary Connectivity Mechanism	Application	Notes
Natural glide feasible	Retained canopy connectivity	Locations where vegetation height and slope permit gliding	Confirmed through validation
Marginal glide / one-way glide	Retained vegetation and topographic assistance	Downslope or gully locations	Subject to modelling and field confirmation
Glide not feasible	Ground-based connectivity support	Partial-clearing zones with retained understorey (<4 m)	Secondary mitigation only
Glide barrier	Artificial arboreal structures	Where natural connectivity cannot be maintained	Triggered following validation

B5. Indicative corridor locations

The location and spacing of connectivity corridors across the Project footprint varies in response to local landscape features, vegetation structure and the distribution of biodiversity values identified in the Revised BDAR. Connectivity potential is highest in areas where large, intact vegetation blocks occur adjacent to the alignment, particularly where natural features such as drainage lines, gullies, riparian vegetation and patches of locally taller canopy are present. In contrast, connectivity is more constrained in areas already fragmented by existing easements or historical land use, where canopy gaps and reduced vegetation height limit movement opportunities for arboreal fauna, including Squirrel Gliders.

The Revised BDAR identified several locations where natural landscape features may continue to facilitate fauna movement across the alignment, including several previously mapped Squirrel Glider crossing points. However, the structural attributes underpinning these pathways were not fully characterised and their current suitability remains subject to confirmation. These locations, together with areas where partial clearing retains understorey vegetation below 4 m and where local topography reduces the effective crossing distance, represent the most likely areas where functional connectivity may persist following construction.

Indicative connectivity corridors identified in the Revised BDAR provide the basis for field-based validation, glide feasibility assessment and design-phase refinement to confirm the final connectivity pathways to be maintained across the widened easement, and to identify the locations where connectivity measures, such as glider poles or ground-based structural elements, are required.

Field-based validation of candidate connectivity corridors will be undertaken prior to the commencement of construction. Final glider pole locations and heights will be confirmed through detailed design within two months of completion of the field investigations. The finalised connectivity corridors, associated assessments and proposed connectivity measures will be provided to CPHR within one month of finalisation of the connectivity measures. Where vegetation clearing results in the loss of a connectivity pathway identified in the Revised BDAR, replacement or alternative connectivity measures will be installed within three months of the loss of that pathway to restore functional connectivity across the easement.

Table B.2 Identified Squirrel Glider connectivity pathways (GHD, 2025b)

Location	Direct	Quality - Existing	Comment	Quality - Proposed	Post-construction connectivity
East of transmission structure 26D	One-way connectivity	Good	Occurs on the slope within the existing easement; a small two-way connection is associated with a drainage line west of the coal reject emplacement area. Located where the Gardens of Stone SCA extends north of the easement near Mount Piper Power Station.	Good	Two-way connectivity remains in the riparian area and one-way connectivity is reduced.
East of transmission structure 24D	Two-way connectivity	Poor	Exists adjacent to the coal reject emplacement area. This link would be removed due to easement width and vegetation height requirements.	None	Impact is minimal
East of transmission structure 22D	Two-way connectivity	Good	Along a drainage line east of the coal reject emplacement, linking the Gardens of Stone SCA to regrowth vegetation on Centennial Coal lands and broader high-quality vegetation.	Good	Link remains after construction due to tall vegetation along the drainage line.
East of transmission structure 20D	Two-way connectivity	Good	Along a drainage line east of the coal reject emplacement, linking the SCA to regrowth vegetation on Centennial Coal lands.	Moderate	Link remains due to tall vegetation along drainage line. Fewer suitable trees reduce overall link quality.

Location	Direct	Quality - Existing	Comment	Quality - Proposed	Post-construction connectivity
At and between transmission structures 19D and 18D	One- and two-way connectivity	Moderate	Trees occasionally provide connectivity across ~600 m between drainage lines. Construction reduces the number of linkages.	Poor	Existing and proposed towers would further impact connectivity in this area.
East of transmission structure 18D	Two-way connectivity	Good	Associated with a drainage line near the eastern boundary of the Gardens of Stone SCA.	Good	This linkage remains following construction
Near transmission structure 14D	Two-way connectivity	Poor	Mapped near the WaterNSW water tank, with this linking to an isolated patch of trees only	None	The small tree patch would be removed as part of the Project.

B6. Steps to connectivity corridor validation

A range of connectivity measures have been identified through the Habitat Connectivity Strategy and will be implemented to maintain or improve functional connectivity for Squirrel Gliders across the alignment. Detailed design and field validation will be undertaken to confirm the final location, configuration and implementation requirements of connectivity measures, including vegetation stepping-stones and glider crossing structures.

Temporary disturbance areas associated with construction activities, including brake and winch sites and access tracks, will be rehabilitated following construction where they intersect identified Squirrel Glider connectivity corridors. Restoration of these areas is intended to reinstate vegetation structure and connectivity function once construction activities have ceased.

In locations where vegetation establishment is planned, the potential installation of glider poles will be considered to provide interim connectivity for Squirrel Gliders while revegetation matures. Where retention of suitable canopy trees within the easement is not feasible and natural gliding opportunities cannot be maintained, permanent glider poles may be required to sustain functional connectivity across the cleared span. Similarly, where existing easements intersect identified Squirrel Glider connectivity corridors, the installation of permanent glider poles will be assessed as a means of restoring connectivity where it has been degraded by historical clearing.

Consistent with the Revised BDAR, further assessment of collision risk and the need for associated design mitigations will be undertaken where required, particularly in locations where connectivity measures concentrate fauna movement across the alignment. In addition, large trees located within Hazard Tree Zones that contribute to Squirrel Glider connectivity will be retained where practicable, subject to ongoing arboricultural assessment and targeted tree management or pruning to address safety requirements while maintaining habitat value.

The preliminary Squirrel Glider connectivity pathways identified by GHD have been incorporated into this Habitat Connectivity Strategy as the basis for maintaining functional connectivity across the alignment. Field validation and detailed design will be undertaken to confirm the final location and configuration of connectivity measures, including vegetated stepping-stones and glider crossing structures, and to identify any refinements required to optimise their

effectiveness. The staged process outlined below describes how the proposed connectivity pathways and associated mitigation measures will be validated and implemented to maintain or improve movement opportunities across the alignment.

B6.1 Desktop validation

Following completion of the initial desktop connectivity assessment by GHD (2025b), additional spatial analysis has been undertaken to further refine the feasibility of identified Squirrel Glider pathways. This assessment integrated spatial layers representing areas of full, partial and exclusion clearing, buffered tower locations, transmission conductor height and sway envelopes, topography, and mapped vegetation height along the alignment.

This spatial modelling was used to:

- Verify the feasibility of GHD-identified pathways with respect to effective canopy height, glide distances and clearance constraints.
- Identify locations where previously identified pathways are no longer feasible due to combined clearing extents, conductor clearance requirements, or unfavourable topographic conditions.
- Identify alternative candidate pathways where terrain, retained vegetation structure or partial-clearing opportunities may support an equal or improved level of functional connectivity.

Building on this assessment, further refinement is currently underway and will incorporate detailed engineering inputs, including transmission line schematics, final span geometry, conductor clearance envelopes and site-specific topographic profiles at candidate glider pole locations. These design inputs will be used to confirm the viability, placement and specifications of any connectivity enhancement measures.

Final connectivity pathway locations and glider pole placements will be confirmed following field-based validation (pre-clearing) and detailed design, and prior to the onset of construction, to ensure connectivity outcomes are achieved while maintaining compliance with safety, clearance and operational requirements. Final glider pole locations, heights and associated schematics will be confirmed within two months of completion of the field investigations, following preparation of schematics and consultation with Zinfra.

The proposed connectivity corridors, glide assessments and connectivity measures (glider pole number, height) will be provided to CPHR as soon as practicable following completion of the detailed design, and no later than one month after finalisation of the connectivity measures. Where clearing results in the loss of a connectivity pathway identified in the Revised BDAR, replacement or alternative connectivity measures will be installed within three months of the loss of that pathway.

Connectivity maps presented in this Plan (Appendix B) represent a draft assessment of Squirrel Glider movement pathways and are intended to illustrate likely connectivity scenarios pre- and post-construction. Final connectivity corridor locations and associated mitigation measures will be confirmed through ongoing consultation with CPHR/NPWS, detailed design refinement and field-based validation prior to construction.

The process used to assess, refine and finalise connectivity corridors is summarised in Table B.3. This process incorporates desktop assessment, glide-feasibility modelling, field validation, detailed design refinement and consultation with CPHR to ensure final corridor locations and connectivity measures achieve the objectives of this Habitat Connectivity Strategy.

Table B.3 steps to validate and finalise connectivity corridors

Step	Action Required	Timing	Responsible Party
Desktop Validation	Integrate final spatial data - clearing limits, vegetation height, topography, tower placement, transmission line sag. Review GHD-identified pathways against identified constraints. Identify any uncertainties requiring field confirmation.	Upon receipt of outstanding datasets and before modelling	Project Ecologist (Desktop Review Lead)
Glide Angle & Distance Modelling	Model glide feasibility at each candidate pathway using vegetation heights and slope data to identify Identify viable and non-viable pathways. Flag pathways requiring closer inspection including alternative options where GHD identified pathways are considered unfeasible.	Following completion of desktop validation	Project Ecologist / GIS Consultant
Field-Based Validation	Ground-truth pathway suitability: – verify vegetation height/structure – assess topography – confirm retained <4 m vegetation in partial-clearing zones – identify stepping-stone vegetation or barriers. Record GPS-accurate locations for micro-siting	During pre-clearing surveys and prior to construction	Project Ecologist
Confirm Corridor Suitability	Determine whether each pathway remains viable. Determination of Glider pole number, height and type Document any changes required and the rationale for adjustments.	Within two months of field validation	Suitably Qualified Ecologist
Micro-Siting / Adjustments	Adjust pathway location where required (e.g., to align with topography or retained vegetation). Identify alternative alignment points if a pathway is unsuitable. Ensure no net reduction in total corridor number.	During detailed design refinement	Project Ecologist + Design Team
CPHR Consultation	Consult CPHR following field validation to discuss finalised pathways and Conditions of Approval compliance.	After field validation and before final pathway confirmation	Project Ecologist + Environmental Manager
Finalisation of Connectivity Corridors	Finalise corridor locations and document all supporting evidence, modelling outputs and field validation results. Update mapping and incorporate corridor locations into construction documentation.	Prior to commencement of clearing and construction	Project Ecologist + Environmental Manager

B6.2 Glide angle and distance modelling

Squirrel Gliders have an average glide angle of approximately 28.5 degrees (Goldingay and Taylor 2009), with an average glide ratio of 1.84. For the purposes of designing connectivity enhancement measures, glide trajectory calculations must ensure that gliders can land at least two metres above ground level, pass beneath fixed infrastructure (including transmission conductors), and achieve effective glides in both directions. Local slope conditions are also relevant, noting that topography may either enhance glide potential through elevation gain or act as a constraint on movement. Gliders typically launch from a horizontal position along a branch below the top of the tree and out from the trunk body, landing vertically on the target tree trunk (Goldingay and Taylor 2009).

Detailed glide trajectory calculations are site- and species-specific and require integration of ecological parameters with engineering design inputs. While preliminary spatial feasibility modelling has been undertaken to assess candidate pathway locations in relation to clearing extents, topography, vegetation height and infrastructure constraints, glide-angle-based modelling has not yet commenced.

Calculation of glide trajectories and assessment of glider pole height, spacing and number will be undertaken once detailed engineering information becomes available, including transmission line schematics, final tower locations, conductor heights, sag and sway envelopes, and site-specific topographic profiles at candidate locations. These inputs are necessary to accurately assess whether canopy-to-canopy glides or glider pole-assisted crossings are feasible within the transmission easement.

Once these design inputs are available, glide-angle modelling will be undertaken to:

- Determine whether local tree heights provide adequate launch points, noting that a launch height of approximately 32 m is generally required to consistently cross a 60 m canopy gap.
- Assess the influence of slope and elevation changes on glide viability at each candidate pathway.
- Identify locations where glide-assisted one-way movement may remain feasible due to favourable topography, consistent with Revised BDAR observations.
- Inform the preliminary specification of glider pole height, spacing and configuration where canopy-based connectivity alone is not feasible.

The outcomes of this modelling will be used to validate and optimise the connectivity pathways identified in this Strategy and to inform any site-specific refinements required during detailed design. This process will support confirmation of the final placement and configuration of connectivity measures prior to construction.

Table B.4 Squirrel Glider Glide Parameters Used for Connectivity Assessment

Parameter	Value	Notes / Source
Average glide angle	28.5°	Published average for <i>Petaurus norfolcensis</i>
Average glide ratio (horizontal : vertical)	1.84	Based on empirical glide studies
Typical launch position	2–3 m below canopy	Launch from horizontal branch
Minimum landing height	≥2–5 m above ground	To enable controlled landing
Implication for wide easements	Increased launch height required	Wider gaps require proportionally greater vertical height

B6.3 Evaluation of design options

Multiple glider-pole options will be considered during detailed design, with each assessed for viability based on structural need, site conditions and glide-angle modelling. The preferred pole type at each crossing will be confirmed following field validation to ensure the final design maintains or improves connectivity. Alternates to the typical glider pole (modified telephone pole) include:

Salvaged Timber Glider Poles

Maintain a corridor of dead trees across the transmission line. The dead trees could be retained trees that are not cleared but rather are killed and pruned to an acceptable height, or they could comprise dead trees that are salvaged during clearing and installed where required. This approach provides a more 'natural' pathway across the gap and can incorporate retained hollows to preserve microhabitat features. Salvaged trunks also allow for natural branching points from which gliders can jump from, removing the need for timber cross-arms. However, the location of the natural launching points may not be in the same optimal position as a cross arm at the top of a glider pole. Where possible trees within the clearing zone selected to act as naturalised glider poles will be retained with their root structure intact.

Standard Glider Poles

Glider poles are typically constructed from tall, smooth hardwood or treated timber telephone or utility poles, with a height of up to 26 m. Glider poles are fitted with a cross arm at the top of the pole, pointing in the direction of travel (i.e. to the next glider pole or salvaged tree trunk) and are strategically placed to align with gliding trajectories. Caps on the top of the pole are used to provide shelter from aerial predators.

Hybrid Connectivity Solution

Combine elements of the above three options to maximise ecological outcomes. Retain anchor trees at the easement margins, repurpose cleared timber for naturalised glider poles, retain suitable trees within the glider corridor and install standard glider poles where necessary to complete the connectivity corridor. This flexible approach allows for site-specific adaptation while maintaining a functional corridor for species movement.

B6.4 Field based validation

Following review of desktop and modelling outputs, a site visit was conducted between 19 and 21 August 2026 to validate the proposed connectivity pathways. The assessment confirmed whether each proposed pathway addressed the structural constraints of the transmission line and ecological requirements for Squirrel Glider movement.

Field validation included:

- Verification of vegetation height, structure and topographic conditions at each pathway.
- Identification of stepping-stone vegetation, canopy edges or topographic features that could aid gliding.
- Mapping of barriers not evident during desktop assessment.
- Recording of GPS-accurate locations where connectivity measures could be implemented.
- Evaluation of whether proposed connectivity actions were appropriate based on ground conditions and Revised BDAR-identified constraints.
- Identification of alternative alignment points where preliminary pathways were unsuitable.

A total of nine potential connectivity pathways were identified and selected for detailed design development and will inform the selection and final placement of Glider connectivity mitigation measures.

B6.5 Consultation

Representatives from CPHR and the local NPWS Area Office were invited to participate in field validation inspections of the proposed crossing locations undertaken between 19 and 21 August 2026; however, representatives were not available to attend the inspections.

Final connectivity corridor assessments, confirmed glider pole locations and associated design drawings will be provided to CPHR and the local NPWS Area Office as soon as practicable following completion of the detailed design process and prior to construction.

B6.6 Finalisation of connectivity corridors

The results of the field validation undertaken between 19 and 21 August 2026 will inform the detailed design and micro-siting of connectivity measures within each corridor. Adjustments identified during the field validation and to be considered during detailed design may include:

- Minor shifts in pathway location to better align with vegetation structure or topographic features.
- Relocation of proposed corridors where ground conditions differ from existing datasets.
- Enhancement of terrestrial connectivity through retained understorey vegetation, log placement or other ground-level features.
- Confirming the most suitable points for any future artificial structures (if required).
- Amendments made during consultation with CPHR

Importantly, there will be no net reduction in the number of connectivity corridors relative to the preliminary connectivity pathways identified in the Revised BDAR and refined through the desktop assessment described in this Strategy.

If any preliminary connectivity pathway identified is deemed unsuitable following desktop refinement, glide-feasibility assessment or field-based validation, an alternative location providing equivalent or improved connectivity outcomes will be identified, assessed and validated prior to construction. CPHR will be kept informed of any changes to the preliminary connectivity pathways and provided with details of the revised location, assessment findings and proposed connectivity measures.

The Revised BDAR identified seven key Squirrel Glider connectivity pathways across the alignment. This Habitat Connectivity Strategy is intended to ensure that these pathways are either retained or, where retention is not feasible, replaced through alternative connectivity measures that provide an equivalent functional connectivity outcome. Connectivity measures may include retained vegetation, partial-clearance measures, glider poles and other supplementary structural elements. Final connectivity pathways and associated measures will be confirmed through field-based validation and detailed design prior to construction, with replacement or alternative connectivity measures implemented in accordance with the timeframes specified in this Strategy.

B6.7 Retention of connectivity assets

Trees identified as forming part of an approved Squirrel Glider connectivity pathway, including glider pole anchor trees and key launch and landing trees, will be mapped and incorporated into ongoing easement management and maintenance planning. These trees will be retained wherever practicable and will not be removed or subject to pruning that would compromise their connectivity function unless required to meet safety, asset integrity or statutory vegetation clearance requirements.

Where proposed maintenance activities have the potential to affect the function of an approved connectivity pathway, the impacts will be assessed by a suitably qualified ecologist. Where a reduction in connectivity function is identified, alternative measures will be developed to maintain equivalent connectivity outcomes. Consultation with NPWS and CPHR will be undertaken where proposed maintenance activities are likely to materially affect an approved connectivity pathway or asset.

B7. Timing and monitoring frequency

The Connectivity measures will be implemented and monitored in accordance with Events 1 to 10 below.

Event 1: Desktop refinement and glide-feasibility assessment

Preliminary connectivity corridors identified in the Revised BDAR will be refined through a desktop assessment prior to field-based validation. This includes:

- Review of preliminary corridors against the confirmed easement alignment;
- Assessment of retained vegetation, aerial imagery, LiDAR and habitat mapping;
- Glide-feasibility assessment considering canopy heights, retained tree architecture, gap widths and Squirrel Glider behavioural preferences; and
- Identification of candidate crossing locations for field-based validation;

Outputs will be used as the basis for field validation.

Event 2: Field-based validation

Field-based validation of candidate crossing locations will be undertaken prior to construction. Field inspections will confirm:

- Suitability of each candidate crossing location;
- Site-specific constraints (e.g. retained tree condition, sightlines, safety clearances);
- Required refinements to glider pole placements; and
- Any alternative locations required where a candidate corridor is deemed unsuitable.

Representatives from CPHR and the local NPWS Area Office will be invited to participate in the field validation inspections. Notification of the field validation schedule will be provided to CPHR and NPWS at least two weeks in advance.

Findings will be used to inform detailed design.

Event 3: Detailed design of connectivity structures

Detailed design of connectivity structures will be finalised within two months of completion of the field investigations. Detailed design will confirm:

- Final glider pole locations and heights;
- Design materials, dimensions and installation methodologies;
- Associated schematics and construction drawings; and
- Consultation with Zinfra and Transgrid.

Finalised connectivity corridors, glide assessments, design schematics and proposed connectivity measures will be provided to CPHR and the local NPWS Area Office within one month of finalisation of the connectivity designs.

Event 4: Installation of connectivity structures

Installation of connectivity structures will be undertaken within three months of the breaking of an identified connectivity pathway. Installation will include:

- Installation of glider poles in accordance with the finalised design;
- Retention or supplementation of vegetated stepping-stones where identified;
- Installation of any additional connectivity measures identified during detailed design; and
- Documentation of installation details in the Connectivity Report (including GPS coordinates, asset identifier, installation date, installer and photographic record).

Installation will be undertaken by the Construction Manager under the supervision of the Project Ecologist.

Event 5: Installation of monitoring infrastructure

Remote monitoring infrastructure will be installed concurrently with, or within three months of, the installation of connectivity structures. Installation will include:

- Remote cameras positioned to capture use of glider poles;
- Calibration of cameras and configuration of data-handling and cloud upload systems; and
- Baseline photographic records of each glider pole and surrounding habitat.

Event 6: Ongoing camera monitoring (Years 0–3)

Continuous remote camera monitoring of installed connectivity structures will be undertaken for a minimum of three years following installation. Monitoring will include:

- Continuous camera capture of glider pole utilisation;
- Rolling data review by the Project Ecologist;
- Annual structural inspections of installed connectivity structures.

Monitoring data will be recorded in the annual Connectivity Report.

Event 7: Event-based inspections

Additional inspections of installed connectivity structures will be undertaken following high-risk weather events with the potential to damage the structures or compromise their function. For the purposes of this BMP, high-risk events include:

- Severe wind events (sustained winds >90 km/h or gusts >100 km/h);
- Bushfires affecting the Project footprint or adjacent retained vegetation.

Inspections will be undertaken within a reasonable timeframe following the event, subject to site access and safety considerations.

Event 8: Effectiveness assessment

A formal effectiveness assessment will be undertaken at three years following installation of the last connectivity structure. The assessment will consider:

- Rates of glider pole utilisation;
- Observed movement patterns across the easement;
- Structural performance of installed connectivity measures; and
- Comparison of monitoring outcomes against the connectivity objectives established through the Revised BDAR and Habitat Connectivity Strategy.

Effectiveness assessment findings will be documented in an effectiveness assessment report provided to CPHR and the local NPWS Area Office.

Event 9: Adaptive management (as triggered)

Where monitoring identifies low utilisation, structural failure, evidence of avoidance behaviour or connectivity objectives not being achieved, the adaptive management process (Section 6.7) will be applied. Adaptive management measures may include:

- Modification of glider pole configuration;
- Installation of additional crossing structures;
- Refinement or supplementation of vegetated stepping-stones;
- Supplementary habitat enhancement measures; or
- Revised monitoring requirements.

Adaptive management actions will be documented in the annual monitoring report.

Event 10: Long-term protection

Trees identified as forming part of an approved Squirrel Glider connectivity pathway will not be removed or subject to pruning that would compromise their connectivity function during operational vegetation maintenance activities, unless required to meet safety or reliability obligations, and in consultation with the Project Ecologist.

B8. Monitoring and validation

Monitoring is designed to evaluate whether the project maintains equal or improved connectivity across the alignment and whether implemented measures continue to provide viable movement opportunities following clearing, construction and operational phases. Data from monitoring will inform adaptive management decisions and, where required, refinement or relocation of connectivity pathways.

B8.1 Camera monitoring

Remote camera monitoring will be established at each glider crossing structure following installation. Cameras will be positioned to monitor movement across glider poles and associated crossing infrastructure. Cameras will be configured to maximise detection of nocturnal arboreal mammals while minimising false triggers.

Monitoring equipment will incorporate suitable redundancy measures (e.g. on-board image storage and backup power supply) to minimise the risk of data loss arising from equipment malfunction, power interruption or communication failure.

Data collected through the monitoring program will be reviewed by suitably qualified ecologists experienced in arboreal mammal identification and the assessment of fauna connectivity structures.

B8.2 Adjacent habitat monitoring

Monitoring of glider connectivity structures will be the primary method used to assess the effectiveness of the Habitat Connectivity Strategy. Routine monitoring of adjacent habitat and local glider populations will not be undertaken during the initial monitoring phase.

Where monitoring identifies limited or no use of a connectivity structure over a period considered sufficient to allow uptake by the target species, the Project Ecologist may recommend targeted investigations to assist in interpreting the monitoring results. These investigations may include assessment of adjacent habitat, species presence surveys, or other methods considered appropriate for the target species and site conditions.

Targeted investigations may be used to distinguish between:

- absence of structure use due to limited local abundance or absence of target species;
- delayed uptake of a newly installed connectivity structure; and
- reduced effectiveness of the connectivity structure itself.

Survey methods may include remote cameras, spotlighting, hair tube surveys, nest box inspections or other techniques considered appropriate by the Project Ecologist.

B8.3 Adaptive management

Monitoring results will be reviewed against the objectives of the Habitat Connectivity Strategy.

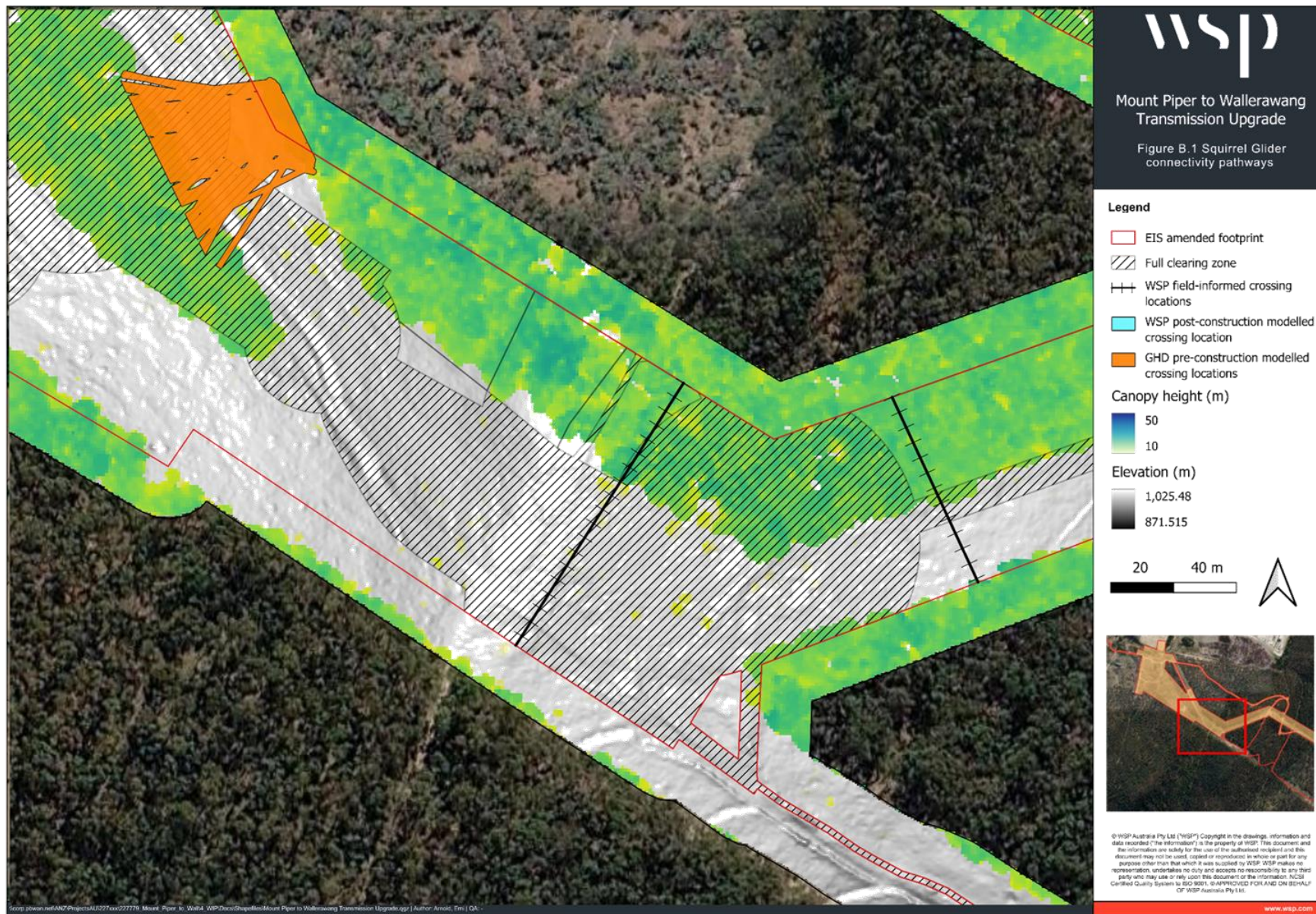
Where monitoring identifies low levels of structure use, evidence of avoidance behaviour, or connectivity objectives are not being achieved, additional assessment will be undertaken to determine the cause. Adaptive management measures may include:

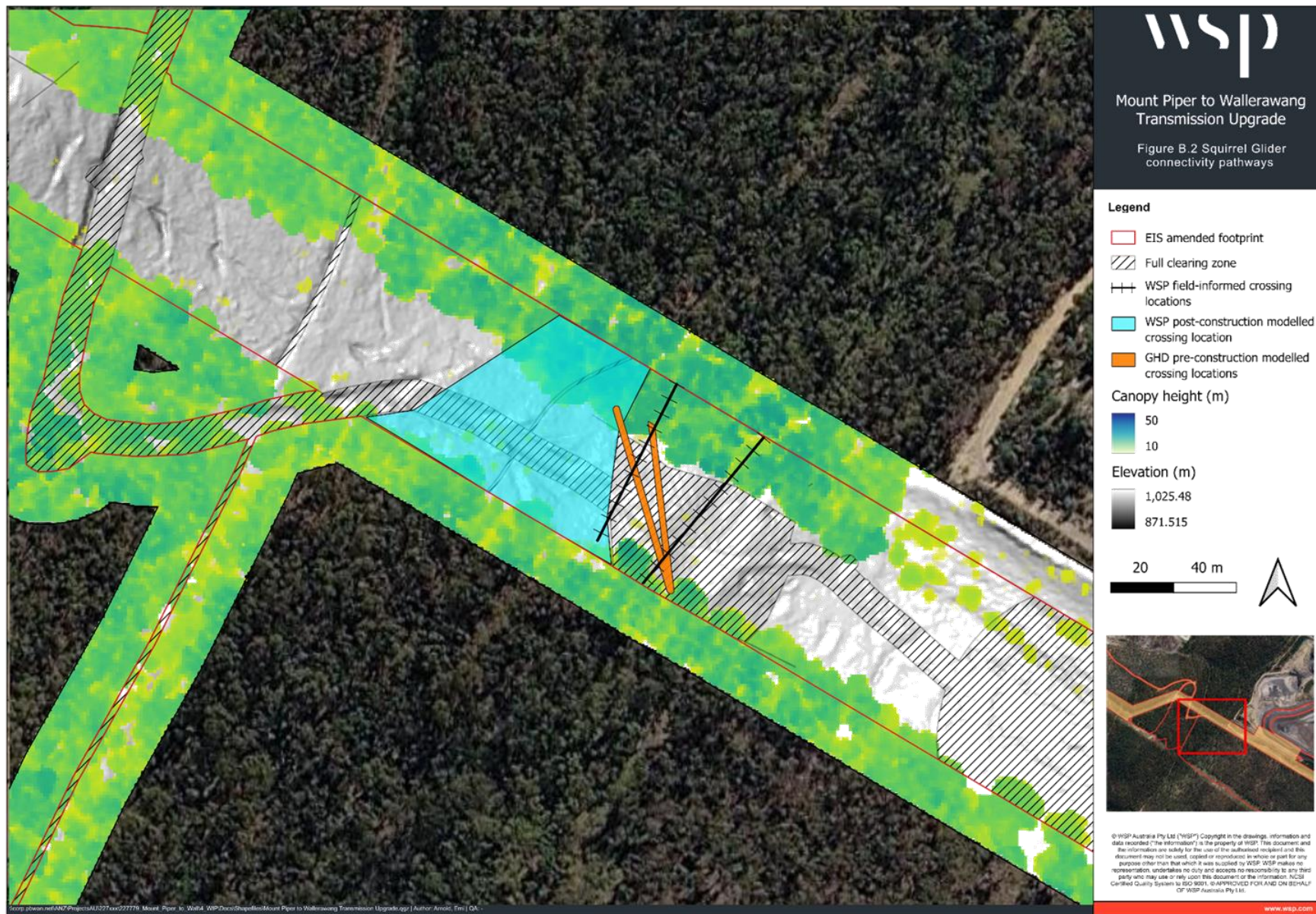
- modification of glider pole configuration;
- installation of additional crossing structures;
- refinement of vegetation stepping-stones;
- supplementary habitat enhancement measures; or
- revised monitoring requirements.

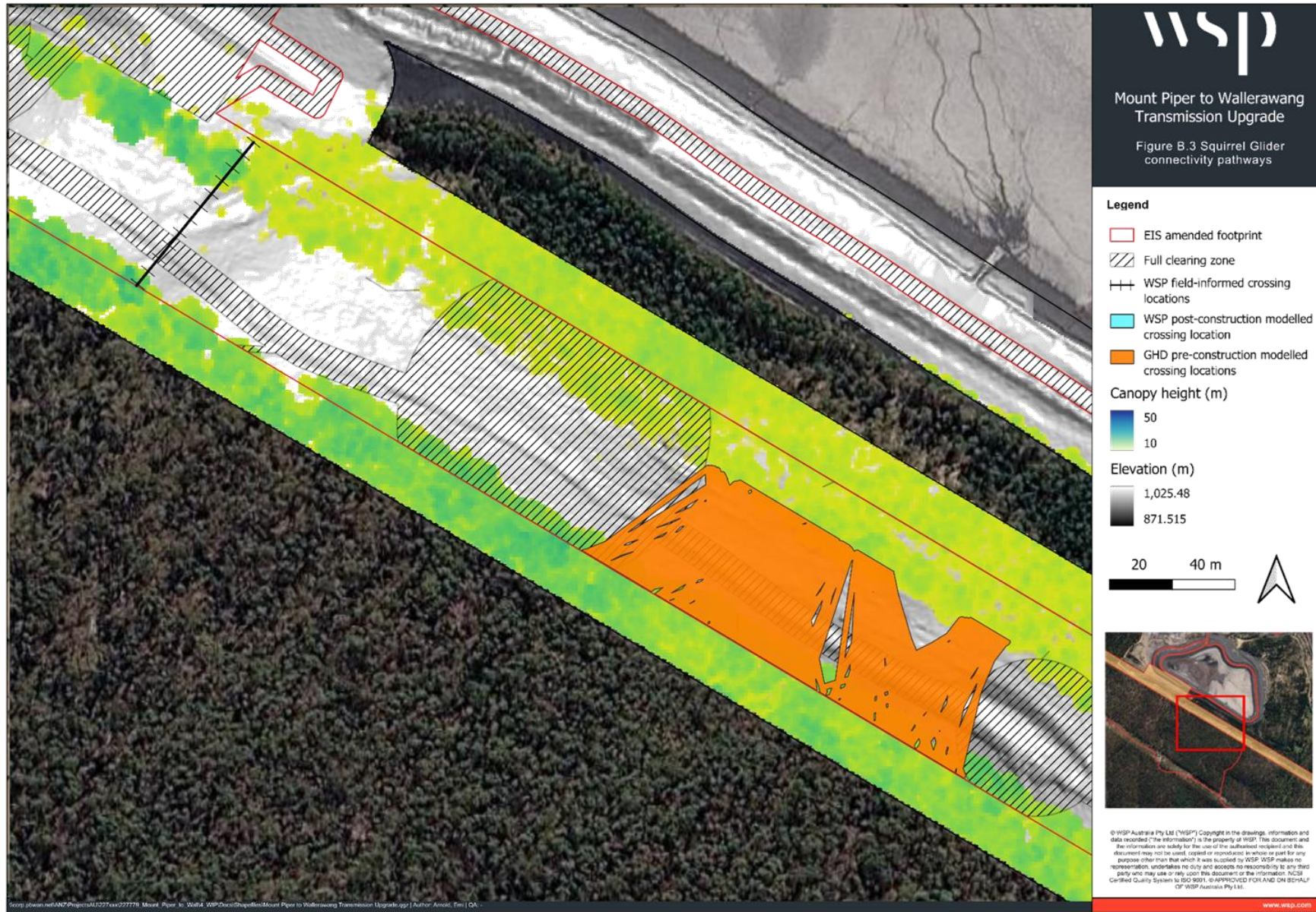
B8.4 Reporting

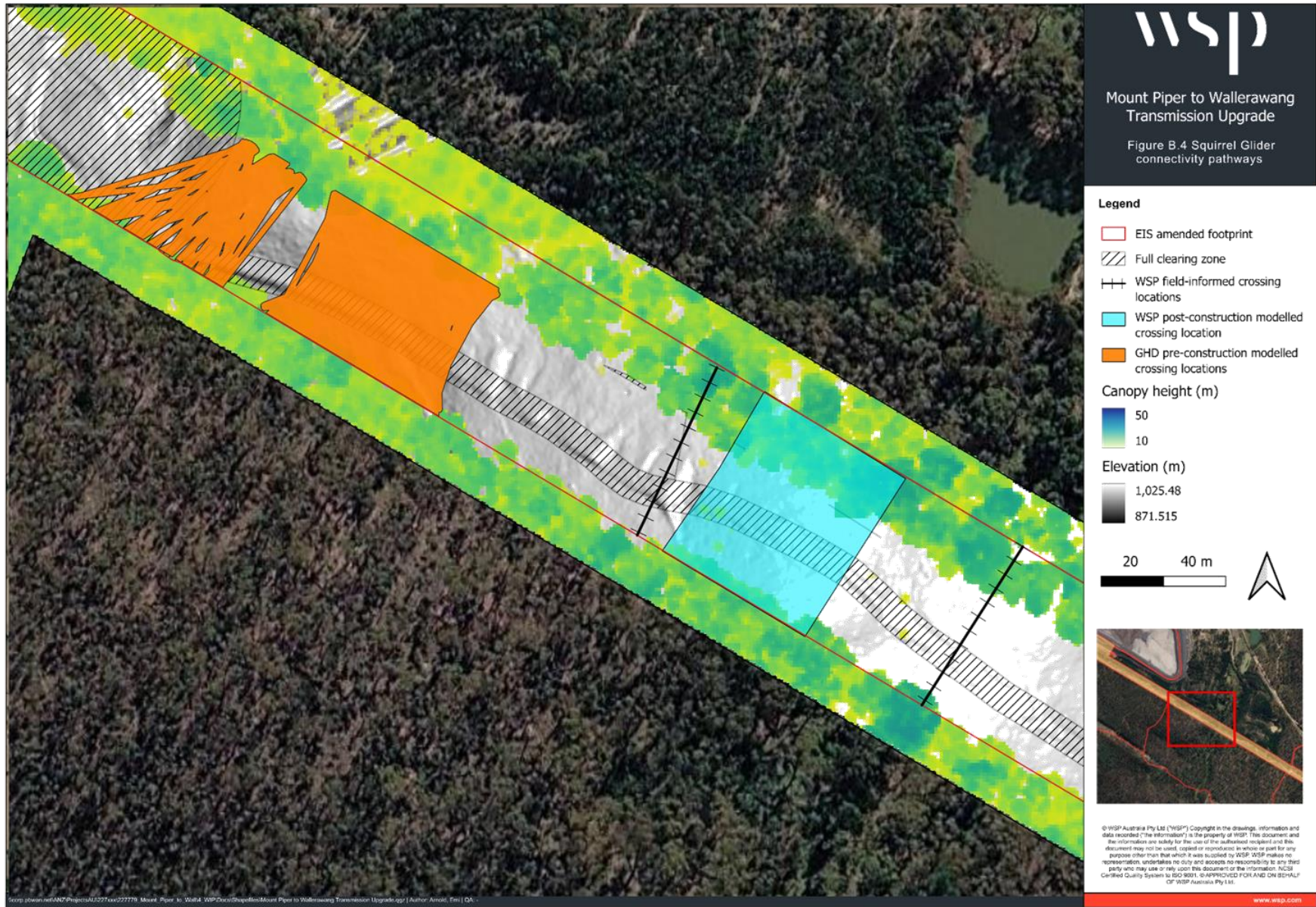
Monitoring results will be documented in annual monitoring reports. Reports will summarise:

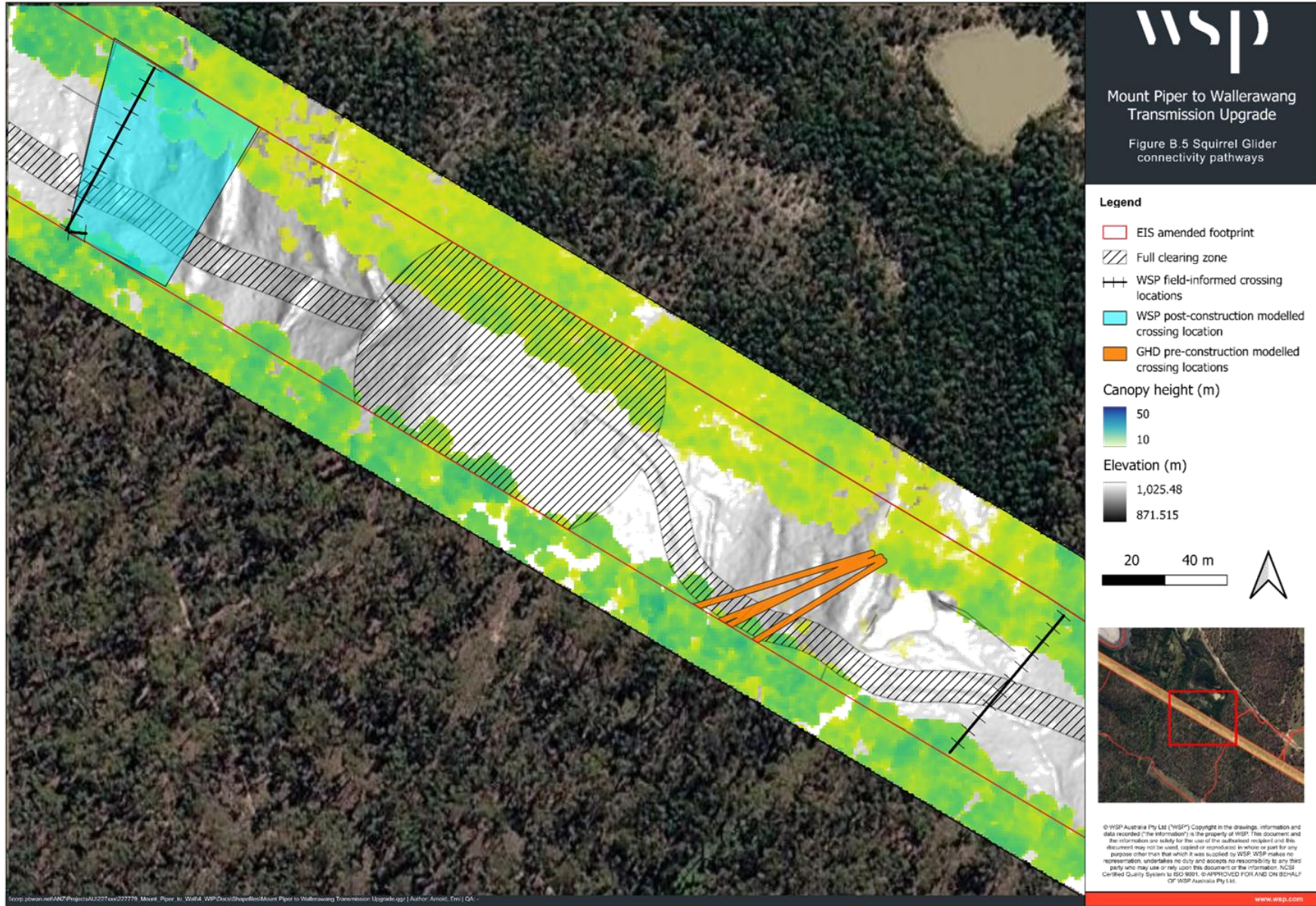
- species recorded;
- frequency of structure use;
- movement patterns observed;
- evidence of successful easement crossings;
- monitoring of adjacent habitat;
- assessment of connectivity outcomes; and
- any recommended adaptive management actions.



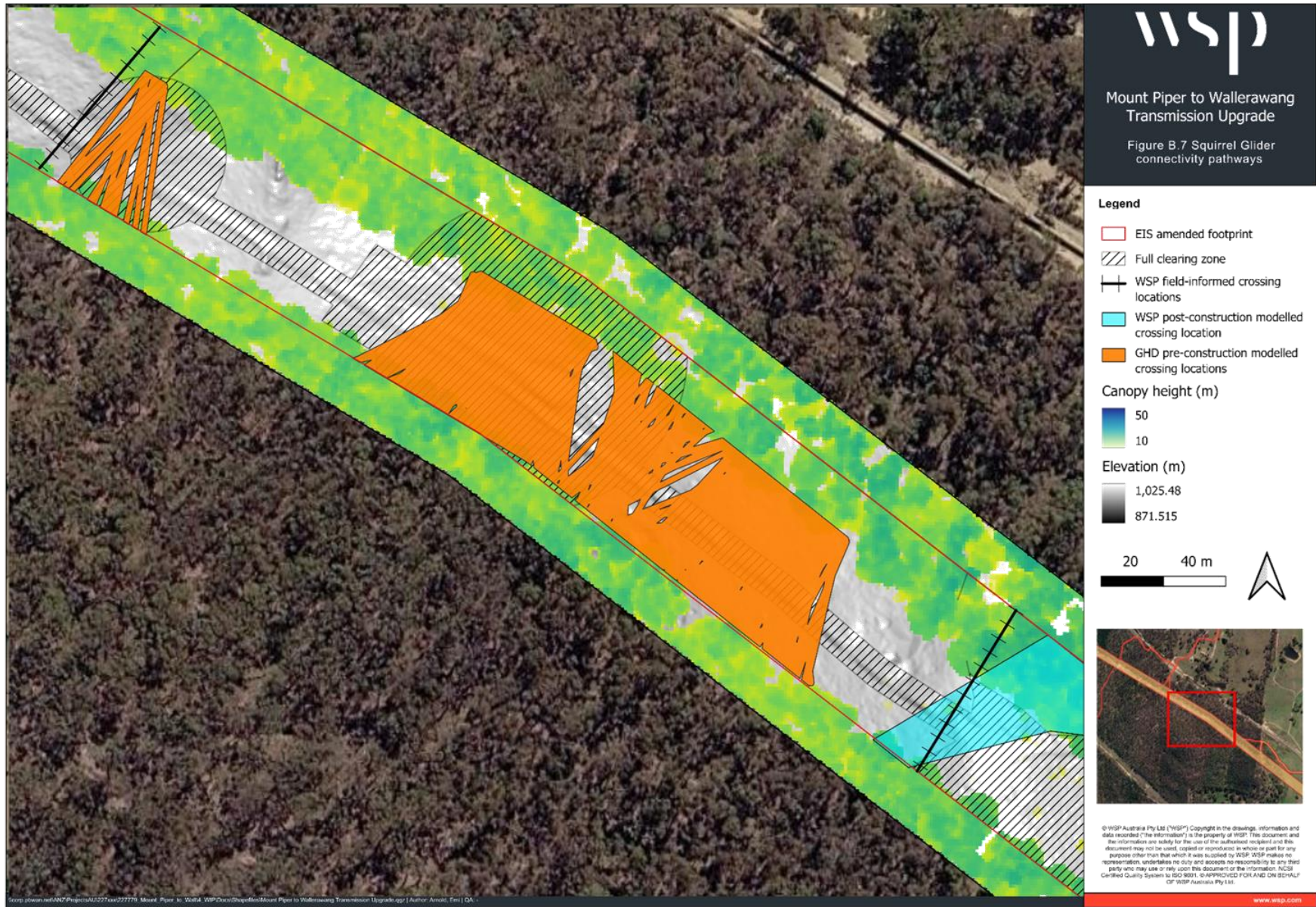


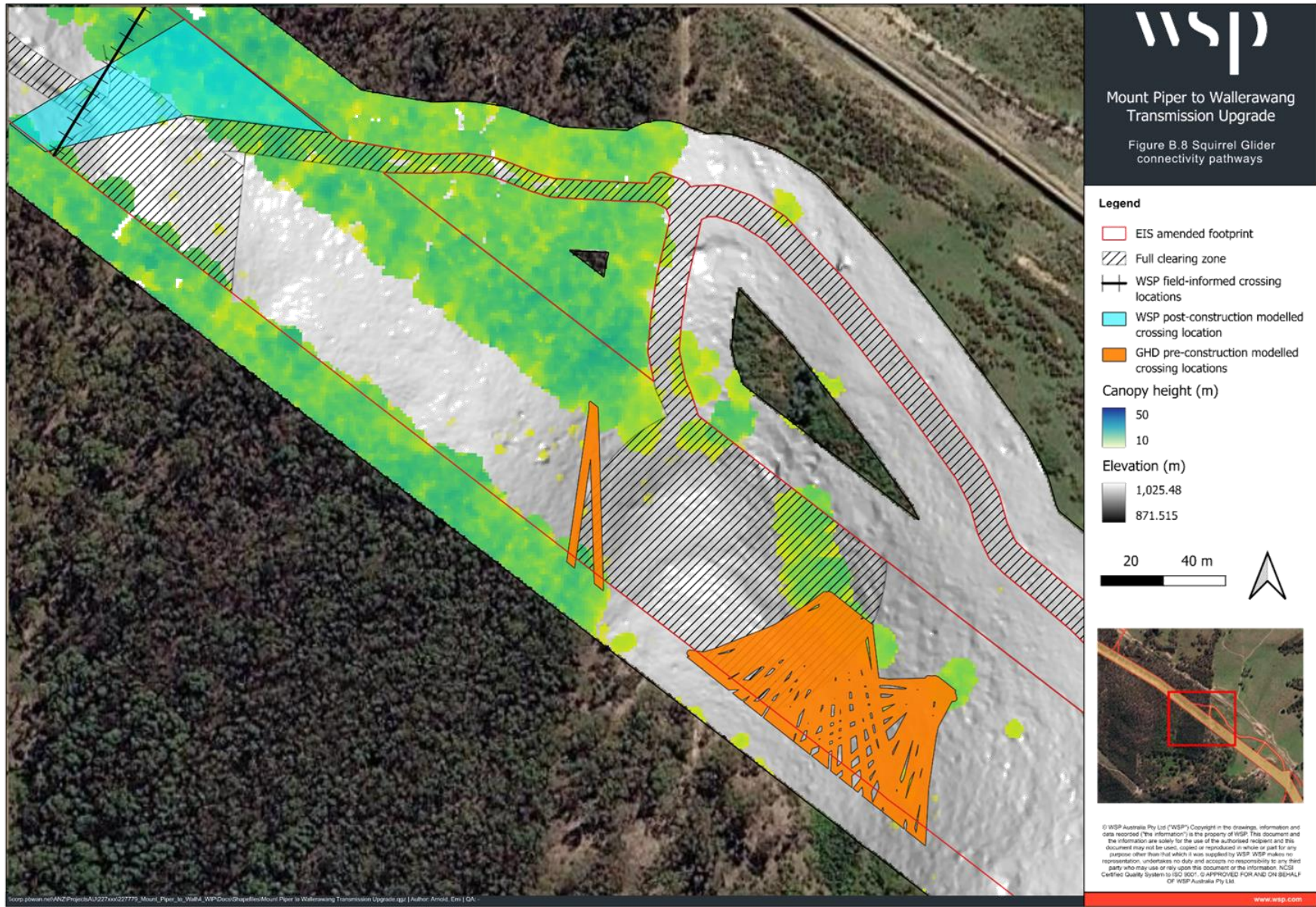












Appendix C

Fauna Handling and Rescue Procedure



C1. Fauna Handling and Removal Procedure

This appendix provides detailed procedures for pre-clearing fauna surveys, fauna handling and relocation, tree hollow management, unexpected species finds, seasonal clearing constraints and euthanasia. The procedures outlined herein are mandatory and apply to all construction activities with the potential to impact fauna.

C1.1 Pre-clearing Fauna Survey Protocols

For all species, a pre-clearance fauna survey must be undertaken by suitably qualified ecologists immediately prior to vegetation clearance. Pre-clearance surveys will include diurnal walkthroughs and active searches immediately prior to clearing (all seasons) and sifting through vegetation and soil removed from construction areas for frogs and skinks (all seasons) and identifying any other potential fauna refuge sites. If tree clearance is to occur during cooler months (March to October), the ecologists must inspect trees for roosting birds/arboreal mammals. Pre-clearance surveys will need to be undertaken throughout the widened alignment.

All trees must be inspected for nests, hollows, and any hollow-bearing trees are to be marked using flagging tape or spray and identified on a map quoting the tree number per the arborist assessment. Pre-clearance assessment of trees is to be undertaken no more than 48 hours before clearance though preferable the day of clearance. If a tree is occupied, the capture and relocation of any fauna should be conducted or where timing allows tree should be allowed to stand for an additional day and checked to see if animal still present. All trees and hollows designated for re-use throughout the Project footprint are to be flagged for suitable handling during clearance.

Where an active nest, breeding hollow or occupied breeding site of a threatened species (i.e. Gang-gang Cockatoo) is identified during pre-clearance surveys or clearing supervision, the nest or hollow-bearing tree will be retained and protected from disturbance until breeding activity has ceased and dependent young have fledged or otherwise left the site, unless an alternative approach is agreed with CPHR and implemented under the direction of a suitably qualified ecologist. Appropriate exclusion zones will be established around the breeding site and works modified as necessary to avoid disturbance. If impacts to an occupied breeding site cannot be avoided, CPHR will be consulted prior to any action being undertaken and species-specific management measures will be developed in consultation with a suitably qualified ecologist.

Clearing supervision must occur continuously and fauna checks occur during and immediately after clearing to rescue any animals still present within the Project footprint which may have been flushed during the clearing activity.

Prior to commencement of works each day, all plant and equipment will be inspected as part of a pre-clearance check to identify any fauna sheltering on or within machinery. Where wildlife is detected, works will not commence until the fauna has safely vacated or been managed by a suitably qualified fauna spotter-catcher, ensuring the risk of injury or harm to fauna is avoided.

C1.2 Qualifications of spotter/catchers (Project Ecologist)

The management of clearing operations and all fauna handling and care will be undertaken by qualified ecologists with practical experience in undertaking spotter/catcher activities. Spotter/catchers will operate under relevant permits and licences and:

- hold current animal ethics approval and appropriate animal handling permits
- have detailed knowledge of, and proven experience in:
 - survey techniques of all vertebrate fauna
 - identification of vertebrate fauna, and threat-listed invertebrate fauna
 - the humane capture, trapping and handling of vertebrate fauna

- identification of habitat and or habitat resources of significant fauna
- ecological processes and the relevance for fauna
- data recording and written reporting
- humane techniques for emergency euthanasia of vertebrate animals
- all State and Commonwealth legislation relevant to the conduct and responsibilities of wildlife spotter/catchers.
- have appropriate equipment for the rescue and care of wildlife
- be vaccinated against the following infectious conditions:
 - Australian Bat Lyssavirus (ABL) – rabies vaccination
 - Coxiella burnetii (Q Fever) – Q Fever vaccination
 - Tetanus.

C1.3 Fauna salvage, handling and relocation

Fauna salvage and relocation involves releasing animals into suitable habitat relatively close to where they were captured (<100 m), reducing animal welfare issues often associated with translocation. All fauna salvage and relocation activities are to be undertaken by a suitably qualified ecologist or wildlife carer. Current animal ethics approval will also be required. Areas where fauna salvage and relocation will be required will occur throughout the Project footprint, as there are extensive linear patches of fauna habitat on both sides of the easement.

Fauna salvage and relocation requires the relevant State wildlife regulatory authority to be notified in advance to reduce the potentially adverse impacts of releasing animals into new habitats outside of their normal home range and into new populations. Prior to the commencement of clearing activities, relevant wildlife rescue organisations, authorised fauna carers and veterinary providers (e.g. WIRES or equivalent local wildlife rescue services) will be notified of the proposed works and provided with contact details and anticipated clearing schedules, to facilitate the timely treatment, care and rehabilitation of any injured, orphaned or otherwise impacted fauna. Suitable areas for relocation should be determined by a qualified ecologist before clearance works begin to facilitate quick release of animals and minimise stress.

Protocols for fauna salvage and relocation are as follows:

- all fauna are to be released into suitable habitat as close as possible to the location of capture on the same side of the easement (<100 m, but ideally less than 20 m)
- captured animals should be transported individually in suitably sized calico bags or similar (i.e. one animal per bag to minimise fighting between individuals or overcrowding)
- captured animals will be released as soon as possible
- any sick, injured, or visibly distressed animals are to be taken to a veterinary surgeon or authorised wildlife carer/shelter as soon as possible for assessment
- any threatened species captured are to be reported to the Project manager immediately
- any deaths are to be reported to the Project manager immediately
- a record of fauna salvage and relocation activities, including species salvaged, numbers relocated, relocation locations and details of any threatened species encountered, will be maintained and provided to the local NPWS office
- construction works may recommence only once the zoologist or wildlife specialist has confirmed that no fauna remain within the construction area
- if the animal cannot be handled (i.e., venomous reptile):

- exclude all personnel from the vicinity with fencing and/or signage
- record the exact location of the animal and advise the appropriate rescue agency.

If the fauna species is identified as a threatened species that is not identified in the Revised BDAR, the Project Manager or Construction Manager will enact the incidental threatened species find procedure.

C1.4 Release procedure

Relocation of fauna from the Project footprint will be undertaken by the Project Ecologist and records will be maintained in a fauna handling and rescue register. Where appropriate, a wildlife carer with specific animal handling experience may be used to carry out animal handling and relocation. If the animal is not injured or stressed, it may be released nearby in adjacent vegetation that is not subject to disturbance by construction of the Project, in accordance with the following:

The following criteria will be met for all animals kept for release or transported to an approved carer:

- the animal is protected from temperature extremes
- the animal is protected from potential trauma (animals, equipment, machinery)
- the animal is protected from sensory stimuli (loud noises, bright lights, rapid movement)
- the bag or container provides:
 - normal air flow
 - radiation/dispersal of heat
 - a hygienic safe space.
- the container, receptacle or bag is protected from environmental conditions (sunlight, rain, wind)
- the animal is checked regularly during its captivity
- all animals held captive for over four hours are provided water.

C1.5 Unexpected Species Finds Protocol

The purpose of the Unexpected Species Finds Protocol is to define the process to be followed where a threatened species, threatened ecological community or associated habitat feature not previously assessed for the affected work area is unexpectedly encountered during Project activities. Where such a find may be affected by the proposed activity, the following steps will be implemented::

- Halt work immediately.
 - the worker/contractor at the point of discovery is to notify the Project Manager and other workers in the area
 - Project Manager is to notify Transgrid and the Project Ecologist accordingly.
- Project Manager should demarcate and prevent access to the area to reduce impact on the species and redirect works where feasible.
- Project Ecologist will document the ecological details of the unexpected find, including the species or feature, abundance, location and habitat characteristics. The Environmental BP will coordinate the Unexpected Find Register, consultation records and associated Project documentation.
- A qualified ecologist will capture the individual(s), only if deemed necessary for the immediate protection and safety of the species by the Project Ecologist.
- For fauna in trees or shrub habitat, encourage the individual to vacate the Project footprint through minor disturbance to the habitat, e.g., gentle disturbance of the vegetation – controlled agitation under supervision. If the individual(s)

does not vacate the area, the individual may be captured and relocated by a suitably qualified person, before the habitat may be “soft felled” or lowered gently under supervision of an arborist so that injury or death to the individual(s) is unlikely.

- Delay the clearance related works within the immediate vicinity until the next day to allow the species to naturally vacate the area.
- The Project Manager to assess the situation with the Project Ecologist:
- The Project Ecologist will assess the nature and potential significance of the find and recommend appropriate avoidance, mitigation, relocation or management measures. The Environmental BP and Project Manager will determine the applicable consultation, approval, documentation and implementation requirements.
- If an impact occurs, Transgrid will undertake consultation with the relevant regulatory authority, as appropriate.
- Transgrid will obtain any relevant licences, permits or approvals required if the threatened species is likely to be impacted.

Implement all management measures as recommended by the Project Ecologist and in accordance with any relevant licenses, permits or approvals.

Works within the affected area will not recommence until the Project Ecologist has completed the assessment, all required avoidance and management measures have been implemented, and any applicable consultation, notification, licence, permit, approval or endorsement requirements have been satisfied. The Project Manager will authorise commencement following confirmation from the Environmental BP and Project Ecologist that the applicable requirements have been completed.

The actions listed below will be undertaken following the event:

- maintain regular inspections
- relevant information on the species will be included in the induction, and a toolbox talk will be given to discuss the outcome
- where required, Transgrid, in consultation with relevant State wildlife regulatory authority, will determine any additional biodiversity offset requirements applying to a significant impact to unaccounted threatened flora and/or fauna species in the Project footprint.

The procedure to be followed in the event the Unexpected Species Finds Protocol has been revised to clarify the assessment, documentation, consultation and work-recommencement process.

ent of an unexpected species find is outlined in Table C-1.

Table C 1 Unexpected Threatened Species Finds Procedure

OBJECTIVE	ACTION	RESPONSE
Identify unexpected species find(s)	Recognise and avoid disturbing the species or habitat feature where practicable.	Undertake pre-clearing surveys and inductions to maintain awareness of threatened species and habitat features.
	Stop works and establish an exclusion zone around the find.	Cease work in the immediate vicinity and prevent access to the area until assessment is completed.
Report the find(s) and assess the impact	Notify the Project Manager.	Project Manager to notify Transgrid and Project Ecologist.

	Project Ecologist inspects and documents the find.	Record species, abundance, location and habitat attributes. Determine the likelihood and significance of impacts.
	Consult specialists and relevant stakeholders where required.	Develop avoidance, mitigation, relocation or management measures. Consult relevant agencies.
	Determine whether impacts can be avoided.	Obtain any licences, permits, approvals or agency agreement required before works recommence.
Recommence works and post-incident actions	Implement all actions recommended by the Project Ecologist.	Maintain exclusion zones and monitoring until the area is deemed safe.
	Confirm completion of required actions.	Works within the affected area may recommence only after the Project Ecologist has completed the assessment, required management measures have been implemented, applicable consultation and approval requirements have been satisfied, and the Project Manager has authorised commencement.
	Review and communicate outcomes.	Undertake inspections, toolbox talks, induction updates and biodiversity offset review (if required).

C1.6 Tree hollow and nest inspection and removal

Inspections for nests and fauna occupancy are to be undertaken for all trees proposed for removal regardless of the time of year, recognising that nesting, roosting and bat torpor may occur outside typical breeding seasons.

Ecologists are to inspect any pre-marked hollow-bearing trees with a camera on an extendable pole before felling. If a tree is occupied, the capture and relocation of any fauna should be conducted or where timing allows tree should be allowed to stand for an additional day and checked to see if animal still present. Fauna should be relocated to habitat pre-determined as suitable for release, either to an empty natural or replacement hollow (log hollow or carved hollow), or to a temporary nest box installed for fauna relocation and removed once empty.

Habitat trees should be felled carefully using equipment that allows habitat trees to be lowered to the ground with minimal impact (e.g. claw extension). Reinspect habitat trees again immediately after felling for any fauna not originally detected. Capture and relocate non-injured fauna that are found in any felled trees to pre-determined habitat identified for fauna release. Do not fell trees towards No-go Zones or other habitat trees. Relocate or reuse timber from felled habitat trees, with habitat improvement uses prioritised.

In addition to the year-round inspection requirements outlined above, the following additional measures apply where clearing of hollow-bearing trees is required between June and January, when breeding and hibernation risks are elevated.

C1.6.1 Clearing during June to January

Where clearing of hollow-bearing trees is proposed between June and January, the Project Ecologist will assess the potential for active nests, breeding hollows, eggs and dependent young during the pre-clearing survey. Local wildlife rescue organisations, veterinarians and specialist fauna carers will be contacted before clearing to confirm available fauna-care arrangements.

Where an active nest, breeding hollow, eggs or dependent young are identified, the Project Ecologist will determine the appropriate avoidance and management measures. Avoidance measures may include:

- establishing a temporary exclusion zone around the nest or breeding hollow;
- retaining the host tree and adjacent vegetation required to maintain screening and habitat values;
- modifying clearing boundaries, methods or sequencing; and
- deferring clearing within the affected area until breeding has concluded and dependent young have fledged or otherwise dispersed.

For non-threatened fauna, handling or relocation will only be undertaken by a suitably qualified and appropriately licensed person where in-situ retention is not practicable and the proposed action is lawful and ecologically appropriate.

Where an active nest, breeding hollow, eggs or dependent young of a threatened species, including the Gang-gang Cockatoo, are identified, the nest or hollow-bearing tree will be retained and protected from disturbance until breeding has concluded and dependent young have fledged or otherwise dispersed. An alternative approach may only be implemented where it has been agreed with CPHR and any other relevant authority, is directed by a suitably qualified ecologist and all required approvals and licences have been obtained.

Where fauna handling is authorised and required, suitable capture, handling, housing and transport equipment will be available on site. Fauna handling, housing and transport will be undertaken in accordance with this Fauna Handling and Rescue Procedure, applicable wildlife licences and the relevant NSW code of practice.

Preventative measures, such as blocking of unoccupied hollows in trees approved for removal, may only be undertaken following inspection by the Project Ecologist to confirm that the hollow is not occupied. Hollow blocking will be undertaken in accordance with Section 5.4.7 and any applicable licence or approval requirements. The pre-clearing survey requirements in this Appendix will continue to apply, including reinspection of blocked hollows before clearing.

If injury or mortality occurs during fauna handling, relocation, nest management or hollow-exclusion activities, the activity will cease immediately and the cause will be investigated. Appropriate corrective actions and additional mitigation measures will be implemented before work recommences. Where the incident involves a threatened species, active nest or breeding site, CPHR will be consulted and work will not recommence until the applicable management, notification and approval requirements have been completed. Where the risk cannot be adequately mitigated, the activity will be modified, relocated, postponed or ceased.

C1.6.2 *Microbat torpor and hibernation*

Microbats may use tree hollows or other habitat features for torpor during cooler periods, and torpor may also occur outside winter. Before clearing a potential microbat roost, the Project Ecologist will assess the potential for torpid or hibernating bats and determine the required inspection, clearing supervision and fauna-care arrangements.

Where a torpid or hibernating bat is encountered, clearing of the affected habitat feature will cease. The bat will be managed by a suitably qualified and appropriately licensed ecologist or specialist bat carer in accordance with the relevant licence and animal-welfare requirements.

C1.7 Euthanasia

In certain situations, animals with severe injuries may need to be humanely euthanised at the location where they are found to prevent further suffering. Any euthanasia involving native wildlife will be carried out in accordance with the *Prevention of Cruelty to Animals Act 1979*, ensuring that approved methods are used and that all procedures comply with the relevant animal ethics licence.

Appendix D

Nest Box Strategy



D1. Introduction

The Conditions of Approval identifies the protection and replacement of hollow-bearing trees (HBTs) as a critical priority for maintaining habitat values within the Study Area. Hollow-bearing trees provide essential breeding, shelter and roosting resources for a wide range of fauna, including several threatened species recorded or likely to occur locally, such as the Large-eared Pied Bat, Southern Myotis, Eastern False Pipistrelle, Yellow bellied Sheath-tail Bat, Gang-gang Cockatoo, South-eastern Glossy Black Cockatoo, Barking Owl and Powerful Owl. The loss of these habitat features represents a significant ecological impact, particularly given the slow rate at which natural hollows develop.

Current assessments indicate that up to 179 hollow-bearing trees may require removal to facilitate construction activities. Importantly, hollow-bearing trees often contain multiple hollows, and detailed inventory shows that the total number of hollows affected is substantially higher than the number of trees themselves. Based on the most recent counts, the Project is expected to impact up to 331 hollows across all size classes, ranging from small (<5 cm) microbat and small bird cavities to large (>30 cm) hollows used by apex avian predators such as large forest owls.

Table D.1 Hollow Size Classes, Species Dependencies and Feasible Replacement Options

Size Class	No Impacted	Sensitive Species	Feasible Replacement Options
0–5 cm	136	Small glider, microbats, small parrots	— Microbat tubes / crevice boxes — Insulated small nest boxes — Carved hollows
5–10 cm	121	Small glider, small parrots	— Salvaged hollows — Insulated small nest boxes — Salvaged log hollows — Carved hollows
10–20 cm	45	Medium parrots, Cockatoo	— Carved hollows — Salvaged log hollows — Species-specific cockatoo nest boxes — Boxes with predator guards
20–30 cm	18	Owls, Cockatoo	— Salvaged hollows — Carved hollows — Owl-specific deep nest boxes — Large, strapped log hollows
>30 cm	11	Owls	— Salvaged hollows (critical) — Very large carved hollows (limited feasibility) — Heavy-gauge insulated owl nest boxes

Given the scale of this impact, the Project is required to implement a tiered, risk-based hollow replacement program to manage impacts to HBTs, with an emphasis on avoiding impacts where practicable and targeting investment to higher-value hollows and habitats where replacement is required. This approach moves away from a strict one-for-one hollow replacement model, recognising that a numeric equivalence approach is not always cost-effective and may not deliver the best ecological outcomes. Hollows below 3 m height will be excluded from replacement calculations,

reflecting their lower ecological value and practical constraints, while replacement effort will be prioritised toward larger, higher-quality hollows with greater benefits to threatened species.

Hollow availability and replacement need will be assessed in context of local hollow density and availability within the adjacent landscape, to ensure there is no reduction in habitat opportunity for hollow-dependent fauna within the broader Study Area.

Replacement will occur through:

- Creation of carved hollows in suitable recipient trees,
- Salvage and remounting natural hollows, and
- Installation of purpose designed nest boxes tailored to species specific requirements.

The replacement program is intended to maintain breeding and roosting opportunities for hollow-dependent fauna during and after construction. Its effectiveness will be assessed through the monitoring program described in this Strategy. The Strategy also sets out the processes for pre-clearing surveys, staged tree removal, fauna handling, replacement hollow installation methods and long-term monitoring, ensuring that the hollow replacement program is scientifically defensible, targeted to threatened species requirements, and aligned with the broader BMP.

This strategy has been refined following consultation with CPHR. The adopted tiered replacement ratios and staged timing of replacement hollow installation reflect the outcomes of that consultation and are intended to maintain functional hollow-dependent habitat opportunity while prioritising higher-value hollows and retained habitat.

D1.1 Objectives

The purpose of this Nest Box Strategy is to ensure that habitat values associated with hollow-bearing trees are retained or replaced where impacts from the Project cannot be avoided. The Strategy establishes a clear hierarchy of mitigation:

- 1) Retention of existing hollow-bearing trees wherever feasible,
- 2) Salvage and reuse of natural hollows from trees unavoidably removed,
- 3) Creation of carved hollows in suitable dead trees, and
- 4) Installation of high-quality nest boxes tailored to local target species.

The objectives of this Strategy are to:

- Avoid and minimise impacts to HBTs through design refinement and micro-siting, including access track placement, to retain hollow resources wherever feasible.
- Apply a tiered, risk-based hollow replacement approach that maintains equivalent breeding habitat opportunity for hollow-dependent threatened species within the Study Area, with replacement scaled to hollow value, habitat context and landscape availability.
- Provide the Project Ecologist and arborist with clear procedures for: identifying and retaining HBTs, salvaging reusable hollows, selecting suitable recipient trees/locations, and installing replacement hollows.
- Implement monitoring, evaluation and adaptive management to evaluate performance of replacement measures and refine placement/design where required.

D1.2 Legislative and Policy Context

This Strategy aligns with relevant NSW and Commonwealth legislative requirements for fauna protection, biodiversity conservation, and environmental management.

Key legislation and guidance documents influencing the Strategy include:

- Environmental Planning and Assessment Act 1979 (NSW)
 - overarching framework for environmental assessment and construction environmental management.
- Biodiversity Conservation Act 2016 (NSW)
 - protection of threatened species, prevention of harm to protected fauna, and management of habitat features such as hollows.
- National Parks and Wildlife Act 1974 (NSW)
 - regulates fauna handling, salvage of habitat features, and licensing requirements for ecologists conducting wildlife procedures.
- Environment Protection and Biodiversity Conservation Act 1999 (Cth)
 - relevant where Matters of National Environmental Significance may be affected.
- Biosecurity Act 2015 (NSW)
 - governs weed and pest hygiene relevant to nest box installation and maintenance.
- TfNSW QA Specification G40 and RTA/RMS Biodiversity Guidelines (Guide 8: Nest Boxes)
 - established procedures for nest box design, installation, monitoring and hollow-bearing tree management.

These pieces of legislation and guidelines collectively require that hollow removal impacts be minimised, fauna protected during works, and functional replacement habitat provided where unavoidable impacts occur.

D2. Impacted hollow-bearing trees

The Project will result in unavoidable impacts to HBTs, which support a wide range of native and threatened fauna. Detailed tree hollow assessments have identified that up to 179 HBTs may require removal, noting that individual trees often contain multiple hollows. Across the Project footprint, this equates to up to 331 hollows being lost. The following section summarises the number, type and size class distribution of impacted hollows to inform replacement requirements and species-specific mitigation.

Of the up to 331 hollows recorded within the Project footprint, 292 hollows form the replacement baseline following the exclusion of hollows <3 m from replacement calculations in accordance with the risk-based framework, the justification for which is discussed in Section D2.4.

Table D2: Hollow availability and proposed replacement effort by size class (excluding hollows <3 m height) provided by Transgrid following consultation with CPHR.

Size class (opening diameter)	Number within Study Area	Number within Project footprint	Hollows for removal as % within the Study Area	Proposed replacement ratio	Number of hollows replaced / retained
<5 cm	574	118	21%	20%	24
5-10 cm	348	105	30%	75%	79
10-20 cm	162	42	26%	75%	32
20-30 cm	87	17	20%	100%	17
>30 cm	55	10	18%	100%	10
Total	1226	292	24%	-	161

D2.1 Measures to mitigate loss of hollows

This section introduces the mitigation and replacement measures applied to manage impacts to HBTs using a tiered, risk-based framework that prioritises ecological function over simple numeric equivalence. Consistent with the mitigation hierarchy, impacts are first avoided and minimised through retention and micro-siting, with replacement implemented only where impacts cannot be avoided.

Importantly, a substantial number of HBTs and associated hollows will be retained within and immediately adjacent to the Project footprint, including extensive hollow resources within the surrounding forest on either side of the easement. These retained areas provide ongoing availability of hollows across a range of size classes, including abundant small hollows and fissures, and continue to support hollow-dependent fauna at the local landscape scale.

The replacement framework is therefore explicitly weighted toward those hollow types and associated fauna most vulnerable to clearing impacts. Large hollows are both limited in availability and require long timeframes to develop, and are critical for larger hollow-dependent species (e.g. cockatoos and owls). As a result, the greatest ecological risk associated with clearing relates to the removal of these larger hollows. In recognition of this, replacement effort is prioritised toward larger hollow size classes, with full replacement maintained for large hollows to maintain their ecological function while lower-value small hollows are replaced at reduced ratios.

Conversely, smaller hollows are more abundant both within retained areas and the surrounding landscape, have shorter formation times, and are utilised by a broader range of more common species. Replacement provision for smaller hollow size classes is therefore reduced relative to removal, allowing effort to be concentrated where it delivers the greatest ecological benefit.

Where replacement is required, measures are delivered through a preference-based sequence, salvage and re-mounting of natural hollows, creation of carved hollows in suitable recipient trees (only dead trees within SCA lands), and installation of high-quality nest boxes. Replacement effort is proportionate to hollow value and species requirements, and is further refined through consideration of habitat context, landscape connectivity, and existing hollow density. Hollows located <3 m above ground are excluded from replacement calculations to focus effort on maintaining equivalent breeding and roosting opportunities for priority hollow-dependent fauna

These measures align with the approach discussed with CPHR, in which the program prioritises higher-performing replacement types (salvaged hollows/log hollows and carved hollows, supported by insulated, species-specific boxes where required) and uses monitoring to progressively shift investment toward the designs and placements to provide the strongest potential ecological outcomes.

D2.2 Retention of hollow-bearing trees

Retention of HBTs is the primary mitigation measure and will be pursued before hollow replacement. Retention opportunities will be identified through pre-clearing assessment and mapped against the Project's clearing framework (exclusion, partial clearance and full clearance zones) and the spatial clearing figures in Appendix A.

Priority retention categories include:

- HBTs located within exclusion/avoidance areas, which are to be retained in full.
- HBTs located along the edges of access tracks, particularly where micro-siting can avoid removal.
- HBTs at the edge of the easement, to be assessed case-by-case where retention can be achieved without compromising safety/clearance requirements.
- Pruning of HBTs and retaining hollows rather than full tree removal, where feasible.

Retention measures will include: marking and protecting HBTs for retention; micro-siting access tracks to avoid removal; pruning/modification in preference to removal where feasible; and, where supported by safety/arboricultural advice, selective retention of standing hollow sections (e.g., pruning to retain hollow trunks) for trees located along the easement edges. Isolated individual HBTs located within the easement will not be eligible for retention.

D2.3 Strategic siting and prioritisation

Replacement hollows will be delivered using a strategic, risk-based approach that prioritises best ecological outcomes and focuses on maintaining ecological function rather than simple numeric equivalence. In this Strategy, “risk-based” refers to

- i. scaling the type and level of replacement toward hollows and species where the consequence of loss is greatest (i.e., higher value/large hollows linked to priority threatened fauna), and
- ii. siting replacement structures to maximise uptake and functional gain while minimising the risk of ineffective placement.

Placement will be guided by habitat context and landscape connectivity, with consideration of proximity to impacted areas, habitat quality, and existing hollow density. This ensures replacement structures are installed in optimal habitat and away from potential impacts (including areas likely to be affected by construction disturbance such as noise/light), and preferentially in areas of lower existing hollow concentrations to maximise functional gain and avoid simply adding resources to already well-resourced patches. Siting will also be constrained by land tenure/access and stakeholder requirements; placement will be progressed in consultation with relevant stakeholders and adapted to accommodate any restrictions applying to adjoining land or managed estate.

Replacement hollows will be tailored to the ecological requirements of target threatened fauna and prioritised toward higher-value breeding resources and habitats, recognising stronger linkages to priority species (cockatoos and large owls). In practice, the Project Ecologist will be responsible for identifying priority species, determining the siting and design requirements for replacement hollows, and recommending the clustering of replacement hollows where this improves habitat functionality and aligns with species requirements and connectivity objectives.

D2.4 Exclusion of low-height hollows (<3 m)

For the purposes of calculating replacement requirements, hollows recorded at <3 m above ground level have been excluded from the replacement baseline. This refinement reflects a value-based focus on maintaining equivalent breeding habitat for priority hollow-dependent threatened fauna, noting that replacement structures for key target groups are typically installed ≥ 3 m (and often higher) to better replicate secure nesting/denning conditions and reduce exposure to ground-based disturbance.

In addition, some studies of Australian nesting birds have indicated that shallow, near-ground hollows can be associated with increased visitation by predators (Piper & Catterrell, 2004), supporting the view that very low hollows are not equivalent to higher, more secure breeding resources. Hollows <3 m will still be recorded and managed through pre-clearing inspections and fauna protection measures but are not used to determine replacement numbers under the hollow-replacement calculation framework.

D2.5 Replacement hollows

To offset the loss of hollow-bearing trees and hollows within the approved clearing area, including the currently identified 179 hollow-bearing trees containing an estimated 331 hollows, the Project will implement a preference-based hierarchy

All hollows and nest boxes will:

- Be fitted with secure, non-abrasive attachment systems allowing for trunk diameter growth.
- Include unique ID numbers, GPS coordinates, installation details, tree species/DBH, height, and aspect recorded in an asset register.

Where additional hollows are identified within trees approved for clearing during pre-clearing inspections or at the time of clearing, these hollows will be recorded by the Project Ecologist and incorporated into the replacement program. Replacement requirements for any such additional hollows will be determined in accordance with the adopted hollow replacement framework and the relevant replacement ratios (Table D.2) for the applicable hollow size class. Where practicable, any newly identified hollows will also be considered for retention, salvage and re-use in accordance with the mitigation hierarchy set out in this Strategy.

D2.5.1 *Re-mounting of salvaged natural hollows*

Relocation of salvaged tree hollows, also sometimes called log-boxes, is the preferred option for re-use for hollow-bearing trees that are proposed to be impacted by the Project. Current assessments indicate that up to 179 hollow-bearing trees are anticipated to be impacted by construction, subject to detailed design and the proposed construction method. The Project will retain as many hollow-bearing trees as possible within the Project footprint and re-purpose any hollows where clearance is unavoidable to retain this important resource for cavity-nesting fauna within the landscape.

Log hollows can be salvaged from felled trees or limbs with naturally occurring tree hollows or artificially created by carving a hollow into a log and then securing the log to suitable host trees which are large enough to support the log hollow (Photo D.1). Internal thermal properties of log hollows are more similar to those of natural hollows compared to standard nest boxes which are warmer during the day and cooler at night (Griffiths *et al.* 2018).

Trees with hollows will be felled as carefully as possible in an effort to protect the natural hollows. However, many hollows will be damaged as the tree is felled and will not be of sufficient quality to warrant installation. It is important that only solid and intact salvaged log hollows be reinstalled to maximise their longevity in the tree. In addition, salvaged hollows are typically much heavier and cumbersome than nest boxes and more difficult to install in trees due to their weight and wide variation in shape. Therefore, only a proportion of total hollows felled will be suitable for use as salvaged natural hollows.

Candidate log hollows from felled trees should be identified prior to felling and of a suitable size and structure to provide habitat for a target species. Placement of log hollows should focus on areas where they occur in low densities in the adjacent landscape to provide improved spatial habitat/nesting availability. Climate and build quality will affect longevity of log hollows, which can last between 5 – 20 years.

D2.5.2 Carved hollows

Where natural hollows are unable to be used as salvaged log hollows, the next alternative hollow replacement method to be implemented is carved hollows. Hollows are carved directly into the trunk or limb of a suitable dead host tree with a chainsaw, drill or other mechanical tool, they can last at least 10 – 20 years, possibly for as long as the tree is standing.

There are different types of carved hollows, including hollows carved and either a face plate (Photo D2) or other door attached, or the hollow is excavated through the hollow entrance, or a slot with no door (e.g. for bats) (Griffiths *et al.* 2018). The size of the hollow and entrance hole is species- and technique-specific. Candidate trees should be sufficiently large and have a suitable structure (no softwood trees such as *Corymbia* sp.) to provide habitat for a target species once carved (Griffiths *et al.* 2018).



Photo D.1 Mounted hollow. credit: Rodney van der Ree



Photo D.2 Carved hollow (face-plate method) installed in a dead River Red Gum tree, Echuca. Credit Rodney van der Ree

D2.5.3 Nest box design specifications

Nest boxes should be installed where the number of replacement carved or log hollows cannot be achieved otherwise. Traditional nest boxes are often made of thin plywood, which are subject to greater fluctuations in temperature compared with natural trees hollows which remain more stable. Where nest boxes are required to be installed, the Project should source nest boxes with thicker walls to buffer extremes in temperature such as Habitat Modular Nest Boxes or timber boxes with thicker walls. Nest boxes should have incorporated a cavity between the external and internal walls and ventilated air gap to create a more internally stable microclimate when compared to traditional nest boxes.

All nest boxes must:

- Be constructed from durable materials with thermal insulation comparable to natural hollows (e.g., double walled composite, thick timber walls, or appropriately insulated).
 - * Nest boxes deployed in the SCA will avoid models which incorporate plastics / fiber glass / treated timber.
 - Be designed to match the entrance size, cavity dimensions, height, and orientation required by target species.
 - Include appropriate internal features (e.g., roughened surfaces, ladders, substrate) to facilitate safe use by fauna.
-

D3. Pre-clearing Hollow-Bearing Tree Assessment

Pre-clearing assessments will be completed by a qualified ecologist to identify HBTs within the clearing footprint.

Pre-clearing assessment will include:

- Recording of any previously unidentified hollows.
- Recording of any hollow activity, including evidence of use (scats, scratch marks, feathers, pellets), fauna presence, or recent nesting.
- Internal inspection of hollows to determine occupancy at the time of survey
- Feasibility of retention and where not practicable, hollow salvage, including whether limbs containing hollows can be safely removed, preserved, and re fixed to recipient trees.

Where clearing occurs, two stage clearing will be implemented (Appendix A):

- Removal of surrounding vegetation to encourage fauna dispersal from the area and from the HBT.
 - HBT removal 24 hours later, under direct supervision of an ecologist or fauna spotter catcher, who will capture and relocate fauna as required.
-

D4. Implementation, monitoring and management

This section sets out how and when the hollow replacement measures will be implemented in practice, including the timing of works relative to clearing, the installation standards to ensure replacement structures are safe and fit-for-purpose, and the monitoring framework used to confirm that replacement measures are functioning as intended for hollow-dependent fauna. It also outlines the adaptive management approach, using inspection outcomes (e.g., structural integrity, thermal performance, occupancy and pest competition) to refine placement, design and maintenance over time, supported by repeatable reporting and an asset register.

D4.1 Timing and inspection frequency

Replacement structures are not required to be installed prior to the onset of clearing and may be installed on a staged basis behind clearing works. Pre-breeding hollow exclusion measures will be implemented prior to the onset of the spring breeding season (September) for HBTs identified for clearing ; refer to the Vegetation Clearing Procedure (Appendix A) for full details.

The monitoring, maintenance and adaptive management framework described in Sections D4.3 to D4.5 will be delivered through a structured sequence of monitoring events across the life (10 years) of the nest box program. Each event has defined objectives, inspection methods and reporting requirements as outlined below.

Event 1: Pre-installation baseline

Prior to installation of any replacement hollows, a baseline assessment of the receiving habitat will be undertaken. This includes:

- Confirmation of host tree suitability (health, structure, DBH, safe climbing access, habitat and landscape context);
- Recording of GPS coordinates, aspect and photo point locations for each proposed installation;
- Baseline assessment of surrounding overstorey and understorey condition; and
- Identification of adjacent retained hollow-bearing trees and habitat features.
- Baseline data will be entered into the central Asset Register to enable comparison in subsequent monitoring events.

Event 2: Installation verification

At the time of replacement hollow installation, a verification inspection will be undertaken by the Project Ecologist to confirm:

- Correct installation in accordance with the procedures described in Section D4.2;
- Appropriate orientation, height, aspect and attachment method;
- Placement of temperature and humidity loggers (where applicable) within a representative subset of installations;
- Recording of GPS coordinates, asset ID, type, host tree details and date of installation; and
- Photographic record of external and internal features of each installed asset.

Event 3: Six-monthly monitoring (Years 0–2)

During the construction and early establishment phase, six-monthly inspections will be undertaken to capture both warm season and cool season conditions. Inspections will assess:

- Structural condition of installed hollows;
- Occupancy and evidence of use by target species;
- Presence of pest or competitor species;
- Thermal performance indicators; and
- Adjacent habitat condition.
- Findings will be recorded in the Asset Register and included in the annual monitoring report.

Event 4: Event-based inspections

Additional inspections will be undertaken during the Year 3 to Year 10 monitoring period following high-risk weather events with the potential to damage replacement hollows or threaten target species. For the purposes of this BMP, high-risk events include::

- Rainfall or flood events equivalent to or exceeding a 1 in 5 year AEP;
- Severe wind events (sustained winds >90 km/h or gusts >100 km/h);
- Heatwaves classified as Severe or Extreme by the Bureau of Meteorology; or
- Bushfires affecting the Project footprint or adjacent retained vegetation.

Inspections will be undertaken within 30 days of the event, subject to site access and safety considerations.

Event 5: Annual monitoring (Years 3–10)

From Year 3 to Year 10, monitoring frequency will transition to annual inspections timed to align with the breeding season of target species (typically spring to early summer). Annual monitoring will include:

- Structural integrity assessment of all located assets;
- Occupancy and breeding activity assessment;
- Pest occurrence and management response;
- Comparative photographic record from established photo points; and
- Review of monitoring outcomes against performance indicators (Table D.4).

Event 6: Targeted species-specific inspections

Targeted species-specific inspections may be undertaken during the Year 3 - 10 monitoring period where annual monitoring, occupancy records or breeding activity indicate that a species-specific assessment is warranted.

Where practicable, targeted species-specific inspections will be coordinated with the annual monitoring program to minimise survey effort, reduce disturbance associated with repeated site visits and maximise the opportunity to identify supplemental hollow use by target species.

Inspections will be timed to coincide with the known breeding periods of species of concern, including:

- Powerful Owl (July – November);
- Gang-Gang Cockatoo (October – January).

Any other target species identified through the annual monitoring program.

D4.2 Installation procedures

Installation of replacement hollows (natural, carved, or nest box) will be undertaken by a level 5 arborist with experience in replacement hollow programs and under the supervision of a qualified and experienced ecologist. Key procedures include:

- Pre installation checks: Confirm suitability of the host tree (health, structure, DBH, safe climbing access, habitat and landscape context, and habitat connectivity).
- Attachment method: Use adjustable, systems such as drill and screwing steel bolt into the tree trunk. Avoid bolts through live cambium where possible.
- Orientation: Install facing away from prevailing hot afternoon sun and in a direction protected from severe storms. Maintain open approach paths for flying fauna.
- Data recording: Document GPS location, asset ID, type, host tree species, DBH, height above ground, aspect, date of installation, and installer name.

The method used to access installation locations (e.g. ladder, climbing techniques or elevated work platform) will be determined on a site-specific basis by the Project Ecologist and installation contractor. Access requirements will be assessed prior to installation to minimise additional vegetation clearing, ground disturbance and impacts to retained habitat, with existing access tracks and previously disturbed areas used wherever practicable.

Any fauna encountered during installation must be handled in accordance with approved Fauna Handling and Rescue Procedure and relevant wildlife licences.

D4.3 Monitoring, maintenance and adaptive management

A comprehensive monitoring and maintenance program is required to ensure that replacement hollows remain safe, functional and ecologically effective throughout the life of the Project. Given the removal of up to 179 hollow-bearing trees and up to 331 hollows, the monitoring program must provide high confidence that newly installed habitat features are performing as intended, particularly for threatened hollow dependent fauna.

Monitoring will be implemented to assess uptake and performance of replacement hollows across seasons and to support adaptive management. Monitoring will evaluate occupancy, evidence of breeding/roosting use, structural condition and key risks (e.g., pest occupation). The monitoring program (methods, frequency and duration) will be finalised in consultation with relevant stakeholders, noting surveys will be undertaken in different seasons corresponding with breeding seasons of different target species to provide confidence in outcomes while remaining practical and proportionate.

The following framework outlined in Section D4.4 to D4.6 describes the inspection frequency, performance criteria, corrective actions, and mechanisms for adaptive management.

Monitoring results will be assessed against the objectives of the replacement hollow program to evaluate whether installed habitat features remain structurally sound, functional and suitable for target fauna. Monitoring will include assessment of occupancy, evidence of use by target species, breeding activity (where applicable), structural integrity, maintenance requirements and any factors that may limit effectiveness.

Where monitoring identifies structural defects, low uptake, inappropriate placement, pest occupation, damage, failure of attachment systems, or other issues that may affect the performance of replacement hollows, corrective actions will be implemented as appropriate. Corrective actions may include maintenance, repair, replacement, relocation, installation of supplementary habitat features, refinement of installation methods and/or increased monitoring frequency.

A summary of monitoring outcomes, performance against program objectives, maintenance undertaken, corrective actions implemented and recommendations for ongoing management will be provided to CPHR as part of annual reporting.

D4.4 Monitoring objectives

The monitoring program aims to

- Assess the structural integrity and ongoing safety of all installed hollows and nest boxes.
- Assess occupancy by target fauna (e.g., microbats, parrots, owls, gliders) and detect signs of breeding activity.
- Identify and respond to pest or competitor species, including feral bees, European wasps, starlings and Common Mynas.
- Detect failures, such as overheating, water ingress, detachment, vandalism, or predation, and implement timely corrections.
- Evaluate the performance of different hollow replacement types (natural salvaged, carved hollows, insulated nest boxes).
- Support an adaptive management program that updates installation methods, materials, and placement strategies over time.

D4.5 Condition assessment and reporting

The condition, performance and long-term functionality of replacement hollows must be assessed through a structured and repeatable monitoring program. To ensure that these habitat features continue to provide safe, thermally suitable and

ecologically meaningful resources for hollow-dependent fauna, each inspection must consider structural integrity, occupancy patterns, pest activity and broader environmental factors that influence box performance. Monitoring results will be documented in annual monitoring reports, including details of replacement hollow condition, occupancy, evidence of breeding or roosting activity, species recorded using replacement hollows, maintenance undertaken, and any corrective actions implemented.

Annual monitoring reports will be provided to the local NPWS Area Office and CPHR to inform ongoing assessment of the effectiveness of the hollow replacement program and adaptive management measures. Table D.3 provides details on the types of inspection to be undertaken over the life of the replacement tree hollow strategy, while Table D.4 summarises the key components of the monitoring, maintenance and adaptive management framework, outlining the specific assessment criteria and corresponding management responses required to maintain the effectiveness of the hollow replacement program over time.

Table D.3 Monitoring Methods for Replacement Hollows

Method	Description / Actions
Visual Inspection (Ground-based)	– Check attachment systems (straps, brackets, carved cavities) for tension, fraying or corrosion. – Observe box orientation, stability, angle, and presence of debris or blockages. – Look for external signs of occupation (scats, scratch marks, chew marks, feathers, guano staining).
Internal Inspection	– Use pole-mounted cameras or infrared scopes to inspect internal chambers with minimal disturbance. – Confirm presence of nesting material, roosting individuals, or breeding activity. – Use of temperature and humidity loggers placed at the time of hollow installation and removed after 12 months. – Repeated after 5 years .
Acoustic Monitoring (for Microbats, as required)	– Compare activity levels near replacement hollows with suitable reference habitat.
GPS and Photo-point Monitoring	– Maintain a repeatable photo-point record for each asset, including an external and internal photo collected during each inspection. – Record GPS coordinates, height, aspect, and any observed changes to the surrounding habitat.

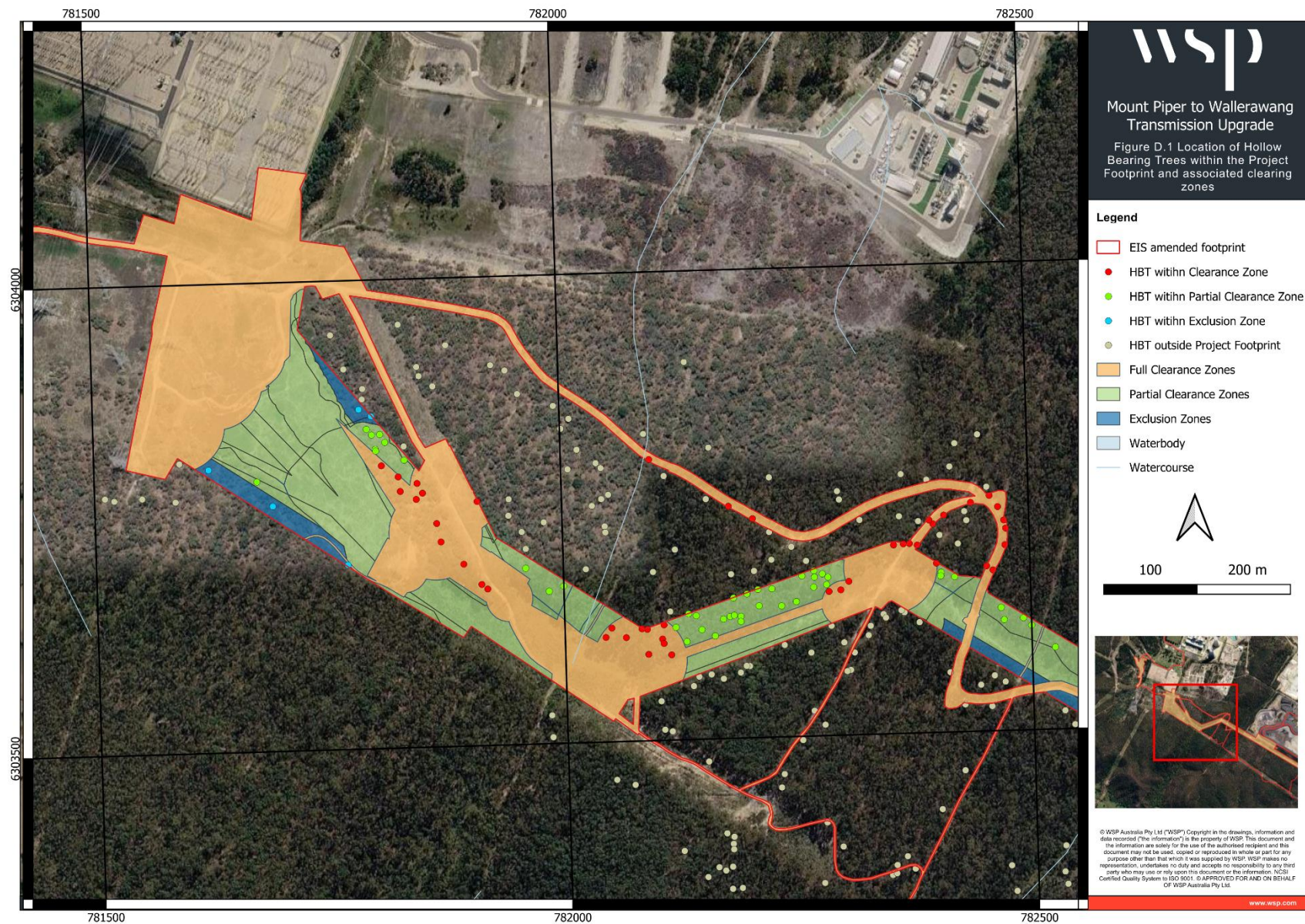
Table D.4 Assessment and Corrective Actions for Replacement Hollows and Nest Boxes

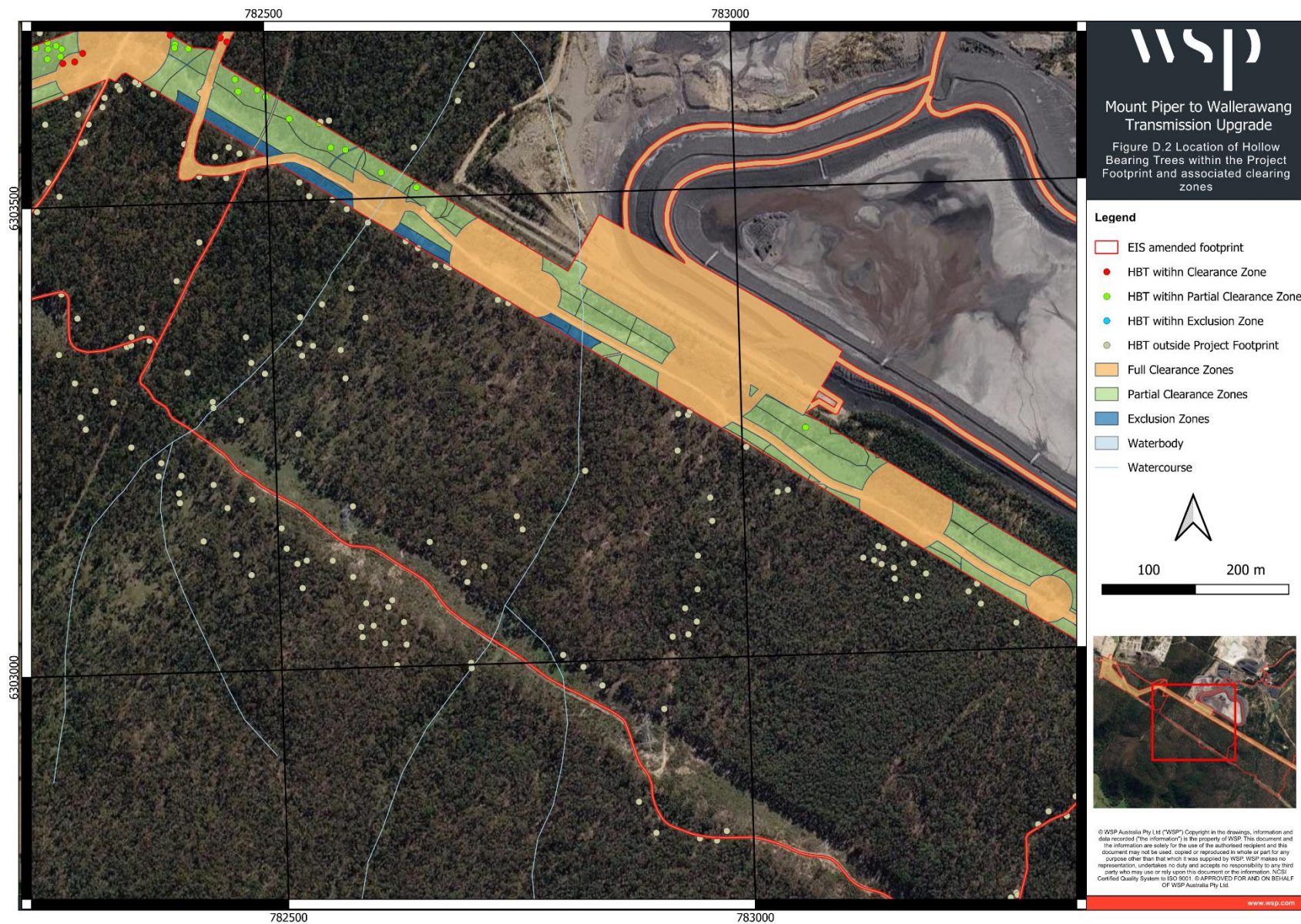
Category	Assessment	Actions / Responses
Structural Condition	— Integrity of replacement hollow — Signs of rot, cracking, sagging, or detachment. — Secure fit of hollow entrances	— Repair or replace damaged hollows. — Tighten/replace straps and fastenings. — Reinstate or replace hollow entrances. — Remove wildlife unsafe assets immediately.

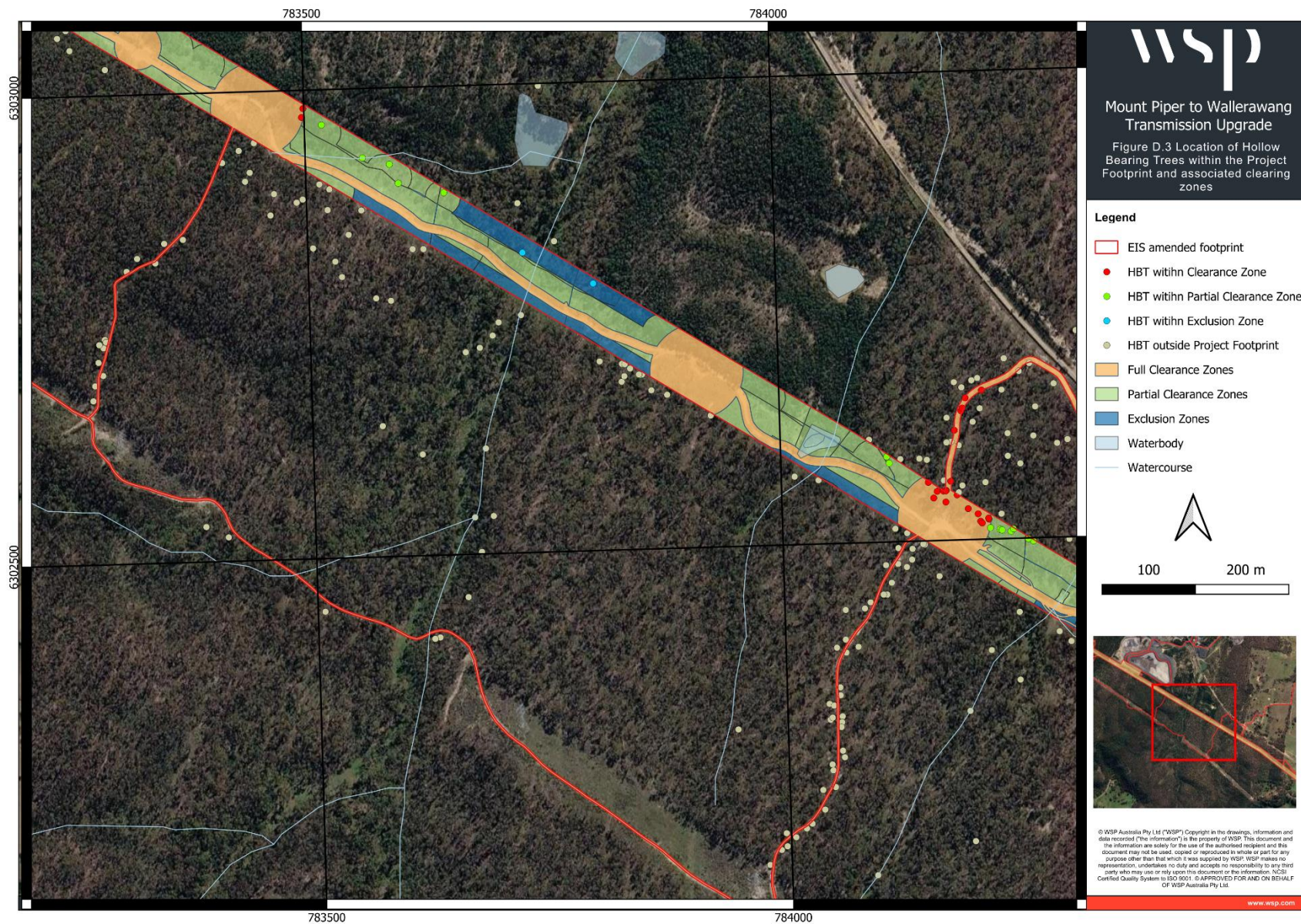
Thermal Suitability	— Evidence of overheating (warping, browning timber, resin smell, dead invertebrates). — Condensation or mould buildup.	— Repaint or re-insulate overheated boxes. — Improve ventilation as required. — Relocate to more suitable aspect (shaded).
Occupancy and Use	— Active use by fauna (roosting, nesting, breeding). — Abandoned nests or temporary use. — Suitability relative to the expected hollow-nesting species identified within the Study Area.	— Relocate unused boxes to more suitable habitat. — Adjust installation height, orientation or position. — Create additional carved hollows if necessary.
Pest / Competitor Occupation	— Presence of feral bees, European wasps, starlings, mynas or ants.	— Safe removal of feral bees/wasps. — Remove pest bird nests and install deterrents (entrance restrictors, mesh barriers). — Relocate hollows in chronic pest areas.
Corrective Maintenance	— Condition issues identified during visual/internal inspections. — Blocked entrances, debris, water ingress.	— Clear drainage holes and remove debris. — Replace damaged components. — Reposition or secure fastenings. — Replace hollows showing repeated failure.
Adaptive Management – Annual Review	— Annual review of occupancy by species group. — Compare performance among hollow types and suppliers/designs.	— Prioritise high-performing designs for future installation. — Phase out poorly performing boxes. Adjust protocols based on evidence.
Adaptive Management – Response Actions	— Issues identified in occupancy, suitability, thermal performance or stability.	— Relocate unused boxes. — Modify installation heights/orientations. — Trial alternative nest box designs or materials. — Increase carved hollows where boxes underperform. — Enhance surrounding habitat.
Long-Term Program Adjustments	— Repeated patterns of underperformance in certain designs or placement types. — Trends from monitoring data.	— Update installation methodologies. Prioritise high-performing hollow types. — Phase out ineffective designs or materials. — Implement long-term habitat enhancements.
Reporting & Data Management	— Collection of GPS coordinates, DBH, tree species, hollow type, installation/inspection dates, occupancy,	— Maintain central Hollow & Nest Box Asset Register. — Produce annual monitoring reports.

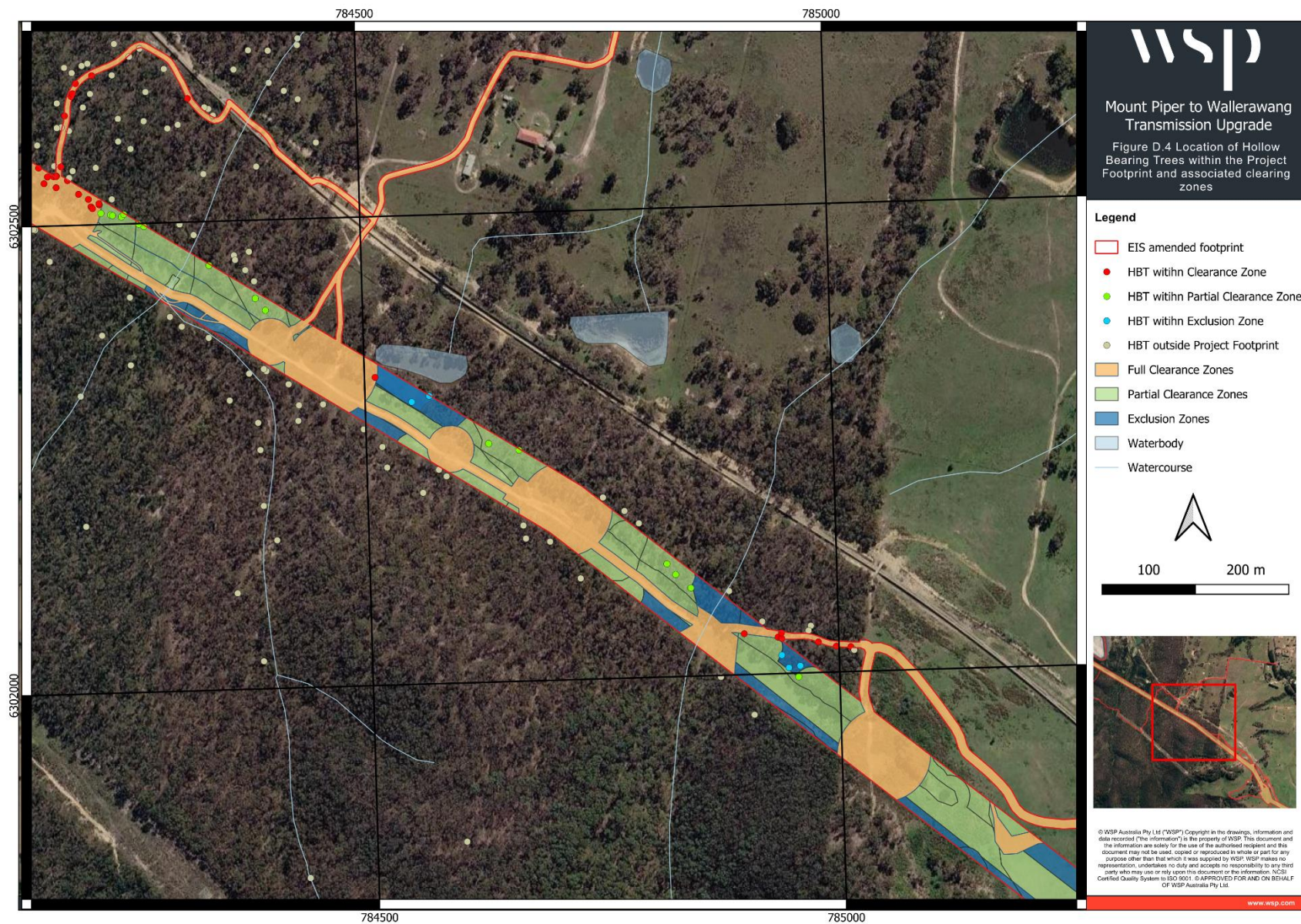
Performance Indicators	maintenance actions, photos, threatened species detections.	— Issue incident reports for failures, pest occupation or fauna injury.
		— Update the BMP based on long-term trends.
	— Integrity >90% of assets per year*.	— Apply adaptive management measures when indicators are not met.
	— Pest occupation <5% of assets.	— Adjust nest box strategy accordingly.
	— Demonstrated occupancy across major fauna groups.	— Increase frequency or depth of monitoring if trends worsen.
	— Increased use of carved hollows and insulated/high-quality boxes over time.	

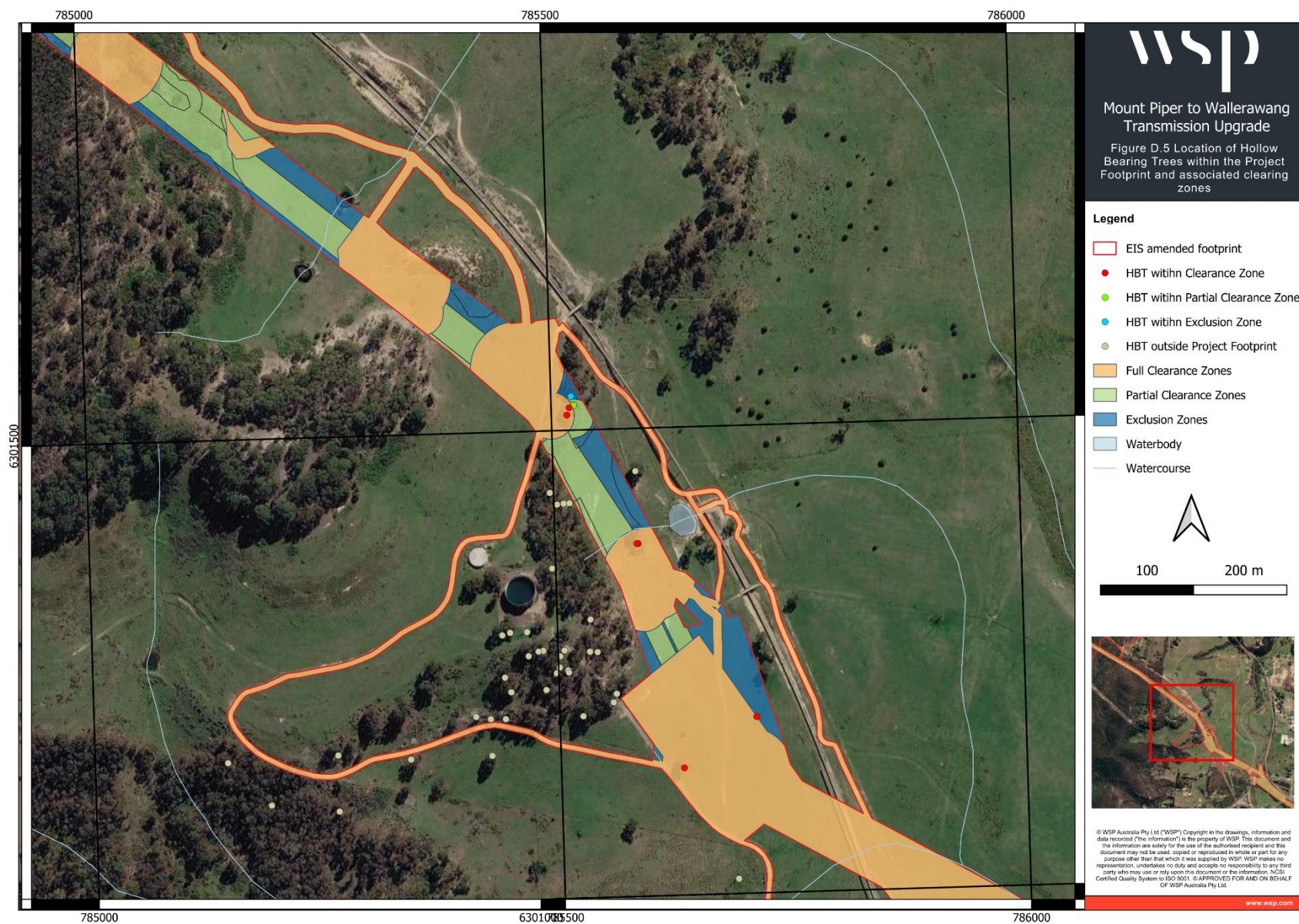
* Structural integrity of installed replacement hollows is expected to remain at $\geq 90\%$ of assets located and inspected annually. Given the scale of the program (+250 assets distributed across forested terrain), it is acknowledged that not all assets will be located and inspected each year. A minimum of $\geq 80\%$ of installed assets will be inspected annually, with full inspection coverage of all installed assets achieved across a rolling three-year monitoring cycle.

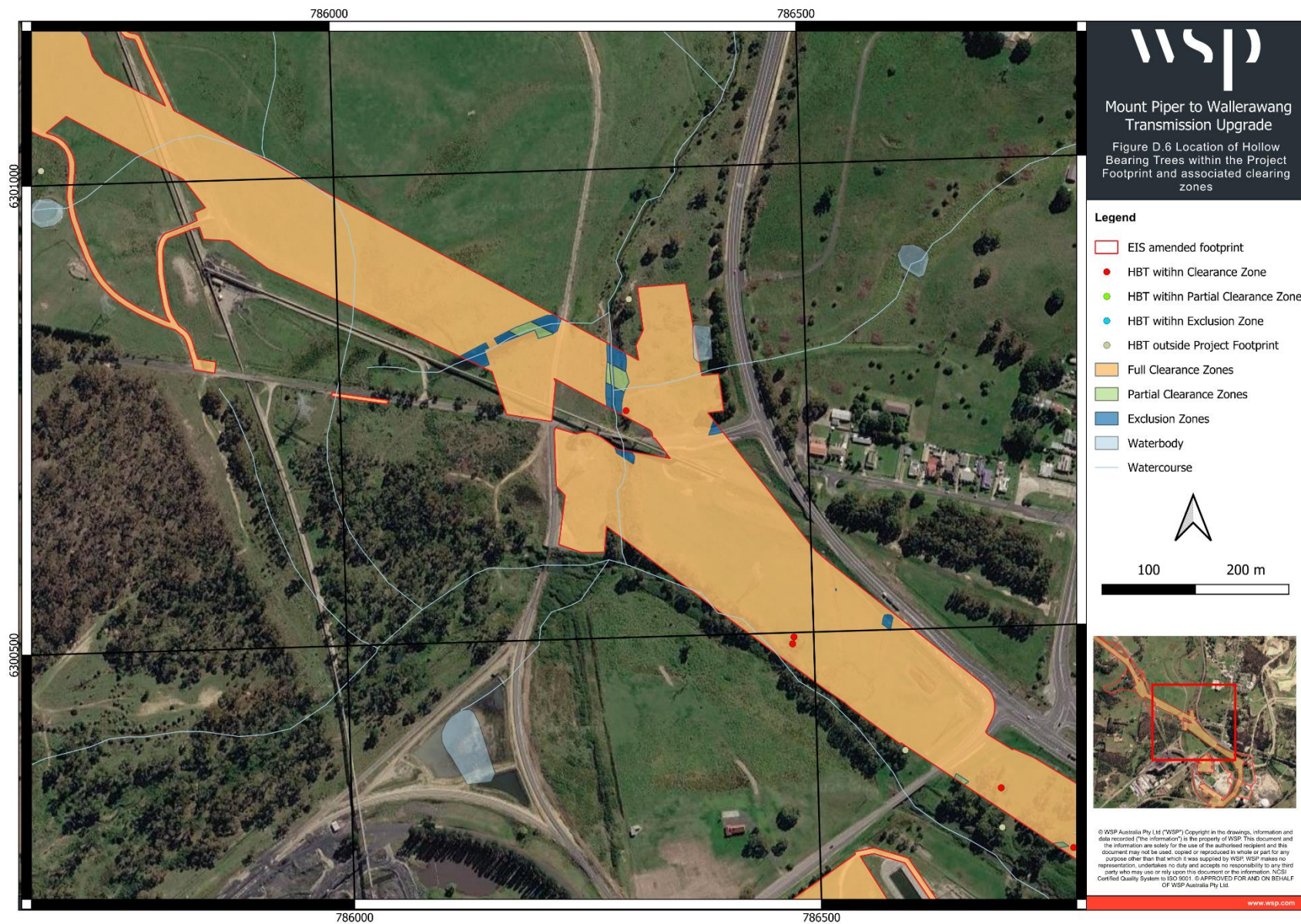


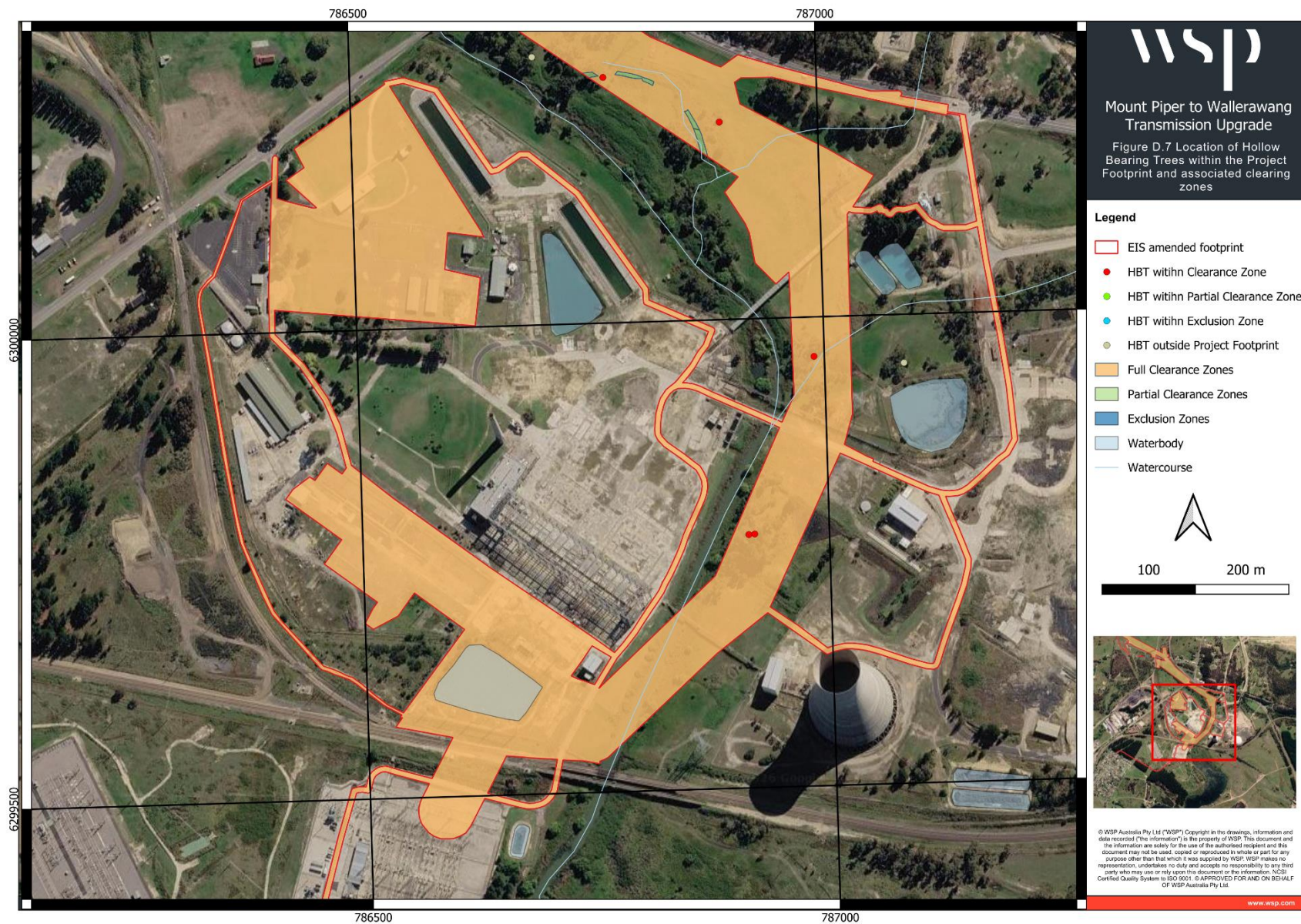












Appendix E

Biosecurity Management Plan



E1. Weed assessment, monitoring and management procedures

Declared priority weeds will be managed in accordance with the requirements of the NSW *Biosecurity Act* 2015. Weed management for the Project will be implemented in accordance with Transgrid's established easement management framework, including the Transgrid (2022) Maintenance Plan – Easement and Access Tracks. The project-specific requirements outlined in this BMP supplement these existing operational procedures during the construction phase of the Project and provide site-specific weed hygiene, monitoring and management measures to be implemented during construction. Following construction, ongoing weed monitoring and management within the transmission easement will continue in accordance with Transgrid's operational maintenance framework.

A pre-construction weed assessment will be undertaken to establish baseline weed distribution and identify any priority weed infestations, high-risk areas and management requirements prior to the commencement of ground-disturbing works.

The assessment will map the location, approximate extent and relative density of major weed infestations and priority weeds within relevant work areas and adjacent retained vegetation. The mapping will identify the applicable full-clearance, partial-clearance or exclusion zone and any required treatment, segregation, demarcation or hygiene controls.

The baseline weed mapping and associated management requirements will be provided to the Construction Manager / Project Manager through the applicable environmental constraints mapping, EWMS, or pre-start documentation before clearing or ground disturbance commences in the relevant work area. The mapping will be updated where monitoring identifies a new infestation or a material change in the extent or density of an existing infestation.

During construction, weed monitoring must be undertaken at a minimum of quarterly intervals, with increased frequency during periods of active ground disturbance or in areas identified as high risk. Monitoring will focus on:

- disturbed ground;
- Soil stockpiles;
- access tracks and roadside earthworks;
- drainage lines; and
- areas of concentrated machinery movement.

Any newly identified weed incursions must be recorded (including location and extent) and reported to the Project Manager and Environmental BP. Targeted weed control must be implemented where declared or priority weeds are identified outside the mapped baseline extent or within previously weed-free areas. Vegetation material and soil disturbed during construction will not be removed from the site and designated storage areas will be monitored to prevent the spread of weeds via erosion, wind or runoff. Where practicable, soil disturbance will be minimised to reduce weed spread risk.

A post-construction weed assessment must be undertaken following completion of major works and stabilisation of rehabilitation or revegetation areas. This assessment will compare post-construction conditions against the pre-construction baseline to evaluate the effectiveness of weed management measures and determine the need for follow-up treatments. Findings will be documented in a post-construction monitoring report, including recommendations for any follow-up weed control or monitoring actions required. Ongoing weed monitoring and management within the transmission easement will subsequently be undertaken in accordance with Transgrid's established easement maintenance framework and operational weed management procedures. Monitoring timeframes for the construction phase of the Project are provided in Table E.1.

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Table E.1 Pre and post construction timeframe

Survey stage	Timing / Frequency	Revised responsibility	Key activities
Pre-construction weed assessment	Prior to the onset of ground disturbance	Project Ecologist; Environmental BP	Baseline mapping of weed extent, distribution and abundance within the Project footprint and adjacent retained vegetation. Identification of priority weed species, high-risk areas and pre-construction management recommendations. Baseline data will be used to assess future weed spread and trigger management responses. Identification of the applicable clearing category and required treatment, segregation, demarcation or avoidance controls. Provision of baseline weed mapping to the Construction Manager through relevant work area documentation.
Construction monitoring (routing)	Quarterly during construction, with additional inspections during periods of active ground disturbance.	Environmental BP; Project Ecologist as required	Weed inspections, recording new infestations and changes in weed extent, cover or abundance relative to the pre-construction baseline, treatment recommendations and review of hygiene compliance.
Event-based inspection	After a significant event such as following a period of heavy rainfall, major soil disturbance activity, or the movement of machinery and vehicles into areas previously deemed free of weeds.	Environmental BP; Project Ecologist as required	Spot check for new growth following potential triggers (disturbance, run-off), implement rapid response mechanics.

Rehabilitation / revegetation phase monitoring	Quarterly to be incorporated with monitoring of planting works in revegetation areas as required.	Environmental BP; Project Ecologist as required	Monitoring areas where weed infestation has been identified. Apply targeted weed control.
Post-construction weed assessment	Following the completion of project works and the establishment /stabilisation of revegetated areas	Project Ecologist or suitably qualified environmental consultant	Finalised weed mapping and comparison with pre-construction baseline. Assessment of weed management effectiveness. Report on residual risks and potential on-going monitoring implications.
Final	Upon the completion of all post-construction assessment recommendations/actions.	Environmental Manager	Confirm that all required weed controls have been completed in line with the management plan and no outstanding biosecurity risks remain

E1.1 Weed performance thresholds and response triggers

The weed management framework described in this Appendix has been developed to align with Transgrid's established easement management and maintenance procedures, including the Transgrid (2022) Maintenance Plan – Easement and Access Tracks. The requirements contained within this Appendix provide project-specific monitoring, hygiene and response measures that will be used to supplement Transgrid's existing operational weed management framework during the construction phase of the Project.

Where a trigger condition is identified, the Project Ecologist will assess the extent and likely cause of the infestation and determine the appropriate management response. Management responses may include targeted weed treatment, increased inspection frequency, review of weed hygiene controls, implementation of additional containment measures, updating of weed mapping, and follow-up monitoring to assess treatment effectiveness.

Weed control actions will be initiated where monitoring identifies any of the following trigger conditions:

- Presence of declared priority weeds within the Project footprint, access tracks, laydown areas or adjacent native vegetation.
- New weed infestations not recorded during the pre-construction weed survey.
- An increase in the distribution, density or cover of existing weed infestations relative to the pre-construction baseline mapping.
- Spread of weeds into exclusion zones, retained native vegetation or rehabilitated areas.
- Weed establishment within rehabilitation or revegetation areas that may compromise regeneration objectives.

A pre-construction weed survey will be used to establish baseline weed distribution and extent within areas subject to disturbance and adjacent retained vegetation. Where monitoring identifies new infestations or a measurable increase in weed extent or abundance relative to this baseline, targeted weed control measures will be implemented as soon as practicable in accordance with Section E.4, followed by monitoring to assess treatment effectiveness.

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Table E 2 Weed Management Response Framework

Trigger	Management Response
Priority or declared weed identified	Record infestation and implement targeted weed control.
New infestation not recorded during baseline survey	Delineate infestation extent, investigate source and implement control measures.
Increase in weed extent, density or cover relative to baseline	Review weed hygiene and containment measures and undertake supplementary weed control.
Weed spread into rehabilitation, exclusion or retained native vegetation areas	Implement immediate control measures and increase monitoring frequency until the infestation is stabilised.
Repeated weed expansion despite treatment	Review treatment methods and implement additional or alternative control measures as recommended by the Project Ecologist.

E2. Awareness / training

On induction, construction staff and subcontractors will be trained on the importance of preventing invasive species from entering or being spread further around the Project footprint, and the biosecurity hygiene measures required to be applied for vehicles, machinery and equipment used on the Project.

E3. Weed hygiene protocols

The primary pathway for the spread of weeds and plant pathogens is the movement of people, vehicles, machinery, soil and water during construction activities. Vehicle and machinery hygiene is therefore a critical biosecurity control measure, particularly during vegetation clearing, soil disturbance and earthworks when disturbed areas are most susceptible to weed establishment.

All vehicles and machinery entering, exiting or moving between work areas must be clean and free of soil, weed seeds and vegetative material. Compliance with hygiene requirements will be verified prior to site entry and throughout construction.

Vehicle and machinery hygiene procedure:

- All vehicles and machinery must arrive on site clean and free of soil and plant material.
- A completed Hygiene Inspection Form must be provided by the supplier prior to site entry and verified on arrival.
- All vehicles and machinery will be inspected at the construction compound prior to commencing work.
- Vehicles or machinery that do not meet hygiene standards must be washed down at a designated wash-down facility or removed from site and cleaned at an approved external facility, then re-inspected prior to use.
- Wheel-wash systems will be installed at site entry and exit points and at additional high-risk locations identified by the Project Ecologist.
- Machinery involved in excavation or soil handling will undergo a wash-down prior to movement between land holdings (e.g. entry to and exit from the Gardens of Stone SCA) and prior to re-entry to the Project footprint from off-site locations.

Where wash-down is required, the following steps must be followed:

- enter the designated wash-down area and position the vehicle to allow full access to the undercarriage, tyres, wheel arches and attachments;

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- undertake a visual inspection to identify soil, plant material or seed contamination;
- remove large accumulations of soil or vegetation manually and dispose of material in designated waste receptacles;
- clean all surfaces using high-pressure water, prioritising high-risk areas such as undercarriages, tyres and machinery attachments;
- inspect hard-to-reach areas where debris may accumulate;
- undertake a final inspection to confirm the vehicle or machinery is free of contamination;
- record the wash-down activity in the Hygiene Inspection Form; and
- exit the wash-down area in a manner that avoids tracking material outside the contained area.

All wash-down facilities will be designed to contain runoff and prevent the release of contaminated water or material, with waste managed in accordance with the Project's waste and environmental management requirements.

E4. Weed treatments

The need for weed treatment will be identified prior to commencement of works through the pre-clearing survey (Appendix A) and documented in the pre-clearing checklist completed by the Project Manager and Project Ecologist. Weed treatment will also be initiated where construction-phase monitoring identifies declared or priority weeds, expansion beyond baseline extent, or new incursions within previously weed-free areas.

Weed management will be implemented according to the clearing category applying to the affected area:

- Full-clearance zones: major weed infestations and priority weeds will be treated, removed or segregated before general vegetation clearing, where practicable. Weed-infested material will be kept separate from habitat resources, mulch, topsoil and other material intended for salvage or reuse.
- Partial-clearance zones: weed infestations will be clearly demarcated and avoided where practicable. Where treatment is required, targeted methods will be used to minimise disturbance to retained native vegetation and prevent further weed spread.
- Exclusion zones: disturbance will be avoided. Weed treatment will only be undertaken where required to meet biosecurity obligations or protect biodiversity values and will use targeted methods appropriate to the surrounding native vegetation.

Where weed-infested material must be moved within the Project footprint, handling, containment and transport controls will be specified by the Environmental BP, in consultation with the Project Ecologist or a qualified weed-management contractor, where required.

Where required, the Construction Manager will engage a suitably qualified bush regeneration or weed management contractor to undertake targeted weed control within the easement and immediately adjacent bushland where weed incursion has been identified. Weed control will typically be undertaken during early spring and autumn, unless site conditions or infestation characteristics warrant alternative timing. The frequency and timing of weed control may be revised in consultation with Transgrid where required to align with Transgrid's established easement maintenance programs and operational weed management procedures, or to respond to elevated weed risk.

Weed control methods may include one or a combination of the following, as determined by the Project Ecologist or qualified weed contractor:

- mechanical removal;
- targeted application of approved herbicides by licensed personnel, undertaken under suitable weather conditions;
- prioritisation of weed removal prior to seed set;
- manual herbicide application where proximity to watercourses or runoff risk requires controlled treatment.

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Following weed removal (mechanical or chemical), soil disturbance areas will be managed in accordance with Section 5.8 to minimise erosion and reinfestation risk. Plant material generated through weed control will be contained and managed in accordance with the Project Waste Management Plan and applicable biosecurity requirements. Material will only be transported off site where permitted and where appropriate containment and disposal arrangements are in place.

Weed presence, extent, and control actions undertaken will be recorded on the Environmental Site Inspection Checklist and used to inform ongoing weed management requirements.

E5. Chytrid fungus

Construction activities have the potential to contribute to the spread of chytrid fungus (*Batrachochytrium dendrobatidis*), particularly where works occur in or adjacent to aquatic habitats or where amphibians are encountered. In addition to the vehicle and machinery hygiene requirements outlined in this appendix, the following chytrid-specific control measures will apply where relevant.

Chytrid management measures include:

- minimising construction activities during muddy or wet conditions, where practicable;
- establishing exclusion zones and fencing to prevent unnecessary access to identified frog habitat;
- induction of all relevant personnel on chytrid hygiene requirements where works occur in or near aquatic habitats;
- providing boot-wash facilities for personnel accessing wet areas;
- restricting vehicles and machinery to designated access tracks and hardstand staging areas, where practicable;
- avoiding transfer of water between isolated waterbodies;
- disinfecting hands and equipment and using clean disposable gloves between handling individual frogs, where fauna handling is required; and
- using an approved broad-spectrum disinfectant (e.g. F10 SC or equivalent) for equipment and footwear where required.

These measures are to be implemented under the direction of the Project Ecologist and complement the general hygiene procedures set out in this appendix.

E6. Phytophthora and Myrtle Rust

Phytophthora (*Phytophthora cinnamomi*) and Myrtle rust (*Austropuccinia psidii*) pose potential risks to native vegetation through the movement of contaminated soil, plant material, water, vehicles and machinery during construction activities. The primary mechanism for managing these risks is the application of strict hygiene, soil management and erosion control measures.

Mitigation measures to manage the risk of spreading Phytophthora and Myrtle rust include:

- implementation of vehicle and machinery hygiene and wash-down procedures as outlined in this appendix;
- stabilisation of disturbed soils and implementation of erosion and sediment controls in accordance with Section 5.7;
- minimisation of soil disturbance where practicable; and
- disposal of plant material and soil in accordance with the Project's waste and spoil management requirements.

No additional pathogen-specific controls are required beyond these measures unless directed by the Project Ecologist following site inspection or detection of disease indicators.

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