Glenellen Solar Farm – Biodiversity Management Plan

Global Power Generation (GPG) Australia

ecological AUSTRALIA
A TETRA TECH COMPANY

1300 646 131
www.ecoaus.com.au

DOCUMENT TRACKING

Project Name	Glenellen Solar Farm – Biodiversity Management Plan
Project Number	23SYD6869
Project Manager	Courtney Blick
Prepared by	Courtney Blick and Emma Bathgate
Reviewed by	Kalya Abbey and Daniel Magdi
Approved by	Daniel Magdi
Status	Final
Version Number	5
Last saved on	19 August 2024

This report should be cited as 'Eco Logical Australia 2023. *Glenellen Solar Farm – Biodiversity Management Plan*. Prepared for Global Power Generation (GPG) Australia Pty Ltd.'

ACKNOWLEDGEMENTS

This document has been prepared by Eco Logical Australia Pty Ltd with support from GPG Australia.

Template 2.8.1

Contents

List of Figures

List of Tables

Abbreviations

Abbreviation	Definition
APZ	Asset Protection Zone
BC Act	*Biodiversity Conservation Act 2016*
BCS	NSW Department of Planning and Environment's Biodiversity, Conservation and Science Directorate
BDAR	Biodiversity Development Assessment Report
BMP	Biodiversity Management Plan
CEEC	Critically Endangered Ecological Community
DBH	Diameter at Breast Height
DCCEEW	Commonwealth Department of Climate Change, Energy, the Environment and Water
EIS	Environmental Impact Statement
ELA	Eco Logical Australia Pty Ltd
EMS	Environmental Management System
EP&A Act	NSW *Environmental Planning and Assessment Act 1979*
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
GPG	Global Power Generation
HBT	Hollow-Bearing Tree
IPC	Independent Planning Commission
LEP	Local Environmental Plan
LGA	Local Government Area
LLS	Local Land Services
MLA	Moir Landscape Architects
MNES	Matters of National Environmental Significance
NCA	Not a Controlled Action
NSW DCCEEW	NSW Department of Climate Change, Energy, the Environment and Water (formerly DPE)
O&M	Operation & Maintenance
PC	Pre-Construction
PCT	Plant Community Type
PV	Photovoltaic
SSD	State Significant Development
TEC	Threatened Ecological Communities
TMP	Traffic Management Plan
WoNS	Weeds of National Significance

1. Introduction

Glenellen Solar Farm (the Project) involves the construction, operation and decommissioning of a 200-megawatt grid-connected photovoltaic solar farm and associated infrastructure, located in the Murray region of NSW. State Significant Development (SSD) Consent for SSD-9550 under the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act) has been granted.

This Biodiversity Management Plan (BMP) has been prepared based on the Development Consent conditions issued by the NSW Independent Planning Commission (IPC), for the construction, operation and decommissioning phases of the Project. The operational and decommissioning phases will largely be guided by other management plans supporting the Project, including for waste and rehabilitation. Further details are provided in Section 6.

The approved layout of the development in relation to the Project Site and its biodiversity values, in accordance with SSD-9550, is shown below in Figure 1-1.

A full description of the Project is provided with the Environmental Impact Statement (EIS), subsequent Submissions Report and Amendment Report.

This information can be accessed on the Project website at https://glenellensolarfarm.com.au/. This BMP has been prepared by Eco Logical Australia (ELA) on behalf of Global Power Generation (GPG) Australia and its wholly owned subsidiary Glenellen Asset Pty Ltd, for the development of the Project. A BMP is required to meet the relevant conditions of Development Consent under SSD-9550, which include the following:

- *Prior to carrying out any development that could directly or indirectly impact biodiversity values, the Applicant must prepare a Biodiversity Management Plan for the development in consultation with BCS, and to the satisfaction of the Planning Secretary.*

Development Consent conditions relevant to this BMP are provided in Section 3, Table 3-1 below.

This BMP describes the biodiversity management measures that will be implemented to avoid, minimise, and manage impacts associated with the construction of the Project as well as through the Project operational and decommissioning phases.

This BMP has been written to complement other management plans for the Project and has been developed as a component of, and must be read in conjunction with, the Project's overarching Environmental Management Strategy (EMS) (ELA 2024a).

It is noted that this BMP does not address any matters relating to securing or managing biodiversity credits to offset the Project, including Biodiversity Stewardship Sites or any other offset mechanism. Biodiversity credit offsetting for residual biodiversity impacts, in accordance with the Biodiversity Development Assessment Report (BDAR) (ELA 2023). The Biodiversity Offset requirements will be considered separately as part of Condition B17, Part B Environmental Conditions – General of the Development Consent. Biodiversity Credits will be retired in accordance with the Condition B17, Schedule 2 prior to the carrying out of any development that could impact biodiversity values.

In accordance with the requirements of Part B, Condition 13 of SSD-9550, consultation with the NSW Department of Climate Change, Energy, the Environment and Water (DCCEEW)'s Biodiversity, Conservation and Science Group (BCS) has been undertaken during the preparation of this BMP. A draft copy of this BMP (Draft Version 2, Version 4 and Final Draft Version 5) was provided to BCS and Department of Planning, Housing and Infrastructure (DPHI) for comment, with outcomes of consultation included in Appendix A.

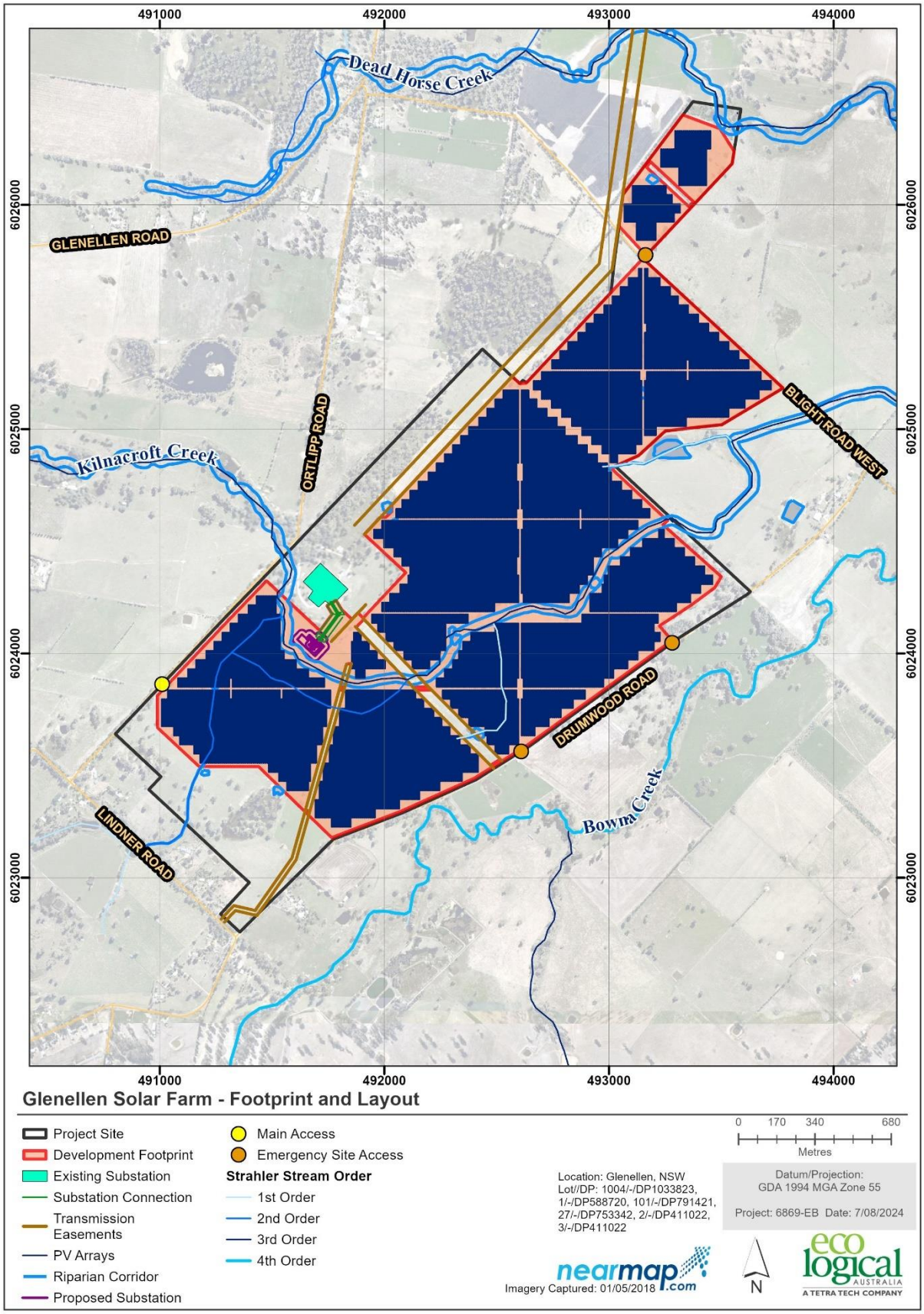


Figure 1-1: Glenellen Solar Farm – Footprint and Layout

2. Project Background

Overview

The Project is a 200 MW solar electricity generation works, through the conversion of solar radiation to electricity using solar photovoltaic (PV) panels arranged across the Project Site in a series of modules. Modules are mounted on steel racking with piled, screwed or ballasted supports. Other infrastructure on site includes electrical conversation units, cabling, telecommunications equipment, operations and maintenance (O&M) building, amenities, storage facilities, vehicle access and parking areas. Security fencing and gates will also be installed.

The area approved for impacts under Development Consent SSD-9550 for the construction of the solar farm, access and ancillary infrastructure is referred to as the 'Development Footprint' (Figure 2-1). The Project will be subject to a detailed design process to determine the final precise locations of PV panels and other infrastructure within the Development Footprint. Project elements will be subject to micrositing within the Development Footprint.

2.1. Location Context

The Project is located on Lot 3 DP 411022, 101 DP 791421, Lot 1004 DP 1033823, Lot 1 DP 588720, and parts of Lot 27 DP 753342 and Lot 3 DP 411022, in the towns of Glenellen and Jindera. It is located within the Greater Hume Shire local government area (LGA), 4 km north-east of Jindera in the south-western slopes part of the NSW Murray Region.

2.2. Biodiversity Management

The Development Footprint is the area approved for disturbance on the basis that:

(a) Impacts to biodiversity will be offset in accordance with Condition B17 and B18 of Development Consent; and

(b) Impacts to biodiversity will be minimised wherever possible through appropriate management measures, as detailed within this BMP.

This means that while approval has been granted for a particular area disturbance (the 'Development Footprint', overview presented in Figure 2-1), impacts to vegetation and fauna must still be minimised wherever possible. Detailed plan sections are provided below in Figure 2-2 to Figure 2-8. The tree location plan is provided in Figure 2-9 (ArborViews 2023).

Vegetation clearing will be limited to the Development Footprint and within the approved clearing extent under the consent conditions. Permanent stock-proof fencing is to be established to protect riparian protection zones and no-go zones outside the approved disturbance area prior to clearing, with appropriate signage in place (i.e. No Go Zone or Environmental Protection Area).

No-go areas will be defined to protect vegetation that is not approved for clearing and has not been assessed or offset. The Development Footprint will be defined as the approved works area, and entry into/clearing of vegetation outside this boundary is not permitted.

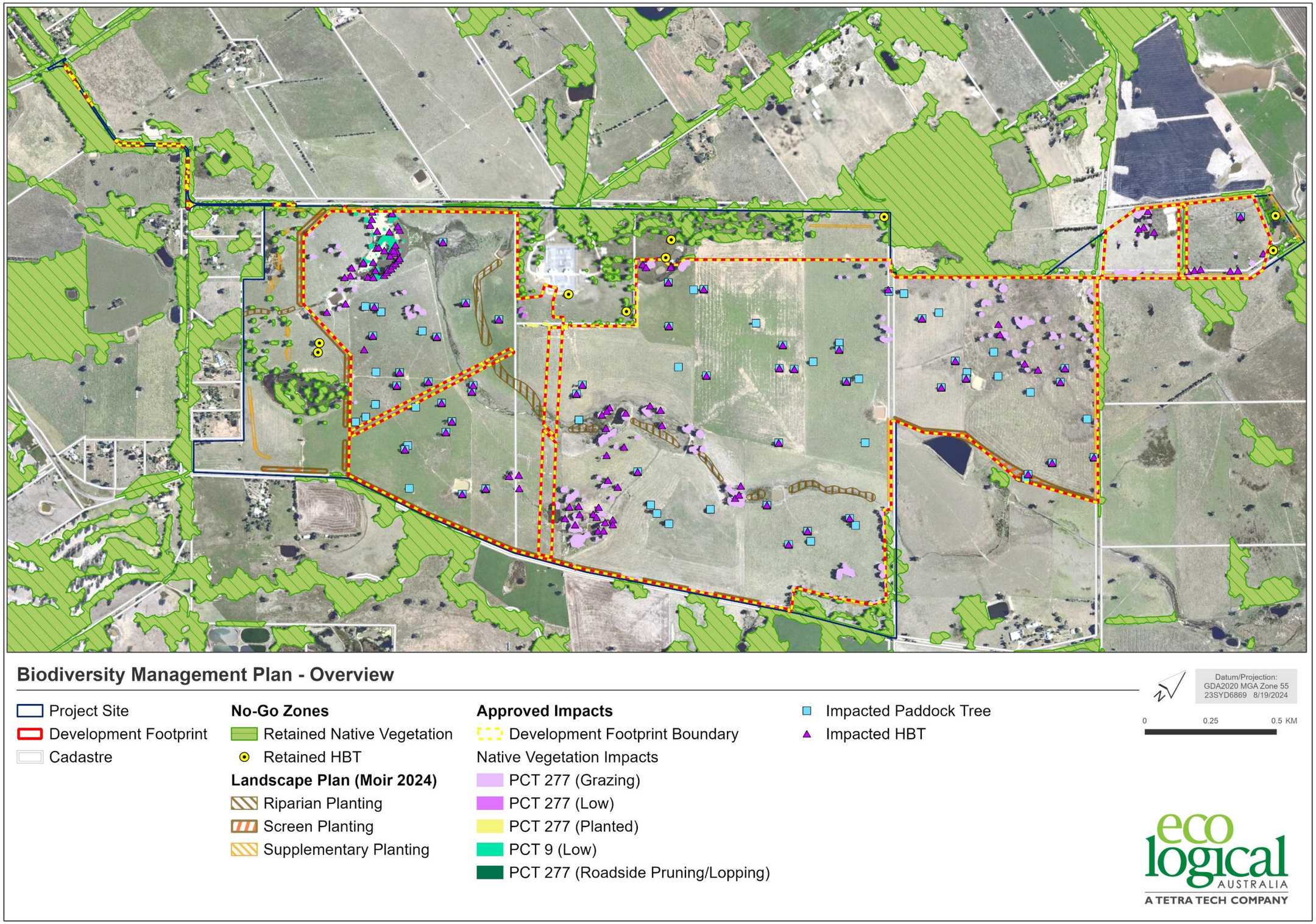


Figure 2-1: Biodiversity Management Plan (Site Overview)

Figure 2-2: Biodiversity Management Plan detail showing roadside vegetation impacts, plantings and protection

Figure 2-3: Biodiversity Management Plan detail showing southwest corner impacts, plantings and protection

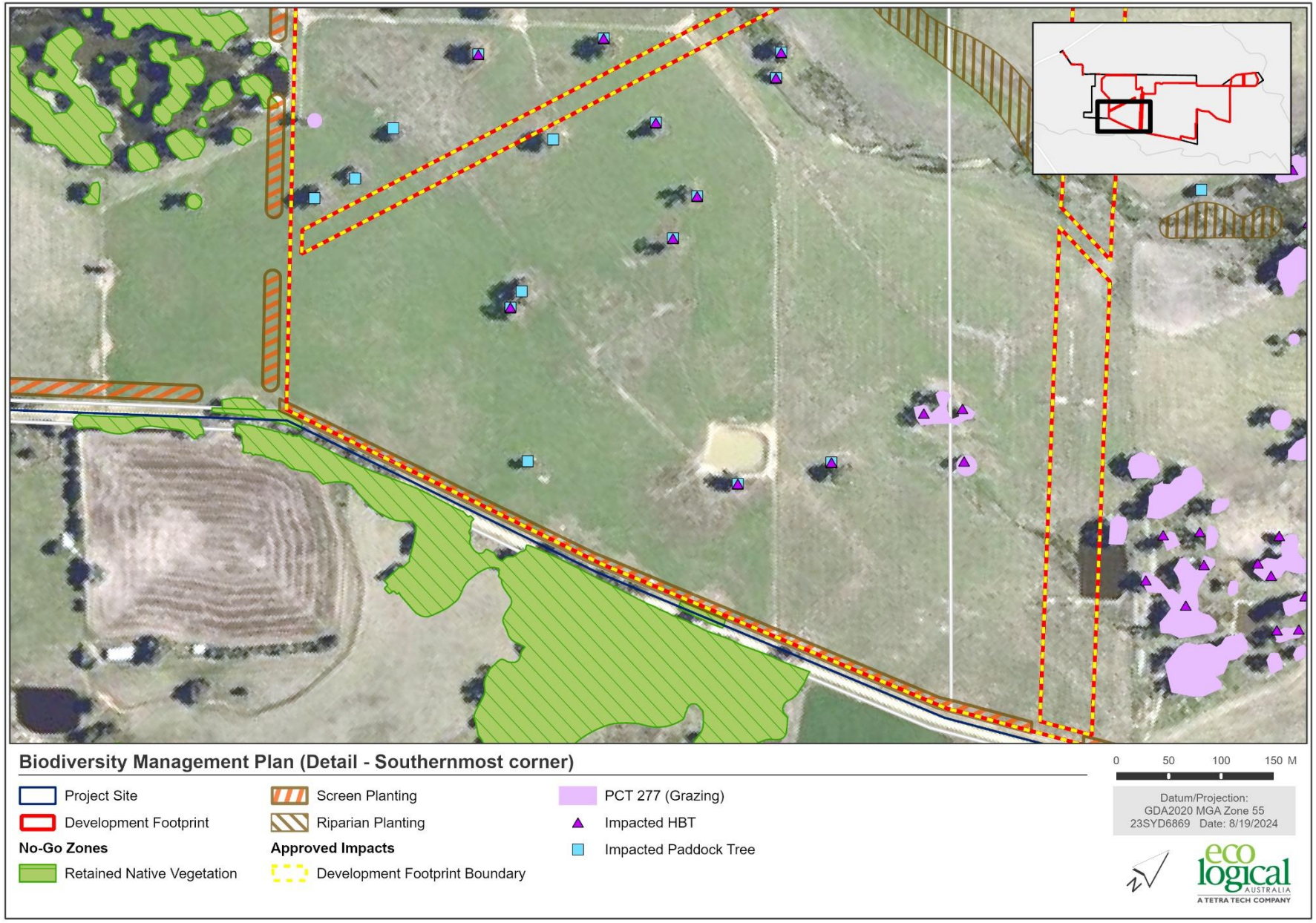


Figure 2-4: Biodiversity Management Plan detail showing impacts, plantings and protection in southernmost extent

Figure 2-5: Biodiversity Management Plan detail in central west extent, showing impacts, plantings and protection

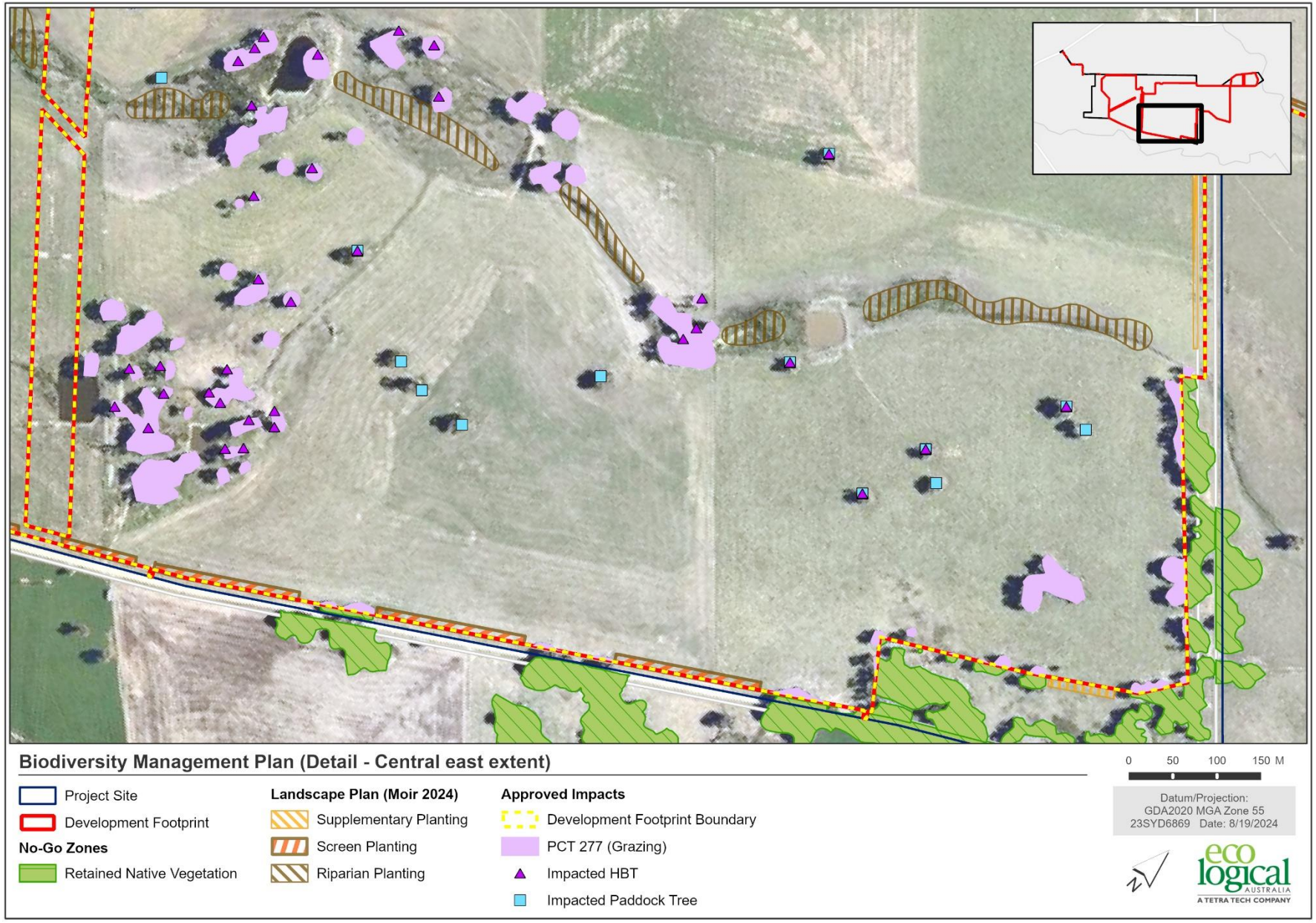


Figure 2-6: Biodiversity Management Plan detail showing central east extent of impacts, plantings and protection

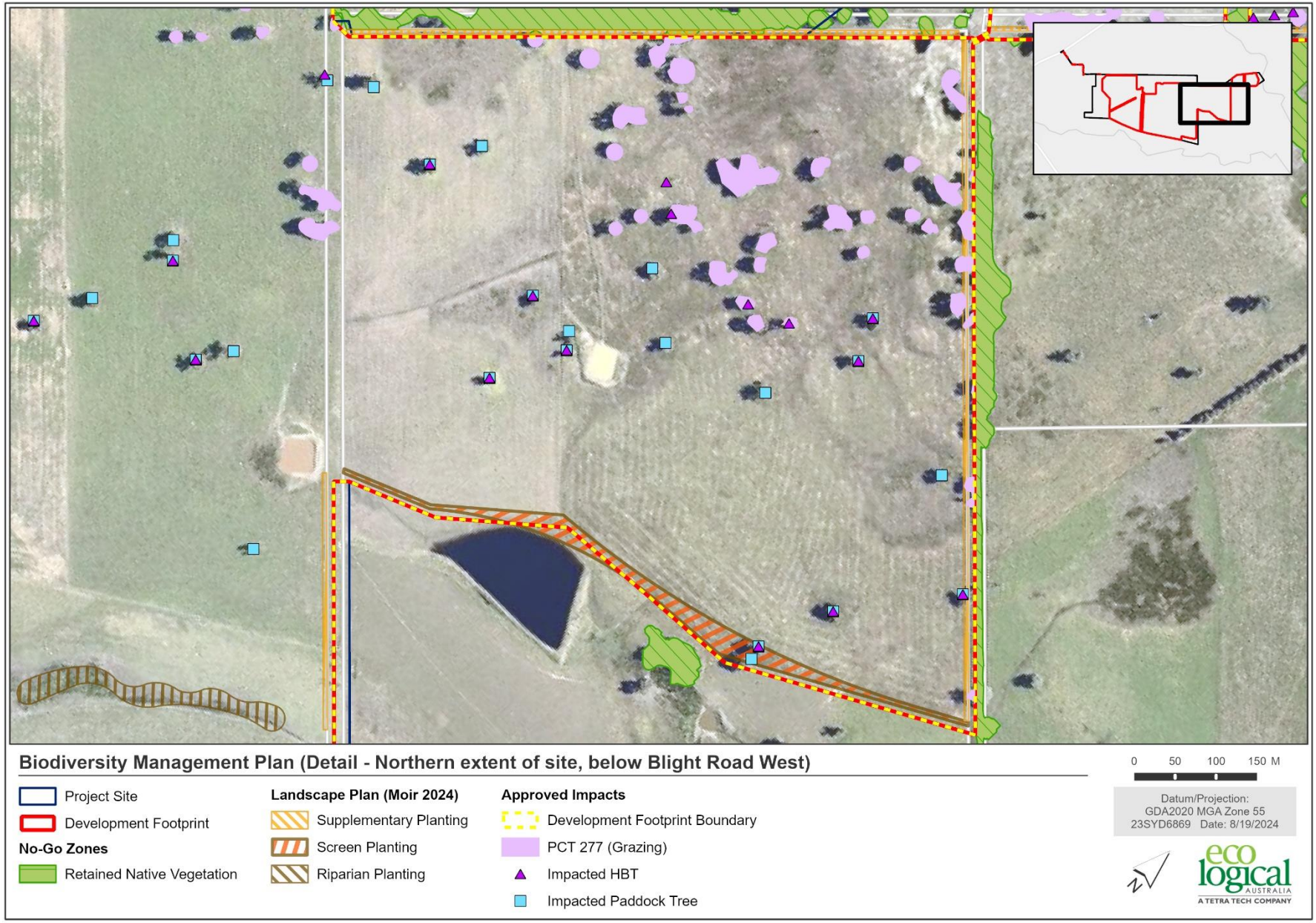


Figure 2-7: Biodiversity Management Plan detail in northern extent until Blight Road West

Figure 2-8: Northernmost Biodiversity Management Plan detail, northeast of Blight Road West

Figure 2-9: Tree Location Plan (ArborViews 2023)showing affected trees. Refer to Appendix B1 for tree pruning/tieback requirements.

3. Legislative Context

3.1. State approval

The Project has received NSW State Significant Development Consent (SSD-9550) under the EP&A Act. This BMP has been developed in consultation NSW DPHI and DCCEEW (BCS).

3.1.1. Conditions of approval

Table 3-1 details the biodiversity consent conditions relevant to SSD-9550, and provides a link to the section of this BMP where it has been addressed.

Table 3-1: Relevant consent conditions

Condition	Requirement	Section addressed
	Part A – Administrative Conditions	
A1	In meeting the specific performance measures and criteria in this consent, all reasonable and feasible measures must be implemented to prevent, and if prevention is not reasonable and feasible, minimise, any material harm to the environment that may result from the construction, commissioning, upgrading, operation, rehabilitation or decommissioning of the development.	The Proponent commits to biodiversity management measures per Table 6-2, and monitoring and reporting obligations within Table 7-3. This condition will be met.
A2	The development may only be carried out: (a) in compliance with the conditions of this consent; (b) in accordance with all written directions of the Planning Secretary; (c) generally in accordance with the EIS; and (d) generally in accordance with the Development Layout in Appendix 1 (of the consent conditions).	The Proponent commits to carrying out development in compliance with the conditions of consent (Table 3-1 as relevant to this BMP), directions of the Planning Secretary, the EIS and the approved development layout provided in Figure 1-1 of this BMP.
A13	**Evidence of Consultation** Where conditions of this consent require consultation with an identified party, the Applicant must: (a) consult with the relevant party prior to submitting the subject document to the Planning Secretary for approval; and (b) provide details of the consultation undertaken including: (i) the outcome of that consultation, matters resolved and unresolved; and (ii) details of any disagreement remaining between the party consulted and the Applicant and how the Applicant has addressed the matters not resolved.	Consultation has been carried out and is summarised in Appendix A
	SSD 9950 – Part B Environmental Conditions – General	
	BIODIVERSITY	
B15	**Vegetation Clearance**	Section 6 and Appendix B

Condition	Requirement	Section addressed
	The Applicant must not clear any native vegetation or fauna habitat located outside the approved disturbance areas described in the EIS.	
B16	The Applicant must take all reasonable efforts to replace the removed paddock trees with the same number of trees of a similar species on site. These replacement trees are to be planted within the area of the site identified for riparian planting and/or within the vegetation buffer.	Section 6 and Landscape Plan (MLA 2024)
B17	**Biodiversity Offsets** Prior to carrying out any development that could directly or indirectly impact the biodiversity values requiring offset, the Applicant must retire biodiversity credits of a number and class specified in Table 1 and Table 2 below (of the consent conditions). The retirement of these credits must be carried out in accordance with the *NSW Biodiversity Offsets Scheme* and can be achieved by: (a) acquiring or retiring 'biodiversity credits' within the meaning of the *Biodiversity Conservation Act 2016*; (b) making payments into an offset fund that has been developed by the NSW Government; and/or (c) funding a biodiversity conservation action that benefits the entity impacted and is listed in the ancillary rules of the biodiversity offset scheme.	Biodiversity credits have been retired in accordance with this condition, prior to carrying out any development that could impact biodiversity values.
B18	Prior to carrying out any development that could directly or indirectly impact the biodiversity values requiring offset, the Applicant must provide evidence to the Planning Secretary that biodiversity credits have been retired.	Biodiversity credits have been retired prior to carrying out any development that could impact biodiversity values.
B19	Biodiversity Management Plan Prior to carrying out any development that could directly or indirectly impact biodiversity values, the Applicant must prepare a Biodiversity Management Plan for the development in consultation with BCS, and to the satisfaction of the Planning Secretary. This plan must: (a) be prepared in accordance with the Biodiversity Development Assessment Report dated 7 August 2023, including incorporation of the measures described in the Roadside Tree Assessment (ArborViews, 2023); (b) include a description of the measures and timeframes that would be implemented for: (iii) protecting vegetation and fauna habitat outside the approved disturbance areas; (iv) managing and enhancing the remnant vegetation and fauna habitat on site; (v) avoiding the removal of hollow-bearing trees during spring to avoid the main	Appendix A Entire document Section 6

Condition	Requirement	Section addressed
	breeding period for hollow-dependent fauna; (vi) minimising clearing and avoiding unnecessary disturbance of vegetation that is associated with the construction and operation of the development; (vii) minimising the impacts to fauna on site and implementing fauna management protocols; (viii) rehabilitating and revegetating temporary disturbance areas with native species that are appropriate to the site's ecology and conditions; (ix) maximising the salvage of vegetative and soil resources within the approved disturbance area for beneficial reuse in the enhancement or the rehabilitation of the site; and (x) controlling weeds, feral pests and pathogens; (c) include a program to monitor and report on the effectiveness of mitigation measures; (d) include an incidental threatened species finds protocol to identify the avoid and/or minimise and/or offset options to be implemented if additional threatened species are discovered on site; (e) include details of who would be responsible for monitoring, reviewing and implementing the plan. Following the Planning Secretary's approval, the Applicant must implement the Biodiversity Management Plan.	Section 7 Appendix B5 Section 7.1
	ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING	
C7	**Notification of Department** Prior to commencing the construction, operations, upgrading or decommissioning of the development or the cessation of operations, the Applicant must notify the Department in writing via the Major Projects website portal of the date of commencement, or cessation, of the relevant phase. If any of these phases of the development are to be staged, then the Applicant must notify the Department in writing prior to commencing the relevant stage, and clearly identify the development that would be carried out during the relevant stage.	Notification will be provided to the Department prior to these milestones and relevant stages, in accordance with Section 7.4 The Project Manager is responsible for notification.
NC10	**Incident Notification** The Planning Secretary must be notified in writing via the Major Projects website immediately after the Applicant becomes aware of an incident. The notification must identify the development (including the development application	Notification will be provided to the Planning Secretary in the event of an incident in accordance with Section 7.4.

Condition	Requirement	Section addressed
	number and the name of the development if it has one) and set out the location and nature of the incident. Subsequent notification requirements must be given, and reports submitted in accordance with the requirements set out in APPENDIX 8 (of the Development Consent).	All staff are responsible for reporting incidents to their superior. The Project Manager is responsible for notification.
C11	**Non-Compliance Notification** The Department must be notified via the Major Projects website portal within 7 days after the Applicant becomes aware of any non-compliance	Notification will be provided to the Department within 7 days of any non-compliance per Section 7.4 All staff are responsible for reporting non-compliance to their superior. The Project Manager is responsible for notification.
C12	**Non-Compliance Notification** A non-compliance notification must identify the development and the application number for it, set out the condition of consent that the development is non-compliant with, the way in which it does not comply and the reasons for the non-compliance (if known) and what actions have been, or will be, undertaken to address the non-compliance	The notification will include the Development name and application number (SSD-9550) and relevant consent condition. Actions will be identified and reported by the Project Manager in consultation with relevant staff or authority in accordance with Section 7.4.
C13	**Non-Compliance Notification** A non-compliance which has been notified as an incident does not need to also be notified as a non- compliance.	The Project Manager will not notify non-compliance where it has already been identified and notified as an incident, in accordance with Section 7.4.

3.2. Commonwealth approval

The Project was referred to the Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW) in relation to impacts on Matters of National Environmental Significance (MNES) under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The Project has been determined as a Not a Controlled Action (NCA), therefore requiring no further action under the EPBC Act.

4. Existing Environment

Overview

Vegetation in the Development Footprint mostly comprises paddock trees across pasture, or pasture improved, land after years of agricultural use. The BDAR identified 8.75 ha of Plant Community Types (PCTs), across five (5) vegetation zones within the total Development Footprint of 308.9 ha. These are:

- **PCT 277** *Blakely's Red Gum – Yellow Box grassy tall woodland of the NSW South Western Slopes Bioregion* (Grazing/exotic pasture)
- **PCT 277** *Blakely's Red Gum – Yellow Box grassy tall woodland of the NSW South Western Slopes Bioregion* (Planted)
- **PCT 277** *Blakely's Red Gum – Yellow Box grassy tall woodland of the NSW South Western Slopes Bioregion* (Low condition)
- **PCT 9** *River Red Gum – wallaby grass tall woodland wetland on the outer River Red Gum zone mainly in the Riverina Bioregion* (Low condition)
- **PCT 277** *Blakely's Red Gum – Yellow Box grassy tall woodland of the NSW South Western Slopes Bioregion* (Roadside)

A total of 77 scattered paddock trees are also present within the Development Footprint. All trees in this zone were over the 50 cm DBH large tree benchmark for PCT 277.

PCT 277 (Low) and PCT277 (Roadside) conform to the Critically Endangered Ecological Community (CEEC) *White Box Yellow Box Blakely's Red Gum Woodland* (Box Gum Woodland) listed under the NSW *Biodiversity Conservation Act 2016* (BC Act). Grazing/exotic pasture and planted zones of PCT 277 do not meet the listing criteria for the CEEC. The condition of PCT 277 did not meet the minimum thresholds for listing under the EPBC Act.

No threatened flora or fauna species were recorded within the Project Site, however, potential habitat for threatened species *Myotis macropus* (Southern Myotis), *Petaurus norfolcensis* (Squirrel Glider)[1] and *Pilularia novae-hollandiae* have been assumed to be present.

Habitat features to be removed include native vegetation, hollow-bearing trees and six stags (dead trees containing small hollows).

[1] Roadside Upgrade areas only.

4.1. Land use

The Project Site is zoned RU1 – Primary Production under the Greater Hume Local Environment Plan (LEP) 2012. It has been used for agricultural purposes for an estimated more than 50 years and is dominated by exotic pasture, cropping or pasture improved land with scattered paddock trees. Several farm dams are present throughout the Project Site to support the agricultural use of the land.

4.2. Plant Community Types (PCTs)

Native vegetation comprises two Plant Community Types (PCT) in six vegetation zones (see Table 4-1**)**. A total area of 8.75 ha of native PCTs was identified within the approved Development Footprint. Impacts to these vegetation types will be appropriately offset in accordance with the conditions of the NSW Development Consent SSD-9550. Management actions to ensure compliance with the approved clearing extent (Development Footprint) are detailed below in Section 6.1.

4.3. Threatened Ecological Communities

One (1) Threatened Ecological Community (TEC) listed under the BC Act is present within the Development Footprint.

PCT 277 conforms to the Critically Endangered Ecological Community (CEEC) listing under the BC Act for *White Box Yellow Box Blakely's Red Gum Woodland* (Box Gum Woodland). PCT 277 within the Development Footprint does not correspond to the condition thresholds for listing under the EPBC Act.

PCT 9 does not correspond to a TEC listing under the BC Act or EPBC Act.

The total affected area of TEC in the Development Footprint is 7.73 ha, of which 7.27 is low condition grassland. Impacts to the areas of CEEC will be appropriately offset in accordance with Condition B17 and B18 of the NSW Development Consent SSD-9550, in accordance with the BDAR (ELA 2023). Management actions to ensure compliance with the approved clearing extent are detailed below in Section 6.

Table 4-1: Native vegetation zones within Development Footprint

PCT Description		
PCT 277: Blakely's Red Gum – Yellow Box grassy tall woodland of the NSW South Western Slopes Bioregion (Grazing and Exotic pasture)		
Vegetation formation	Grassy Woodlands	
Vegetation class	Western Slopes Grassy Woodlands	
Approved clearing extent	7.27 ha	
Key diagnostic characteristics	Canopy contained *Eucalyptus blakelyi* (Blakely's Red Gum) and *Eucalyptus melliodora* (Yellow Box). A few *Eucalyptus bridgesiana* (Apple Box) were present along western edge of Development Footprint. A midstorey was lacking and exotic pasture improved grasses dominated the ground layer, including *Avena* sp. (Wild Oats), *Bromus* spp. (Brome), *Festuca* spp. (Tall Fescue), *Hordeum* spp. (Barley), *Lolium* spp. (Rye Grass), *Phalaris aquatica* (Phalaris) and *Vulpia* sp. (Fescue). The majority of these exotic grasses are sown yearly as part of the on-going land management practices for pasture improvement. The majority of trees in this vegetation zone were over the large tree benchmark for the PCT (50cm DBH) and often contained multiple hollows. Fallen logs and leaf litter were rare.	
Condition status	Grazing and exotic pasture	
TEC status	**BC Act (State listing)**	**EPBC Act (Commonwealth listing)**
	White Box Yellow Box Blakely's Red Gum Woodland (Box Gum Woodland) – Critically Endangered	N/A – does not meet minimum condition threshold for listing
Photo		

Figure 4-1: PCT 277 (Grazing and exotic pasture)

PCT Description		
PCT 277: Blakely's Red Gum – Yellow Box grassy tall woodland of the NSW South Western Slopes Bioregion (Planted)		
Vegetation formation	Grassy Woodlands	
Vegetation class	Western Slopes Grassy Woodlands	
Approved clearing extent	0.29 ha	
Key diagnostic characteristics	Mixed planted juvenile *Eucalyptus blakelyi*, *Eucalyptus melliodora*, *Eucalyptus microcarpa* (Grey Box) and *Eucalyptus crebra* (Thin-leaved Ironbark). A dense mid-storey was present containing planted shrubs including a number of Wattles and Callistemons such as *Acacia baileyana* (Cootamundra Wattle), *Acacia rubida* (Red-stemmed Wattle) and *Callistemon* sp. (Bottlebrush). The ground layer was predominately exotic with occasional native grass species. This vegetation zone was assigned to PCT 277 as it contained species native to NSW (including those present within PCT 277 and those absent, such as *Eucalyptus crebra*).	
Condition status	Planted	
TEC status	**BC Act (State listing)**	**EPBC Act (Commonwealth listing)**
	White Box Yellow Box Blakely's Red Gum Woodland (Box Gum Woodland) – Critically Endangered	N/A – does not meet minimum condition threshold for listing
Photo		

Figure 4-2: PCT 277 (Planted)

PCT Description		
PCT 277: Blakely's Red Gum – Yellow Box grassy tall woodland of the NSW South Western Slopes Bioregion (Low condition)		
Vegetation formation	Grassy Woodlands	
Vegetation class	Western Slopes Grassy Woodlands	
Approved clearing extent	0.10 ha	
Key diagnostic characteristics	*Eucalyptus blakelyi* canopy. Canopy trees were younger than elsewhere in the development footprint. Tree hollows and fallen logs were rare; leaf litter was more abundant. No midstorey was present, and groundcover contained mixed native and exotic grasses and forbs.	
Condition status	Low	
TEC status	**BC Act (State listing)**	**EPBC Act (Commonwealth listing)**
	White Box Yellow Box Blakely's Red Gum Woodland (Box Gum Woodland) – Critically Endangered	N/A – does not meet minimum condition threshold for listing
Photo		

Figure 4-3: PCT 277 (Low condition)

PCT Description		
Scattered Paddock Trees (Category 1 Land)		
ID	Scattered Paddock Trees	
Approved clearing extent	77 trees	
Key diagnostic characteristics	Comprised of the canopy species *Eucalyptus blakelyi* and *Eucalyptus melliodora*. The majority of trees were over the large tree benchmark for the PCT (50cm DBH) and often contained multiple hollows.	
TEC status	**BC Act (State listing)**	**EPBC Act (Commonwealth listing)**
	N/A	N/A
Photo		

Figure 4-4: PCT 277 (Paddock tree)

PCT Description		
PCT 9: River Red Gum – wallaby grass tall woodland wetland on the outer River Red Gum zone mainly in the Riverina Bioregion (Low condition)		
Vegetation formation	Forested Wetlands	
Vegetation class	Inland Riverine Forests	
Approved clearing extent	1.02 ha	
Key diagnostic characteristics	Comprised of a single remnant canopy species *Eucalyptus camaldulensis* (River Red Gum). The majority of trees in this vegetation zone were over the large tree benchmark for the PCT and often contained multiple hollows. However, in the far north of the Development Footprint, a few planted indigenous Eucalypts were present, including *Eucalyptus microcarpa* and *Eucalyptus polyanthemos* (Red Box). No mid-storey was present.	
Condition status	Low condition	
TEC status	**BC Act (State listing)**	**EPBC Act (Commonwealth listing)**
	N/A – not listed	N/A – not listed
Photo		

Figure 4-5: PCT 9 (Low condition)

PCT Description		
PCT 277 Blakely's Red Gum – Yellow Box grassy tall woodland of the NSW South Western Slopes Bioregion (Roadside)		
Vegetation formation	Grassy Woodlands	
Vegetation class	Western Slopes Grassy Woodlands	
Approved clearing extent	0.07 ha	
Key diagnostic characteristics	This vegetation zone occurred along the roadside. It comprised of the canopy species *Eucalyptus blakelyi*, *E. melliodora* and *E. polyanthemos* and no midstorey was present. The ground layer included a mix of native and exotic grasses and forbs including, *Poa sieberiana* (snow grass), *Bothriochloa macra* (Red Grass), *Enteropogon acicularis* (Curly Windmill Grass) The canopy trees in this vegetation zone were younger than the rest of the Development Footprint. Tree hollows and fallen logs were rare, while leaf litter was more abundant.	
Condition status	Roadside	
TEC status	**BC Act (State listing)**	**EPBC Act (Commonwealth listing)**
	White Box Yellow Box Blakely's Red Gum Woodland (Box Gum Woodland) – Critically Endangered	N/A – does not meet minimum condition threshold for listing
Photo		

Figure 4-6: PCT 277 (Roadside)

4.4. Threatened Flora

The Project Site has been subject to comprehensive threatened flora surveys targeting a range of species within the appropriate survey timing. No threatened flora species have been identified within the Development Footprint. Despite this, *Pilularia novae-hollandiae* is listed as endangered under the BC Act have been assumed to be present based on-site characteristics.

4.5. Threatened Fauna

With potential habitat present for a range of species, comprehensive targeted surveys were undertaken for the Project to assess potential presence of threatened species. No threatened species were identified during targeted survey. Two threatened fauna species, Southern Myotis and Squirrel Glider[2], were assumed to be present based on habitat features in the Development Footprint.

4.6. Fauna Habitat

4.6.1. Woodlands and Forests

Woodland and forest areas vary across pasture, planted and low conditions within the Development Footprint and contain seasonal flower resources, trees with hollows and fallen timber for fauna habitat. In general, woodland and forest of the roadside area has a sparse mid-storey, and the groundcover is dominated by exotic or pasture-improved grasses. Scattered throughout the site are numerous hollow-bearing trees (HBTs) and stags with hollows.

The Development Footprint contains 8.75 ha of native PCTs in varying conditions, as well as a total of 77 scattered paddock trees.

4.6.2. Dams

All dams within the Development Footprint will be retained. The dams within the site are mostly devoid of vegetation and the edges have been heavily trampled by cattle. The farm dams and vast majority of exotic vegetation are not considered to represent habitat for threatened species.

Dams provide potential habitat for Southern Myotis, especially where small hollows are located within proximity. Dam edges and areas of PCT 9 also provide potential habitat for the endangered flora species, *Pilularia novae-hollandiae*.

4.6.3. Cleared/highly disturbed non-native vegetation

Cleared and highly disturbed non-native vegetation dominate the Development Footprint and present limited habitat opportunities, primarily providing foraging habitat for common farmland birds such as Magpie Lark (*Grallina cyanoleuca*), Australian Magpie (C*racticus tibicen*) and Nankeen Kestrel (*Falco cenchroides*).

[2] Roadside Upgrade areas only.

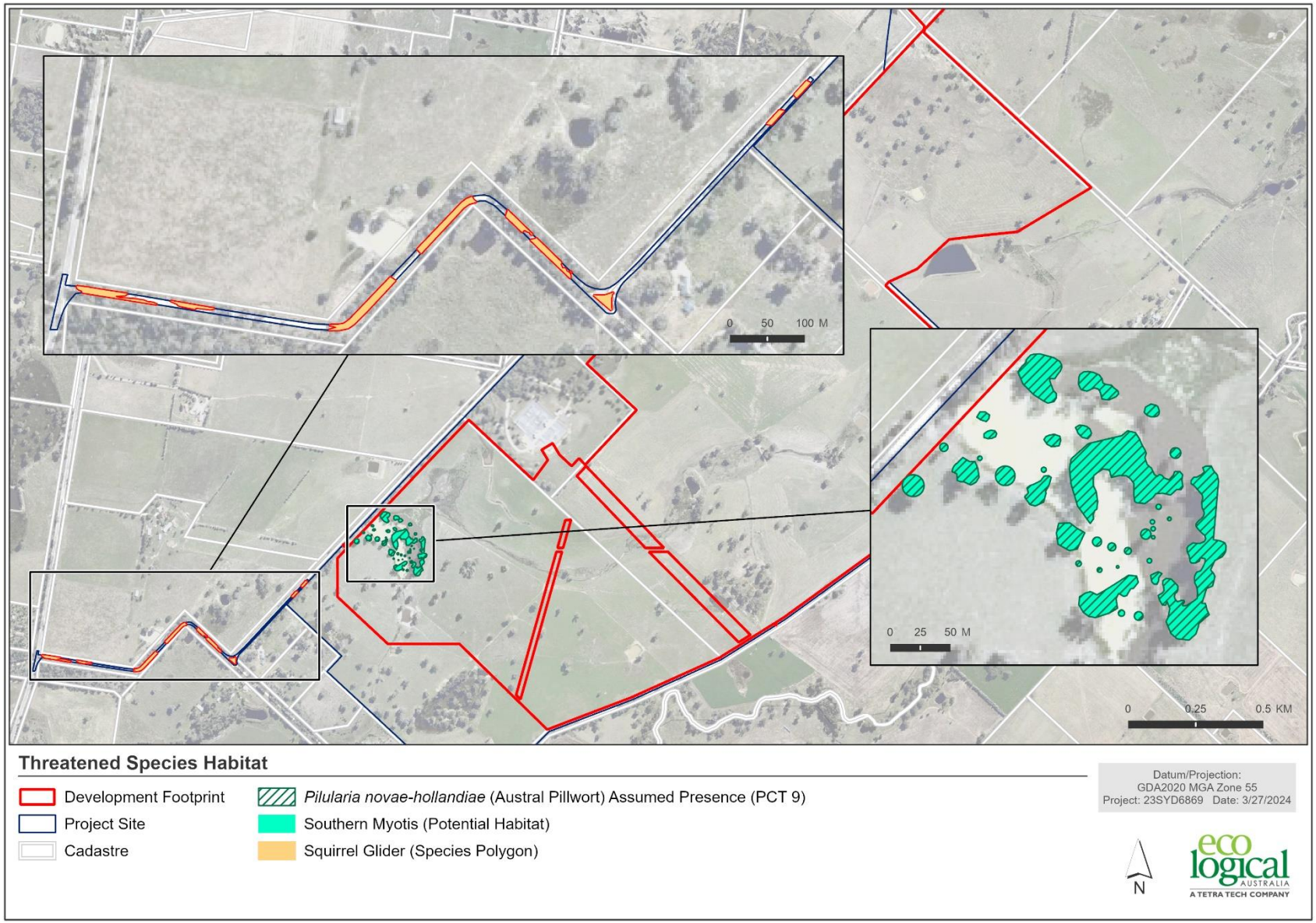


Figure 4-7: Threatened species habitat

4.7. Weeds

No State and/or regional priority weed listed under the *Murray Regional Strategic Weed Management Plan 2023-2027* were recorded within the Project Site during extensive vegetation surveys. No Weeds of National Significance (WoNS) were observed; however this does not eliminate the potential for WoNS or additional weeds not observed to occur within the Project Site.

Weed species found within the Project Site which may be considered environmental or agricultural weeds, listed below in Table 4-2. These are consistent with the site's agricultural history, roadside context and ongoing disturbance.

Table 4-2: Environmental and agricultural weeds recorded in the Project Site

Scientific name	Common name
Acetosella vulgaris	Sorrel
Arctotheca calendula	Capeweed
Avena sp.	Wild Oars
Brassica sp.	Canola
Bromus sp.	Brome
Cestrum vulgare	Spear Thistle
Cotula coronopifolia	Water Buttons
Erodium moschatum	Musky Crowfoot
Festuca arundinacea	Tall Fescue
Hordeum sp.	Barley
Hypochaeris radicata	Catsear
Lolium sp.	Rye Grass
Lythrum hyssopifolia	Hyssop Loosestrife
Malva sp.	Mallow
Phalaris aquatica	Phalaris
Poa annua	Winter Grass
Romulea rosea	Onion Grass
Sonchus asper	Prickly Sowthistle
Stellaria media	Common Chickweed
Trifolium sp.	Clover
Trifolium repens	Clover
Vulpia sp.	Fescue

5. Construction and Operation Activities

Table 5-1 provides the likely work schedule indicative of the staging of the Project and associated biodiversity impacts, which were identified in the BDAR (ELA 2023), as a reference point for site contractors and staff and to promote awareness of biodiversity issues. Some activities may occur simultaneously.

Biodiversity impacts have informed the biodiversity management measures provided in Section 6.

Table 5-1: Schedule of biodiversity impacts

Project Phase	Potential/Anticipated Impact (identified in BDAR)
Pre-Construction (PC) Site preparation and construction of roads/ancillary infrastructure	• Disturbance to native groundcover from vehicle movements • Disturbance and removal of fauna habitat including woody debris and leaf litter • Introduction and spread of weeds or pathogens • Vehicle strike causing wildlife injury or death • Noise, dust and light spill • Sedimentation and/or nutrient-rich runoff • Rubbish dumping • Reduced water quality in riparian corridor and/or retained farm dams • Reduced quality or edge effects in adjacent vegetation • Risk of fire to spark during construction from any machinery or electrical works
Construction (C) Installation of PV Modules, Electrical Cables, Substation Modifications. Includes the Project commissioning phase.	• Risk of fire to spark during construction from any machinery or electrical works • Trampling of vegetation and threatened flora • Generation of dust and noise • Introduction and spread of weeds or pathogens • Vehicle strike causing wildlife injury or death • Disturbance to native groundcover from vehicle movements • Disturbance to native groundcover from vehicle movements • Noise, dust and light spill
Restoration	• Spread or introduction of priority weeds from machinery/equipment • Ongoing risk of vehicle strike
Operation & Maintenance Approximate 30 year operational period.	• Vehicle strike causing wildlife injury or death resulting from operation and maintenance vehicle movements • Rubbish dumping • Risk of bushfire • Increased pest and/or predatory species presence in adjacent vegetation (placing pressure on fauna)
Decommissioning **Removal of PV modules, electrical cables, substation.**	• Disturbance to native groundcover from vehicle movements • Vehicle strike causing wildlife injury or death • Noise, dust and light spill • Rubbish dumping • Reduced water quality in riparian corridor and/or retained farm dams • Reduced quality or edge effect in adjacent vegetation • Risk of fire to spark during decommissioning from any machinery or electrical works • Introduction and spread of weeds or pathogens

6. Biodiversity Management Measures

Project specific measures and protocols are required pre-construction, during construction, in the operational phase and post-operation (rehabilitation, repowering or decommissioning). These management measures are summarised in Table 6-1 below in accordance with the Project phases.

Table 6-2 below provides a detailed schedule of the biodiversity management measures in accordance with Project phasing. Each measure is associated with a unique Action ID related to each phase (per Table 6-2) to assist with auditing, monitoring and reporting – which in turn will support accurate implementation and compliance with Development Consent.

The measures in this BMP must be referenced in conjunction with the Development Consent Conditions for SSD-9550 and the Project EMS (ELA 2024a) to ensure management of all environmental aspects, and ongoing compliance with consent conditions.

Table 6-1: Summary of biodiversity management measures

PROJECT PHASE / MEASURE	Pre-Construction	Construction	Operation	Rehabilitation, Repowering or Decommissioning
Staff training & induction	Yes	Yes	Yes	Yes
Pre-clearance surveys	Yes	N/A	N/A	N/A
Landscape plantings, replacement & monitoring	Yes	Yes	Yes	N/A
Monitoring vegetation clearing	Yes	Yes	Yes	N/A
Protection of vegetation and fauna habitat in No Go and riparian zones	Yes	Yes	Yes	Yes
Vegetation removal procedures	Yes	Yes	N/A	N/A
Resource salvage	Yes	Yes	N/A	N/A
Pest management	Yes	Yes	Yes	Yes
Hygiene and weed Management	Yes	Yes	Yes	Yes
Threatened species finds procedure	Yes	Yes	N/A	Yes
Vehicle movements and strike	Yes	Yes	Yes	Yes
Noise and light management	Yes	Yes	Yes	Yes
Waste and general rubbish management	Yes	Yes	Yes	Yes
Soil and water quality management	Yes	Yes	Yes	Yes
Bushfire risk	Yes	Yes	Yes	Yes
Rehabilitation	N/A	Yes	N/A	Yes

Table 6-2: Biodiversity Management Measures

Project Phase	Action ID	Measure	Responsibility	Trigger / Timing	Success Measures / Performance Indicators	Completion Measures	Adaptive Management	Monitoring / Reporting Requirement (Table 7-3)
Pre-Construction (PC) Site Preparation and construction of roads/ancillary infrastructure.	BIO-PC01	**Training & Induction** All staff, contractors and temporary workers must complete a site induction prior to commencing any work on the Project. The induction must communicate environmental features to be protected and relevant protocols, measures and other requirements of this BMP and Consent Conditions	EPC Site Manager HSE Manager	Prior to any pre-construction work	All performance indicators below are met. All biodiversity measures are implemented, monitoring, reported and managed.	All staff have completed relevant training and induction	Should gaps or issues with the induction be identified at any stage, the training/induction material will be updated in consultation with the HSE Manager and Project Ecologist if necessary.	Training record (BIOMON-00)
	BIO-PC02	**Identify and demarcate approved disturbance area per procedure in Appendix B3.A** The approved disturbance area (Development Footprint, Figure 2-1) must be clearly demarcated on all survey and GIS systems. Fencing, high visibility bunting or flagging tape is used to physically delineate this area on site. Install permanent stock-proof fencing and appropriate signage such as “No Go Zone” or “Environmental Protection Area” in areas to be protected to protect retained vegetation and fauna habitat (Figure 2-1). Access for vehicles, equipment and machinery is clearly defined and does not impact on vegetation outside the Development Footprint. Access for staff, contractors and temporary works is clearly defines and does not impact on vegetation outside the Development Footprint (Figure 2-1).	EPC Site Manager HSE Manager All staff	Prior to any on ground disturbance or clearing of vegetation	No clearing, trampling or adverse effects to vegetation in no-go zones. No-go zones (i.e. vegetation to be retained) are protected throughout construction.	Development Footprint is clearly demarcated on-ground (high visibility bunting, fencing or similar) and via survey and GIS systems. Protection of No Go Zones with permanent stock-proof fencing is maintained for construction and Project life.	Review and revise this BMP if deficiencies are identified. Note any changes required to approved impacts will first require a modification	BIO-MON02
	BIO-PC03	**Implement the Sediment and Erosion Control Plan (ELA 2024b)** Measures include protection of water quality in farm dams and riparian land from soils and erosion	EPC Site Manager Site Manager	Prior to any on ground disturbance	Dam and watercourse water quality is maintained. No biodiversity issues resulting from sediment and erosion. Checks to ensure there are no increased sediment and material in waterways, drains etc.	N/A	Review and revise this BMP and relevant subplans if deficiencies are identified.	In accordance with Sediment and Erosion Control Plan (ELA 2024b)
	BIO-PC04	**Weed and seed protocols on site entry in accordance with Appendix B5** Strict hygiene measures to avoid movement of weed propagules or introduction of pathogens from machinery and vehicles entering site	All staff	Prior to machinery/vehicles site entry	No introduction of weeds or pathogens from the Project Site	N/A	Review and revise this BMP and relevant subplans if deficiencies are identified.	BIO-MON12
	BIO-PC05	**Machinery washdown on exit from site in accordance with Appendix B5** Strict hygiene measures to prevent movement of weed propagules known from the Project Site to other areas	All staff	Prior to machinery site exit	No increase of weeds or pathogens on Project Site.	N/A	Review and revise this BMP and relevant subplans if deficiencies are identified.	BIO-MON12

Project Phase	Action ID	Measure	Responsibility	Trigger / Timing	Success Measures / Performance Indicators	Completion Measures	Adaptive Management	Monitoring / Reporting Requirement (Table 7-3)
	BIO-PC06	**Limit works to standard daytime hours** All pre-construction work (including deliveries) will occur in accordance with standard daytime house set out by the Consent Conditions: • 7am – 6 pm Monday to Friday • 8 am – 1 pm Saturdays • at no time on Sunday or NSW Public Holidays	All staff	At all times	No noise or light disturbance to adjacent retained fauna habitat at night	N/A	Respond to any noise or light complaints and revise relevant subplans if required.	BIO-MON15
	BIO-PC07	**Reduce vehicle speeds and limit access to designated and formed roads** Adhere to 40 km/h speed limit along Ortlipp and Lindner Roads. Minimise speed moving throughout the Project Site on designated roads that are clearly signed.	All staff	At all times	No vehicle strike on fauna or injuries to fauna as a result of speeding vehicles	N/A	Review Traffic Management Plan (TMP) if required.	BIO-MON09
	BIO-PC08	**Fauna handling is minimised.** Including any fauna that may enter the site – wait for it to leave on its own. All native fauna are protected. Fauna management procedures (Appendix B4) are implemented as required.	All staff Project Ecologist	If fauna is identified utilising vegetation to be removed, including but not limited to hollow-bearing trees	Minimal fauna handling required	N/A	Review and revise this BMP if deficiencies are identified	BIO-MON05
	BIO-PC09	**Relocate fauna if identified during pre-clearance survey or fauna rescue protocol** Refer to fauna management procedures provided in Appendix B4.	All staff Project Ecologist	If fauna is identified utilising vegetation to be removed, including but not limited to hollow-bearing trees	No injury to fauna Fauna either leave on their own or are appropriately handed and relocated to nearby retained vegetation (subject to appropriate permits/licenses)	N/A	Review and revise this BMP if deficiencies are identified	BIO-MON06
	BIO-PC10	**Removal of hollow-bearing trees in accordance with Appendix B3.D** Only hollow-bearing trees within the Development Footprint (identified in Figure 2-1) are approved for removal. Schedule removal of hollows outside of Spring (main breeding season) to limit disturbance. *Note: Felled HBTs can be relocated into adjacent habitat per BIO-PC15 and Appendix B3.F*	Project Ecologist EPC Site Manager Site Manager & HSE Manager	Prior to and during removal of hollow-bearing trees.	No injury to fauna	All hollows surveyed, removed and relocated	Suitable fauna management protocols in consultation with Project Ecologist if fauna using hollows at time of felling.	BIO-MON04
	BIO-PC11	**Vegetation Clearance Procedures in accordance with Appendix B3** Vegetation clearing can only occur within the approval areas (Figure 2-1) following the method and approached outlined in Appendix B3.	HSE Manager EPC Site Manager Project Ecologist	Pre-clearance surveys and during vegetation clearing	No vegetation removal occurs in no-go zones. No injury to fauna.	Total vegetation clearing complete and does not exceed approved impacts. No clearing of vegetation outside Development Footprint No-go zones are maintained	Review and revise this BMP if deficiencies are identified.	BIO-MON01
	BIO-PC12	**All vegetation removal is undertaken with regard for fauna, minimising clearing and no-go zones**	HSE Manager EPC Site Manager Project Ecologist	During vegetation clearing	No vegetation removal occurs in no-go zones. No injury to fauna	Total vegetation clearing complete and	Review and revise this BMP if deficiencies are identified.	BIO-MON01

Project Phase	Action ID	Measure	Responsibility	Trigger / Timing	Success Measures / Performance Indicators	Completion Measures	Adaptive Management	Monitoring / Reporting Requirement (Table 7-3)
		Relevant vegetation clearing procedures must be followed, as provided in Appendix B2 and Appendix B3.				does not exceed approved impact. No clearing of vegetation outside Development Footprint No-go zones are maintained		
	BIO-PC13	**Implement Arboricultural Procedures for road upgrade works** Refer to Figure 2-2, Figure 2-9, Appendix B1 and ArborView (2023) report for pruning/tie-back instruction and supplementary watering.	EPC Contractor Project Arborist	Before road upgrades	Full recovery of trees in road upgrade area (except Tree 196 requiring extensive canopy pruning)	Access for road upgrade work is achieved	Review Arboricultural procedures in consultation with Project Arborist if issues identified with tree health following works, or if specifications cannot be met	BIO-MON03
	BIO-PC14	**Monitor and progressively track vegetation clearing** The cumulative amount of cleared vegetation must be continually monitored and compared to Development Footprint and approved vegetation clearing area (Figure 2-1).	HSE Manager EPC Site Manager	During vegetation clearing	No more than 8.75 ha of vegetation is cleared. Clearing of PCTs does not exceed the areas assessed in the BDAR and identified in Table 9-2.	Vegetation clearing required for the Project is complete	Consult with the HSE Manager in relation to any management issues for vegetation clearing limits. Review this BMP if deficiencies are identified.	BIO-MON02 BIO-MON11
	BIO-PC15	**Salvage resources (e.g. woody debris, felled hollows, seed collection, topsoil)** Resources are reused and relocated in accordance with the procedure provided in Appendix B2.F wherever feasible	EPC Site Manager Project Manager Project Ecologist	During and after vegetation clearing Prior to construction activities	Offsite disposal of natural resources is avoided or minimised	Resources are relocated to retained areas of native vegetation within the Project Site	Should additional areas for resources be required, or resource salvage is not feasible, consultation with adjacent landholders, BCS and/or the Project Ecologist will be required	BIO-MON14
	BIO-PC16	**Report unexpected and threatened species finds** Threatened species assumed present or with suitable habitat in the Development Footprint (Figure 2-1) are described in Appendix B5 with relevant procedure.	All staff	In the event a threatened species is identified and may be affected	No threatened fauna harmed. No clearing of threatened fauna outside of approved impacts.	N/A	If additional threatened species or locations are identified during the Project that may be affected, consult with the Project Ecologist and/or BCS for advice and revise this BMP as required.	BIO-MON07
	BIO-PC17	**Use hand tools for vegetation pruning, lopping and removal where feasible** Minimise unnecessary noise and risk of machinery fire	All staff	At all times	No unnecessary clearing or damage to vegetation. No fire hazards resulting from unnecessary machinery use.	Vegetation removal complete	Review and revise this BMP if deficiencies are identified	N/A
	BIO-PC18	**Replacement of cleared paddock trees** Replacement trees are to equal the number and species of removed paddock trees, within areas	Project Manager Site Manager	Before construction	1:1 replacement of removed paddock trees	Paddock tree removal is compensated across the Project Site, up to	Revise Landscape Plan (MLA 2024) if required	In accordance with Landscape Plan (MLA 2024)

Project Phase	Action ID	Measure	Responsibility	Trigger / Timing	Success Measures / Performance Indicators	Completion Measures	Adaptive Management	Monitoring / Reporting Requirement (Table 7-3)
		identified for riparian planting and/or within the vegetation buffer (refer to Landscape Plan, MLA 2024).	Landscape Architect		*Eucalyptus blakelyi* and *Eucalyptus melliodora*. Additional visual screening in riparian areas and/or vegetation buffers.	77 trees. Compliance with Condition B16.		
	BIO-PC19	**Minimise feral pest presence** Manage waste in accordance with the Waste Management Plan (Coffey 2024) and BIO-PC18 to limit scavenging opportunities for pests on site.	All staff	At all times	No feral pest presence during pre-construction activities No scavenging opportunities (e.g. rubbish or organic waste) remain on site	N/A	If feral pests are a greater issue than anticipated, review of this BMP and development of further management actions will be required	BIO-MON13
	BIO-PC20	**Dispose of waste appropriately** Contracted staff handle general waste appropriately (provided receptacles or disposed offsite). Waste generated by pre-construction works to be managed in accordance with the Waste Management Plan (Coffey 2024).	All staff	General waste will be stored in containers with regular removal from the Project site. Removal of other waste materials in accordance with Waste Management Plan (Coffey 2024)	No harm to the environment as a result of pollution or poor waste management.	N/A	Review and revise this BMP and relevant subplans if deficiencies are identified	In accordance with Waste Management Plan (Coffey 2024)
Construction (C) Installation of PV Modules, Electrical Cables, Substation Modifications. Includes rehabilitation of temporary amenities/laydown areas. Includes the Project commissioning phase.	BIO-C01	**Training & Induction** All staff must complete an induction prior to working on the Project. The induction must communicate environmental features to be protected and relevant protocols, measures and other requirements of this BMP and Consent Conditions	EPC Site Manager HSE Manager	New staff, temporary workers, contractors and consultants prior to any construction work	All performance indicators below are met. All biodiversity measures are implemented, monitoring, reported and managed.	All staff have completed relevant training and induction	Should gaps or issues with the induction be identified at any stage, the training/induction material will be updated in consultation with the HSE Manager and Project Ecologist if necessary.	BIO-MON00
	BIO-C02	**Materials laydown and temporary disturbance located appropriately** Utilise previously cleared areas (Figure 2-1) and avoid unnecessary clearing of vegetation for these purposes	EPC Site Manager	At all times	Vegetation clearing is limited to Development Footprint and previously approved clearing limit No clearing of vegetation for temporary uses	End of construction Remediation of temporary disturbance areas	Review and revise this BMP if deficiencies are identified	BIO-MON10
	BIO-C03	**Reduce vehicle speeds and limit access to designated and formed roads** Adhere to 40 km/h speed limit along Ortlipp and Lindner Roads. Minimise speed moving throughout the Project Site to 10 km/hr and on designated roads that are clearly signed.	All staff	At all times	No vehicle strike on fauna or injuries to fauna as a result of speeding vehicles	N/A	Review Traffic Management Plan (TMP) if required.	BIO-MON09
	BIO-C04	**Inspect open trenches for trapped fauna** Implement fauna rescue protocols if required per Appendix B4	EPC Site Manager ESQ Manager	Twice daily inspections during construction and decommissioning	No trapped fauna remain in trenches No injury or death of fauna	N/A	Review and revise this BMP if deficiencies are identified	BIO-MON08
	BIO-C05	**Fauna handling is minimised.** Including any fauna that may enter the site – wait for it to leave on its own.	All staff Project Ecologist	If fauna is identified within the construction site	Minimal fauna handling required No injured fauna	N/A	Review and revise this BMP if deficiencies are identified	BIO-MON05

Project Phase	Action ID	Measure	Responsibility	Trigger / Timing	Success Measures / Performance Indicators	Completion Measures	Adaptive Management	Monitoring / Reporting Requirement (Table 7-3)
		All native fauna are protected. Fauna management procedures (Appendix B4) are implemented as required.						
	BIO-C06	**Report unexpected and threatened species finds** Threatened species assumed present or with suitable habitat in the Development Footprint are described in Appendix B5 with relevant procedure.	All staff	In the event a threatened species is identified and may be affected	No threatened fauna harmed. No clearing of threatened fauna outside of approved impacts.	N/A	If additional threatened species or locations are identified during the Project that may be affected, consult with the Project Ecologist and/or BCS for advice and revise this BMP as required.	BIO-MON07
	BIO-C07	**Maintain permanent stock-proof fencing around Development Footprint to protect No Go Zones** Stock-proof fencing of no-go areas (Figure 2-1) is to be maintained for the duration of pre-construction, construction activities and Project life.	HSE Manager EPC Site Manager	At all times	No clearing of vegetation in no-go zones No-go zones (i.e. vegetation to be retained) are protected throughout construction, operation and decommissioning.	End of Project / completion of decommissioning	Review effectiveness of stock-proof fencing, location of fencing and maintenance of fencing/signage.	BIO-MON11
	BIO-C08	**Reinstate disturbed areas** Progressive rehabilitation carried out to reinstate disturbed areas with suitable grazing or cropping cover, in accordance with the Rehabilitation and Decommissioning Plan (ELA 2024b).	Site Manager EPC Site Manager	As feasible throughout construction phase, and in accordance with Rehabilitation and Decommissioning Plan (ELA 2024b)	No bare ground or weed infestations on completion of construction activities	Remediation of temporary disturbance areas		
	BIO-C09	**Salvage resources (e.g. topsoil from excavations)** Resources are reused and relocated either for backfilling of excavations, in landscaping or in accordance with the procedure provided in Appendix B2.F wherever feasible	EPC Site Manager Project Manager Project Ecologist	During construction activities	Offsite disposal of soil resources is avoided	Ground and vegetation disturbance is complete	Should additional areas for resources be required, or resource salvage is not feasible, consultation with adjacent landholders, BCS and/or the Project Ecologist will be required	BIO-MON14
	BIO-C10	**Implement the Sediment and Erosion Control Plan (ELA 2024b)** Measures include protection of water quality in farm dams and riparian land from soils and erosion	EPC Site Manager	Prior to any on ground disturbance	Dam and watercourse water quality is maintained. No additional sediment load in watercourse. Site is stabilised with no signs of active erosion.	N/A	Review and revise this BMP and relevant subplans if deficiencies are identified.	In accordance with Sediment and Erosion Control Plan (ELA 2024b)
	BIO-C11	**Weed and seed protocols on site entry in accordance with Appendix B5** Strict hygiene measures to avoid movement of weed propagules or introduction of pathogens from machinery and vehicles entering site	All staff	Prior to machinery/vehicles site entry	No introduction of weeds or pathogens from the Project Site	N/A	Review and revise this BMP and relevant subplans if deficiencies are identified.	BIO-MON12
	BIO-C12	**Machinery washdown on exit from site in accordance with Appendix B5** Strict hygiene measures to prevent movement of weed propagules known from the Project Site to other areas	All staff	Prior to machinery site exit	No spread of weeds or pathogens from the Project Site. Weed presence on site is reduced through	N/A	Review and revise this BMP and relevant subplans if deficiencies are identified.	BIO-MON12

Project Phase	Action ID	Measure	Responsibility	Trigger / Timing	Success Measures / Performance Indicators	Completion Measures	Adaptive Management	Monitoring / Reporting Requirement (Table 7-3)
					appropriate progressive rehabilitation (ELA 2024c).			
	BIO-C13	**Limit works to standard daytime hours** All pre-construction work (including deliveries) will occur in accordance with standard daytime house set out by the Consent Conditions: • 7am – 6 pm Monday to Friday • 8 am – 1 pm Saturdays • at no time on Sunday or NSW Public Holidays	All staff	At all times	No noise or light disturbance to adjacent retained fauna habitat at night	N/A	Respond to any noise or light complaints and revise relevant subplans if required.	BIO-MON15
	BIO-C14	**Minimise feral pest presence** Manage waste in accordance with the Waste Management Plan (Coffey 2024) and BIO-PC18 to limit scavenging opportunities for pests on site.	All staff	At all times	No feral pest presence during construction activities No scavenging opportunities (e.g. rubbish or organic waste) remain on site	N/A	If feral pests are a greater issue than anticipated, review of this BMP and development of further management actions will be required	BIO-MON13
	BIO-C15	**Dispose of waste appropriately** Contracted staff handle general waste appropriately (provided receptacles or disposed offsite). Waste generated by pre-construction works to be managed in accordance with the Waste Management Plan (Coffey 2024).	All staff	Regular removal of general waste; compliance with Waste Management Plan. Removal of other waste materials in accordance with Waste Management Plan (Coffey 2024)	No harm to the environment as a result of pollution or poor waste management.	N/A	Review and revise this BMP and relevant subplans if deficiencies are identified	In accordance with Waste Management Plan (Coffey 2024)
	BIO-C16	**Baseline monitoring of plantings** Establish baseline location and conditions of landscape plantings (riparian, screen and supplementary planting types) to support future regular monitoring under operation (below).	Project Manager Landscape Architect Project Ecologist	Establishment of riparian, screen and supplementary plantings under Landscape Plan (MLA 2024)	Landscape plan achieves prescribed outcomes	Plantings reach at least 3 m height	Review and revise this BMP and/or landscape plan (MLA 2024) if deficiencies are identified	In accordance with Landscape Plan (MLA 2024) and BIO-MON17
Operation & Maintenance (M) Approximate 30 year operational period.	BIO-M01	**Training & Induction** All staff must complete an induction prior to working on the Project. The induction must communicate environmental features to be protected and relevant protocols, measures and other requirements of this BMP and Consent Conditions	All Staff HSE Manager	New staff, prior to operational activities	All performance indicators below and above are met. All biodiversity measures are implemented, monitoring, reported and managed.	All staff have completed relevant training and induction	Should gaps or issues with the induction be identified at any stage, the training/induction material will be updated in consultation with the HSE Manager and Project Ecologist if necessary.	BIO-MON00
	BIO-M02	**Minimise feral pest presence** Manage waste in accordance with the Waste Management Plan (Coffey 2024) and BIO-PC18 to limit scavenging opportunities for pests on site. Ongoing feral animal management in accordance with Rehabilitation and Decommissioning Plan (ELA 2024c).	All staff	At all times	No feral pest presence during construction activities No scavenging opportunities (e.g. rubbish or organic waste) remain on site	N/A	If feral pests are a greater issue than anticipated, review of this BMP and development of further management actions will be required	BIO-MON13
	BIO-M03	**Weed and seed protocols on site entry in accordance with Appendix B5**	All staff	Prior to machinery/vehicles site entry	No introduction of weeds or pathogens from the Project Site	N/A	Review and revise this BMP and relevant subplans if deficiencies are identified.	BIO-MON12

Project Phase	Action ID	Measure	Responsibility	Trigger / Timing	Success Measures / Performance Indicators	Completion Measures	Adaptive Management	Monitoring / Reporting Requirement (Table 7-3)
		Strict hygiene measures to avoid movement of weed propagules or introduction of pathogens from maintenance machinery and vehicles entering site						
	BIO-M04	**Machinery washdown on exit from site in accordance with Appendix B5** Strict hygiene measures to prevent movement of weed propagules known from the Project Site to other areas	All staff	Prior to machinery site exit	No spread of weeds or pathogens from the Project Site	N/A	Review and revise this BMP and relevant subplans if deficiencies are identified.	BIO-MON12
	BIO-M06	**Reduce vehicle speeds and limit access to designated and formed roads** Adhere to 40 km/h speed limit along Ortlipp and Lindner Roads. Minimise speed moving throughout the Project Site on designated roads that are clearly signed.	All staff	At all times	No vehicle strike on fauna or injuries to fauna as a result of speeding vehicles	N/A	Review Traffic Management Plan (TMP) if required.	BIO-MON09
	BIO-M07	**Dispose of waste appropriately** Contracted staff handle general waste appropriately (provided receptacles or disposed offsite). Waste generated by pre-construction works to be managed in accordance with the Waste Management Plan (Coffey 2024).	All staff	Daily removal of general waste Removal of other waste materials in accordance with Waste Management Plan (Coffey 2024)	No harm to the environment as a result of pollution or poor waste management.	N/A	Review and revise this BMP and relevant subplans if deficiencies are identified	In accordance with Waste Management Plan (Coffey 2024)
	BIO-M08	**Implement Sediment and Erosion Control Plan (ELA 2024b) measures relevant to maintenance activities**	Site Manager	Prior to maintenance activities as required	Dam and watercourse water quality is maintained. No biodiversity issues resulting from sediment and erosion.	Maintenance activity completion	Review and revise this BMP and relevant subplan if deficiencies are identified.	In accordance with Sediment and Erosion Control Plan (ELA 2024b)
	BIO-M09	**Manage risk of bushfire in accordance with the Emergency Response Plan (ERP)**	Site Manager HSE Manager	During operational life	Bushfire risk mitigated and/or anticipated and quickly responded to	N/A	Review and revise the Emergency Response Plan as required, if deficiencies are identified	In accordance with the Emergency Response Plan (ERP)
End of 30-year Operational Life (L) Upgrading, repowering and/or decommissioning.	Implement all biodiversity measures described above for pre-construction and construction phases. Reference additional sub-plans (including but not limited to Rehabilitation and Decommissioning, CEMP, Sediment and Erosion Control Plan, Waste Management Plan, Emergency Response Plan and Traffic Management Plan) to support relevant biodiversity impacts at the upgrading, repowering or decommissioning phase. No-go areas (Figure 2-1) must continue to be protected during upgrading, repowering or decommissioning. Additionally, this BMP will require regular revision and updates, as such specific biodiversity management for this phase will be addressed once the scope (whether upgrading, repowering or decommissioning) is determined and the success of implementation of this BMP to date. Consultation with the Project Ecologist is recommended in updating this BMP, for practicality and as part of the review and improvement commitment (Section 8) to address end of operational life activities.							

7. Compliance Management

7.1. Roles and responsibilities

The Project's organisation structure and overall roles and responsibilities are outlined in the EMS. It is important to note that any activities relating to the decommissioning and rehabilitation will be considered within a Decommissioning and Rehabilitation Plan, which will be prepared and submitted prior to (a) progressive rehabilitation during construction and operation, and (b) 2 years prior to rehabilitation or decommissioning in accordance with condition B37 of the Development Consent. This BMP must also be updated (per Section 8) as required, including prior to rehabilitation, repowering or decommissioning commences to address the relevant biodiversity impacts at the end of the Project life.

The personnel responsible for implementing this BMP are described in Table 7-1 below. These roles primarily focus on pre-construction, construction and operational phases.

Table 7-1: Roles and responsibility

Role	Responsibility	Authority
Project Manager	• Ensuring all BMP procedures are adhered to during pre-construction, construction and decommissioning • Issue direction on program and provide authority to proceed as required • Review induction and training material for adequacy and comprehensiveness • Ensure appropriate approvals and licenses are obtained and complied with • Oversee all staff and contractors including monitoring induction records • Report any pollution, harm or accidental clearing incidents • Report any breach of approval to the Planning Secretary	• Stop Work order for activities that may cause material or biodiversity loss • Release Stop Work order as required • Obtain any necessary approvals/consultation in response to incidents
Site Manager	• Support the Project Manager to implement the BMP • Supporting the HSE Manager in ongoing compliance reporting • Induct all site staff and contractors • Ensure inductions and environmental training are adequate and compliant with Development Consent and this BMP • Complete thorough routine environmental inspections • Maintain records of inspection and compliance, including a compliance tracking matrix • Provide records and reports to the ESQ Manager • Implement corrective actions for any potential or known issues • Monitor the effectiveness of the mitigation measures	• Stop Work order for activities in breach of this BMP, or in danger of a breach • Monitor waste disposal and resource salvage • Liaise with staff (e.g. Ecologist) as required to respond to biodiversity management issues (such as active fauna management requirements) • Report to the Project Manager • Support the HSE Manager

Role	Responsibility	Authority
	• Monitor and adhere to no-go zones (including protective stock-proof fencing and signage) throughout all phases of the Project • Monitoring of landscape plantings • Report any incidents in breach of this BMP to the Project Manager	
Health, Safety and Environment (HSE) Manager	• Support the Project Manager to implement the BMP • Maintain a register of all biodiversity management documents • Respond to any failed controls or shortfalls on performance criteria • Maintain a compliance tracking matrix • Monitor and report environmental compliance including but not limited to actions mentioned in Table 6-2. • Report any pollution, harm or accidental clearing incidents • Report any breach of approval to the Project Manager • Regular checks of development footprint boundary and monitoring and management of disturbance area • Regular checks that stock-proof fencing and appropriate signage is in place during all project stages, to protect No Go and riparian zones	• Stop Work order for activities that may cause material or biodiversity loss • Release Stop Work order as required • Obtain any necessary approvals/consultation in response to incidents • Report to the Project Manager
Operations Project Manager	• Responsible for BMP fulfillment during the operation phase • Monitor O&M Contractor on fulfillment of BMP and relevant sub-plan activities and targets • Liaison with Council as required • Reporting of BMP outcomes to the Planning Secretary and other stakeholders during operation • Regularly monitor maintenance of stock-proof fencing and appropriate signage around No Go and riparian zones during operations	• Stop Work order for activities that may cause material or biodiversity loss • Release Stop Work order as required • Obtain any necessary approvals/consultation in response to incidents • Report to the Project Manager
EPC Project Manager	• Ensure implementation and compliance with BMP and Development Consent • Liaison with Council and other stakeholders • Reporting of BMP outcomes and/or incidents to the Project Manager	• Stop Work order for activities that may cause material or biodiversity loss • Report any issues that may have the potential to cause harm to biodiversity • Report any incidents or near-misses that may adversely affect biodiversity or breach the controls under this BMP

Role	Responsibility	Authority
		• Report to the Project Manager
EPC Site Manager	• Ensuring biodiversity and environmental induction training and resources are available to all contractor staff • Coordinate all staff and activities • Ensure clearance boundaries (approved development footprint and no-go areas) are accurately demarcated • Maintain records of inspection and compliance • Provide records and reports to the EPC Project Manager • Implement corrective actions for any potential or known issues • Comply with all aspects of this BMP • Proactively identify, raise and report any issue that may have an impact on biodiversity including the effectiveness of the mitigation measures • Report any incidents in breach of this BMP to the GPG Site Manager and/or ESQ Manager • Regularly monitor maintenance of stock-proof fencing and appropriate signage around No Go and riparian zones during construction	• Stop Work order for activities that may cause material or biodiversity loss • Report any issues that may have the potential to cause harm to biodiversity • Report any incidents or near-misses that may adversely affect biodiversity or breach the controls under this BMP • Report to the EPC Project Manager
O&M Contractor	• Support the Project Manager for fulfillment of the BMP during the operation phase • Liaison with O&M subcontractors and relevant stakeholders • Reporting of BMP outcomes to Operations Project Manager • Regularly monitor maintenance of stock-proof fencing and appropriate signage around No Go and riparian zones during operations	• Report to Operations Project Manager
All contracted staff	• Complete site induction prior to commencing works on site • Attend all environmental and biodiversity training as required • Maintain competency and awareness of the requirements of this BMP, in accordance with the provided training • Report any incidents in breach of this BMP to the EPC Site Manager • Follow instructions of EPC Site Manager / Project Manager • Identify and raise any issue that may have an impact on biodiversity; notify EPC Site Manager • Monitor and adhere to No Go Zones throughout all phases of the Project; report any failed fencing or signage of No Go and riparian zones	• Report issues that arise and have the potential to cause harm to biodiversity • Report to EPC Site Manager

7.2. Training

All Proponent employees, site contractors and staff working on the Project will complete site induction training relating to biodiversity values and controls, as described in this BMP.

Targeted training in the form of toolbox talks or specific training will also be provided to personnel with a key role in biodiversity management, including vegetation clearing. This will include information on the outcomes of pre-clearance survey and clearing procedures (Appendix B3), biodiversity constraints and approved clearance boundaries (Figure 1-1). Targeted training will address the requirements of the biodiversity management measures (Section 6 and Appendix B), legislative requirements (Section 3), and all conditions of approval relating to biodiversity (Section 3.1.1).

7.3. Inspections and monitoring

Regular inspections and monitoring will be completed during pre-construction, construction and operation of the Project. This includes:

- Pre-clearing inspections – checking for roosting/breeding habitat, recording tree hollows, marking habitat trees, delineating clearance area
- Progressive monitoring of vegetation cleared – the cumulative amount of cleared vegetation must be continually monitored and compared to approved Development Footprint
- Monitoring of high disturbance or high-risk areas – groundcover, exclusion zones, fences, resource reuse, waterways
- Monitoring fauna injury – any fauna killed or injured on site must be recorded and reviewed; threatened fauna injuries/mortalities must be reported to NSW DCCEEW; bird deaths resulting from contact with fencing and/or solar panels to be recorded.
- Fauna relocation – record any fauna required to be relocated, including where they were found and relocated to
- Groundcover monitoring – use 30 cm x 30 cm quadrats (squares) to monitor groundcover quality throughout construction and during progressive rehabilitation. Take up to 10 quadrat assessments in relatively uniform monitoring areas; 15 or more quadrats are recommended in highly variable areas. Use either a random meander method or take measurements on a diagonal transect across the paddock/nominated area.
- Areas of priority weeds will be mapped and inspected on a regular basis
- Regular site walkover inspections to determine vertebrate pest species presence during operation

Monitoring factors are described in Table 7-3**.**

7.4. Incident and non-compliance

7.4.1. Response to an Incident under the NSW Development Consent

In accordance with the Development Consent SSD-9550, an 'incident' is defined as:

> *A set of circumstances that causes or threatens to cause material harm to the environment.*

Material harm, is harm which:

involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial; or

results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding $10,000 (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

All on-site key personnel must report a potential incident to the EPC Site Manager and Project Manager and/or HSE Manager. The Project Manager in consultation with the HSE Manager (and the HSE Lead as required) will determine if the incident has caused or threatens to cause material harm.

7.4.2. Immediate Notification Process

If the Proponent becomes aware of an incident relating to the Development Consent, the HSE Manager (or other key personnel nominated by the Project Manager) will notify he Department of the Incident in writing via the Major Projects portal immediately in accordance with Condition C10. The immediate notification will clearly identify the development (SSD-9550; Glenellen Solar Farm) and the location and nature of the Incident.

7.4.3. Formal Incident Notification Process

The HSE Manager (or other key personnel nominated by the Proponent's Project Manager) will subsequently provide a written notification to the Planning Secretary within 7 calendar days after the Proponent became aware of an incident. This written notification will be provided via the Major Projects portal and will:

- Identify the development and application number (Glenellen Solar Farm; SSD-9550);
- Provide details of the incident (date, time, location, a brief description of what occurred and why it is classified as an Incident);
- Identify how the incident was detected;
- Identify when the applicant became aware of the incident;
- Identify any actual or potential non-compliance with conditions of consent;
- Describe what immediate steps were taken in relation to the incident;
- Identify further action(s) that will be taken in relation to the incident; and
- Identify a project contact for further communication regarding the incident

7.4.4. Incident Report Process

Within 30 calendar days of the date on which the incident occurred or as otherwise agreed to by the Planning Secretary, the HSE Manager (or other key personnel nominated by the Project Manager) must provide the Planning Secretary and any relevant public authorities (as determined by the Planning Secretary) with a detailed report on the incident addressing all requirements below, and such further reports as may be requested:

- Summary of the incident;
- Outcomes of an Incident investigation, including identification of the cause of the incident;
- Details of the corrective and preventative actions that have been, or will be, implemented to address the incident and prevent recurrence; and

- Details of any communication with other stakeholders regarding the incident.

For environmental incidents that don't cause or threaten to cause material harm to the environment, the Project HSE Manager and Proponent Project Manager will determine what external agencies need to be notified, if at all.

7.4.5. Non-compliance

For non-compliance, the following process (also available under the Project EMS) is to be followed. In accordance with the conditions of consent, a non-compliance is defined as:

> *An occurrence, set of circumstances or development that is a breach of this consent but is not an incident.*

7.4.5.1. Compliance Conditions

The conditions of consent provide criteria for non-compliance, summarised in Table 7-2 below.

Table 7-2: Non-compliance notification

Condition	Description
C11	The Department must be notified via the Major Projects website portal within 7 days after the Applicant becomes aware of any non-compliance
C12	A non-compliance notification must identify the development and the application number for it, set out the condition of consent that the development is non-compliant with, the way in which it does not comply and the reasons for the non-compliance (if known) and what actions have been, or will be, undertaken to address the non-compliance.
C13	A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.

7.4.5.2. Identification of non-compliance

Non-compliance may be identified through internal or external audit, inspection, monitoring, incident investigation, community complaints or review. Regardless of the trigger, if non-compliance has been identified the following steps must be taken:

- Notify the Project Manager and HSE Manager and stop relevant works if advised.
- The Project Manager and HSE Manager will ensure the non-compliance is investigated by the responsible party in order to determine the source, reason and implications of the non-compliance
- Advice will be sought from a relevant body if the implications of the non-compliance are unknown or are severe/require additional approvals
- Corrective and/or preventative actions will be developed and implemented by the responsible party, in consultation with the Proponent, such as:
    - Amending this BMP or relevant strategy, plan, program or procedure
    - Additional control measures
    - Staff training
    - Disciplinary actions

- The responsible party will prepare and submit a report to the Project Manager which documents the investigation and corrective/preventative action process and outcomes. Reports must be submitted in a timely manner to the Project Manager, with regard to the severity of the non-compliance, but no later than 1 week following the non-compliance in order to notify the Department (see below).

7.4.5.3. Notifying the Department of non-compliance

In accordance with Condition C11 of SSD-9550, the Department must be notified via the Major Projects website portal within 7 days once the Applicant becomes aware of any non-compliance. The written notification must include the following details:

- Identify the Project and application number (Glenellen Solar Farm SSD-9550)
- Relevant condition which non-compliance was in breach of
- Describe the nature of non-compliance
- Reasons for non-compliance (if known)
- Corrective and/or preventive actions put in place, or that will be put in place, to address the incident

7.4.5.4. Compliance Tracking Matrix

A Compliance Tracking Matrix is an internal document that will be developed as a tool for monitoring compliance with SSD-9550 conditions of consent. The HSE Manager is responsible for maintaining the Compliance Tracking Matrix throughout the development.

The Compliance Tracking Matrix will be subject to routine review and update by the HSE Manager, to reflect the compliance of the Project. The Matrix will also be updated as required, in response to the outcomes of environmental monitoring or any non-compliance identification.

7.4.6. Response to Emergencies

Responses to actual or potential emergencies will vary depending on the nature, scale, and severity of the emergency. Types of emergencies could include fire, explosion, chemical spill, medical emergency, natural disaster, bomb threat or violence.

Emergency response will be undertaken in accordance with specific emergency response plans to be developed for the project in accordance with the relevant Work, Health, and Safety Regulations. The emergency response process will generally be initiated in the following way in the event of an emergency:

- Raise the alarm;
- Implement the EPC Contractor Emergency Plan;
- For fire and bushfire emergencies, implement the Emergency Plan (Fire and Bushfire) prepared under Condition B28; and
- For pollution incident emergencies, implement the Contractor's relevant Pollution Incident Response Management Plan.

External agencies and support will be requested in accordance with the decision hierarchy outlined in the EPC Contractor's Emergency Response Plan, which will be prepared prior to commencement of

construction. The Project Manager and/or HSE Manager will be notified of the emergency as soon as possible. This may be via the Site Manager who must immediately inform the Project Manager.

7.5. Reporting

Reporting of inspection and monitoring outcomes is required to determine the effectiveness of management measures detailed in this BMP, and to provide a record of compliance with the consent conditions. The minimum monitoring and reporting requirements for implementation of the BMP are summarised below in Table 7-3**.** The following records are to be collated prior to, and weekly for the duration of, clearing activities:

- Detailed design and delineating of clearing boundary
- Area surveyed during pre-clearance works
- GPS location of cleared hollow-bearing trees
- GPS location of retained hollow-bearing trees
- Area of vegetation cleared
- Any active fauna management actions taken
- Record of supplementary watering for pruned trees in the road upgrade area

All records are to be collated on completion of vegetation clearance works.

Table 7-3: Monitoring and reporting obligations

Monitoring ID	Monitoring factor	Frequency and Timing	Reporting	Responsibility
BIO-MON00	Training records	• Update record as required per staff inducted	• Provide weekly records to HSE Manager	HSE Manager, EPC Site Manager and Project Manager
BIO-MON01	Implementation of pre-clearing procedures	• Prior to commencement of vegetation clearing • As required for the duration of clearing	• Records to be collated weekly: ○ Detailed design and demarcation of clearing boundary ○ Area surveyed • All records to be collated at the completion of vegetation clearing.	EPC Site Manager / Project Manager in consultation with Project Ecologist
BIO-MON02	Monitor vegetation clearing limits in relation to cumulative clearing	• On completion of detailed design • Area cleared to be progressively monitored as clearing progresses. • On completion of clearing to calculate total area cleared	• Records to be collated weekly: ○ Detailed design and demarcation of clearing boundary ○ Area cleared • All records to be collated at the completion of vegetation clearing.	HSE Manager, EPC Site Manager or Project Manager
BIO-MON03	Supplementary watering	• After pruning and tie-back of roadside vegetation • Supplementary watering records, for volumes provided to pruned trees	• Records to be collated weekly: ○ Supplementary watering volumes • All records to be provided to the Project Arborist on a monthly basis.	Project Manager in consultation with Project Arborist
BIO-MON04	Hollow-bearing trees	• Prior to commencement of vegetation clearing • As required for the duration of clearing, which will include daily monitoring where active fauna management is required.	• Records to be collated weekly: ○ The GPS location of all HBTs cleared ○ Any HBTs retained • All records to be collated at the completion of vegetation clearing.	EPC Site Manager / Project Manager in consultation with qualified ecologist
BIO-MON05	Implementation of fauna active management protocols	As required for the duration of clearing, which will include daily monitoring where active fauna management is required.	• Records to be collated weekly: ○ The GPS location of all fauna or habitat features	Project Ecologist / licenced fauna handler

Monitoring ID	Monitoring factor	Frequency and Timing	Reporting	Responsibility
			○ Actions undertaken • All records to be collated at the completion of vegetation clearing.	
BIO-MON06	Implementation of fauna rescue protocol	As required for the duration of clearing, which will include daily monitoring where active fauna management is required.	• Records to be collated weekly: ○ The GPS location of all fauna managed ○ Actions undertaken All records to be collated at the completion of vegetation clearing.	Project Ecologist / licenced fauna handler
BIO-MON07	Unexpected threatened species finds	As required	• The location of the find • The species and threatened status • Confirmation of stop work • Outcomes of assessment of significance • Outcome of regulatory agency consultation	All staff – notify EPC Site Manager to respond in consultation with Project Ecologist
BIO-MON08	Inspection of open excavations for trapped fauna	Twice daily	If fauna is identified	All staff – notify EPC Site Manager to respond in consultation with Project Ecologist
BIO-MON09	Vehicles remain within the Development Footprint and where possible only use designated and formed roads	Daily / weekly	In the event of a nonconformance	EPC Site Manager
BIO-MON10	Placement of laydown and temporary disturbance areas in already disturbed areas	Daily / weekly	In the event of a nonconformance	EPC Site Manager
BIO-MON11	Permanent stock-proof fencing and signage (No Go Zone / Environmental Protection Area) is maintained No vegetation clearing is undertaken outside the Development Footprint or areas marked as exclusion zones / no clearing	Daily / weekly	In the event of a nonconformance	EPC Site Manager / Project Manager in consultation with the Proponent

Monitoring ID	Monitoring factor	Frequency and Timing	Reporting	Responsibility
BIO-MON12	Weed infestations and management	At least monthly or more frequently where weed infestations / management actions are required.	Monthly	EPC Site Manager / Project Manager in consultation with the Proponent
BIO-MON13	Vertebrate pest management	Regular site walkovers during operation of the Project (weekly / monthly)	Monthly	Project Manager with the Ecologist
BIO-MON14	Salvage and relocation of resources to adjacent retained areas	At least weekly or more frequently during vegetation clearing	Collate weekly/monthly or at completion of clearing and relocation activities (whichever comes first): • Type of material reused • Original location • Relocation coordinates	EPC Site Manager / Project Manager in consultation with Project Ecologist
BIO-MON15	Incident or nonconformance with BMP and/or Project Development Consent	Daily / weekly / monthly	In the event of a nonconformance or incident, appropriate notification and reporting per Section 7.4.	EPC Site Manager in consultation with the Proponent
BIO-MON16	BMP Review	At the completion of the upgrade works / site access construction, in response to any required change to measures documented in the BMP, or annually at a minimum.	As required, including in accordance with the consultation process detailed in the consent condition.	Proponent in consultation with the EPC Site Manager
BIO-MON17	Landscape planting monitoring	Twice yearly or in accordance with approved Landscape Plan, for at least 5 years and/or until plantings reach 3 m height	As required in event of non-conformance, requirement for replacement plantings and completion of monitoring	Project Manager in consultation with Landscape Architect and/or Project Ecologist

8. Review and Improvements

This BMP is to be reviewed at least every five years during operation of the Project, and at the following key Project milestones:

- On completion of detailed design
- On completion of construction
- If the Project design changes (subject to relevant approvals)
- If deficiencies are identified during pre-construction, construction, operation or rehabilitation.

Additionally, in order to comply with C2 of the Development consent conditions. Revisions of strategies, plans and programs are required. Condition C2 requires the following:

"The Applicant must:

a) Update the strategies, plans or programs required under this consent to the satisfaction of the Planning Secretary prior to carrying out any upgrading or decommissioning activities on site; and

b) Review and, if necessary, revise the strategies, plans or programs required under this consent to the satisfaction of the Planning Secretary within 1 month of the:

i. Submission of an incident report under C20 of Schedule 2;
ii. Submission of an audit report under condition C14 of schedule 2; or
iii. Any modification to the conditions of this consent."

The reporting of any incidents, non-compliance, audits and modifications to the condition of this consent will be separate to this BMP but if deemed relevant a revision of the BMP will be provided within one (1) month to the Planning Secretary.

The review process will ensure that the BMP measures are still relevant and appropriate for the management of the site. Any new threats or impacts identified must be reported and additional actions will be included in an updated BMP, or addendum, as required.

9. References

ArborViews 2023. *Arboricultural Assessment – Glenellen Solar Farm.* 13 June 2023. Prepared for Trina Solar Group. Available at https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=RFI-54720206%2120230619T131706.301%20GMT.

Coffey 2024. *Glenellen Solar Farm Waste Management Plan.* Prepared for Eco Logical Australia Pty Ltd on behalf of Global Power Generation Australia Pty Ltd.

Eco Logical Australia (ELA) 2023. *Glenellen Solar Farm Biodiversity Development Assessment Report [Version 7].* 7 August 2023. Prepared for Trina Solar (Australia) Pty Ltd. Available at https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=SSD-9550%2120230809T225842.983%20GMT.

Eco Logical Australia (ELA) 2024a. *Glenellen Solar Farm - Environmental Management Strategy.* Prepared for Global Power Generation Australia Pty Ltd.

Eco Logical Australia (ELA) 2024b. *Glenellen Solar Farm - Sediment and Erosion Control Plan.* Prepared for Global Power Generation Australia Pty Ltd.

Eco Logical Australia (ELA) 2024c. *Glenellen Solar Farm – Rehabilitation and Decommissioning Plan.* Prepared for Global Power Generation Australia Pty Ltd.

Local Land Services (LLS) 2022. *Murray Regional Strategic Weed Management Plan 2023-2027.* Available at https://www.lls.nsw.gov.au/__data/assets/pdf_file/0004/722632/Murray-Regional-Strategic-Weed-Management-Plan-2023-2027.pdf.

Moir Landscape Architects (MLA) 2024. *Glenellen Solar Farm – Landscape Plan (Final).* 6 February 2024. Prepared for Global Power Generation Australia Pty Ltd.

Appendix A Consultation Log

Date	Stakeholder	Feedback	Summary of outcomes
12 March 2024	Biodiversity, Conservation and Science (BCS) Group under NSW DCCEEW	BCS feedback provided in summary PDF format (attached below)	BCS feedback has been addressed in BMP v3 (28 March 2024) as follows: • Revised mapping to show roadside vegetation in detail • Simplified BMP ap to demonstrate support for Consent Conditions • Additional views of mapping added appropriate to Project scale • Improved alignment with source documentation (EIS and BDAR) in management measures • Revised summary of management measures from Section 5 to be detailed in Section 6 • Aligned actions with the construction and operation phases of the Project • Inclusion of unique identifiers for actions, to assist with reporting and auditing • Organisation of protocols and procedures is improved Revised BMP (v3 Final Draft) provided to Proponent for resubmission and further review by BCS.
29 July 2021 and 12 August 2024	Department of Planning, Housing and Infrastructure (DPHI)	DPHI feedback attached below	DPHI feedback on BMP v4 (15 April 2024) and v5 (12 August 2024) has been addressed and included the following: • Inclusion of additional consent conditions and procedures (e.g. incident and non-compliance notification) to ensure BMP acts as sufficient standalone document • Adjustments to figures and titles for clarity, and appropriate order of presentation in BMP • Reference to figures throughout plan to support implementation of specific management measures • Included specific actions to install permanent stock-proof fencing around No Go and riparian zones, to protect retained vegetation and fauna habitat • Updated roles and responsibilities, and management measures, to ensure implementation across Project phases • Updated monitoring measures to include landscape planting/screening monitoring, for at least 5 years

Date	Stakeholder	Feedback	Summary of outcomes
			A meeting between the Proponent and the authors of this BMP was held with DPHI to discuss feedback, which has informed updates to this BMP and captured in the post-approval review responses below. Revised BMP (v5) reissued as final version on 19 August 2024.

Department of Climate Change, Energy, the Environment and Water

Your ref: SSD 9550-PA-3
Our ref: DOC24/111074

Guillermo Alonso

Projects Development Director
Global Power Generation

Via Major Projects Portal: SSD-9550-PA-3 (PAE-67517464)

Dear Guillermo,

Subject: Glenellen Solar (SSD-9550-PA-3) – Draft Biodiversity Management Plan

Thank you for your request received on 27 February 2024 seeking advice from the Biodiversity, Conservation and Science Group (BCS) of the NSW Department of Climate Change, Energy, the Environment and Water on the Draft Biodiversity Management Plan (BMP) for this project.

BCS has reviewed the Draft BMP, with consideration of the requirements set out in Schedule 2 Condition B19 of the Development Consent, the Biodiversity Development Assessment Report (BDAR) dated 7 August 2023, and the Roadside Tree Assessment (ArborViews, 2023).

A summary of recommendations is included in **Attachment A**, and detailed advice is provided in **Attachment B.**

We recommend the BMP be comprehensively revised to provide confidence that all avoid and mitigate commitments made during the assessment will be successfully implemented.

The BMP needs to identify and consolidate all biodiversity commitments, more clearly specify the construction or operation stage to which each action applies, provide clear maps and descriptions of the approved activities, and detail how the proponent will demonstrate measures have been successfully implemented. We recommend the development footprint be presented in a way that is more specific and useable by construction and operational personnel.

To be confident the BMP will be effective in managing biodiversity impacts of the development, we expect to be provided with a final version for review and that any further comments are addressed before acceptance by the NSW Planning Group.

If you have any questions about this advice, please contact Marcus Wright, Senior Conservation Planning Officer, via planning.southwest@environment.nsw.gov.au or 02 6983 4917.

Yours sincerely

Adam Vey
12 March 2024
Director, South West
Biodiversity, Conservation and Science Group
NSW Department of Climate Change, Energy, the Environment and Water

ATTACHMENT A – Summary of BCS recommendations for the Glenellen Solar Farm Biodiversity Management Plan (SSD 9550)
ATTACHMENT B – Detailed advice for the Glenellen Solar Farm Biodiversity Management Plan (SSD 9550)

ATTACHMENT A Summary of BCS recommendations for the Glenellen Solar Farm Biodiversity Management Plan (SSD 9550)

In preparing this advice BCS reviewed the following documents:

- Eco Logical Australia (2020) *Glenellen Solar Farm Environmental Impact Statement* Prepared for Glenellen Solar Farm Pty Ltd (V3 – 16 October 2020)
- Eco Logical Australia (2022a) *Glenellen Solar Farm Submissions Report* Prepared for Glenellen Solar Farm Pty Ltd (V4 - 5 December 2022)
- Eco Logical Australia (2022b) *Glenellen Solar Farm Amendment Report* Prepared for Glenellen Solar Farm Pty Ltd (V3 – 14 December 2022)
- Eco Logical Australia (2023a) *Glenellen Solar Farm – Biodiversity Development Assessment Report* Prepared for Trina Solar Australia Pty Ltd (Version 4 – 7 August 2023)
- Eco Logical Australia (2023b) *Glenellen Solar Farm – Biodiversity Management Plan* Prepared for Global Power Generation (GPG) Australia (Project No. 23SYD6869) (Version 2 - 9 February 2024)

List of acronyms and terms used in this response:

BDAR	Biodiversity Development Assessment Report
BMP	Biodiversity Management Plan
CoA	Condition of Approval, as per Schedule 2 of the Development Consent
Development footprint	Area within the site on which the components of the project will be constructed (Appendix 1 of development consent)
EIS	Environmental Impact Statement for Glenellen Solar Farm project (version 3) dated 16 October 2020, the associated Submissions Report (version 4) dated 5 December 2022, the Amendment Report (version 3) dated 14 December 2022, and the BDAR (version 4) dated 7 August 2023
RFI	Request for further information
SMART	Specific, measurable, achievable, realistic, time-bound

Summary of recommendations:

1.1. Revise all mapping to ensure consistency with final BMP, including:

- the clearing of trees along the access route as assessed in the Roadside Tree Assessment and shown in Figure 16 of the BDAR (required under CoA B19(a)
- simplified map(s) to demonstrate support for all actions required under CoA B19(b).

1.2. These revised map(s) become part of the simplified BMP Work Instructions (see below).

2.1. Revise the BMP to clearly demonstrate alignment with the source documents and the construction and operation phases of the development.

2.3. List all actions using a unique identifier to assist reporting and auditing.

ATTACHMENT B Detailed Advice for the Glenellen Solar Farm Biodiversity Management Plan (SSD 9550)

1. Revise all BMP maps to ensure consistency with final BDAR.

CoA B19(b)(iv) specifies the BMP must minimise clearing and avoid unnecessary disturbance of vegetation. The BMP makes a commitment to delineate the approved clearing extent and capture the boundary of no-go zones. However, the BMP does not present a complete map of the approved development footprint to enable that action.

Condition B19(a) specifies the BMP must include the actions and measures specified in the Roadside Tree Assessment. Section 8.3.1 of the BDAR also specifies those impacts and mitigation measures. Therefore the BMP must be amended to map the clearing of trees along the access route from the Walla Walla – Jindera Road along Linder and Ortlipp Roads to the entry of the site as shown in Figure 16 of the BDAR.

Other CoAs in B19(b) specify controls on the clearing of hollow bearing trees, the salvage of cleared vegetation, rehabilitation of disturbed areas, how retained patches of vegetation are to be managed, how fauna is to be managed, how weeds, pests and pathogens are to be managed, and what to do when threatened species are found unexpectedly. These various controls must all be mapped in the BMP consistent with the final BDAR.

For example:

- Figures 11, 12 and 13 of the BDAR describe the areas where the Austral Pillwort, Southern Myotis and Squirrel Glider are most likely to be found.
- Retained patches of vegetation are already mapped.
- Species polygons have already been drawn and applied in the BDAR.
- Areas most likely to harbour weeds and feral animals are known.
- Hollow bearing trees are already mapped.

Although some of this information is presented in the maps at Figures and 1.1 and 2.1 of the BMP, those figures do not support the actions because the scale is not useful, the information is obscure, Figures 1.1 and 2.1 are made for other purposes, and the spatial data is not available to personnel implementing the BMP.

Consequently, new maps supported by spatial data are required to meet the requirements of Condition B19. The mapping should clearly show:

- the approved clearing, including 77 paddock trees and trees on the access road
- hollow bearing trees
- retained patches to be rehabilitated
- salvage stock piles
- areas to be revegetated
- any other relevant features.

Areas to be protected or that are not to be disturbed or cleared must be mapped as ‘no-go’ zones.

Recommendations:

1.1. Revise all mapping to ensure consistency with final BMP, including:

- the clearing of trees along the access route as assessed in the Roadside Tree Assessment and shown in Figure 16 of the BDAR (required under CoA B19(a)
- simplified map(s) to demonstrate support for all actions required under CoA B19(b).

1.2. These revised map(s) become part of the simplified BMP Work Instructions (see below).

2. Revise the BMP to ensure line-of-sight from the EIS through to auditable actions.

The draft BMP is difficult to read and important actions are obscured by the complexity of the document.

The key sources of information that should inform the content of the BMP are the Development Consent, the EIS, the Submissions Report, the Updated Mitigation measures in the Amendment Report, and the final BDAR. The BMP does not synthesise these sources in a way that makes the actions easy to identify and implement.

Table 5.1 and Chapter 6 of the BMP most closely correlate with the source documents. Key procedures and actions are typically presented as appendices. However, it is difficult to relate the actions in the BMP with the BDAR, the EIS, the Submissions Report, and the Development Consent. Key actions and protocols are hard to find, difficult to understand, and unlikely to be applied how and when they are intended.

The BMP needs to clearly identify all commitments to avoid and mitigate impacts to biodiversity.

- Section 6 must reference all commitments made in tables and text of the BDAR and the updated mitigation measures.
- There must be line-of-sight between the assessment, approval, and construction and operation phases to enable auditing of the biodiversity commitments.

The BMP must present actions in a more simplified way. For example, a simplified schedule of works will make it more likely the BMP is implemented consistent with the Development Consent. All actions should be numbered with a unique identifier for reporting and auditing.

That schedule of work must align with the stages of the development's construction and operation set out in at Chapter 5 of the EIS (Typical Works Program) and the subsequent program of work as it evolves. For example, the Amendment Report includes a revised timeline and anticipated program of works.

The BMP should be built around that schedule of work in a logical sequence stage by stage. BMP actions need to be simple, timely, and easily implemented by construction and operational personnel at each relevant stage.

The BMP must also provide a table listing details of monitoring to demonstrate success of each action. This will include (but not be limited to):

- Detailed method or techniques
- Implementation schedule (timing, frequency, duration)
- Individual or role responsible for implementation
- Ecologically based criteria or indicators using SMART principles for determining:
    - If the mitigation action(s) are successful
    - When the mitigation actions are complete (completion measures)
    - When remedial actions and adaptive management are required
- Reporting – frequency, who receives the reports and who is responsible for further actions.

Recommendations:

2.1. Revise the BMP to clearly demonstrate alignment with the source documents and the construction and operation phases of the development.

2.2. List all actions using a unique identifier to assist reporting and auditing.

Documents: Glenellen Biodiversity Management Plan – SSD 9550
Revision: Version 4, 15 April 2024, Version 5 12 August 2024
Reviewed: Keren Halliday 29 July 202, 12 August 2024

OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT **Condition A1, Schedule 2**	**Sufficient (Yes/No/Partial)**	**Document reference and comment**	**Action Required**	**Company Response**
In meeting the specific performance measures and criteria in this consent, all reasonable and feasible measures must be implemented to prevent, and if prevention is not reasonable and feasible, minimise, any material harm to the environment that may result from the construction, commissioning, upgrading, operation, rehabilitation or decommissioning of the development.	Partial Yes	This condition of approval (CoA) is referenced in Table 3.1 but it is not clear how it is addressed in Section 4.7 and Section 6. Commitment included in Table 3-1	Include commitment to meeting the requirements of this condition in the BMP.	Section 4.7 is an error. The majority of the conditions are addressed in Section 6 and 7. Commitment to meeting the requirements of condition A1 included.
TERMS OF CONSENT ***Condition A2, Schedule 2***	**Sufficient (Yes/No/Partial)**	**Document reference and comment**	**Action Required**	**Company Response**
The development may only be carried out: (a) in compliance with the conditions of this consent; (b) in accordance with all written directions of the Planning Secretary; (c) generally in accordance with the EIS; and generally in accordance with the Development Layout in APPENDIX 1.	Partial Yes	The condition is referenced in Table 3.1 but it is not clear how it is addressed in Section 3 or Figure 1.1 Commitment included 3.1	Detail where this CoA is addressed in the BMP. Update rehabilitation references throughout the document to correctly refer to Section 4.10.	Figure 1-1 reproduces the relevant development layout per Appendix 1 of the conditions. Section 3 lays out the conditions of consent. Wording updated: *Proponent commits to carrying out development in compliance with the conditions of consent (Table 3 1 as relevant to this BMP), directions of the Planning Secretary, the EIS and the approved development layout provided in Figure 1 1 of this BMP.*
Evidence of Consultation, Condition A13, Schedule 2	**Sufficient (Yes/No/Partial)**	**Document reference and comment**	**Action Required**	**Company Response**
Where conditions of this consent require consultation with an identified party, the Applicant must:	Partial Yes	Consultation undertaken with BCS. Response provided in Appendix A	Refer to the specific actions in relation to	Appendix A includes summary of

(a) consult with the relevant party prior to submitting the subject document to the Planning Secretary forapproval; and (b) provide details of the consultation undertaken including: (i) the outcome of that consultation, matters resolved and unresolved; and details of any disagreement remaining between the party consulted and the Applicant andhow the Applicant has addressed the matters not resolved.			BCS comments below Yes I meant refer to BCS' specific comments in the Agency section at end of this table which need to be addressed to fully satisfy this condition	outcomes in respone to BCS feedback. Confirm if addressed or clarify comment. Description included in Section 3 for clarity (table 3-1).
BIODIVERSITY ***Vegetation Clearance, Condition B15, Schedule 2***	**Sufficient (Yes/No/Partial)**	**Document reference and comment**	**Action Required**	**Company Response**
The Applicant must not clear any native vegetation or fauna habitat located outside the approved disturbance areas described in the EIS.	Yes	Addressed in Section 6 and Appendix B		
Vegetation Clearance, Condition B16, Schedule 2	**Sufficient (Yes/No/ Partial)**	**Document reference and comment**	**Action Required**	**Company Response**
The Applicant must make all reasonable efforts to replace the removed paddock trees with the same number of trees of a similar species on the site. These replacement trees are to be planted within the area of the site identified for riparian planting and/or within the vegetation buffer.	Yes	Section 6 and Landscape Plan (MLA 2024)		
Biodiversity Offsets, Condition B17, Schedule 2	**Sufficient (Yes/No/ Partial)**	**Document reference and comment**	**Action Required**	**Company Response**
Prior to carrying out any development that could directly or indirectly impact the biodiversity values requiring offset, the Applicant must retire biodiversity credits of a number and class specified in Table 1 and **Error! Reference source not found.** below. The retirement of these credits must be carried out in accordance with the *NSW Biodiversity Offsets Scheme*and can be achieved by: (a) acquiring or retiring 'biodiversity credits' within the meaning of the *Biodiversity Conservation Act 2016*; (b) making payments into an offset fund that has been developed by the NSW Government; and/or (c) funding a biodiversity conservation action that benefits the entity impacted and is listed in the ancillary rules of the biodiversity offset scheme.	Partial Yes	Referenced in Section 1 and noted the BMP does not address any matters related to the retirement of biodiversity credits. Commitment included in Section 1	Include a statement that biodiversity credits will be retired in accordance with the requirements condition b17 Schedule 2 prior to the carrying out of any development that could impact biodiversity values.	Included statement that credits will be retired prior to development.

Table 1: *Ecosystem Credit Requirements*

Vegetation Community	***PCT ID***	***Credits Required***
Blakely's Red Gum – Yellow Box grassy tall woodland of the NSW South Western Slopes Bioregion	277	92
River Red Gum – wallaby grass tall woodland wetland on the outer River Red Gum zone mainly in the Riverina Bioregion	9	13
Scattered Paddock Trees	277	70

Table 2: *Species Credit Requirements*

Species Credit Species	***Credits Required***
Southern Myotis (*Myotis Macropus*)	15
Austral Pillwort (*Pilularia novae-hollandiae*)	22
Squirrel Glider (*Petaurus norfolcensis*)	1

Biodiversity Offsets, Condition B18, Schedule 2	**Sufficient (Yes/No/ Partial)**	**Document reference and comment**	**Action Required**	**Company Response**
Prior to carrying out any development that could directly or indirectly impact the biodiversity values requiring offset, the Applicant must provide evidence to the Planning Secretary that biodiversity credits have been retired.	Partial Yes	The condition is identified in Table 3 but not addressed. Commitment included in Section 1	As above. Include a statement that biodiversity credits will be retired in accordance with the requirements condition b17 Schedule 2 prior to the carrying out of any development that could impact biodiversity values.	Included statement that credits will be retired prior to development.
Biodiversity Management Plan, Condition B19, Schedule 2	**Sufficient (Yes/No/ Partial)**	**Document reference and comment**	**Action Required**	**Company Response**

Documents: Glenellen Biodiversity Management Plan – SSD 9550
Revision: Version 4, 15 April 2024, Version 5 12 August 2024
Reviewed: Keren Halliday 29 July 202, 12 August 2024

Prior to carrying out any development that could directly or indirectly impact biodiversity values, the Applicant must prepare a Biodiversity Management Plan for the development in consultation with BCS, and to the satisfaction of the Planning Secretary. This plan must:	Partial		Refer to BCS comments in the section at the end of this table.	
(a) be prepared in accordance with the Biodiversity Development Assessment Report dated 7 August 2023, including incorporation of the measures described in the Roadside Tree Assessment (ArborViews, 2023);	Partial		The tree location plan (Figure 2.3 appears out of sequence with figures either side. Check the figures provided are referred to in the document. Ensure the figures clearly show the veg/trees to be retained versus those that will be cleared. Figures are still confusing. Could remove previous reference numbers and ensure title for each describes the figure.	Adjusted. The BDAR included area clearing for BOS purposes, hence Figure 2-2 shows an impact area rather than individual trees. The tree plan (Fig 2-3) shows all trees subject to impacts, but no tree removal is proposed. One tree (96) is to be pruned significantly (95% of crown) but not removed. Details are already included in Appendix B1 regarding pruning and tieback. Figure caption and intext clarity provided Figure titles updated. Reference to Tree Plan included in Appendix B1 as relevant.
(b) include a description of the measures and timeframes that would be implemented for:	Yes	Section 6		-
(i) protecting vegetation and fauna habitat outside the approved disturbance areas;	Yes Partial	Appendix B2.C (page 47), Removal Of Vegetation Outside Approved Boundary	1. Amend Section 2, Section 6 (table 6.2) and B2 to include installation of permanent stock proof fencing (not bunting or flagging	1. Included in Section 2, Table 6-2 and Appendix B2. 2. Included signage and monitoring of plantings in relevant

			prior to clearing (to protect vegetation and fauna habitat outside the approved disturbance area including the riparian zones to be planted). 2. Install Appropriate signage such as "No Go Zone or Environmental Protection Area" in areas to be protected. Plantings should be monitored for at least 5 years and/or until reaches 3 metres in height NB: this requirement should be included in all relevant sections	sections + additional monitoring factor (BIO-MON17)
(ii) managing and enhancing the remnant vegetation and fauna habitat on site;	Yes	Addressed in Appendix B4		-
(iii) avoiding the removal of hollow-bearing trees during spring to avoid the main breeding period for hollow-dependant fauna;	Yes	Addressed in Appendix B2.A and Appendix B4.A		-
(iv) minimising clearing and avoiding unnecessary disturbance of vegetation that is associated with the construction and operation of the development;	Partial	Addressed in Appendix B2 and B3	Include reference to Appendix B3 in Table 6-2 Biodiversity Management Measures	Included. Adjusted Appendix 3 to correct Appendix B3.

			Check reference says Appendix B3 (check BIO-PC11 - refers to appendix 3).	
(v) minimising the impacts to fauna on site and implementing fauna management protocols;	Yes	Addressed in Section 6 and Appendix B4		-
(vi) rehabilitating and revegetating temporary disturbance areas with native species that are appropriate to the site's ecology and conditions;	Yes	Addressed in Section 6 and Appendix B2		-
(vii) maximising the salvage of vegetative and soil resources within the approved disturbance area for beneficial reuse in the enhancement or the rehabilitation of the site; and	Yes	Addressed in Section 6 and a resource salvage guide is provided in Appendix B3.F		-
(viii) controlling weeds, feral pests and pathogens;	Yes	Addressed in Section 4.7 and Section 6.1.		-
(c) include a program to monitor and report on the effectiveness of mitigation measures;	Partial	Addressed in Section 7 but focuses on construction.	Address all stages of the project and include relevant monitoring for all stages. BMP applies for the life of the project. Monitoring should continue through operations and decommissioning. Table 7.2 should include monitoring during operation and decommissioning. This should include monitoring of plantings in the riparian and no go zones to offset the loss of paddock trees. Monitoring should continue for	Operational and decommissioning monitoring comes under other subplans, as biodiversity impacts associated with these stages are listed as waste (WMP), vehicle movements (TMP), pests, rehab (Rehab/Decom plan), noise/light (CEMP), soils (CEMP/SEMP) and bushfire risk (Hazards MP). Included specific reference to additional subplans that will effectively manage post-construction impacts.

			at least 5 years following planting and/or until reaches 3 metres in height. Checks also needed to make sure permanent stock proof fencing remains in place. Responsibility for these tasks need to be addressed as construction contractor will not be around for operations and decommissioning.	Bmp should also be treated as a live document and updated as needed e.g. in 20-30 years, will require updates prior to repowering or decomm. Included additional detail where relevant (including roles) and deferred to subplans as needed. Included additional monitoring and measures to maintain stock-proof fencing to address.
(d) include an incidental threatened species finds protocol to identify the avoid and/or minimise and/oroffset options to be implemented if additional threatened species are discovered on site; and	Yes	Addressed in Appendix B6		-
(e) include details of who would be responsible for monitoring, reviewing and implementing the plan. Following the Planning Secretary's approval, the Applicant must implement the Biodiversity Management Plan.	Partial Partial	Addressed Section 7.1 but focusses on construction.	Consider all phases of project and identify tasks for each assign responsibilities. Consider all phases of project and identify tasks for each assign responsibilities. Regular checks of fencing, signage plantings within riparian zone to offset loss of paddock trees.	Updated. Updated to include construction, operation and decommissioning responsibilities for relevant staff responsibilities. Included responsibility to monitor fencing/signage of no-go and riparian zones.

Revision of Strategies, Plans and Programs, Condition C2, Schedule 2	**Sufficient (Yes/No/ Partial)**	**Document reference and comment**	**Action Required**	
The Applicant must: (a) update the strategies, plans or programs required under this consent to the satisfaction of the Planning Secretary prior to carrying out any upgrading or decommissioning activities on site; and (b) review and, if necessary, revise the strategies, plans or programs required under this consent to the satisfaction of the Planning Secretary within 1 month of the: (i) submission of an incident report under condition **Error! Reference source not found.** of SCHEDULE 2; (i) submission of an audit report under condition **Error! Reference source not found.** of SCHEDULE 2; or any modification to the conditions of this consent.	Partial Yes	Partly addressed in Section 8. Addressed in section 8	Include requirements of C2 in Section 8.	Included
NOTIFICATIONS ***Notification of Department, Condition C7, Schedule 2***	**Sufficient (Yes/No/ Partial)**	**Document reference and comment**	**Action Required**	
Prior to commencing the construction, operations, upgrading or decommissioning of the development or the cessation of operations, the Applicant must notify the Department in writing via the Major Projects website portal of the date of commencement, or cessation, of the relevant phase. If any of these phases of the development are to be staged, then the Applicant must notify the Departmentin writing prior to commencing the relevant stage, and clearly identify the development that would be carried out during the relevant stage.	No Partial	The document should be stand alone and include relevant incident, non compliance notification and reporting requirements.	Include relevant references to incident and all notification requirements. Repeating the condition is insufficient. The document should be stand alone and include a section addressing relevant incident, non compliance notification and reporting requirements.	Included reference and commitment in 3.1.1. Included EMS notification, incident and noncompliance procedure.
Incident Notification, Condition C10, Schedule 2	**Sufficient (Yes/No/ Partial)**	**Document reference and comment**	**Action Required**	

The Planning Secretary must be notified in writing via the Major Projects website immediately after the Applicant becomes aware of an incident. The notification must identify the development (including the development application number and the name of the development if it has one) and set out the location and nature of the incident. Subsequent notification requirements must be given, and reports submitted in accordance withthe requirements set out in APPENDIX 8.	No Partial	As above	As above	Included reference and commitment in 3.1.1. Incident notification procedure, consistent with EMS, included in Section 7.4
Non-Compliance Notification, Condition C11, Schedule 2	**Sufficient (Yes/No/ Partial)**	**Document reference and comment**	**Action Required**	
The Department must be notified via the Major Projects website portal within 7 days after the Applicant becomes aware of any non-compliance.	No Partial	As above	As above	Included reference and commitment in 3.1.1. Notification procedure, consistent with EMS, included in Section 7.4
Non-Compliance Notification, Condition C12, Schedule 2	**Sufficient (Yes/No/ Partial)**			
A non-compliance notification must identify the development and the application number for it, set out thecondition of consent that the development is non-compliant with, the way in which it does not comply and the reasons for the non-compliance (if known) and what actions have been, or will be, undertaken to address the non-compliance.	No Partial	As above	As above	Included reference and commitment in 3.1.1. Non-compliance notification, consistent with EMS, included in Section 7.4
Non-Compliance Notification, Condition C13, Schedule 2	**Sufficient (Yes/No/Partial)**	**Document reference and comment**	**Action Required**	
A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.	No Partial	As above	As above	Included reference and commitment in 3.1.1. Included reference, commitment (3.1.1)

				and instruction in Section 7.4 consistent with EMS
Other Agency Comments ***BCS***	**Sufficient (Yes/No/Partial)**	**Document reference and comment**	**Action Required**	
1.1. Revise all mapping to ensure consistency with final BMP, including: • the clearing of trees along the access route as assessed in the Roadside Tree Assessment and shown in Figure 16 of the BDAR (required under CoA B19(a) • simplified map(s) to demonstrate support for all actions required under CoA B19(b).	Partial Partial	The tree location plan (Figure 2.3 appears out of sequence with figures either side. The presentation of figures and naming is confusing.	Check the figures provided are referred to in the document. Ensure the figures clearly show the veg/trees to be retained versus those that will be cleared. Review the figures and order that they are discussed and presented. Include appropriate references to figures throughout the document including Table 6-2.	Mapping updated references included. Trees to be removed not identified; BDAR identified clearing boundary and area of clearing, not individual trees. Roadside trees are not for removal; pruning and tieback only. Tree Location Plan is in relevant sequence according to in-text reference.
1.2. These revised map(s) become part of the simplified BMP Work Instructions (see below).	Partial	Figures have been amended but not all are labelled clearly and describe content adequately.	Include reference to all figures that have been added to the document and description. Include relevant figure numbers in the protocols and procedure eg B1 should refer back Figure 2.3 Table 6.2 should include references to the relevant figures where appropriate.	Updated figures. Updated references to figures throughout Table 6-2 and other relevant areas (e.g. Appendices)

2.1. Revise the BMP to clearly demonstrate alignment with the source documents and the construction and operation phases of the development.	Partial		Clearly identify all phases of the project and applicable actions.	Phases of Project included in BMP, consistent with EMS and other documentation provided by Proponent.
2.3. List all actions using a unique identifier to assist reporting and auditing.	Yes	Unique identifiers have been added to Table 6-2.		-
~~***Other Agency Comments***~~ ***General Comments*** ~~***BCS***~~	**Sufficient (Yes/No/ Partial)**	**Document reference and comment**	**Action Required**	
Address all comments in the marked up PDF	No Yes		Address all comments in the marked up PDF	
Amend language where appropriate from would, should, may to **will** throughout the entire document.	No Yes		Amend language where appropriate from would, should or may to “will”	Updated all. Some updates to ‘must’ depending on context. Remnant should/would wording sensible per context.

Appendix B Protocols and Procedures

B1 Arboricultural Procedures (ArborViews 2023)

A Recommendations (Road Upgrade)

- It is recommended that ArborViews Australia or another suitably qualified (minimum AQF Level 5) and experienced consulting arborist is engaged as the project arborist for the duration of the project.
- As much as possible, avoid over-size truck movements immediately following periods of high rainfall.
- It is recommended that tree works to achieve the necessary clearance complies strictly with the specification in Appendix 2 of the Arboricultural Assessment (ArborViews 2023)
- It is recommended that a spotter, ideally the project arborist, is engaged to move with the over-size trucks and watch that branches do not catch on the load and break. If an unforeseen conflict between the over-size load and branches occurs, with the approval of the project arborist, the affected branch should be pruned.
- Where the road widens near Tree 96, trucks should move to the left-hand (northern) side of the road if necessary.
- It is recommended that monthly rainfall is monitored. After the trees have been pruned, when the monthly rainfall is less than 60 mm, supplementary watering shall be provided. An area of 10 metres from the roadside and 10 metres either side of trees that have been pruned shall be watered. Water shall be applied at a rate of one litre per square metre for each mm less than 60 mm rainfall in a month. For example, if 40 mm rain fell in the month, 20 litres of water per m2 would be applied to an area of 200 m2, totalling 4,000 litres of water.
- It is recommended that a record of supplementary watering is maintained and provided to the project arborist on a monthly basis.
- It is recommended that seeds are collected from the trees along Lindner Road to propagate trees for compensatory tree planting.
- It is recommended that the number of trees planted to compensate for the loss of canopy and the loss of trees that die prematurely due to the pruning is based on the removal of approximately 300 m^3 of canopy including the loss of one tree (Tree 96).

Some trees are recommended to be tired back, instead of pruned or cleared, to achieve clearance on the road upgrades (ArborViews 2023). These are shown in Figure 2-9 and are as follows:

- Trees numbered 87, 88, 91, 94, 98, 99, 100, 198, 199 and 200.

Tying back will be completed no longer than 2 weeks prior to first oversized truck movements.

An arborist with a minimum qualification of Arboriculture Certificate 3 is engaged to undertake the pruning and tying back of branches, in accordance with the specification in Appendix 2 of the Arboricultural Assessment (ArborViews 2023).

B Summary of Tree Management Measures

Table 9-1: Tree Assessment (from Table 2 ArborView 2023 / Table 29 ELA 2023)

Tree No.	Species	Common Name	DBH (cm)	Tree Retention Value	Management
80	*Eucalyptus polyanthemos*	Red Box	101	High	2 branches to prune. 5% canopy loss.
81	*E.polyanthemos*	Red Box	60	High	1 branch to prune. 2 to tie back. Estimated 5% canopy loss.
82	*E.polyanthemos*	Red Box	58	High	Small habitat cavity. Investigate prior to pruning. 5 branches to prune. 60% canopy loss.
83	*E.blakelyi*	Blakely's Red Gum	52	High	1 branch. 10% canopy loss.
84	*E.blakelyi*	Blakely's Red Gum	65	High	One 2nd order branch. 5% canopy loss.
85	*E.polyanthemos*	Red Box	59	High	Tie back western stem. Remove deadwood and 5 branches over road. 25% canopy loss.
86	*E.polyanthemos*	Red Box	143	High	Remove two 3rd order branches. Tie up low hanging tertiary branch on west side to branch above. 5% canopy loss.
87	*E.melliodora*	Yellow Box	27	Moderate	Tie overhanging branch to branch behind.
88	*E.melliodora*	Yellow Box	51	High	Tie top of tree up and back to red gum 4 m to east
89	*E.polyanthemos*	Red Box	111	High	Remove 3 lower dead branches.
90	*E.blakelyi*	Blakely's Red Gum	42	High	Remove one live branch and one dead branch. 5% canopy loss
91	*E.blakelyi*	Blakely's Red Gum	16	High	Remove deadwood. Tie up and back to tree on western side of T91.
92	*E.polyanthemos*	Red Box	57	High	Remove 1 eastern branch. Tie back western branch. 5% canopy loss.
93	*E.polyanthemos*	Red Box	49	High	Remove 2 tertiary branches. Tie eastern branch to branch higher in the tree. 5% canopy loss.
94	*E.blakelyi*	Blakely's Red Gum	39, 44	High	Tie back overhanging branch to other main stem of the tree.
95	*E.blakelyi*	Blakely's Red Gum	64	High	Remove one 1st order branch. Remove one dead branch. 25% canopy loss.
96	*E.blakelyi*	Blakely's Red Gum	33, 29	High	100% canopy over road. W stem: Lop

Tree No.	Species	Common Name	DBH (cm)	Tree Retention Value	Management
					two 2nd order branches 15cm above union. E stem: at branch union 4m AGL remove lower, 1st order branch at union. Reduction prune upper 1st order branch back to second 2nd order branch.
97	*E.blakelyi*	Blakely's Red Gum	34	High	One branch removed. 60% canopy loss.
98	*E.polyanthemos*	Red Box	59, 35	High	Tie back 3 branches to higher in the same tree.
99	*E.blakelyi*	Blakely's Red Gum	43	High	Prune deadwood over road.
100	*E.blakelyi*	Blakely's Red Gum	19	Moderate	Tie back overhanging branches to tree behind.
200	*E.blakelyi*	Blakely's Red Gum	32	High	Tie back overhanging branches to trees behind.
199	*E.melliodora*	Yellow Box	20	Moderate	Tie back overhanging branch to tree to the west.
198	*E.polyanthemos*	Red Box	93, 52	High	Tie back overhanging branches to high northern stem in same tree
197	*E.blakelyi*	Blakely's Red Gum	71	High	Reduction prune southern stem to perpendicular stem. 10% canopy loss.
196	*E.melliodora*	Yellow Box	56	High	Reduction prune one branch. 5% canopy loss.

C Lopping, Pruning and Trimming Procedure

Where possible, tree removal will be avoided and lopping, pruning and trimming used instead as required. This reduces loss of biodiversity and minimises impacts on fauna.

It is recommended that the following trees are pruned in accordance with the pruning specifications in Appendix 2 of the Arboricultural Assessment (ArborViews 2023) and that other branches that encroach into the clearance zone, which are not specified for pruning, are tied back to achieve the required clearance.

- Trees numbered 81, 85, 86, 92 and 93 (Figure 2-9)

Additionally, the following controls apply:

- Heavy machinery will not be used for pruning or trimming
- Appropriate tools are loppers, chain saws and vehicle mounted saws. Use hand tools to reduce need for fuels and noise where possible

- Retain hollow-bearing limbs wherever possible
- Removal of hollow-bearing limbs will be reused in accordance with the Resource Salvage measure wherever possible
- Tree limbs are to be removed using the three-cut method as below

Pruning will be completed no longer than 2 weeks prior to first oversized truck movements.

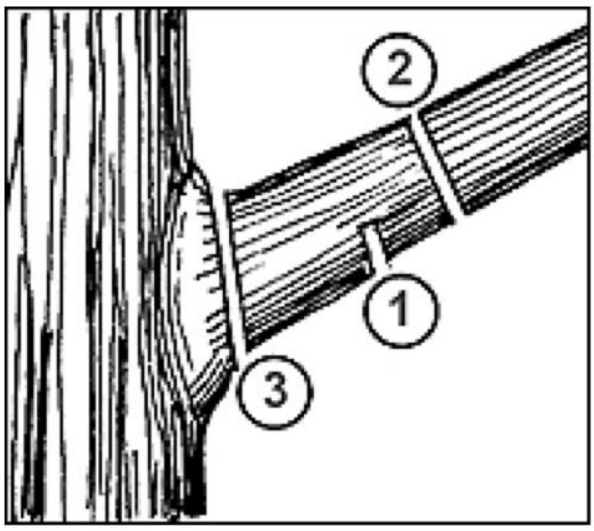


Figure 9-1: Three step cut method

B2 Protecting & Enhancing Retained Vegetation

Remnant vegetation and fauna habitat outside of the approved Development Footprint and within the Project Site is to be retained and protected with stock-proof fencing (Figure 2-1). Clear delineation of the approved Development Footprint, and protection of vegetation to be retained will be carried out in accordance with the procedures provided below.

Arboricultural procedures (Figure 2-9, Appendix B1) are provided which provide for the management of retained roadside trees to ensure their survival and longevity. The Arboricultural Assessment (ArborViews 2023) must also be referenced, and a suitable qualified AQF Level 5 Arborist is to be consulted with during and after all works completed on the roadside upgrades.

Resource salvage will be completed in accordance with Appendix B3.F to enhance retained vegetation. Replacement plantings and ongoing rehabilitation will be completed in accordance with the Landscape Plan (MLA 2024) and the Rehabilitation and Decommissioning Plan (ELA 2024b) to further enhance retained areas.

A Minimise clearing and unnecessary disturbance

The EPC Contractor will be responsible for ensuring the clearing of vegetation is undertaken in accordance with the following key processes to minimise vegetation clearing and unnecessary disturbance to vegetation and fauna wherever possible:

- The pre-clearing procedures detailed in Appendix B1 must be completed before commencement of the upgrade works / construction and prior any vegetation clearing
- Removal of HBTs (Figure 2-1) is to be avoided during spring, to minimise disturbance during the main breeding period for hollow-dependent fauna, in accordance with the procedure detailed in Appendix B3.D and B4
- Avoid clearing trees wherever possible.
- Pruning of vegetation will be preferred over clearing wherever possible to reduce the total area of vegetation to be removed and impact on biodiversity per Appendix B1.C
- Vegetation surrounding the HBT is to be cleared first, with the HBT left standing overnight (ideally longer up to three days) to encourage self-relocation of any fauna that may be using the hollow.
- Surface disturbance (e.g., excavation, compaction) is to be minimised and managed in accordance with the Sediment and Erosion Control Plan (ELA 2024b)
- No vegetation clearing is to occur outside the approved Development Footprint (Figure 2-1 and further details below and Appendix B3)
- Active fauna management may be required for resident fauna including actively nesting birds or mammals, tree hollows that may contain roosts, nests or dens, or suspected active microbat roosts. A qualified ecologist/licenced wildlife handler is to supervise clearing activities and manage any impacts to fauna. Active fauna management is to be a last resort if passive measures have not been successful (Appendix B4)
- Where vegetation is cleared, large fallen logs and woody debris will be salvaged where it is considered appropriate for use in revegetation or habitat enhancement activities. For example, HBTs requiring removal (per Figure 2-1) and cleared larger woody debris may be relocated adjacent to the Development Footprint (subject to landowner agreement) into adjacent habitat

or placed on rehabilitation disturbance areas, where feasible and practicable (per Appendix B3.F.

B Protect Vegetation in No-Go Zones

The EPC Contractor and HSE Manager are responsible for ensuring the following mitigation measures are implemented to protect vegetation that is not approved for clearing (i.e. adjacent to and outside of the Development Footprint – see Figure 2-1 and detailed maps as required):

- Ensure clearing of vegetation is contained within the Development Footprint (Figure 2-1)
- Project vehicles and machinery are to remain within the Development Footprint wherever practicable
- Laydown or temporary disturbance areas will be sited within the Development Footprint, or in adjacent areas which are already disturbed (for example, driveways or stopping bays)
- Procedures to avoid the spread of weeds to adjacent areas will be implemented in accordance with Appendix B5
- During clearing, care will be taken to prevent damage to the roots of retained trees:
    - Excavations will be dug at least 15 m away from the base of trees to minimise root interference, and outside of drip lines for vegetation to avoid unintended pruning
    - Where possible, a minimum trench distance from the base of the tree will be achieved in accordance with the TPZ formula under Australian Standard (AS) 4970-2009. The TPZ is calculated by multiplying the Diameter at Breast Height (DBH – 130 cm above the ground) by twelve.

C Removal Of Vegetation Outside Approved Boundary

The approved clearing boundary is the **Development Footprint** as approved under the SSD-9550 consent conditions, and assessed in the BDAR (ELA 2023). Offsets and potential impacts have only been approved for removal of vegetation and fauna habitat within this boundary. The boundary is to be shown on all design plans (Figure 2-1).

Some construction activities may require tree removal or trimming that has not been included in the design or conditions of approval. If additional impacts to vegetation are required, the following process must be followed:

- Stop works immediately
- Site Manager will notify the ESQ Manager, providing details of the impact (location, justification)
- HSE Manager will consult with a qualified Ecologist and NSW DCCEEW as required to determine next steps (e.g. additional approval, minor modification, additional offsets may be required)
- Site Manager will await written confirmation and any necessary approvals/offsets prior to recommencing works around vegetation clearing outside the approved boundary.

B3 Vegetation Clearing Procedures

The maximum area of native vegetation that can be disturbed, or cleared, for the Project is prescribed by the consent conditions, and linked directly to the biodiversity offsets required (Table 3-1). Specifically:

> ***The Applicant must not clear any native vegetation or fauna habitat located outside the approved disturbance areas described in the EIS.***

The approved disturbance area refers to the development footprint and extent of native vegetation to be cleared shown in Figure 1-1.

To ensure compliance with development consent, prior to the clearing of any vegetation or any construction works, a robust pre-clearing procedure is to be implemented by the nominated EPC Contractor to ensure minimal impacts to biodiversity wherever possible, and no unauthorised vegetation impacts occur.

The pre-clearing methods will comprise the following key elements described in detail below:

- Identification of approved clearance boundaries, based on detailed design (Figure 2-1)
- Pre-clearance survey conducted by a suitably qualified ecologist, to manage fauna presence and identify any sensitive areas which may require further management during clearing.

A Identify Clearance Boundary

The Development Footprint (Figure 2-1) defines the approved clearance boundary for the Project. The Development Footprint is to be:

- Digitally captured and displayed within the Project survey and GIS databases.
- Demarcated on site using flagging tape, bunting, temporary fencing or similar with clear signage
- Verified onsite during clearing to ensure no unauthorised clearing will occur.

Areas outside of the Development Footprint are considered No Go Areas and must be protected using permanent stock-proof fencing and appropriate signage, for the duration of the Project. The Proponent will provide the relevant GIS data to the EPC Contractor. This data will be available digitally and physically on-site for all staff to inform vegetation clearing. Following completion of the required clearing for construction of the Project, records of the cleared areas will be made available, and any necessary rehabilitation will be completed in accordance with the Rehabilitation and Decommissioning Plan (ELA 2024c).

The EPC Contractor will be responsible for accurately delineating clearance boundaries based on the detailed design and approved Development Footprint.

Boundaries that occur directly adjacent to retained vegetation may require supervision of a suitably qualified Arborist in order to delineate Tree Protection Zones (TPZs) and avoid unauthorised impacts to trees outside the clearance boundary. Potential issues to consider when working in proximity to retained vegetation include the following direct and indirect impacts:

- Compaction of soil in a retained TPZ, resulting from storage of machinery or materials
- Dust, noise and light disturbance to fauna utilising adjacent habitat.

If the final detailed design and required construction footprint encroaches > 10% of a TPZ outside approved impacts, and it is determined by the supervising Arborist that such encroachment is both unavoidable and would require removal of a tree outside the approved Development Footprint, works must stop and a minor modification sought in consultation with the Department (per Appendix B2.E).

Following any vegetation clearing in the vicinity of a no-go zone that is protecting native vegetation, the HSE Manager will inspect the area to confirm that no-go zones have not been impacted.

B Pre-Clearance Survey

A survey of the Development Footprint (Figure 2-1) is to be undertaken by a suitably qualified ecologist prior to any vegetation clearing, to determine:

- The areas of native vegetation to be cleared, including mapped CEEC
- The location of Hollow-bearing trees (HBTs) is to be recorded using GPS. In addition:
    - HBTs to be removed will be marked with flagging tape and an "H" spray painted onto two or three sides of the tree trunk with fluorescent paint
    - HBTs immediately adjacent to and / or within the Development Footprint that will be retained will be marked, for the establishment of an exclusion zone and protection from impacts. Note that the HBTs to be retained will be differentiated (marked differently (i.e. colour)) to those HBTs that are to be removed
    - Removal of HBTs is to be avoided during spring to minimise disturbance of the main breeding period of hollow-dependent fauna
- Resident fauna or habitat features that may require active management prior to or during disturbance will be recorded using GPS (see active management protocols below). This may include:
    - actively nesting birds or mammals
    - habitat features including tree hollows or fallen logs that may contain roosts; nests, dreys or dens
    - suspected active microbat roosts
- The presence of any previously unrecorded threatened flora or fauna species requiring management under the 'Unexpected finds' procedure detailed below.

Features identified in the pre-clearing survey will be recorded using handheld GPS. The use of a differential GPS unit will be considered where sensitive vegetation or features are identified to provide greater accuracy of the location.

Data collected in the pre-clearing inspection will be collated and reported by the EPC Contractor and provided to the HSE Manager and/or Site Manager.

C General Habitat Removal Procedure

Fauna may be using elements of vegetation to be cleared for habitat, and is not limited to hollow-bearing trees. All fauna that may be using the site at the time of pre-clearance survey will be considered and dealt with appropriately. Please refer to Appendix B4 (Fauna Management Procedures).

D Hollow-Bearing Tree Removal Procedure

Hollows occur in trees across the Project site. Hollow-bearing trees are important habitat features for a range of common and threatened fauna such as possums, gliders, birds and bats. They can use hollows for nesting and roosting. Before clearing any hollow-bearing trees, the contractor must consider if any animals are present. The following procedure (Figure 9-2) is a guide to give animals an opportunity to escape hollows prior to their removal.

A qualified ecologist must be present as a 'spotter' to detect species movements and hollow use. The ecologist will also identify any fauna observed escaping hollows prior to removal, or handle injured fauna.

Figure 9-2: Hollow-bearing tree removal procedure

E Monitoring Clearing of Vegetation

The cumulative amount of vegetation cleared will be progressively monitored by the Contractor. The number and species of paddock trees cleared is also to be progressively monitored. Prior to any new set of vegetation clearing, this value (or number) is to be compared to the total approved area (or number of paddock trees) to be cleared to ensure compliance with Project approval.

Vegetation clearance is only permitted in areas identified in the BDAR (ELA 2023) as summarised in Table 9-2 and Figure 2-1.

No more than 8.75 ha of native vegetation and 77 paddock trees will be removed in total (comprising 7.27 ha of PCT 277 (Grazing and Exotic Pasture), 0.29 ha of PCT 277 (Planted), 0.10 ha of PCT 277 (Low), 1.02 of PCT 9 (Low) and 0.07 ha of PCT 277 (Roadside)) to achieve compliance with the BDAR and the required retirement of biodiversity credits. Any additional clearance will first require a project modification.

Table 9-2: Summary of approved vegetation clearing

Approved Vegetation Areas / Numbers	Approved Clearing Extent

• **8.75 ha of native PCTs**
  ○ 7.27 ha of PCT 277 (Grazing and Exotic Pasture)
  ○ 0.29 ha of PCT 277 (Planted)
  ○ 0.10 ha of PCT 277 (Low)
  ○ 1.02 of PCT 9 (Low)
  ○ 0.07 ha of PCT 277 (Roadside)
• **77 paddock trees**
	Within Development Footprint (Figure 2-1). Any additional clearance will first require a project modification.

F Resource Salvage Guide

During disturbance activities, including vegetation clearing and earthworks, salvaged resources may enhance retained habitat in adjacent areas of the Project Site where practicable and feasible. Resources can also be re-used in rehabilitation activities throughout disturbed areas in the Development Footprint.

Potential resources include felled HBTs, large fallen logs and woody debris, as well as topsoil and mulch. For example, HBTs requiring removal and cleared larger woody debris will be relocated into adjacent habitat or placed on progressively rehabilitated disturbance areas.

Vegetation that has been cleared that does not contain habitat features may be placed in areas of exotic vegetation, mulched, or removed from the Development Footprint in accordance with EPA (2014) *Waste Classification Guidelines* and/or negotiation with the relevant landowner.

Where soil is cleared for excavations, it may used for backfill or progressive rehabilitation. If signs of unexpected contamination are identified during excavations, soils will be tested and disposed of appropriately in accordance with the *Waste Classification Guidelines*.

Many native fauna species utilise woody debris and bush rock for shelter, basking to hide from predators, find food and avoid extreme weather. When woody debris and bush rock are required to be removed from a development site, consideration will be given to finding suitable locations for re-use of these important habitat features.

Term	Definition
Woody Debris	Trees and wood, whether living or dead, at least 100 mm in diameter and 500 mm long, including hollows.
Bush Rock	Loose rock occurring on rock or soil surfaces.

Prior to relocation of woody debris found within the development site, consultation will be undertaken with landowners and the Site Ecologist to determine a suitable location for re-use to ensure it does not have a negative impact on the receiving environment. For example, in areas of high-quality bushland, there may already be enough suitable hollows, fallen logs or bush rock and adding more may cause unnecessary disturbance or create a fire hazard. Consultation with the Department will not be required for relocation of materials within the approved Development Footprint. Recommended areas for relocation include vegetation buffers or visual screen plantings that are located within the Development Footprint, outside of any Asset Protection Zones (APZs) and where placement of material does not increase any hazard or risk.

If a suitable relocation area is not identified in the Development Footprint (i.e. offsite relocation is required, for example in adjacent bushland), consultation between the Department, Proponent and any landowners involved is required and will be undertaken before material can be relocated.

For all relocation of material, the following best practice methods apply:

- Removal, stockpiling, transportation, and relocation of woody debris and/or bush rock is carried out in a manner that minimises disturbance to native vegetation (including the canopy, shrubs, dead trees, fallen timber and groundcover species) or bush rock.
- The spread of any weeds or pathogens that may be in the soil is avoided when relocating woody debris and bush rock from stockpiles.
- An Ecologist is consulted with to provide advice on positioning woody debris and bush rock in designated relocation areas.
- Topsoil disturbance is kept to a minimum and is not heaped up against woody debris or bush rock because of the potential to provide habitat for rabbits.
- Woody debris is placed evenly across the site.
- Where woody debris is to be mulched the Project Manager and/or Site Supervisor will ensure that weeds are separated from native vegetation.

B4 Fauna Management Procedures

As a general principle, any native animals found within the construction area will be avoided. Fauna will only be handled by a qualified ecologist or wildlife carer with relevant skills and experience (e.g., snake handling), and only when absolutely necessary.

Where a need for active fauna management has been determined from the pre-clearing inspections, a qualified ecologist/licenced wildlife handler is to be present during vegetation clearing activities.

In any area to be cleared (Figure 2-1), non-habitat vegetation will be cleared first per vegetation removal procedures (Appendix B3). Any fauna habitat (or resident fauna including actively nesting birds) identified during the pre-clearing procedure is then to be left standing overnight as a minimum (ideally longer up to three days) to encourage the self-relocation of fauna that may be using the available habitat feature.

A hierarchy of fauna management will be followed that prioritises passive fauna management and proactive measures prior to clearing, to reduce fauna disturbance and potential harm. Any injured fauna must be reported to the Project Manager and identified by a qualified Ecologist.

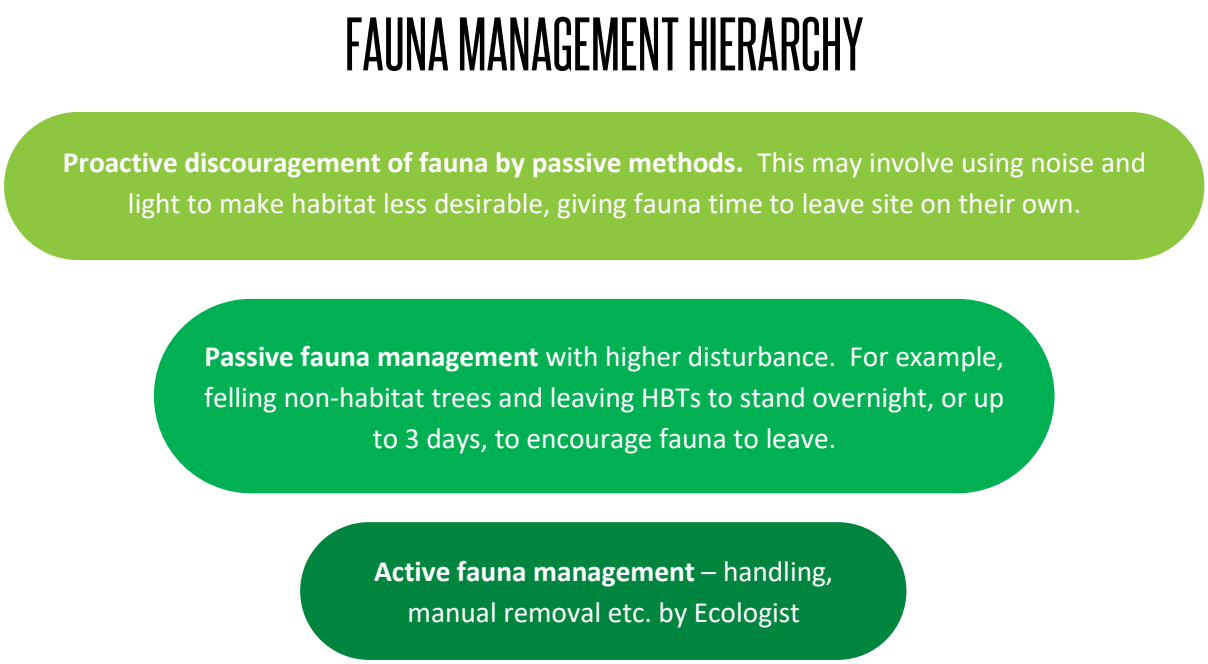


Figure 9-3: Fauna management hierarchy

A Management of hollow-dependent fauna

HBTs may contain roosts, nests or dens for a range of species including mammals, birds and microbats. HBTs may include live trees and stags (dead standing trees with hollows). Clearing of HBTs will be avoided during spring wherever possible to avoid impacts to fauna. The following robust HBT clearing procedure is to be followed at all times:

- Removal of HBTs is to be avoided during spring, to avoid the main breeding period for hollow-dependent fauna.
- A pre-clearance survey (Appendix B3) is to be completed prior to the commencement of clearing, to determine the location of HBTs and ensure all have been recorded and marked appropriately.
- Vegetation surrounding the HBT is to be cleared first, with the HBT left standing overnight (ideally longer up to three days) to encourage self-relocation of any fauna that may be using the hollow.
- Prior to clearing, HBTs will be shaken appropriately (under Ecologist supervision) with machinery to encourage resident fauna to vacate the hollow and move to an alternative site. Relocation may be assisted by the supervising ecologist / fauna handler.
- HBTs be soft pushed to the ground when felling in order to reduce the impact to any remaining resident fauna.
    - Where fauna is known to remain within the hollow, an alternative method that may be considered is to lower cut sections of the tree using an arborist and crane.
- Preferentially, felled HBTs will be positioned on the ground so the entrance to the hollow faces upwards allowing any remaining resident fauna to exit.
- Felled HBTs are to be inspected by the supervising ecologist / fauna handler to confirm whether fauna have exited the tree.
- Felled HBTs are to be left overnight before mulching or relocating, to allow any remaining fauna time to exit, which will be confirmed by reinspection on the following day.

B Arboreal mammals

In addition to HBTs, trees which provide habitat to arboreal mammals, may be considered habitat trees. If the presence of arboreal mammals is suspected or known, clearing of vegetation will be managed by:

- Causing noise/light disturbance to encourage the movement of animals away from the vegetation on their own.
- Clearing adjacent vegetation not likely to be used by arboreal mammals, to allow time for the animal to self-relocate of its own accord.

Where the animal(s) still remain in the tree, the supervising Ecologist or suitably qualified fauna handler will be responsible for determining the appropriate method, for example:

- For any threatened species (e.g. Koala):
    - ensuring sufficient time is allowed for the animal to relocate
    - capture and relocation may be considered if necessary (consultation may be required)

- Shaking the tree with machinery to be used during clearing activities to encourage the animal to move to an alternative location.
- Gently lowering the tree to the ground in order to reduce the likelihood of disturbance to the habitat feature/animals if present
- Inspection of the felled tree to confirm that the mammal has relocated.
- Where the mammal is still present, leave the felled tree overnight to encourage the animal to relocate, which will be confirmed by reinspection on the following day.

A qualified Ecologist acting as a 'spotter' must be present with radio communication to identify animal presence and ensure its welfare at all stages of vegetation clearing. Proceeding with vegetation removal if unsure of animal presence must be a last resort following proactive measures to discourage the animal from the habitat, and providing sufficient time (at least 24 hours) for its relocation.

C Nesting birds

Trees will be inspected for nests immediately prior to clearing to ensure that the nest is not active. If the nest is not active, the tree can be cleared.

Where a nest is active, birds present (generally fledglings) must be collected where safe and taken to a wildlife carer to be cared for, prior to later release. The nest will be removed from the tree and an inspection undertaken to confirm the nesting activity hasn't recommenced. If nesting has recommenced, then the nest will be removed again before any nest can be established and the tree then cleared. Felled trees will be inspected on the ground for any sign of fauna and/or fauna habitat such as nests.

D General fauna management

Not specific to any type of habitat feature, fauna species or group, construction procedures will include measures to further minimise direct and indirect impacts to fauna including:

- The EPC Contractor is to prepare a Fauna Rescue Protocol that includes notification of local wildlife carers (i.e. WIRES) and a veterinarian will they be required during clearing of vegetation. All staff are required to be inducted into the protocol.
- Temporary construction features such as trenches, and pits will be fenced/covered overnight and when not in use for construction. Open trenches will be checked twice daily for any fauna by the EPC Contractor.
- Any external lighting associated with the development uses best management practice for minimising fauna disturbance (AS 4282:2019 *Control of the obtrusive effects of outdoor lighting* and National Light Pollution Guidelines for Wildlife)
- Vehicle speed limits (including deliveries and contractors) across the Project Site will be reduced to minimise the risk of fauna strike.
- Vehicle use will be restricted to the Development Footprint and to areas which are to be used for access tracks or infrastructure. This avoids harm to areas not approved for impact, including compaction of soils that can cause inadvertent harm to retained trees.

B5 Weeds, Pathogens and Pests

A Weed Management

Weed species known from the Development Footprint are described in Section 4.7. All Project activities may result in the spread of weeds, resulting in potential impacts to surrounding agriculture and remnant native vegetation. Weeds will be proactively managed to avoid the spread of existing weeds and to manage any incursions which arise throughout construction and operation of the Project.

Weed management procedures are summarised in Figure 9-4 below. Please also refer to the Rehabilitation and Decommissioning Plan (ELA 2024b) for further weed management measures.

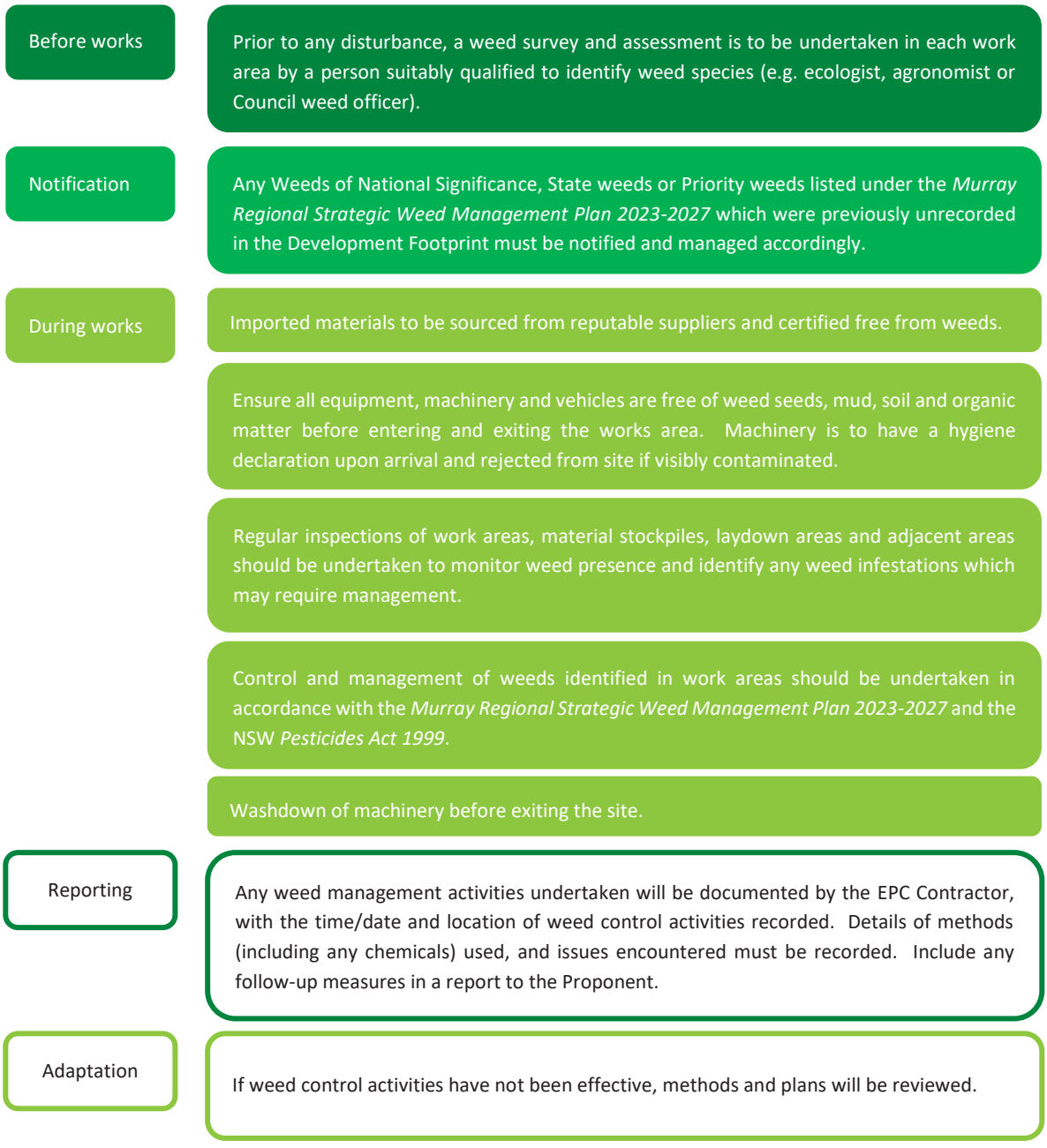


Figure 9-4: Weed management procedures

B Pathogen Management

Best practice methods to prevent the spread of pathogens is provided in Table 9-3.

Should any signs of pathogen presence on site be identified, the Project Manager and HSE Manager will be notified immediately and appropriate follow-up actions determined.

Table 9-3: Best practice hygiene protocols to prevent the spread of pathogens

Pathogen	Best Practice Hygiene Protocols
Phytophthora	• Minimise work during excessively wet or muddy conditions. • Programming of works will always move from uninfected areas to infected areas. • Set up exclusion zones with fencing and signage to restrict access into contaminated areas. • All personnel (including visitors) to be inducted on Phytophthora management measures for the site. Provide vehicle wash down facility. • Restrict vehicles to designated tracks, trails, and parking areas. • Provide parking and turn-around points on hard, well-drained surfaces. • Provide boot wash down facility. • Restrict personnel to designated tracks and trails. • Use a certified supply of plants and soil that is disease-free. • Retain all potentially affected materials within the contaminated area. • Ensure stockpiles of mulch, topsoil and fill material are separated to avoid potential contamination and spread.
Chytrid Fungus	• Minimise work during excessively wet or muddy conditions. • Programming of works will always move from uninfected areas to infected areas. • Set up exclusion zones with fencing and signage to restrict access into contaminated areas. • All personnel (including visitors) to be inducted on chytrid management measures for the site. • Provide vehicle wash down facility. • Restrict vehicles to designated tracks, trails, and parking areas. • Provide parking and turn-around points on hard, well-drained surfaces. • Provide boot wash down facility. • Disinfect with cleaning products containing benzalkonium chloride or 70% methylated spirits in 30% water. • Disinfect hands or change gloves between the handling of individual frogs and between each site. • Only handle frogs when necessary. Use the 'one bag-one frog' approach. • To avoid cross contamination, generally avoid transferring water between two or more separate waterbodies.

Myrtle Rust	• To determine if Myrtle Rust is known within the locality of the development site, the following will be undertaken:
	  ○ Use of the DPI Myrtle Rust Management Zone map (https://www.dpi.nsw.gov.au/__data/assets/pdf_file/0008/374633/myrtle-rust-nsw-mgt-zones.pdf noting that the Project Site is within a 'Green Zone' being considered relatively free of Myrtle Rust
	  ○ Photograph potentially infected plants and send to: biosecurity@industry.nsw.gov.au for confirmation.
	• Programming of works will always move from uninfected areas to infected areas.
	• Set up exclusion zones with fencing and signage to restrict access into contaminated areas.
	• All personnel (including visitors) to be inducted on Myrtle rust management measures for the site.
	• Provide vehicle wash down facility.
	• All vehicles and machinery to be washed with Truck wash (or equivalent).
	• Restrict vehicles to designated tracks, trails, and parking areas.

Pathogen	Best Practice Hygiene Protocols
	• For medium-long term projects, install a concrete wash down bay which will capture the water in a trench or bunded area. • Water used for wash downs must not be used for dust control. • Personnel working in an infected site will shower and launder clothes (especially hats) before moving to another bushland site. • Provide boot wash down facility. • Footwear and equipment to be cleaned of soil/mud then sprayed with 70% methylated spirits in 30% water. • Use a certified supply of plants and soil that is disease-free (the Australian Nursery Industry *Myrtle Rust Management Plan* (McDonald 2011) provides best practice Myrtle rust management that is to be expected from suppliers). • Plant material will be buried on site if possible. • Do not dispose of waste at another bushland site. • Buried material sites must be mapped to prevent re-exposure, especially if located near utility easements. • If material cannot be buried advice will be sought from the relevant authority.

C Feral Pest Management

Several introduced vertebrate pest species are common to the region and have the potential to compete with native species and cause considerable damage to land and vegetation. Contamination and waste management will be managed in accordance with the Waste Management Plan (Coffey 2024). The Waste Management Plan will identify the waste management measures to be implemented to reduce opportunities for scavenging which may encourage animals such as foxes, wild dogs and feral cats.

The Project will cooperate with landowners to facilitate existing and ongoing vertebrate pest control programs being undertaken on freehold land in the Project Site. Any vertebrate pest control activities undertaken will be done in accordance with the requirements of the Local Land Services (LLS) and in consultation with relevant stakeholders (namely landowners).

B6 Unexpected Finds Procedure

A Unexpected Threatened Species Finds

If previously unrecorded threatened flora or fauna are identified during pre-clearing surveys or clearing activities, a qualified ecologist will be engaged to determine the significance of impacts and provide advice on approval requirements.

Works in these areas, where potential impacts to threatened species are identified, will not be undertaken until authorisation to proceed is provided by the relevant authority.

Three threatened species were not identified during targeted surveys, but are assumed present based on site characteristics and potential habitat. These are:

- *Myotis macropus* (Southern Myotis) – listed as vulnerable under the BC Act
- *Petaurus norfolcensis* (Squirrel Glider) – listed as vulnerable under the BC Act[3]
- *Pilularia novae-hollandiae* (Austral Pillwort) – listed as Endangered under the BC Act.

Details on species habit and ecology are provided below to assist potential identification. Where unsure, and the species has the potential to be impacted, staff are to notify the Site Manager and works must stop until a qualified Ecologist determines presence.

If other threatened species are identified, notify the Site/Project Manager and alert the Ecologist.

[3] Roadside Upgrade areas only (see Figure 2-2)

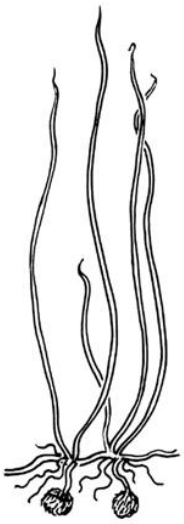
B Southern Myotis

Species name	*Myotis macropus* (Southern Myotis)
Species kingdom & family	Fauna – Microchiroptera (microbats)
Listing status	Vulnerable (BC Act)
Habit and Ecology	Southern Myotis feed on aquatic insects and small fish. They fly close to the surface of rainforest streams or large lakes and reservoirs. To catch their prey, they rake the water with the curved claws on their large feet. Hibernates during winter. Roosts in tree hollows and is often close to water. Sometimes found in roofs and ceilings. Usually 10 – 15, but up to 100, bats roost in a colony.
Example	

C Squirrel Glider

Species name	*Petaurus norfolcensis (Squirrel Glider)*
Species kingdom & family	Fauna – Diprotodontia (Australian marsupial mammals)
Listing status	Vulnerable (BC Act)
Habit and Ecology	Squirrel Glider inhabits mature or old growth Box, Box-Ironbark woodlands and River Red Gum forest west of the Great Dividing Range. Live in family groups of a single adult male one or more adult females and offspring. Require abundant tree hollows for refuge and nest sites. Head and body length of approximately 20 cm, with a soft and bushy tail up to 27 cm in length.
Example	

D Austral Pillwort

Species name	*Pilularia novae-hollandiae* (Austral Pillwort)
Species kingdom & family	Flora – Marsileaceae (small aquatic or subaquatic plant)
Listing status	Endangered (BC Act)
Habit and Ecology	A semi-aquatic fern that grows in shallow swamps and waterways, often among grasses and sedges. Most conspicuous in drying mud. Many records from the Albury-Urana region are from roadside table drains. This species is likely ephemeral, appearing when soils are moistened by rain. It has thread-like fronds up to 8 cm long from an underground stem (rhizome) with fruiting capsules at the base of the fronds.
Identification	Rhizome fine, branched, glabrous, green. Fronds scattered along rhizome, often 2 or 3 per node, tapering towards tip, slender, 2–7 cm long, deep green; young fronds with coiled tips. Sporocarps woody, single at frond base, shortly stalked, usually bent downwards and often buried, globular, 2–4 mm diameter, moderately hairy.
Example	 

ecological AUSTRALIA
A TETRA TECH COMPANY

1300 646 131
www.ecoaus.com.au