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Willatook Wind Farm Project

**Application of the Victorian Renewable
Energy Handbook and Response to the
Minister's Assessment**

May 2026

Willatook Wind Farm Project

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Willatook Wind Farm Pty Ltd // Application of the Victorian Renewable Energy Handbook and Response to the Minister’s Assessment

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Quality Information

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Revision	Description	Date	Originator	Reviewer	Approver
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1 Introduction

1.1 Purpose of this Document

This document has been prepared to demonstrate how the Willatook Wind Farm aligns with *Handbook for the Development of Renewable Energy in Victoria – Guidance to avoid, minimise, mitigate and compensate for impacts on threatened bird and bat species* (the *Handbook*), and how the project aligns with and responds to the relevant findings and recommendations of the Minister for Planning's Assessment under the *Environment Effects Act 1978*.

Specifically, this document:

- Demonstrates how the project aligns with the Handbook, including the general risk-based framework, the guiding principles of its application, and the species-specific guidance for onshore wind energy facilities.
- Sets out how the key risks to threatened bird and bat species identified through the Environment Effects Statement (EES) process, and those highlighted in the Minister's Assessment, have been subject to further consideration, refinement and design response where required.
- Demonstrates the risk-based approach that has been adopted, consistent with the Handbook and the Ministerial Guidelines for assessment of environment effects, such that the level of assessment and management measures applied have been proportionate to the level of risk identified.
- Demonstrates the structured application of the mitigation hierarchy (avoid, minimise, mitigate and, where necessary, compensate) to achieve an acceptable level of impact on threatened bird and bat species.

This document does not replace or re-assess the findings of the EES. Rather, it consolidates and clarifies how the technical work undertaken through the EES, together with subsequent design refinements and commitments, collectively demonstrate alignment with the Handbook and how its expectations within the statutory planning framework have been addressed.

This report forms part of the Planning Permit Application for the Project and is intended to assist the Responsible Authority and relevant advisory agencies in assessing the proposal against:

- Clause 12.01 (Protection of Biodiversity) of the Moyne Shire Planning Scheme;
- Clause 52.32 (Wind Energy Facility) and/or Clause 53.22 (Significant Economic Development) of the Moyne Shire Planning Scheme;
- The objectives of the *Planning and Environment Act 1987*; and
- The Minister's Assessment of the Willatook Wind Farm EES under the *Environment Effects Act 1978*.

In doing so, this document provides a clear and traceable statement of how the Project has identified, assessed and managed risks to threatened bird and bat species in a manner that is proportionate, evidence-based and consistent with Victorian Government policy guidance.

1.2 Relationship to EES and Minister's Assessment

An *Environment Effects Statement* (EES) (Wind Prospect, 2022) for the Project was prepared in accordance with the Scoping Requirements issued by the Minister for Planning and assessed under

the *Environment Effects Act 1978*. The EES comprised a comprehensive assessment of environmental effects across all relevant disciplines, including:

- Chapter 11 – Brolga
- Chapter 12 – Biodiversity and habitat
- Chapter 24 – Cumulative effects
- Chapter 25 – Matters of National Environmental Significance
- Chapter 26 – Environmental management framework

The EES was informed by detailed technical investigations, modelling and survey programs, including species-specific assessment of Brolga (EES Appendix C1) (Nature Advisory, 2022a) and terrestrial fauna, including Southern Bent-wing Bat (EES Appendix D) (Nature Advisory, 2022b).

Following exhibition of the EES and the Inquiry and Advisory Committee process, the Minister for Planning issued an Assessment under the *Environment Effects Act 1978*. The Minister's Assessment identified two matters requiring particular attention in subsequent statutory decision-making. These were:

- Brolga, particularly in relation to appropriate set-backs from potential and confirmed breeding habitat and the management of disturbance during breeding; and
- Southern Bent-wing Bat, particularly in relation set-backs from potential foraging habitat and collision risk and the strengthening of operational mitigation measures.

This document has been prepared having regard to the Minister's findings and recommendations, and demonstrates how the Project, as proposed under the Planning Permit Application, responds to those findings *and* implements the expectations of the Victorian Renewable Energy Handbook.

1.2.1 Subsequent Technical Work

To support the Planning Permit Application and ensure full alignment with the Handbook, the following additional technical work has been undertaken:

- A new Brolga Assessment (Nature Advisory, 2026a) prepared in accordance with the species-specific guidance in Appendix 2 of the Handbook;
- A new Bat Impact Assessment (Nature Advisory, 2026b), including assessment of Southern Bent-wing Bat, prepared in accordance with Appendix 3 of the Handbook; and
- An Addendum Biodiversity Assessment (Nature Advisory, 2026c) addressing the modified project design and confirming the biodiversity implications of layout refinement and infrastructure adjustments.

1.2.2 Role of this Document

This document consolidates (as relevant to the purpose of this document):

- findings of the EES;
- conclusions within the Minister's Assessment;
- subsequent species-specific assessments prepared under the Handbook; and
- the Addendum Biodiversity Assessment of the modified design.

In doing so, it provides a single, integrated statement demonstrating that:

- the environmental effects of the Project have been assessed through a robust and transparent

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EES process;

- the key risks identified by the Minister have been subject to further targeted investigation where required; and
- the Project, as now proposed for planning approval, is consistent with the risk-based approach, proportionality principles and mitigation hierarchy set out in the Handbook.

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2 Legislative and Policy Context

This chapter provides a high-level overview of the statutory and policy framework relevant to the application of the *Handbook for the Development of Renewable Energy in Victoria – Guidance to avoid, minimise, mitigate and compensate for impacts on threatened bird and bat species* (DEECA, 2025) (the Handbook).

A detailed description of the legislative approvals framework, planning controls, permit triggers and referral requirements is provided in:

- Chapter 5 – Legislative Context; and
- Chapter 6 – Planning Provisions

of the Planning Permit Application.

This chapter does not replicate that analysis. Instead, it identifies the statutory context within which the Handbook operates and clarifies its role in informing assessment and decision-making for the Project.

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2.1 Environment Effects Act 1978 and Minister's Assessment

The Project was subject to assessment under the *Environment Effects Act 1978* (EE Act), culminating in the Minister for Planning's Assessment dated 21 July 2023. The Minister concluded that the Project could proceed with acceptable environmental effects, subject to conditions and the implementation of specific environmental management measures, with particular attention to:

- risks to Brolga; and
- risks to Southern Bent-wing Bat.

The Minister's Assessment forms a key statutory consideration for decision-makers under the *Planning and Environment Act 1987* (P&E Act) and establishes the environmental performance expectations to be carried forward into subsequent approval processes.

This document responds directly to the matters identified in the Minister's Assessment insofar as they relate to threatened bird and bat species, and demonstrates how those findings have been addressed in a manner consistent with the Handbook, which was published after the Minister's Assessment was released and specifically clarifies expectations regarding the assessment and management of potential impacts to Brolga and bats.

2.2 Planning and Environment Act 1987 and the Moyne Planning Scheme

The Project requires approval under the *Planning and Environment Act 1987* and the Moyne Planning Scheme, including (amongst other provisions):

- Clause 52.32 – Wind Energy Facility;
- Clause 52.17 – Native Vegetation;
- Clauses 19.01-1S and 19.01-2S – Energy Supply and Renewable Energy; and
- Clause 12.01 – Protection of Biodiversity.

As set out in Chapter 6 of the Planning Report, decision-making under the Planning Scheme requires consideration of:

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- the protection of biodiversity;
- the avoidance and minimisation of environmental impacts;
- cumulative impacts; and
- the broader environmental and economic benefits of renewable energy generation.

The Handbook is a reference document supporting these policy objectives and provides guidance on how impacts on threatened bird and bat species (and other ecological values) are to be assessed and managed in the context of onshore wind energy facilities.

This report demonstrates how the Project, as proposed for approval, is consistent with both the statutory provisions of the Planning Scheme and the policy guidance contained in the Handbook.

2.3 Flora and Fauna Guarantee Act 1988

The *Flora and Fauna Guarantee Act 1988* (FFG Act) establishes the statutory framework for the protection and conservation of threatened species and ecological communities in Victoria.

Brolga and Southern Bent-wing Bat are listed taxa under the FFG Act and were assessed in detail through the EES process. Likewise, a range of other species that have either been recorded or have the potential to occur in the Project site are discussed in detail. The EES (and subsequent assessments) documented the presence, habitat utilisation, and potential impact pathways for these species, and identified avoidance and mitigation measures to manage risks associated with construction and operation of the Project.

2.4 Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)

The Project was referred under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and determined to be a controlled action, with listed threatened species and communities identified as controlling provisions.

Based on the information provided in the EPBC referral, the delegate for the Commonwealth Minister for the Environment determined the proposed action has the potential for significant impacts on the following matters of national environmental significance:

- Southern Bent-wing Bat (*Miniopterus orianae bessenii*)
- Seasonal Herbaceous Wetlands (Freshwater) of the Temperate Lowland Plains
- Growling Grass Frog (*Litoria raniformis*); Dwarf Galaxias (*Galaxiella pusilla*); Yarra Pygmy Perch (*Nannoperca obscura*)
- Matted Flax-lily (*Dianella amoena*); Clover Glycine (*Glycine latrobeana*); Basalt Peppercreess (*Lepidium hyssopifolium*); Gorae Leek-orchid (*Prasophyllum diversiflorum*); Maroon Leek-orchid (*Prasophyllum frenchii*); Dense Leek-orchid (*Prasophyllum spicatum*); Button Wrinklewort (*Rutidosia leptorhynheoides*); Swamp Fireweed (*Senecio psiloearpus*); and Swamp Everlasting (*Xerochrysum palustre*).

The Project is being assessed under the bilateral assessment agreement between the Commonwealth and Victoria, whereby the Minister for Planning's Assessment under the *Environment Effects Act 1978* informs the Commonwealth approval decision.

The EES included an assessment of the potential impacts on MNES, including collision risk and habitat impacts to Southern Bent-wing Bat. The updated Bat Impact Assessment (Nature Advisory, 2026b) prepared in accordance with Appendix 3 of the Handbook provides additional clarity and refinement of operational risk and mitigation measures, consistent with both State policy guidance and Commonwealth assessment expectations.

Nothing in the Handbook alters or supplants the requirements of the EPBC Act. However, the structured risk-based approach and mitigation hierarchy embedded in the Handbook assist in demonstrating that impacts to MNES have been rigorously assessed and managed in a transparent and proportionate manner.

2.5 Status and Role of the Handbook

The Handbook for the Development of Renewable Energy in Victoria (DEECA, 2025) was released after the EES process for the Project had concluded.

The Handbook:

- applies to onshore wind energy facilities across approval pathways in Victoria;
- establishes a risk-based framework for assessing impacts on threatened bird and bat species;
- requires the use of the mitigation hierarchy (avoid, minimise, mitigate and compensate); and
- includes species-specific guidance for Victorian Brolga (Appendix 2) and bats, including Southern Bent-wing Bat (Appendix 3).

The Handbook is guidance rather than legislation. It does not create new statutory obligations, nor does it alter the approval requirements under the EE Act, P&E Act, FFG Act or EPBC Act. However, it represents current Victorian Government policy guidance on best practice assessment and management of threatened bird and bat impacts from onshore wind energy facilities. Importantly the Handbook and supporting guidelines replace earlier draft and international guidelines referred to within the Minister's Assessment.

Accordingly, this document demonstrates how:

- the Handbook has been applied to the Project;
- the species-specific guidance for Brolga and bats has been implemented through new technical assessments; and
- the broader principles of risk proportionality and the mitigation hierarchy are embedded within the Project's design and environmental management framework.

2.6 Relationship to Native Vegetation Policy

Native vegetation removal associated with the Project is assessed under Clause 52.17 of the Moyne Planning Scheme and the Guidelines for the Removal, Destruction or Lopping of Native Vegetation (2017).

The three-step approach under Clause 52.17 (avoid, minimise, offset) aligns with, and is conceptually consistent with, the mitigation hierarchy embedded within the Handbook.

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The Addendum Biodiversity Assessment prepared for the modified Project layout confirms the extent of native vegetation removal and demonstrates continued application of the avoidance and minimisation principles.

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3 Assessment Approach

The statutory approvals framework for the Project, including the application of the *Planning and Environment Act 1987*, the Moyne Planning Scheme and Clause 52.32 (Wind Energy Facility), is set out in Chapters 5 and 6 of the Planning Report. This chapter does not repeat that analysis. Instead, it explains how threatened bird and bat risks have been identified, prioritised and addressed within that established framework.

This chapter describes the risk-based methodological framework applied to assess and manage potential impacts on threatened bird and bat species, consistent with the *Handbook for the Development of Renewable Energy in Victoria* (DEECA, 2025). The assessment methods reflect the same core principles that underpinned the Willatook Wind Farm EES.

3.1 Continuity with the EES Assessment Framework

The assessment of threatened bird and bat species undertaken for the EES was structured around identification and protection of environmental values, consistent with the evaluation objectives set out in the EES scoping requirements and subsequently applied by the Minister for Planning in the Minister's Assessment.

The Minister's Assessment explicitly notes that the EES, the Inquiry and Panel report, and the supporting technical documentation were evaluated against evaluation objectives that reflect key statutory and policy priorities, including the need to avoid or minimise potential adverse effects on biodiversity values within and near the site.

As documented in the EES, the assessment approach comprised the following core steps:

1. Identification of relevant environmental values, including threatened species, present or likely to occur within the Project area;
2. Identification of potential impact pathways that could arise from construction and operation of the Project;
3. Application of avoidance and minimisation measures through project siting, layout refinement and design development; and
4. Assessment of residual impacts following the application of those measures.

This values-based assessment approach aligns with the expectations of the Handbook: both frameworks focus assessment effort on material issues and credible impact pathways, emphasise early avoidance and minimisation, and require transparent evaluation of residual effects once mitigation has been applied.

Accordingly, the approach documented in this report reflects a continuation and consolidation of the EES assessment framework, expressed in a manner that clearly demonstrates alignment with the Handbook and the expectations set out in the Minister's Assessment.

3.2 Handbook Risk-Based Approach

The Handbook sets out a risk-based approach for onshore wind energy facilities that focuses assessment effort on those threatened bird and bat species and related impact pathways most likely to result in material impacts.

Consistent with the assessment of potential impacts through the EES (see Section 3.1) and the Handbook, the Project has applied the following steps:

- site and context characterisation
- species identification and likelihood of occurrence
- impact pathway identification and impact evaluation
- application of the mitigation hierarchy
- assessment of residual impact

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There has been additional work following the EES focussed on the two priority species identified by the Minister for Planning's Assessment, being Brolga and Southern Bent-wing Bat. This work responds directly to the recommendations set out in the Minister's Assessment and draws on the relevant species-specific guidelines that support the Handbook.

For other threatened birds and bats, the assessment is based primarily on the technical investigations and impact evaluation undertaken as part of the EES. The Minister for Planning concluded that these assessments were appropriate and that impacts to these matters were acceptable, subject to the implementation of the proposed mitigation and management measures.

Notwithstanding this, an assessment against the Handbook has also been undertaken for these matters for completeness, to demonstrate the applicability of the Handbook and to confirm that the Project's design and mitigation measures are aligned with its intent.

3.2.1 Site and context characterisation

The Project area and its surrounding landscape context were characterised to identify features relevant to threatened bird and bat species, including:

- habitat distribution and condition;
- key ecological functions (e.g. breeding, roosting, foraging and movement);
- wetlands, waterways and other attractants relevant to bird utilisation;
- landscape connectivity and potential movement corridors; and
- proximity to known or potential important areas for species of concern.

This context informs where impacts could plausibly occur and the level of survey and analysis required, which formed the EES.

3.2.2 Species identification and likelihood of occurrence / interaction

Threatened bird and bat species were identified and screened based on the likelihood that they occur in the locality and may interact with the Project, informed by:

- EES technical investigations and survey programs;
- desktop review of relevant biodiversity records and mapped information; and
- targeted additional surveys and updated analysis since the EES Ministers Assessment where relevant to the modified design.

Species were then prioritised where the available evidence indicates a credible potential for occurrence and interaction with Project infrastructure (for example, utilisation of habitats within or adjacent to the Project, or likely flight / movement through the area).

3.2.3 Impact pathway identification and impact evaluation

For species considered likely to occur and interact with the Project, the assessment identified credible impact pathways and evaluated the nature and potential significance of impacts. Impact pathways considered (as relevant) include:

- habitat loss or modification (including indirect effects);
- disturbance, displacement and barrier effects;
- collision risk (turbines and ancillary infrastructure such as overhead powerlines); and
- cumulative impacts in the regional context.

This step is used to distinguish matters requiring detailed species-specific assessment from those adequately addressed through the EES findings and standard controls.

3.2.4 Application of the mitigation hierarchy (avoid, minimise, mitigate, compensate)

The mitigation hierarchy was applied to the impact pathways identified above, with emphasis on:

- avoidance through siting decisions, layout refinement and exclusion of sensitive areas where practicable;
- minimisation through micro-siting, design measures and construction controls;
- mitigation through operational controls where appropriate (including monitoring and adaptive management); and
- compensation only where residual impacts remain after avoidance, minimisation and mitigation, where required.

3.2.5 Assessment of residual impact

Following application of avoidance and mitigation measures, residual impacts were identified and evaluated to confirm whether they are acceptable in the context of:

- the Minister's Assessment and its relevant recommendations;
- applicable biodiversity legislation and policy;
- relevant Planning Scheme provisions (including biodiversity policy); and
- the Handbook's intent to achieve an acceptable level of impact, supported by monitoring and adaptive management where required.

In applying this framework, the Project has focused additional species-specific assessment effort on Brolga and Southern Bent-wing Bat, consistent with the risks and information needs identified in the Minister's Assessment and the Handbook's species-specific guidance, while other threatened bird and bat matters are addressed through EES findings and post EES targeted assessment included in the amended planning permit application where relevant to the modified design.

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4 Assessment

This chapter presents an assessment of impacts on threatened bird and bat species as a result of the Willatook Wind Farm in accordance with the *Handbook for the Development of Renewable Energy in Victoria* (DEECA, 2025), and considering the assessment and recommendations set out in the Minister's Assessment. Consistent with the Handbook, the assessment is informed by early consideration of site and context characteristics that influence the nature and significance of impacts on threatened bird and bat species, and by the likelihood that those species may occur within, or interact with, the Project area.

The Handbook identifies that early site and context analysis is a critical step in identifying potential risks to threatened bird and bat species and in informing project design, assessment effort and the application of the mitigation hierarchy. In particular, it recognises that the sensitivity of a site, the biodiversity values present, and the surrounding landscape context influence both the potential impacts of a renewable energy facility and the feasibility and effectiveness of avoidance, minimisation and mitigation measures.

For this purpose, the Handbook sets out three criteria to support identification of risks to threatened bird and bat species as part of site and context analysis. These criteria are intended to identify the location and extent of biodiversity values relevant to threatened bird and bat species, and to inform consideration of potential impact pathways associated with construction and operation of the Project, including direct, indirect and cumulative impacts.

The assessment presented in this chapter applies these criteria to the Project area and its surrounding context, drawing on the findings of the EES, subsequent species-specific assessments and addendum biodiversity work. In doing so, it provides a structured and proportionate assessment of potential impacts on threatened bird and bat species, consistent with the Handbook and the Minister's Assessment, and forms the basis for the application of the mitigation hierarchy described in the sections that follow.

This assessment is not intended to comprehensively re-open or reassess the Project's biodiversity impacts as examined through the EES process. Rather, it synthesises and presents the findings of the EES, the Minister's Assessment and subsequent targeted investigations through the lens of the contemporary Handbook framework. Where additional information has been collected since completion of the EES, or where updated species-specific guidance has been released, this material has been incorporated to ensure alignment with current policy expectations and best available scientific knowledge. Accordingly, this chapter provides a consolidated and updated articulation of threatened bird and bat risk that builds upon, rather than replaces, the conclusions of the EES.

4.1 Site Context

4.1.1 Biodiversity Value of Site

This section describes the biodiversity values within and surrounding the Project area that are relevant to the assessment of potential impacts on threatened bird and bat species, consistent with the site and context analysis principles set out in the Handbook. The description draws on the findings of the EES biodiversity assessment, subsequent addendum work, and the application of the Victorian Government's Habitat Value mapping to characterise the relative sensitivity of the landscape.

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Landscape context and land use

The Project is located within the Victorian Volcanic Plain bioregion, a landscape that has been extensively modified for agricultural purposes. Land use within the Project area is dominated by sheep and cattle grazing and cropping, with large areas of introduced pasture and limited remnant native vegetation. Native vegetation and higher-value habitat features are generally fragmented and confined to waterways, wetlands, rocky rises, roadside reserves and small isolated patches within the broader agricultural matrix (Nature Advisory, 2022b).

This landscape context influences both the likelihood of occurrence of threatened species and the nature and potential significance of impacts associated with the Project.

Habitat Value

To support an understanding of relative biodiversity sensitivity across the Project area and surrounding landscape, Habitat Value mapping has been applied. Habitat Value is a spatial dataset developed by the Victorian Government that provides a consistent, landscape-scale indication of the relative biodiversity value of habitat, expressed on a scale from 0 (low value) to 100 (high value).

Habitat Value mapping is derived through a modelled approach that integrates multiple datasets, including:

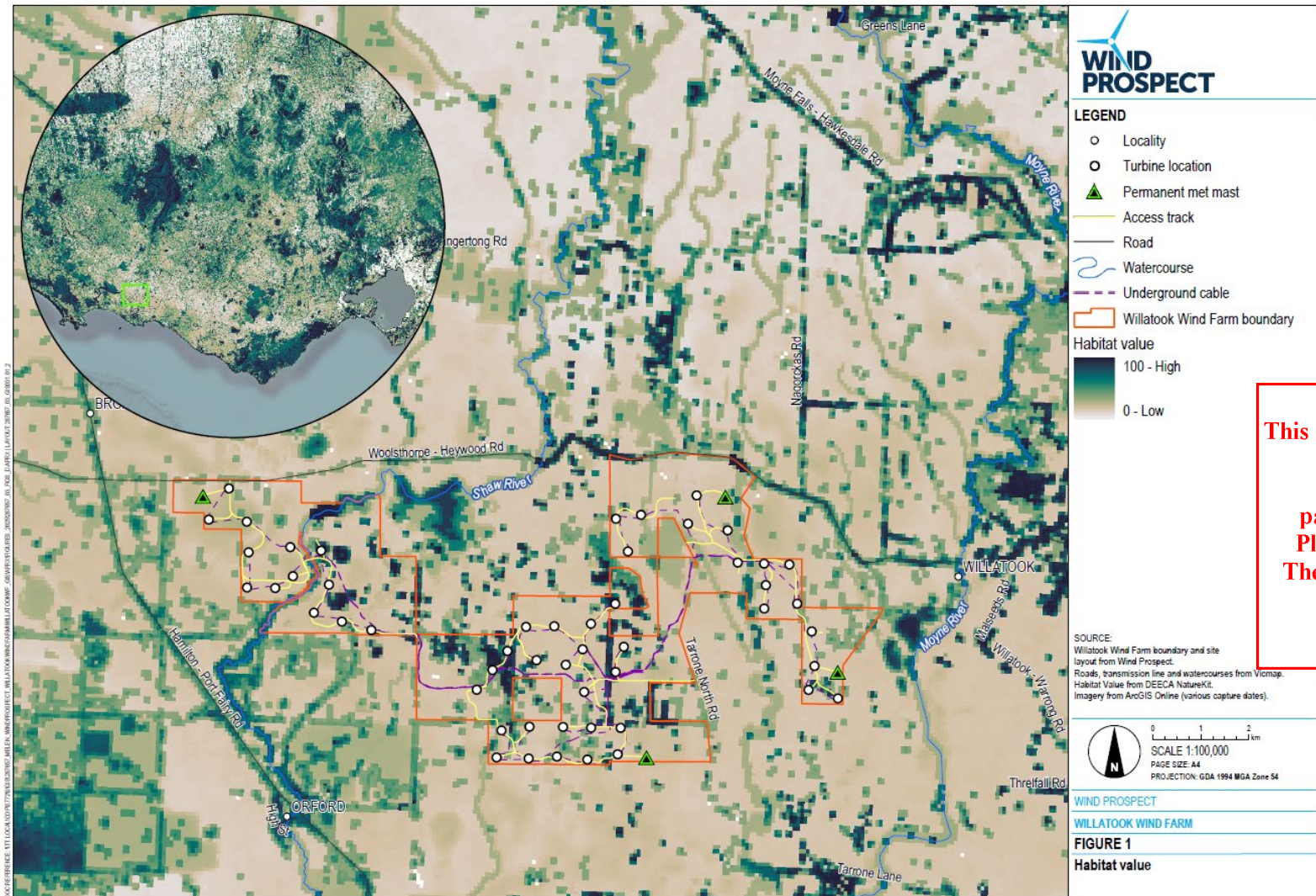
- native vegetation extent and condition;
- Ecological Vegetation Class (EVC) distribution;
- proximity to waterways, wetlands and riparian corridors;
- landscape context and connectivity; and
- known biodiversity values and ecological functions.

The dataset is intended to support early site and context analysis by identifying areas where biodiversity values are relatively higher or lower, and by informing decisions about project siting, assessment focus and the application of the mitigation hierarchy. It is not intended to replace site-specific ecological surveys or detailed impact assessment, but provides a strategic layer to guide proportional assessment effort.

Figure 1 presents the Habitat Value Map for the Project area and surrounding context, overlaid with the Project boundary and proposed turbine locations

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Figure 1 Habitat Value Map

The Habitat Value Map indicates that:

- the majority of the Project area is characterised by low to moderate Habitat Value, consistent with extensive agricultural modification;
- areas of relatively higher Habitat Value are generally associated with waterways, ephemeral wetlands, riparian corridors and remnant native vegetation patches; and
- the spatial distribution of higher Habitat Value areas generally corresponds with habitat features identified through the EES biodiversity assessment as being of greater ecological significance, although there are some key exceptions primarily relating to where ephemeral wetlands have been permanently modified (i.e., their habitat value is considerably less than indicated by the Habitat Value score).

When considering the project footprint the overall average habitat value score is 26 (where 0 is low and 100 is high).

Native vegetation and ecological communities

The Addendum Biodiversity Assessment (Nature Advisory, 2026c) confirms that the Project is located within a highly modified agricultural landscape of the Victorian Volcanic Plain bioregion, where native vegetation is generally fragmented and largely confined to remnant patches associated with wetlands, waterways, roadside reserves and rocky rises. This landscape context is consistent with that described in the EES and remains a key determinant of biodiversity risk and impact pathways.

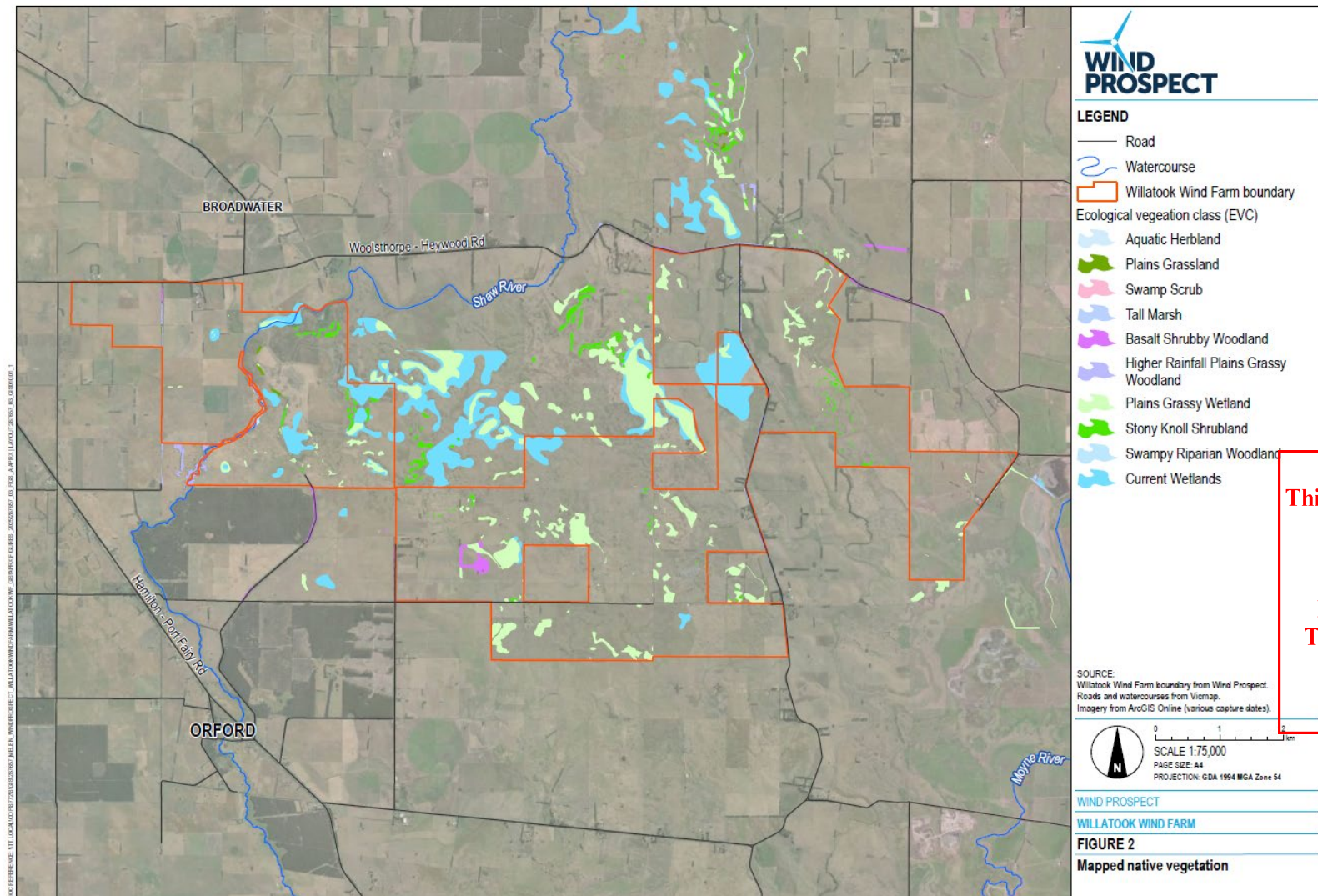
Updated field surveys and mapping undertaken between 2024 and 2026 identified nine Ecological Vegetation Classes (EVCs) within the study area, comprising a total of approximately 909.9 hectares of native vegetation in patches, including a substantial component of wetland habitat (approximately 183.5 hectares) as shown in Figure 2. Areas not supporting remnant native vegetation have a high cover (>90%) of exotic grass species, many of which have been direct seeded for use as pasture. In addition, 183 scattered trees were recorded, representing the residual canopy component of previously more extensive woodland communities.

The condition of most native vegetation patches is generally low, reflecting long-term agricultural use, fragmentation and altered hydrology. Nevertheless, these areas provide locally important habitat functions, including shelter, foraging resources and movement pathways for fauna in an otherwise simplified landscape.

The updated biodiversity assessment confirms the presence of three EPBC Act-listed threatened ecological communities within the study area:

- Grassy Eucalypt Woodland of the Victorian Volcanic Plain;
- Natural Temperate Grassland of the Victorian Volcanic Plain; and
- Seasonal Herbaceous Wetlands (Freshwater) of the Temperate Lowland Plains (SHWTLP)

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Figure 2 Native Vegetation Mapping

Fauna habitat values and threatened species relevance

Fauna habitat values within the Project area reflect the broader Habitat Value patterns described above. Habitat quality is generally low to moderate across much of the site, with locally higher-value habitats occurring in association with wetlands, waterways and remnant vegetation.

Within the predominantly modified agricultural landscape of the Project area, two areas have been identified through the EES as having comparatively higher biodiversity value and relevance to threatened bird and bat species:

- remnant treed and riparian vegetation associated with the Shaw River; and
- the Cockatoo Swamp wetland complex .

These features are reflected in both the EES biodiversity assessment and the Habitat Value mapping and have informed the focus of species-specific assessment and design avoidance measures.

Shaw River riparian corridor

The Shaw River and its associated riparian vegetation in the south-western portion of the Project area represent one of the more intact habitat features within the local landscape. Remnant treed vegetation along the river corridor provides structural complexity, shelter and foraging opportunities for a range of fauna species and functions as an important linear movement corridor within an otherwise fragmented environment.

From a threatened bird and bat perspective, the Shaw River corridor is of particular relevance as:

- a source of higher-quality habitat relative to surrounding agricultural land;
- a potential movement pathway for bats and birds, including along treed and riparian edges; and
- an area where habitat values are locally elevated, as reflected in the Habitat Value mapping.

These values were recognised in the EES and have informed turbine siting and design decisions to avoid and minimise encroachment into riparian vegetation and associated higher-value habitat areas.

Cockatoo Swamp wetland complex

The Cockatoo Swamp wetland complex represents a significant biodiversity feature relevant to threatened bird species in the local context. As documented in Chapter 11 of the EES, this complex comprises a group of seasonal wetlands that provide breeding, foraging and roosting habitat for Brolga.

Extensive field surveys, hydrological modelling and long-term observational data have confirmed that:

- the Cockatoo Swamp complex supports multiple functional wetlands capable of meeting the hydrological and vegetation requirements for Brolga breeding;
- one breeding pair of Brolga has been repeatedly recorded nesting within the complex over multiple breeding seasons; and
- the spatial arrangement of wetlands within the complex supports Brolga movement between breeding, foraging and night-roosting habitats.

Due to its size, habitat functionality and demonstrated use by Brolga, the Cockatoo Swamp complex was identified through the EES as a key area requiring avoidance and protection. This directly informed the establishment of a large turbine-free buffer and resulted in significant layout changes, including the removal or relocation of wind turbines to avoid impacts on Brolga breeding and movement pathways.

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Landscape connectivity

Landscape connectivity within the Project area is generally limited due to the highly modified agricultural context and long history of vegetation clearance across the Victorian Volcanic Plain. Native vegetation and higher-value habitat features occur in a fragmented pattern, resulting in connectivity that is largely confined to discrete linear and nodal features rather than a continuous ecological network.

Key elements contributing to localised connectivity include:

- riparian vegetation along the Shaw River;
- treed roadside reserves and planted windbreaks noting these are highly fragmented and not continuous; and
- wetlands and ephemeral swamps, including the Cockatoo Swamp complex.

These features provide localised movement pathways and stepping-stone habitat for fauna, such as bats and water-dependent bird species. However, connectivity across the broader Project area is constrained, with large areas of open pasture providing limited habitat or movement function for threatened species.

This pattern of fragmented and localised connectivity has informed the site and context analysis under the Handbook. Design refinement and avoidance measures have therefore been concentrated on riparian corridors, wetlands and associated habitat features where connectivity and ecological function are greatest.

4.1.2 Site-Specific Characteristics and Likelihood of Occurrence

Consistent with Criteria 2 of the Handbook, this section examines site-specific characteristics of the Project area that indicate whether threatened bird and bat species occur, or are likely to occur, within the site. The assessment draws on extensive desktop analysis, targeted field surveys and species-specific investigations undertaken for the EES over several years, as documented the Flora and Fauna Impact Assessment (Nature Advisory, 2022b) and the Brolga Impact Assessment (Nature Advisory, 2022), together with subsequent supplementary work following the EES.

Site characteristics relevant to threatened bird and bat species

The Project area occurs within a predominantly modified agricultural landscape. However, a number of site characteristics are relevant to threatened bird and bat species, including:

- seasonal and permanent wetlands and watercourses;
- riparian vegetation and treed linear features, particularly along the Shaw River and Back Creek;
- remnant native vegetation patches and rocky rises; and
- widespread artificial waterbodies (farm dams).

These features are not uniformly distributed and influence both the likelihood of occurrence of threatened species and where interactions with Project infrastructure may plausibly occur.

Evidence of occurrence and likelihood of use – bats

Southern Bent-wing Bat

Southern Bent-wing Bat activity was recorded infrequently within the Project area during extensive acoustic monitoring undertaken between 2009–2011 and 2018–2020. Across approximately 4,700 bat detector nights, detections were low and intermittent, indicating sporadic and opportunistic use rather than regular or sustained activity (Nature Advisory, 2026b). Across more than ten years of monitoring, only 160 confirmed Southern Bent-wing Bat calls were recorded, reflecting very low utilisation of the site.

Detections were spatially constrained, with relatively higher activity associated with treed features, rather than the predominantly open agricultural matrix (Nature Advisory, 2026b). Positively identified calls were recorded at a small subset of monitoring locations and typically comprised single or low numbers of calls per night, consistent with transient foraging movements. Sites with comparatively higher activity were located approximately 490 metres west and more than 1,550 metres east of proposed turbines.

No maternity caves, non-breeding caves or permanent roosting sites occur within or near the Project area. The nearest key non-breeding roost caves are located within 15 to 27 km of the site (including Mt Eccles, Yambuk/Deen Mar/Codrington, Byaduk and Grassmere) (Nature Advisory, 2026b). The Warrnambool maternity cave is located approximately 46 km south-east of the Project area. While the site lies within the broader landscape-scale foraging range of the species, it does not contain maternity caves, key non-breeding roosts or other habitat critical to reproduction or overwintering.

Call height data indicate that most activity occurred below the rotor-swept zone of the proposed turbines. No Southern Bent-wing Bat calls were recorded on high-mounted detectors positioned approximately 45 metres above ground level on wind monitoring masts, corresponding to the lower extent of the potential rotor-swept area (Nature Advisory, 2026b). This indicates that SBWB activity at the site is concentrated at lower flight heights, reducing the likelihood of interaction with turbine blades.

Other threatened bat species with the potential to occur

Yellow-bellied Sheath-tail-bat

The Yellow-bellied Sheath-tail-bat was recorded 16 times from nine locations across the investigation area, representing a low detection frequency of approximately 0.003 calls per bat recording night. Detections were widely distributed and did not demonstrate a clear spatial association with particular habitat types, linear features or landscape elements within the Project site (Nature Advisory, 2026b).

The species is a wide-ranging, fast-flying bat that typically forages high above the canopy and over open landscapes, often undertaking long-distance movements. Consistent with this ecology, the low number of detections and the absence of repeated activity at individual monitoring locations indicate transient passage through the area, rather than regular or sustained use of the Project area for foraging or commuting (Nature Advisory, 2026b).

No Yellow-bellied Shearwater-bats were recorded on detectors mounted at approximately 45 metres above ground level on meteorological masts. This suggests limited use of airspace at heights corresponding with the lower extent of the turbine rotor-swept zone, despite the species' capacity for high-altitude flight. This finding is consistent with previous assessments in south-west Victoria, which indicate that the species is typically recorded infrequently at wind farm sites and does not regularly use turbine-height airspace in open agricultural landscapes.

The Project area contains very limited treed habitat, with most of the landscape comprising open pasture and cropping land. While the Yellow-bellied Shearwater-bat may occasionally forage or traverse open areas, the absence of extensive tree cover, forest edges or structurally complex vegetation reduces the likelihood that the site provides important or preferential foraging habitat.

Grey-headed flying fox

Grey-headed Flying-fox (*Pteropus poliocephalus*) was assessed for its potential to occur within the Project area as part of the Bat Impact Assessment (Nature Advisory, 2026b). The Project area is located outside the core distribution of the species in Victoria, and no known maternity camps or permanent roost sites occur within or adjacent to the site, the closest being more than 30 kilometres in Warrnambool (Nature Advisory, 2026b). Database searches did not identify any recent records within the local search area, and no evidence of roosting or regular foraging use was recorded during field investigations.

Grey-headed Flying-fox typically forages within approximately 20 to 50 kilometres of known camp locations, with movements closely associated with seasonally abundant flowering and fruiting resources. The Project area and the surrounding landscape is dominated by open agricultural land with limited remnant native vegetation. Vegetation within the Project area comprises largely modified pasture with scattered trees, shelterbelts and narrow riparian corridors, none of which support extensive stands of flowering eucalypts or other key foraging resources known to attract flying-fox aggregations (Nature Advisory, 2026b).

While individual Grey-headed Flying-fox may occasionally traverse broader landscapes during periods of resource scarcity or seasonal movement, the absence of roost habitat, limited availability of high-quality foraging resources, lack of local records and the site's location relative to known camps indicate that the species is unlikely to regularly occur or forage within the Project area.

Evidence of occurrence and likelihood of use – birds

A total of 96 bird species were recorded within the investigation area and surrounding landscape between 2009 and 2020, representing approximately half of the bird species recorded locally in the Victorian Biodiversity Atlas (Nature Advisory, 2022b). During bird utilisation fixed-point surveys undertaken in 2018 and 2019, 57 bird species were recorded within the Project site.

The avifauna community was dominated by common, widespread species such as Little Raven, Australian Magpie, Eurasian Skylark, Common Starling, Magpie-lark and Long-billed Corella, which collectively represented more than two-thirds of all records.

Most bird activity (approximately 95%) was recorded below 40 metres above ground level, with only a small proportion of activity occurring within the turbine rotor-swept zone (Nature Advisory, 2022b). Species most frequently recorded flying above 40 metres included Eurasian Skylark, Sulphur-crested Cockatoo, Little Raven, Magpie and raptors. These species are not listed as threatened.

An updated desktop assessment (Nature Advisory, 2026c) identified a small number of additional threatened species with potential to occur; however, these were not considered likely to occur due to limited suitable habitat and a lack of recent records, and do not materially alter the assessment of risk.

Brolga

Extensive investigations have been undertaken over more than a decade to document Brolga occurrence within the Project area and a surrounding 5 km assessment area. These investigations have included database reviews, detailed landholder consultation, two seasons of aerial breeding surveys (2010 and 2018), and seven seasons of on-ground breeding surveys between 2009 and 2025 (Nature Advisory, 2026a). These studies provide a robust and long-term dataset against which site use can be evaluated.

No mapped or unmapped Brolga flocking areas occur within the Project area or the 5 km assessment area (Nature Advisory, 2026a). The nearest known flocking site is located near Lake Bolac, approximately 28 km north of the Project area.

Within the 5 km assessment area, seven wetlands met the Handbook criteria as Brolga Breeding Wetlands and a further 51 wetlands were conservatively classified as Potential Breeding Wetlands (Nature Advisory, 2026a). Confirmed breeding wetlands occur in clusters both within and beyond the Project boundary, with the most significant cluster being the Cockatoo Swam complex. Historical and recent breeding records confirm that Brolga breeding activity occurs in the broader landscape; however, infrastructure has been designed to avoid breeding wetland buffers (Nature Advisory, 2026a).

Threatened and migratory bird species

Latham's Snipe and the Fork-tailed Swift, both listed migratory species under the EPBC Act. Latham's Snipe were recorded in very low numbers and only in association with localised wetland and riparian habitat, and was not assessed to be a regular or consistent user of the project area (Nature Advisory, 2022b). The Fork-tailed Swift was recorded in low numbers during aerial observations and was not assessed to be a regular visitor to, or reliant on, habitat within the site.

Six raptor species were recorded, with Brown Falcon and Nankeen Kestrel being the most frequently observed. Raptors represented approximately 2% of all bird records (Nature Advisory, 2022b). Wedge-tailed Eagle was recorded on only three occasions, indicating infrequent use of the site. Black Falcon and Little Eagle were not recorded during surveys but were assessed as having a low likelihood of passing through the site on occasion.

Seven species of waterbirds were recorded during utilisation surveys, most commonly Pacific Black Duck, White-faced Heron and Australian Shelduck (Nature Advisory, 2022b). These species were typically observed flying close to the ground. Higher concentrations of waterbirds were recorded at Wild Dog Swamp to the east of the Project area along the Moyne River floodplain, rather than within the Project site itself.

Targeted surveys for migratory shorebirds identified potential habitat for five species. Of these, Sharp-tailed Sandpiper, Common Greenshank and Latham's Snipe were recorded in low numbers, while Curlew Sandpiper and Red-necked Stint were assessed as occasional visitors. Observed numbers were well below thresholds indicating populations of national importance (Nature Advisory 2022b).

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Nature Advisory concluded that the highly ephemeral nature of most wetlands within the Project area, together with the limited extent of open water and exposed mudflats, means that the site is unlikely to support important habitat for migratory shorebirds. Suitable habitat for Latham's Snipe was identified in limited locations along Back Creek, the Shaw River and some deeper, vegetated wetlands.

A summary of threatened and migratory species either known or have the potential to occur in the project site are shown in Table 1.

Table 1 Other threatened species with the potential to occur

Species	Assessment of Likelihood of Occurrence
White-throated Needletail	Was not recorded during field surveys, and the lack of forested habitat within the Project area indicates that the site is unlikely to provide important foraging habitat for this species.
Latham's Snipe	Latham's Snipe was recorded in low numbers during targeted migratory shorebird surveys, with habitat limited to vegetated wetland margins and drainage lines, particularly along Back Creek. Most wetlands within the Project area are ephemeral and lack extensive shallow open water or exposed muddy margins.
Sharp-tailed Sandpiper	Sharp-tailed Sandpiper was recorded infrequently and in low numbers during targeted surveys. While temporary inundation of wetlands may provide short-term foraging opportunities, most wetlands are shallow, ephemeral and highly modified, offering limited consistent habitat.
Curlew Sandpiper (<i>Calidris ferruginea</i>)	Assessed as potentially occurring but not recorded in significant numbers. Habitat within the site is limited and unsuitable for supporting important populations.
Common Greenshank	Common Greenshank was recorded during targeted migratory shorebird surveys in 2018 in low numbers. Suitable habitat within the Project area is limited to scattered, ephemeral wetlands and drainage lines, with most wetlands being shallow, seasonally inundated and of limited extent
Red-necked Stint	Red-necked Stint was not recorded during targeted surveys but was assessed as having the potential to occasionally visit wetlands within the Project area. The limited extent, scattered distribution and ephemeral nature of suitable wetland habitat constrain the likelihood of sustained use, and any individuals present would be expected in small numbers.
Black Falcon (<i>Falco subniger</i>)	A wide-ranging raptor that may occasionally pass through the area. Not recorded during surveys and assessed as having a low likelihood of regular occurrence due to limited prey concentration and low raptor activity across the site.
Little Eagle (<i>Hieraaetus morphnoides</i>)	Assessed as having potential to pass through the area. Not recorded during surveys and considered unlikely to occur regularly given limited woodland habitat and low raptor abundance.

4.1.3 Surrounding Protected Areas and Landscape Features

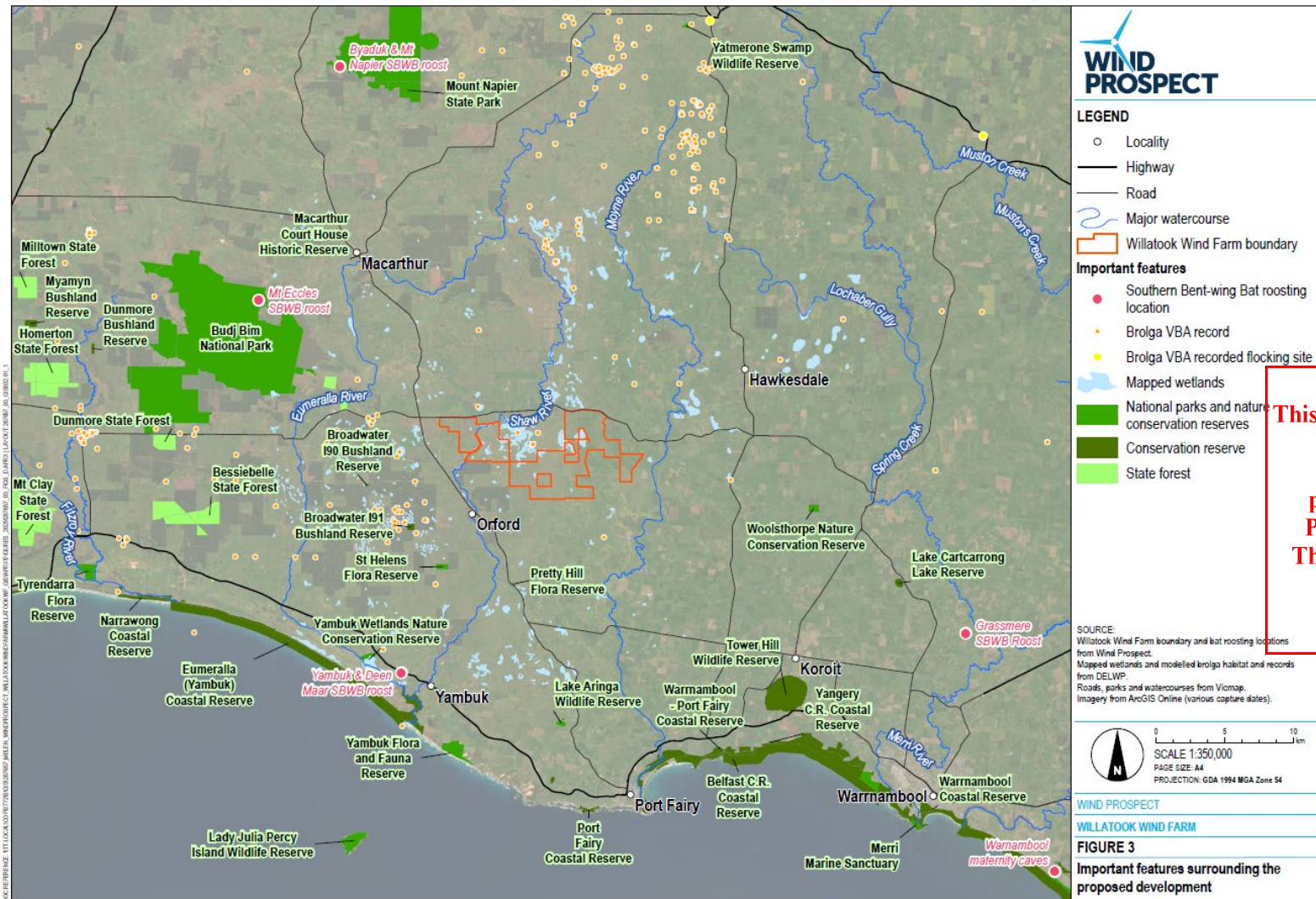
Consistent with Criteria 3 of the Handbook, the assessment of potential impacts on threatened bird and bat species has considered the presence of protected areas and important landscape features in the surrounding context of the Project area that may increase the likelihood of site use by mobile or migratory species, or support critical life stages such as breeding, roosting or foraging.

The surrounding landscape context has been characterised drawing on the findings of the Flora and Fauna Impact Assessment (Nature Advisory, 2022b), the EES and subsequent addendum work (Nature Advisory, 2026c), with a focus on features most relevant to threatened bird and bat species.

An overview of the features discussed in the following section is shown in Figure 3.

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Figure 3 Important features surrounding the Project

Protected areas and formal conservation reserves

There are no World Heritage Areas or Ramsar-listed wetlands located within or immediately adjacent to the Project area. No National Parks or State Parks established primarily for the protection of threatened bird or bat species occur within the Project area.

Budj Bim National Park (formerly known as Mount Eccles National Park) and Mount Napier State Park are about 12 kilometres and 20 kilometres north-west of the project site, respectively. Other reserves within 20 kilometres of the project site include Yambuk Coastal Reserve, Woolsthorpe Nature Conservation Reserve, Yambuk Wetlands Nature Conservation Reserve, Tower Hill Wildlife Reserve, as well as other smaller bushland and flora reserves. Commercial blue gum plantations are situated to the south-west of the project site.

The surrounding region contains scattered areas of public land and Crown reserves, including roadside reserves and small parcels of Crown land associated with waterways. These areas are generally narrow and linear in nature and are embedded within a broader agricultural landscape. While these reserves may provide local habitat value, they do not function as large, continuous conservation areas that would be expected to substantially increase regional-scale use of the Project area by threatened bird or bat species

Wetlands and water-dependent landscape features

Water-dependent landscape features within and surrounding the Project area comprise a combination of permanent or semi-permanent waterways and artificial waterbodies, as well as a network of seasonal and ephemeral wetlands. The relative permanence, extent and ecological function of these features influence the likelihood that threatened bird and bat species use the Project area, either regularly or opportunistically.

Permanent and semi-permanent water features

The most persistent surface water features relevant to threatened bird and bat species are the Shaw River and the Moyne River, together with their major tributaries and associated riparian vegetation.

The Shaw River is the principal surface water feature intersecting the Project area. It is a designated waterway that flows through the north-western portion of the site and is fed by Kangaroo Creek and Carmichael Creek. While flows are highly seasonal, the Shaw River typically retains isolated pools during drier months, supported by its defined channel and local catchment hydrology. Remnant riparian vegetation along parts of the river provides relatively higher habitat value and contributes to its function as a linear movement pathway for fauna

The Moyne River does not intersect the Project area but lies approximately 1.5 kilometres east of the site at its closest point. It is a larger, permanent river system with a broad floodplain and multiple tributaries, including Back Creek, which flows through the eastern part of the Project area. These waterways provide more reliable aquatic habitat and are more likely to be used consistently by water-dependent fauna than smaller ephemeral features

Constructed farm dams are also widespread across the agricultural landscape within the Project area. These dams typically retain water for extended periods and are often used by waterbirds, frogs and

other fauna for foraging and drinking. However, habitat quality is generally low to moderate due to grazing pressure, steep banks and limited fringing vegetation, and their function for threatened species is considered opportunistic rather than critical.

Ephemeral wetlands and seasonal inundation areas

In contrast to the permanent and semi-permanent features described above, much of the wetland habitat within and adjacent to the Project area is ephemeral, forming in low-lying depressions during wetter winter and spring periods and drying out during summer and in drier years.

The largest and most notable of these features is the Cockatoo Swamp wetland complex, located immediately north of the Project area. This complex comprises a series of shallow depressions that become inundated during periods of high rainfall or when floodwaters from the Shaw River spill onto the floodplain. These wetlands may retain water for several months in wetter years but are not permanently inundated

Despite their ephemeral nature, these wetlands are of particular importance for threatened bird species, notably Brolga, because they can support breeding, foraging and roosting during suitable hydrological conditions. Hydraulic and hydrological modelling undertaken for the EES demonstrated how these wetlands fill, interconnect and dry over time, informing the identification of wetlands capable of supporting Brolga breeding and the establishment of appropriate buffers and turbine-free areas.

Elsewhere across the Project area, numerous smaller ephemeral wetlands, drainage lines and shallow depressions occur between stony rises. These features typically inundate only briefly following rainfall events and dry rapidly. While they may be used opportunistically by fauna, their limited duration and extent reduce the likelihood that they support repeated or critical use by threatened bird or bat species

Roosting, breeding and flocking sites

No bat maternity caves or known permanent roosting structures for threatened bat species occur within or immediately adjacent to the Project area. The nearest known maternity caves for Southern Bent-wing Bat are located near Warrnambool 35 to 40 km from the site.

Known breeding wetlands for threatened bird species are limited to the Cockatoo Swamp complex, which, as noted above, has been the primary focus of avoidance and mitigation measures.

No large, regionally significant flocking or feeding sites for threatened bird species have been identified within or adjacent to the Project area beyond those already documented in the EES.

4.2 Impact pathway identification and impact evaluation

4.2.1 Impact pathway identification

Consistent with the risk-based assessment framework adopted for the Willatook Wind Farm EES, potential impact pathways to threatened bird and bat species were systematically identified through a combination of desktop review, targeted field investigations and species-specific assessments. The

identification of impact pathways was guided by the EES scoping requirements and informed by the assessment framework outlined in EES Chapter 7 (Assessment Framework)

For threatened birds and bats, including Brolga and listed bat species, the EES considered the full range of potential impact pathways associated with the construction, operation and decommissioning of the Project, as summarised in EES Chapter 11 (Brolga) and EES Chapter 12 (Biodiversity and habitat). These pathways included both direct and indirect mechanisms by which the Project could interact with fauna values.

The following impact pathways were identified and screened through the EES process:

- collision risk with wind turbine blades during operation, relevant to certain bird and bat species based on flight height, behaviour and site utilisation.
- disturbance and displacement resulting from construction activity and the presence of operational infrastructure, including potential avoidance of nearby habitat.
- direct habitat loss or degradation associated with vegetation clearance and ground disturbance during construction.
- habitat fragmentation and barrier effects, including potential disruption to movement pathways between foraging, roosting or breeding areas.
- indirect impacts, such as changes to habitat quality from noise, lighting, human activity, weed spread or altered hydrological conditions; and,
- cumulative impacts, considered in the context of other existing and approved wind energy facilities within the broader region.

Through the application of this framework, several pathways were identified as negligible or not credible for threatened bird and bat species at Willatook and were screened out at an early stage of assessment. In particular:

- direct loss of critical breeding or roosting habitat for threatened bats was ruled out due to the absence of maternity caves, permanent roost sites or other critical life-stage habitat within or near the Project area.
- barrier effects to regional movement pathways were assessed as negligible given the open agricultural landscape, the linear and permeable nature of infrastructure, and the lack of evidence for constrained or funnelled movement through the site; and,
- indirect effects such as lighting and noise were assessed as negligible for bats and birds, given their localised extent and the absence of reliance on sensitive habitat in proximity to Project infrastructure.

These screened pathways were documented in the EES as part of the staged impact identification and risk screening process, ensuring assessment effort was proportionate to the level of risk identified.

4.2.2 Impact evaluation

Following impact pathway identification, the EES undertook a structured evaluation of the likelihood and consequence of relevant impacts on threatened bird and bat species, and a range of other

biodiversity values. These were conducted by ecological specialists Nature Advisory (Nature Advisory, 2022b) adopting the risk-based approach outlined in Chapter 7 of the EES.

For Brolga, impact evaluation is documented in the Brolga Impact Assessment by Nature Advisory (2022a), which assessed collision risk, disturbance and habitat interactions using species-specific survey data, modelling and conservative assumptions.

For threatened bat species, including the Southern Bent-wing Bat and Yellow-bellied Sheath-tail-bat, Nature Advisory (2022b) evaluated collision risk and other potential pathways based on extensive acoustic monitoring at ground level and at turbine height, habitat availability and species ecology. This evaluation found that:

- Site use by threatened bats was low and spatially constrained;
- Use of the turbine rotor-swept zone was infrequent or absent; and
- The Project area does not support important or regularly used habitat critical to population persistence.

Subsequent to the Independent Panel Inquiry, the Minister's Assessment of the EES and the release of the Handbook and supporting species-specific guidelines, a re-assessment was completed for Brolga and threatened bat species in accordance with the contemporary guidance and the Minister's Recommendations. These were presented in the Brolga Impact Assessment (Nature Advisory, 2026a) and the Bat Impact Assessment (Nature Advisory, 2026b). In addition, a supplementary assessment (Nature Advisory, 2026c) of other biodiversity values was completed to assess whether the modifications of the project design result in any changes of the predicted impacts from the flora and fauna technical study (Nature Advisory, 2022b) that supported the EES.

The Addendum Biodiversity Assessment (Nature Advisory, 2026c) confirms that the nature of potential impacts to bird and bat species remains consistent with that assessed in the EES, with updated survey data and design refinements providing greater confidence in, and in some cases reducing, the level of risk.

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5 Demonstration of the Mitigation Hierarchy

5.1 Avoidance

Avoidance of impacts on biodiversity values has been a central consideration in the selection of the Project site and the subsequent design and refinement of the Project. As detailed in Chapter 4 of the EES, the Project was identified following an extensive search for suitable wind farm locations within Victoria, informed by wind resource availability, access to land, proximity to transmission infrastructure and the presence of environmental and social constraints.

From the outset, the approach to site selection and development has been to avoid potential impacts wherever practicable, with particular emphasis on avoiding impacts to native vegetation, wetlands and habitats supporting threatened flora and fauna species. This avoidance-first approach is consistent with the mitigation hierarchy and has guided decision-making throughout the Project's development history.

A summary of the development of the Project in consideration of biodiversity values is shown in Figure 3 below.

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Figure 4 Project development timeline

5.1.1 Site selection rationale

The Willatook site was selected within a broader regional context characterised by extensive agricultural land use and a highly modified landscape. This context provided opportunities to locate wind farm infrastructure predominantly within cleared pastoral land, thereby avoiding large, contiguous areas of native vegetation and formally protected conservation reserves. Early site reconnaissance and desktop investigations identified key biodiversity values and constraints, which were progressively incorporated into the project's spatial planning and feasibility assessments

At an early stage, environmental investigations were commissioned to improve understanding of native vegetation extent, wetlands, watercourses and fauna habitat, including habitat for listed species. These investigations informed the establishment of the project boundary and the identification of areas that could not accommodate wind farm infrastructure due to biodiversity sensitivities.

5.1.2 Progressive design development and avoidance outcomes

Since initial site selection, the Project has undergone more than 300 design iterations, ranging from large-scale reconfiguration of turbine layouts to detailed micro-siting of individual infrastructure elements. Avoidance of biodiversity impacts has been a consistent driver of this iterative design process.

The Project design has evolved through a series of defined milestones, with progressive refinement informed by technical assessment, stakeholder engagement and statutory review. At each stage, design changes have been undertaken to respond to identified constraints and to avoid or reduce potential impacts, including impacts on biodiversity values.

Concept design

The initial concept design was developed following selection of the Willatook area as a preferred site within a broader regional site identification process. The concept layout was informed by high-level desktop investigations and preliminary site reconnaissance, including early identification of environmental constraints such as native vegetation, wetlands and watercourses.

At this stage, the design sought to maximise energy generation potential while avoiding obvious high-level constraints. The concept layout established the preliminary project footprint and turbine distribution that formed the basis for referral and subsequent detailed investigations.

Referral design

The referral design represented a refinement of the concept layout, incorporating early environmental, planning and engineering inputs to support referral under the *Environment Effects Act 1978* and the *Environment Protection and Biodiversity Conservation Act 1999*.

Key features of the referral design included:

- initial exclusion of turbines from mapped native vegetation and wetland areas;
- early consideration of buffers to waterways and sensitive landscape features; and
- refinement of turbine locations to reflect landowner participation and access constraints.

This design was used to describe the proposed action for referral purposes and to inform the scope of technical investigations required for the EES.

EES design

The EES design represented a substantially refined project layout developed through extensive technical assessment and iterative design development. As documented in Chapter 4 of the EES, this stage involved numerous layout iterations informed by detailed studies across all disciplines, including biodiversity, hydrology, landscape and visual amenity, noise, traffic and Aboriginal cultural heritage.

From a biodiversity perspective, key refinements included:

- removal or relocation of turbines to avoid native vegetation, wetlands, riparian corridors and higher-value habitat;
- application of buffers to watercourses and wetlands based on field survey and hydrological modelling;
- significant redesign of the layout to avoid Brolga breeding habitat and movement pathways associated with the Cockatoo Swamp wetland complex;
- reduction in turbine numbers facilitated by advancements in turbine technology, resulting in a reduced project footprint; and
- relocation of the on-site substation to land adjacent to the Tarrone Terminal Station, eliminating the need for an internal overhead transmission line and avoiding associated vegetation clearance and bird collision risk.

The EES design formed the basis for the Minister's Assessment and the Inquiry and Advisory Committee's consideration of environmental effects.

Post-Minister's Assessment design

Following the release of the Minister's Assessment, the Project design was further refined to respond to the Minister's conclusions and recommendations, as well as to incorporate updated policy guidance, including the Handbook for the Development of Renewable Energy in Victoria.

Post-EES refinements have included:

- removal of 7 turbine locations and shifting a number of others
- adoption of updated guidance for assessing and managing impacts on Brolga and threatened bat species;
- preparation of a revised Brolga assessment and a new standalone bat impact assessment aligned with the Handbook;
- further refinement of turbine locations and layout to respond to species-specific risk findings and Ministerial recommendations; and
- confirmation and consolidation of avoidance measures through updated biodiversity assessment of the modified design.

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These refinements resulted in the current Project design proposed for planning approval, which reflects an avoidance-led approach embedded throughout the Project's development history.

Transmission connection

As outlined in Chapter 4 of the EES, in 2019, more land was included in the project site. The addition of this land to the central part of the site allowed for the proposed on-site substation to be moved to be immediately adjacent to the Tarrone Terminal Station area.

This resulted in a more efficient internal cable route design and removed the need for 5 kilometres of overhead high voltage transmission line between the on-site substation and the grid connection point at the Tarrone Terminal Station. The original transmission line connecting the on-site substation to the Tarrone Terminal Station would have resulted in native vegetation clearance and potential to impact on Brolga and other aerial species, which have subsequently been avoided by this relocation.

5.2 Minimisation

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5.2.1 Exclusion zones

Exclusion zones have been applied across the Project area to avoid direct and indirect impacts on biodiversity values, consistent with the mitigation hierarchy and informed by detailed technical assessment. These exclusion zones reflect the outcomes of the EES, the Minister's Assessment, and subsequent post-EES studies undertaken in accordance with the Handbook for the Development of Renewable Energy in Victoria.

The exclusion framework incorporates buffers around waterways and wetlands, avoidance of key Brolga breeding and roosting habitats, and turbine-free buffers around bat foraging habitat associated with watercourses and treed vegetation.

Brolga exclusion zones and wetland buffers

Brolga has been identified as a Species of Concern due to confirmed breeding within the Cockatoo Swamp wetland complex immediately north of the Project area and use of surrounding agricultural land for foraging and movement, as detailed in Nature Advisory Pty Ltd (2026a).

In response to EES findings and the Minister's Assessment, turbine-free exclusion zones have been applied to:

- the Cockatoo Swamp wetland complex, excluding the majority of this area from turbine placement;
- other wetlands assessed as having breeding or potential breeding value for Brolga; and
- associated buffers around these wetlands to avoid disturbance, enable movement corridors and to minimise collision risk and displacement effects.

Hydrological modelling and field surveys were used to identify the spatial extent of wetlands capable of supporting Brolga breeding during suitable seasonal conditions. These areas were incorporated into the Project's constraint mapping and treated as exclusion zones for turbine placement. The application of these buffers resulted in the removal and relocation of multiple turbines and contributed to a reduction in overall turbine numbers Nature Advisory Pty Ltd (2026a).

Bat habitat exclusion zones – rivers and treed vegetation

The revised Bat Impact Assessment (Nature Advisory 2026b) undertaken by Nature Advisory identifies a strong association between bat activity—particularly Southern Bent-wing Bat—and key habitat features within the Project area, notably permanent watercourses and areas of remnant or planted trees.

Survey results demonstrated that:

- 63% of confirmed Southern Bent-wing Bat calls were recorded near the Shaw River and adjacent treed areas;
- 57% of calls were within 250 m of permanent water; and
- 80% of calls were within 50 m of trees, including remnant woodland, plantations and tree rows

In response, and consistent with the Minister's Assessment and Handbook guidance, turbine-free buffers of 200 metres (blade-to-habitat) have been applied around:

- the Shaw River and its associated riparian vegetation;
- nearby remnant native woodland and treed linear features connected to the river; and
- other mapped areas of higher bat activity associated with water and trees.

These buffers are intended to avoid the placement of turbines within areas most likely to be used for bat foraging, commuting and drinking, thereby reducing collision risk and disturbance. Where minimal overlap was identified during earlier layout iterations, further micro-siting commitments have been made to remove turbines entirely from buffered bat habitat. The application of these buffers resulted in the removal and relocation of multiple turbines and contributed to a reduction in overall turbine numbers.

Waterways and hydrologically connected features

As documented in Willatook Wind Farm Hydrogeological and Hydrological Investigation (Water Technology, 2022) the Project area contains a network of permanent and ephemeral waterways, including the Shaw River, Moyne River, Back Creek and numerous drainage lines and seasonally inundated wetlands. These features perform important hydrological and ecological functions and support riparian and wetland-dependent habitat.

Buffers have been applied around waterways and wetlands to:

- avoid direct disturbance to aquatic and riparian habitat;
- maintain hydrological function and connectivity;
- reduce the risk of sedimentation, erosion and water quality impacts during construction; and
- avoid indirect impacts on fauna that utilise water-dependent features.

The Shaw River, as the most prominent permanent watercourse within the Project area, has been afforded particular consideration due to its ecological value and role as a movement corridor for fauna. Turbines and associated infrastructure have been excluded from riparian zones and adjacent wetlands, with buffers integrated into the layout design and treated as spatial constraints during turbine siting and micro-siting.

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Back Creek, while a smaller and largely ephemeral tributary of the Moyne River, has also been afforded appropriate buffers and siting controls, with infrastructure crossings minimised and designed to maintain existing flow paths and avoid disturbance to associated riparian vegetation and seasonally inundated wetland habitat, consistent with the surface water impact assessment and mitigation measures outlined in Chapter 10 of the EES.

Integration of exclusion zones into project design

All exclusion zones described above were incorporated into the Project's GIS constraint mapping and treated as fixed spatial constraints during layout refinement. Turbine siting, access tracks, and other infrastructure were progressively refined to avoid these areas, with exclusion zones updated as additional survey data and post-EES assessments became available.

The application of exclusion zones has resulted in:

- avoidance of key wetland and riparian habitats;
- substantial exclusion of Brolga breeding and movement areas;
- avoidance of high-use bat foraging habitat associated with the Shaw River and treed features; and
- a reduced project footprint and turbine count.

Collectively, these exclusion zones demonstrate the practical implementation of avoidance as the first and primary step in the mitigation hierarchy.

5.2.2 Micro-siting

Following establishment of turbine-free exclusion zones around key bat habitat features, further refinement of turbine locations was undertaken through a structured micro-siting process to minimise any residual overlap with areas likely to be used by bats (Nature Advisory, 2026b).

Following the establishment of turbine buffers around key bat habitat areas and locations of higher call activity, further refinement was undertaken through a targeted micro-siting process. This process optimised the precise location and orientation of individual turbines to maximise separation from, or minimise overlap with, mapped potential habitat for Southern Bent-wing Bat and Yellow-bellied Sheath-tail-bat.

Spatial analysis using the 262-metre turbine influence zone was applied to identify any overlap between turbine locations and potential bat habitat features. Where overlap was identified, turbines were relocated or rotated to reduce the extent of overlap and increase horizontal separation between the blade sweep area and habitat features such as wetlands and planted tree rows.

This process was applied iteratively, with each refinement reassessed spatially to confirm improvements. As a result, the final layout minimises potential interaction between turbines and bat habitat within the developable area, with more than 98% of the area within the turbine influence zones comprising open landscape (Nature Advisory, 2026b). This outcome reflects a systematic application of avoidance and minimisation to reduce residual risk to the lowest practicable level.

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5.2.3 Minimum tip height

The Bat Impact Assessment (Nature Advisory 2026b) identified that Southern Bent-wing Bat (SBWB) activity within the Project area is likely to be concentrated at lower flight heights, reflecting foraging and commuting behaviour.

Analysis of acoustic detections and inferred flight height distributions indicates that the majority of SBWB activity is predicted to occur below 40 metres above ground level, with lower activity at greater heights (Nature Advisory 2022b). On this basis, and as a precautionary design response, the minimum blade tip height for the Project has been increased from 40 metres to 60 metres above ground level.

Increasing the minimum blade tip height elevates the rotor-swept zone above the airspace in which most SBWB activity is expected to occur, thereby increasing vertical separation between turbine blades and bat flight space. This design change directly addresses the identified collision risk pathway and complements horizontal separation achieved through exclusion zones and micro-siting (Nature Advisory, 2026b).

The adoption of a 60 m minimum blade tip height was assessed in combination with other mitigation measures and is predicted to reduce the potential of interaction between SBWB and turbine blades, without introducing additional land disturbance or infrastructure requirements (Nature Advisory 2026b).

Bird utilisation data indicates that the proportion of birds flying within the rotor swept area has decreased substantially compared to the EES, reflecting the increased minimum blade tip height and reduced rotor diameter. This provides further evidence that the risk of collision for most bird species is lower under the modified design.

5.2.4 Minimisation of native vegetation clearance

Avoidance of native vegetation clearance and habitat values that this provides has been a key consideration throughout the Project's site selection, layout design and subsequent refinement. In the context of the Handbook, native vegetation provides habitat for several threatened bird and bat species. As documented in Chapter 11 of the EES, a staged and iterative design process has been applied to ensure that impacts on native vegetation are avoided wherever practicable, consistent with Clause 52.17 and the Native Vegetation Framework

From the early stages of project development, extensive desktop investigations and field surveys were undertaken to identify the extent, type and condition of native vegetation across the site. These investigations confirmed that the majority of the Project area is highly modified agricultural land, with native vegetation largely confined to wetlands, watercourses, roadside reserves, stony rises and scattered remnant trees.

These mapped native vegetation areas were incorporated into the project's constraint mapping and used to guide the initial layout, with turbines, access tracks, underground cabling and ancillary infrastructure preferentially located within cleared pasture and other previously disturbed areas.

As the Project design evolved, further avoidance measures were implemented through progressive layout refinement. These measures included:

- re-routing access tracks and underground cabling to avoid remnant vegetation patches and scattered trees;
- repositioning turbines and hardstands away from mapped native vegetation and higher-quality habitats;
- consolidating infrastructure footprints to minimise the overall area of disturbance; and
- avoiding native vegetation in roadside reserves where possible, including at intersections requiring upgrade for over-dimensional loads.

These refinements resulted in a substantial reduction in the extent of native vegetation affected when compared with earlier project designs.

The effectiveness of this avoidance-led approach is demonstrated by the reduction in native vegetation clearance over successive design stages:

- Early project concepts would have resulted in the removal of approximately 20 hectares of native vegetation;
- The design referred for assessment in 2018 reduced this to approximately 9 hectares through layout refinement;
- Further design refinements during the EES reduced the proposed area of vegetation clearance to 4.6 hectares;
- Following the release of the Minister's Assessment, the project design was again refined by civil engineers to deliver design efficiencies with a detailed three dimensional model, while also adopting more conservative allowances for construction footprint extents to reflect practical construction requirements. The over-dimensional (OD/OSOM) transport route was also refined and assessed in more detail.
- A final design iteration was completed to further avoid areas of native vegetation while retaining detailed civil design and conservative construction assumptions, including consideration of the over-dimensional (OD/OSOM) transport route. The updated extent of native vegetation removal reflects improved survey coverage and resolution, together with refinement of disturbance footprints through detailed and three-dimensional design. As a result, the total proposed native vegetation removal is approximately 5.8 hectares (including the wind farm and OD/OSOM route), representing a modest increase relative to the EES (4.6 hectares), rather than a fundamental change in impact pathways.

The Minister's Assessment acknowledged that impacts on native vegetation have been appropriately minimised and that residual impacts are acceptable and manageable through permit conditions and environmental management measures.

The updated design for the Willatook Wind Farm incorporates a more detailed and refined civil layout, resulting in a modest increase in the overall construction footprint from approximately 222.3 hectares to 244.7 hectares (an increase of around 22.4 hectares, or approximately 10%). This increase reflects improved design resolution, including three-dimensional modelling and the application of conservative assumptions to define construction disturbance areas.

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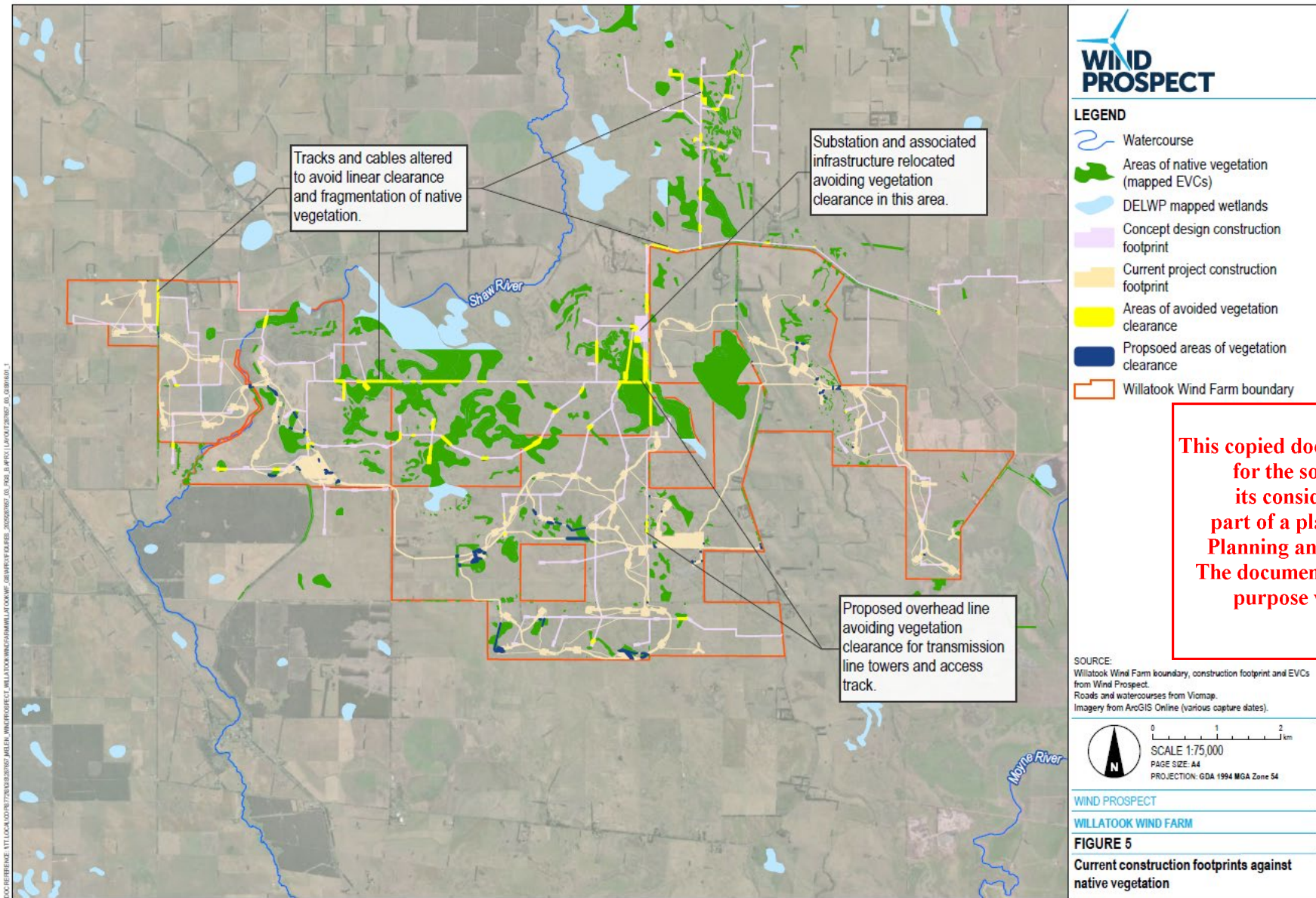
Notwithstanding this, the updated design delivers greater efficiency in linear infrastructure. Internal access tracks have been reduced from approximately 60 kilometres to 45.6 kilometres, and cable trench lengths from approximately 62.1 kilometres to 55.8 kilometres. These reductions reflect improved infrastructure alignment, co-location of services and increased use of shared trenching.

These refinements have also resulted in improved ecological outcomes in key areas. In particular, impacts to EPBC Act-listed ecological communities have reduced from approximately 0.486 hectares in the EES design to 0.241 hectares in the current layout. Impacts to native vegetation (EVC) for the wind farm site remain broadly comparable, increasing only marginally from approximately 4.13 hectares to 5.43 hectares, consistent with the refined disturbance footprint and updated survey information.

Overall, while the current layout incorporates a modestly larger and more conservatively defined construction footprint, it achieves reductions in track extent, trenching and cabling, and delivers improved avoidance of sensitive ecological vegetation communities.

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Figure 5 Construction footprint vs native vegetation

5.2.5 Construction timing

Consistent with the findings of the surface water assessment (Water Technology, 2022; and Water Technology, 2026), the timing of construction activities has been identified as a measure to minimise potential impacts on waterways and hydrologically connected features, particularly during periods of higher flows.

Surface water modelling and hydrological analysis undertaken for the EES indicate that watercourses within and surrounding the Project area are highly responsive to seasonal rainfall, with higher flow conditions typically occurring during winter and early spring. During these periods, the potential for erosion, sediment mobilisation and downstream water quality impacts is increased.

Where practicable, construction activities involving waterways, drainage lines or low-lying areas will be scheduled to avoid periods of higher flow and saturated ground conditions. This includes, where feasible, timing works such as access track construction, culvert installation and watercourse crossings to drier periods when flow conditions are lower and more stable.

It is recognised, however, that complete avoidance is not always practicable due to construction sequencing, program requirements and weather variability. Accordingly, where works are required during wetter periods, appropriate environmental management measures will be implemented in accordance with the Environmental Management Plan to manage erosion and sediment risks and protect downstream water quality.

5.3 Mitigation

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5.3.1 Curtailment regime

The Bat Impact Assessment (Nature Advisory 2026b) identifies that bat activity within the Project area is temporally variable and is influenced by a combination of seasonal, meteorological and environmental factors. Consistent with findings from the EES and subsequent assessment, higher levels of SBWB activity are most likely to occur under specific conditions, including low wind speeds and warmer temperatures, particularly during the breeding and post-breeding periods.

The Minister's Assessment recognised the importance of operational controls in managing residual risks to the Southern Bent-wing Bat and recommended that the cut-in wind speed be increased to at least 4.5 m/s, applied from dusk to dawn between September and May (inclusive) for the life of the project, and applied to all turbines (Minister's Assessment).

In response, a risk-based curtailment regime is proposed, informed by the Bat Impact Assessment (Nature Advisory 2026b) and consistent with the Minister's recommendation, the Project proposes to increase the low-wind speed cut-in of 4.5 m/s. This mitigation is proposed to be implemented across all turbines between September to May. It is proposed that curtailment would be implemented when the temperature is above 10°C.

Curtailment parameters, including wind speed thresholds, temperature thresholds and seasonal applicability, will be finalised in consultation with DEECA prior to operation and documented within the Bat Management Plan.

5.3.2 Blade feathering below cut-in

Turbine blades can still rotate below the cut-in speed when electricity is not being generated. 'Feathering' is the act of preventing the turbine blades from free-spinning below the cut-in speed, which is achieved by locking turbine blades or angling the blades to be parallel to the wind. This reduces the risk of bats colliding with rotating turbine blades.

The proponent is committed to feathering turbine blades below the cut-in speed from the offset of operation to mitigate impacts to bats.

5.3.3 Acoustic deterrents

Ultrasonic acoustic deterrent systems have been proposed as a potential mitigation measure to reduce bat activity in the vicinity of wind turbines. These systems emit ultrasonic sound within the frequency range used by echolocating bats, with the intent of interfering with echolocation and discouraging bats from entering the turbine airspace.

While acoustic deterrents have been trialled internationally, evidence of their effectiveness remains variable and species-specific, and their applicability to Southern Bent-wing Bat is currently uncertain. The effectiveness of these technologies under Australian conditions has not yet been demonstrated.

Notwithstanding these limitations, there is a commitment to investigating the feasibility of acoustic deterrent trials in consultation with DEECA as part of an adaptive management framework Draft Bat Impact Assessment (Nature Advisory 2026b). Any future consideration of these systems would be informed by emerging research, technological advances and post-construction monitoring outcomes.

5.3.4 Transmission line marking

The EES identified collision risk associated with overhead transmission infrastructure as a potential impact pathway for large birds, including Brolga and other waterbirds, particularly where lines intersect open landscapes and areas used for foraging or movement.

To minimise this risk, the Project includes a commitment to mark any new overhead transmission lines with bird flight diverters in locations where collision risk is elevated. Line marking will be applied in accordance with contemporary best practice and relevant guidelines, with the objective of improving line visibility and reducing the likelihood of bird strike.

It is noted that subsequent design refinement relocated the on-site substation adjacent to the existing Tarrone Terminal Station, thereby eliminating the need for a new internal overhead transmission line with the exception of a 300 metres in length.

5.4 Compensatory measures

Where avoidance and mitigation measures cannot fully eliminate impacts on biodiversity values, compensatory measures will be implemented in accordance with Victorian policy requirements to address residual effects on native vegetation and Brolga habitat.

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5.4.1 Native vegetation

Consistent with the findings of principles of habitat avoidance outlined in the Handbook, the project design has prioritised avoidance of native vegetation wherever practicable through the use of existing tracks, disturbed agricultural land, and micro-siting of turbines and infrastructure. Nevertheless, some unavoidable removal of native vegetation is required for turbine hardstands, access tracks and ancillary infrastructure. Any permitted removal will be offset in accordance with the Victorian Native Vegetation Removal Regulations, with offsets secured to achieve no net loss of biodiversity. Offsets will be delivered through the purchase or securing of appropriate biodiversity offsets that are ecologically equivalent, with a preference for offsets within the local landscape to maintain regional ecological values.

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5.4.2 Brolga

Residual impacts to Brolga have been identified following application of the mitigation hierarchy, primarily associated with limited and localised infrastructure overlap with Brolga Breeding and Potential Breeding Wetland Buffers. These impacts are described in detail in the Brolga Impact Assessment and are limited in extent, with all wind turbines located outside Breeding Wetland Buffers and the majority of buffer areas avoided through design.

The only turbine-related interaction with a wetland buffer is associated with Wetland 12a (a Potential Breeding Wetland 0.6 ha in size), where a single turbine (T31) and supporting infrastructure is located within the buffer applied to that wetland. This interaction is limited to a Potential Breeding Wetland Buffer (not a Breeding Wetland Buffer) and reflects a localised constraint where full avoidance was not practicable following application of the mitigation hierarchy. All other turbine infrastructure is located outside wetland buffers, with remaining overlaps limited to minor linear infrastructure (e.g. access tracks and underground cabling).

Consistent with the Handbook (DEECA, 2025), compensation is proposed only where residual impacts remain after avoidance, minimisation and mitigation measures have been applied. A targeted Brolga compensation framework has therefore been developed to address these residual impacts, informed by site-specific ecological and hydrological understanding and the requirements of Appendix 2 of the Handbook.

The compensation framework focuses on the protection, enhancement and long-term management of Brolga breeding habitat, with measures including:

- identification and securing of suitable wetlands for enhancement and protection;
- hydrological restoration and enhancement to improve inundation regimes and support breeding function;
- habitat management and revegetation to improve ecological condition and suitability for Brolga;
- management of key threats, including predator control during the breeding season; and
- supplementary measures, such as provision of nesting materials where appropriate.

These measures are designed to improve the availability and quality of functional breeding habitat within the regional context, consistent with the ecological requirements of Brolga and the intent of the Handbook to achieve an acceptable outcome for the species.

The quantum and nature of compensation are informed by the extent and type of residual impact identified, including the specific wetlands and buffer areas affected (notably Wetland 12a), and are proportionate to the level of risk posed by the Project. A draft compensation plan has been prepared and will be further refined in consultation with DEECA as part of the approvals process.

Implementation of the compensation framework will be supported by the broader monitoring and adaptive management regime, including the Bat and Avifauna Management Plan (BAM Plan), to ensure that outcomes are achieved and that management measures can be adjusted in response to observed conditions.

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6 Application of the Handbook

Consistent with Section 6.4 of the Handbook, the mitigation hierarchy has been applied on a species-by-species basis, with the depth of assessment and mitigation commensurate with the level of risk identified. Species with the greatest potential for impact have been addressed first and in the greatest detail, with proportionately less detail provided for species assessed as having a low likelihood of occurrence or interaction with the Project.

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6.1 Priority species

Brolga and Southern Bent-wing Bat are considered the two priority species for the Project, reflecting their conservation status, the outcomes of the EES, and the Minister's Assessment, which identified these species as requiring the greatest focus for avoidance, mitigation and ongoing management; accordingly, further targeted work was undertaken in accordance with the relevant species-specific guidelines supporting the Handbook for the Development of Renewable Energy in Victoria, resulting in the preparation of updated Brolga Impact Assessment and Bat Impact Assessment (Nature Advisory, 2026a and Nature Advisory, 2026b).

A summary of the application of the mitigation hierarchy and the species-specific guidelines supporting the Handbook is provided in Table 2 and Table 3 for Brolga and Southern Bent-wing Bat respectively.

Table 2 Application of mitigation hierarchy for Brolga

Matter to be addressed	Description
Assessment methods	The assessment of Brolga drew on multiple complementary methods over a long period, including desktop review of existing records and literature; targeted field surveys conducted over 11 breeding seasons to document presence, breeding activity, foraging and movements; non-breeding period flocking surveys to characterise seasonal use and aggregation patterns; and two dedicated aerial surveys to identify breeding wetlands, nests and landscape use. This was supported by detailed field-based wetland and habitat assessments, habitat suitability modelling of wetlands (breeding and potential breeding habitat), hydrological modelling and spatial analysis, iterative GIS-based layout interaction assessments to inform avoidance and buffering, and landowner engagement to incorporate historical observations. The revised assessment of Brolga adopted the species-specific guidelines that support the Handbook (DEECA, 2025; Appendix 2). For a full description of the assessment methods see (Nature Advisory, 2026e).
Current site conditions and use	The Project area is located within a broader region where historical records of Brolga breeding are limited, and no regular Brolga flocking sites have been identified within the Project area or within 5 km of the site. Within this context, the Cockatoo Swamp wetland complex represents the principal concentration of known breeding activity in the local landscape. Targeted field surveys and landowner engagement expanded existing knowledge, identifying additional wetlands used intermittently and confirming one wetland (W4) as a repeatedly used breeding site across multiple seasons, demonstrating site fidelity, with several other Brolga breeding wetlands recorded within 5km of the site. Hydrological and habitat suitability modelling identified a subset of other wetlands capable of supporting breeding under favourable seasonal conditions. Seven Brolga Breeding Wetlands (forming five clusters) and 51 Potential Breeding Wetlands have been identified within the 5 km assessment area, with no flocking areas present within or near the site.

Matter to be addressed	Description
	The revised Brolga assessment adopted the species-specific guidelines that support the Handbook (DEECA, 2025; Appendix 2) in terms of defining both Brolga Breeding Wetlands and Potential Brolga Breeding Wetlands. For a full description of the assessment methods see (Nature Advisory, 2026a).
Description of potential impact pathways	The Brolga Impact Assessment (Nature Advisory, 2026a) identified several potential impact pathways associated with the construction and operation of the Project, informed by observed site use, habitat distribution and Brolga behaviour. These pathways include: • Collision risk, primarily during movements between breeding or potential breeding wetlands and surrounding foraging areas • Disturbance and displacement, including temporary disturbance during construction activities near wetlands, and potential behavioural avoidance of areas • Habitat loss or modification, resulting from direct disturbance to wetland margins, or modified hydrology due to construction of access tracks or ancillary infrastructure that could reduce the suitability of breeding, roosting or foraging habitat • Barrier effects, where turbine placement could influence preferred movement routes between wetlands and foraging areas
Description of measures for avoidance, minimisation and mitigation	• Avoidance: The project has been strategically sited outside known Brolga flocking areas, avoiding the primary population-level risk pathway. At the site scale, layout design has been informed by detailed wetland identification, field verification and hydrological assessment, enabling avoidance of key Brolga breeding habitat. All turbines (including blade sweep) are located outside Breeding Wetland Buffers, and the majority of wetland buffers have been avoided through iterative design refinement and reduction in project scale. • Minimisation: Where complete avoidance was not practicable, minimisation measures have been applied through micro-siting of infrastructure and the application of buffers to Breeding and Potential Breeding Wetlands in accordance with the Handbook. This includes maintaining hydrological function of wetlands, limiting disturbance through construction controls (including seasonal timing), reducing the extent of overhead transmission infrastructure, and increasing minimum blade tip height to reduce interaction during low-level flight. • Mitigation: Targeted operational and management measures are proposed to address residual risk, including implementation of a Bat and Avifauna Management Plan (BAM Plan), post-construction monitoring of Brolga use and behaviour, defined adaptive management triggers, and the ability to implement additional risk-reduction measures where monitoring indicates unexpected impacts. These measures provide an adaptive framework to ensure impacts remain acceptable over the life of the project.
Description of predicted residual impacts	The Brolga Impact Assessment (Nature Advisory, 2026e) concludes that, following implementation of the proposed avoidance, minimisation and mitigation measures, the Project is not expected to result in significant impacts on the Victorian Brolga population. The assessment confirms that no confirmed Breeding Wetlands will be directly impacted, with breeding habitat within the Cockatoo Swamp complex and the repeatedly used breeding wetland (W4) avoided through the application of turbine-free buffers and layout refinement. Residual impacts are limited, localised and well-defined. The only turbine-related interaction with a wetland buffer occurs at Wetland 12a (a Potential Breeding Wetland), where a single turbine (T31) is located within the buffer applied to that wetland. This does not involve a Breeding Wetland Buffer and represents a lower-order constraint under the Handbook. Additional residual impacts are associated with linear infrastructure within the Cockatoo Swamp Breeding Wetland Buffer, including approximately 1.6 km of underground cabling and 800 m of access track. These works are designed to

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Matter to be addressed	Description
	minimise disturbance (including construction outside the breeding season) and do not involve turbine placement within Breeding Wetland Buffers. The assessment identifies that residual effects are primarily associated with potential disturbance during movement between breeding or potential breeding wetlands and surrounding foraging areas. On this basis, and with the proposed mitigation and compensatory measures in place, the Brolga Assessment concludes that residual impacts are not expected to result in a significant effect on Brolga breeding success or population viability at the local or regional scale.
Description of compensatory measures	Residual impacts requiring compensation are limited to a single turbine interaction with a Potential Breeding Wetland (Wetland 12a) and minor linear infrastructure (underground cabling and access track) within the Cockatoo Swamp Breeding Wetland Buffer. In accordance with the Handbook, compensation is targeted and proportionate, and includes: • protection and long-term management of identified Breeding and Potential Breeding Wetlands • hydrological restoration and enhancement to support breeding function in suitable seasons • habitat improvement and management to support foraging and movement • management of key threats, including predator control during the breeding season; and, • monitoring and adaptive management to confirm effectiveness and refine measures over time A draft compensation plan has been prepared and will be refined in consultation with DEECA, with implementation secured through project approvals and management plans.
Description of implementation measures	Implementation of mitigation and compensation measures will be staged and aligned with the Project lifecycle. Measures required prior to construction, including finalisation of detailed design, confirmation of buffers and exclusion zones, and development of management plans, will be undertaken by Wind Prospect as project proponent. Upon commencement of construction and through the operational phase, responsibility for implementation will transfer to the owner and operator of the Project. Construction-phase measures will be implemented by the appointed lead construction contractor, in accordance with approved environmental and construction management plans, and overseen by owner and operator. Operational measures, including curtailment, monitoring and adaptive management. Appropriate funding will be provided to support implementation of all approved mitigation, monitoring and compensation measures, including engagement of suitably qualified technical specialists to undertake species-specific monitoring and to develop and implement any approved Brolga compensation measures. Where third parties (such as landholders or conservation organisations) are involved in delivering compensatory actions, appropriate agreements will be established to define roles and responsibilities. The timing of implementation will be linked to key project milestones, including pre-construction approvals, commencement of construction, and early years of operation, with specific requirements to be secured through permit conditions and approved management plans. Any uncertainty associated with implementation, including seasonal variability or monitoring outcomes, will be managed through adaptive management provisions and regulator oversight.
Monitoring, reporting and evaluation	Monitoring will be undertaken in accordance with the Bat and Avifauna Management Plan (BAM Plan) to validate impact predictions and inform adaptive management. This will include targeted monitoring of Brolga presence, breeding activity and behaviour within 2 km of turbines, with increased focus on wetlands associated with residual impacts (including Wetland 12a and the Cockatoo Swamp complex). Monitoring of compensatory

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Matter to be addressed	Description
	habitat will also be undertaken to assess habitat condition, utilisation and breeding outcomes. Results will be reported to the regulator and used to trigger adaptive management where required, ensuring that mitigation and compensation measures remain effective over time.

Table 3 Application of mitigation hierarchy for Southern Bent-wing Bat

Matter to be addressed	Description
Assessment methods	The assessment of Southern Bent-wing Bat was informed by multiple complementary methods, including a desktop review of existing records and literature, and extensive acoustic monitoring using ground-based ultrasonic detectors across approximately 5,000 bat-detector nights at 107 survey locations. Detectors were also deployed on meteorological masts at multiple heights to characterise bat activity within and above the rotor-swept zone, informing collision risk assessment. Spatial analysis of call activity was undertaken in relation to key habitat features, including waterways, wetlands, remnant treed vegetation and linear landscape elements, supported by habitat mapping and field verification. These methods provide a robust and comprehensive dataset to characterise SBWB activity, distribution and risk pathways. Further detail is provided in the Bat Impact Assessment (Nature Advisory, 2026b).
Current site conditions and use	The Bat Impact Assessment (Nature Advisory, 2026b) identifies that the Project is located away from key SBWB roosting infrastructure. The nearest known maternity cave (Warrnambool / Starlight Cave) is approximately 46 km to the south-east of the study area. The nearest non-breeding roosts are located approximately 18 km south-west (Yambuk), with other roosts 30 km north-west (Byaduk and Mt Napier) and 35 km south-east (Grassmere).
Description of potential impact pathways	Across an extensive acoustic monitoring program (4,646 detector nights at 107 sites), SBWB activity was low and spatially constrained. A total of 160 confirmed SBWB calls were recorded, with SBWB-definite detections at 33 sites. Additional detections were classified as SBWB-complex, reflecting call characteristics consistent with Southern Bent-wing Bat and related <i>Miniopterus</i> species, and were recorded more broadly across the study area. Confirmed SBWB calls were highly clustered, with the majority associated with the Shaw River corridor, nearby treed habitat (including plantation), and a wetland to the east of the study area. Most other sites recorded very low call rates, with an overall mean of approximately 0.03 confirmed calls per detector night. This pattern indicates that SBWB use of the site is localised and primarily associated with higher value habitat features. At-height monitoring (two meteorological masts at approximately 42–45 m AGL) recorded no confirmed SBWB calls and only a single SBWB-complex call, with limited detections at ground level. This indicates that SBWB activity is concentrated at lower heights and associated with habitat features, with limited use of open areas where turbines are proposed. Potential impact pathways consist of: - Habitat modification or fragmentation, resulting from vegetation clearance or alteration of landscape features that may function as foraging habitat or movement corridors, such as riparian vegetation and scattered trees. Given the scale of proposed clearance for the Project this is likely to be insignificant - Collision risk with turbine blades, particularly during periods of low wind speed when bat activity is typically higher and turbines would otherwise be operating. This risk is primarily associated with commuting or foraging

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Matter to be addressed	Description
	movements near habitat features such as riparian corridors, wetlands and remnant treed vegetation.
Description of measures for avoidance, minimisation and mitigation	• Avoidance: The turbine layout was refined to avoid higher value bat habitat, including the removal of turbines near the Shaw River and relocation of others away from riparian corridors, wetlands and remnant treed vegetation. A 200 m turbine-free buffer has been applied to the Shaw River and adjacent treed habitat, consistent with the Minister's Assessment, to avoid key foraging and movement corridors. • Minimisation: A detailed micro-siting process was undertaken to minimise overlap between turbine zones of influence and mapped habitat features. Turbine locations were iteratively adjusted to maximise separation from wetlands, riparian vegetation, treed corridors and planted shelterbelts, reducing potential interaction where complete avoidance was not practicable. • Mitigation (design and operational): The minimum blade tip height has been increased from 40 m to 60 m, raising the lower extent of the rotor-swept zone above the height at which most SBWB activity was recorded. In addition, a conservative low wind speed curtailment regime will be implemented in accordance with the Minister's Assessment, with turbines non-operational below 4.5 m/s from dusk to dawn between September and May, with provision for adaptive escalation if monitoring indicates a need for further risk reduction.
Description of predicted residual impacts	The Bat Impact Assessment (Nature Advisory, 2026b) concludes that, following implementation of the proposed avoidance, minimisation and operational mitigation measures, residual impacts to Southern Bent-wing Bat are expected to be low across both direct and indirect impact pathways. Direct impacts (collision risk) are considered low, reflecting the low and spatially constrained activity recorded across the site, the absence of confirmed SBWB activity within the lower rotor-swept zone, and the application of avoidance and mitigation measures including increased blade tip height and operational curtailment. Indirect impacts, including disturbance and displacement, are also expected to be low given the limited and transient use of the site, the absence of roosting habitat, and the concentration of activity within treed habitat features that have largely been avoided through project design. On this basis, residual impacts are unlikely to result in a significant impact on the local or regional SBWB population.
Description of compensatory measures	No initial compensation is proposed for Southern Bent-wing Bat, as residual impacts are predicted to be low and unlikely to be significant. However, monitoring outcomes will be used to validate these predictions, and where impacts exceed predicted levels or defined trigger thresholds, additional mitigation or compensatory measures will be considered in consultation with the regulator.
Description of implementation measures	Implementation of mitigation measures for Southern Bent-wing Bat is primarily operational and will be the responsibility of the owner and operator of the Project. These measures will be embedded within the Project's operational management framework and delivered through approved management plans, including the Bat and Avifauna Management Plan (BAM Plan). Key operational measures, including the blanket low wind speed curtailment regime (minimum cut-in speed of 4.5 m/s from dusk to dawn between September and May), will be implemented and maintained for the life of the Project, consistent with the Minister's Assessment. Curtailment settings will be applied across all turbines via the turbine control system and monitored to ensure compliance. Design-based mitigation measures relevant to SBWB, including the increased minimum blade tip height (60 m) and final turbine siting outcomes (including removal and relocation of turbines near the Shaw River and micro-siting

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Matter to be addressed	Description
	outcomes), will be locked in prior to construction and carried through into operation. Post-construction bat monitoring and reporting will be implemented in accordance with the BAM Plan, with monitoring undertaken by suitably qualified specialists. Monitoring outcomes will be reviewed to confirm the effectiveness of operational mitigation measures and to inform any adaptive management responses required under permit conditions. All operational mitigation and monitoring measures for SBWB will be appropriately resourced and funded by the owner, with oversight provided through regulatory compliance processes and reporting to the relevant authority as required.
Monitoring, reporting and evaluation	The Bat Impact Assessment identifies the Bat and Avifauna Management Plan (BAM Plan) as the primary mechanism for managing, monitoring and verifying residual impacts on bats and birds during construction and operation. The BAM Plan has been prepared for the Project and sets out detailed procedures for post-construction monitoring, impact triggers, response measures and reporting, consistent with the Minister's Assessment and expected permit conditions. Monitoring under the BAM Plan includes systematic post-construction bird and bat monitoring to detect turbine interactions, including carcass searches, assessment of collision risk and evaluation of activity patterns in proximity to turbines. Monitoring will be undertaken over an initial five-year period, with additional monitoring at defined intervals for the life of the Project. Monitoring outcomes will be used to evaluate the effectiveness of avoidance, minimisation and operational mitigation measures, including low wind speed curtailment, and to inform adaptive management. The BAM Plan provides for a trigger-based response framework, whereby monitoring results are assessed against defined thresholds and may initiate investigation, implementation of additional mitigation measures, and escalation of management actions where required. Reporting will include documentation of monitoring outcomes and notification of relevant authorities of any significant adverse impacts, in accordance with approval conditions. The BAM Plan provides a structured and ongoing framework to ensure that residual impacts are monitored, managed and, where necessary, responded to over the operational life of the Project.

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6.2 Other bats

In addition to Southern Bent-wing Bat, two other threatened bat species were either recorded or have the potential to occur in the project site: the Yellow-bellied Sheath-tail-bat and the Grey-headed Flying-fox. While both species have the potential to occur within the broader region, the EES and Minister's Assessment concluded that site use is limited, irregular or occasional, and that the Project area does not support important habitat for either species.

A summary of the application of the mitigation hierarchy and the species-specific guidelines supporting the Handbook is provided in Table 4 and Table 5 for Yellow Sheath-tailed Bat and Grey-headed Flying-fox respectively.

Table 4 Application of mitigation hierarchy for Yellow Sheath-tailed Bat

Matter to be addressed	Description
Assessment methods	The Yellow-bellied Sheath-tail-bat was assessed through a combination of desktop review and extensive field-based acoustic surveys. Ultrasonic bat detectors were deployed at approximately 100 locations across the project site during spring and late summer–early autumn over multiple years, with

Matter to be addressed	Description
	detectors installed both at ground level and at 45 m on meteorological masts to assess activity at potential turbine blade height. Recorded calls were analysed using established Victorian reference libraries and independently peer-reviewed to confirm species identification, with results interpreted in the context of species ecology, habitat availability and collision risk evidence from other Victorian wind farms.
Current site conditions and use	The Yellow-bellied Sheath-tail-bat was recorded infrequently across the project site, with 16 calls detected across nine survey locations, equating to a very low activity rate of approximately 0.003 calls per bat recording night (Nature Advisory, 2026b). Records were widely distributed and did not show any consistent association with particular habitat types. Despite extensive survey effort conducted over multiple seasons and years, the species was not recorded on detectors installed at 45 metres above ground level on meteorological monitoring masts, indicating no detected activity at potential turbine blade height. The low number of detections, lack of spatial clustering, and absence of elevated-height records indicate that site use by the Yellow-bellied Sheath-tail-bat is occasional and transient, and that the project site does not support important or regularly used foraging habitat for the species (Nature Advisory, 2026b).
Description of potential impact pathways	The main potential impact pathway identified for the Yellow-bellied Sheath-tail-bat is collision with wind turbine blades during flight. This pathway would require individuals to fly through the rotor-swept zone of operating turbines. While the species is known to be capable of fast, high-altitude flight, site-specific surveys recorded very low levels of activity, with detections infrequent and widely distributed, and no calls recorded at 45 metres above ground level, corresponding to turbine blade height. As such this was rated as xx by Nature Advisory (Nature Advisory, 2026b). As outlined in the Minister's Assessment of the EES, the Minister concluded <i>"that impacts to the species can be readily managed through the BBAM Plan and the monitoring and mitigation measures recommended for the Southern Bent-wing Bat."</i>
Description of measures for avoidance, minimisation and mitigation	• Avoidance and minimisation (design): While no important foraging or movement habitat for the Yellow-bellied Sheath-tail-bat was identified within the project site, turbine design refinements that reduce collision risk for bats generally are relevant to this species. Increasing blade tip height provides some reduction in collision risk for Yellow-bellied Sheath-tail Bat by reducing interaction at lower flight heights, but is less effective than for low-flying species, as this species is known to forage within the rotor-swept zone. • Mitigation (operational): A conservative low wind speed curtailment regime will be implemented in accordance with the Minister's Assessment, requiring turbines to remain non-operational below 4.5 m/s from dusk to dawn between September and May. This measure provides a broad reduction in bat collision risk, including for species that utilise the rotor-swept zone. Curtailment settings may be refined through the adaptive management framework where monitoring indicates a need for further risk reduction. The Minister's Assessment did not identify the species as requiring additional species-specific mitigation beyond the operational and monitoring measures proposed for Southern Bent-wing Bat, which are implemented through the Bat and Avifauna Management Plan.
Description of predicted residual impacts	Residual impacts to Yellow-bellied Sheath-tail Bat are expected to be low to moderate across direct and indirect impact pathways, consistent with the Bat Impact Assessment (Nature Advisory, 2026b). Direct impacts (collision risk) are considered low to moderate, reflecting the species' use of open airspace, including within the rotor-swept zone, but noting that activity at the site was low and sporadic. Collision risk is reduced through the application of avoidance and minimisation measures, and is further mitigated through operational controls, particularly the implementation of a conservative low wind speed curtailment regime.

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Matter to be addressed	Description
	Indirect impacts, including disturbance and displacement, are expected to be low given the absence of known roosting habitat within or near the Project area and the transient nature of site use. On this basis, residual impacts are unlikely to result in a significant impact on the local or regional population.
Description of compensatory measures	Not proposed.
Description of implementation measures	Implementation of mitigation measures relevant to the Yellow-bellied Sheath-tail-bat will be undertaken by the owner and operator of the Project and incorporated within the Project's operational management framework. Design-based measures that reduce bat collision risk generally, including the increased minimum blade tip height (60 m) and final turbine siting outcomes, will be locked in prior to construction and carried through into operation. Operational mitigation measures, including blade feathering and the blanket low-wind-speed curtailment regime (minimum cut-in speed of 4.5 m/s from dusk to dawn between September and May), will be implemented across all turbines via the turbine control system and maintained for the life of the Project. Post-construction bat monitoring and reporting will be undertaken in accordance with the approved Bat and Avifauna Management Plan by suitably qualified specialists, with results reviewed to confirm effectiveness. All mitigation and monitoring measures will be resourced and funded by the operator and subject to regulatory oversight and compliance reporting as required.
Monitoring, reporting and evaluation	Management and verification of residual impacts to the Yellow-bellied Sheath-tail-bat will be undertaken through the approved Bat and Avifauna Management Plan (BAM Plan). The BAM Plan will provide the framework for post-construction monitoring, reporting and adaptive management during operation, including monitoring of bat activity and potential turbine interactions to confirm the effectiveness of operational mitigation measures such as low-wind-speed curtailment. Monitoring results will be reviewed over time and, if required, inform refinement of operational controls in accordance with permit conditions and the Minister's Assessment. All monitoring and reporting will be implemented for the operational life of the Project and reported to the relevant authority as required.

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Table 5 Application of mitigation hierarchy for Grey-headed Flying Fox

Matter to be addressed	Description
Assessment methods	The Grey-headed Flying-fox was assessed through a combination of desktop review and field-based observations undertaken as part of the broader Bat Impact Assessment (Nature Advisory, 2026b). Desktop investigations included a review of existing records, published information on species distribution and ecology, and the location of known and historic roost sites relative to the project area. Field-based assessment relied on incidental observations recorded during ecological surveys and an evaluation of the availability and suitability of foraging habitat within the project area, including the presence of mature flowering trees and other key food resources (Nature Advisory, 2026b).
Current site conditions and use	The Grey-headed Flying-fox is considered unlikely to regularly use the project area. Desktop review identified that the nearest known roosts are located a considerable distance from the site, beyond the range at which regular commuting to the project area would be expected. No Grey-headed Flying-fox records were identified within or immediately adjacent to the project area, and the species was not observed during field surveys. Assessment of site vegetation indicates that the project area does not support important or

Matter to be addressed	Description
	regularly used foraging habitat, with a general absence of extensive stands of mature flowering eucalypts or other key foraging tree species typically relied upon by the species. Any use of the project area, should it occur, is therefore expected to be infrequent, opportunistic and transient, consistent with the highly mobile nature of the species and its reliance on regionally distributed food resources (Nature Advisory, 2026b). The Minister also noted that the Project area contains limited foraging habitat, is outside typical nightly foraging distances from known camps, and is not located between roosting camps, thereby reducing the likelihood of regular site use.
Description of potential impact pathways	The only credible impact pathway identified for the Grey-headed Flying-fox is collision with wind turbine blades during flight. This pathway would require individuals to traverse the project area at heights intersecting the rotor-swept zone.
Description of measures for avoidance, minimisation and mitigation	The Minister's Assessment did not recommend species-specific avoidance or design changes for Grey-headed Flying-fox beyond those already proposed in the EES. Notwithstanding several measures have been implemented: • Avoidance: The turbine layout was refined to avoid areas of higher habitat value, including treed vegetation associated with the Shaw River, and a 200-metre turbine-free setback was applied to native treed vegetation. • Minimisation: A detailed micro-siting process was undertaken to minimise overlap between turbine zones of influence and mapped habitat features, including remnant treed vegetation, waterways and wetlands, where complete avoidance was not practicable.
Description of predicted residual impacts	Residual impacts to Grey-headed Flying Fox are expected to be low across both direct and indirect impact pathways, consistent with the Bat Impact Assessment (Nature Advisory, 2026b). Direct impacts (collision risk) are considered low, noting the species' use of open airspace, including within the rotor-swept zone, but also recognising the low likelihood of regular use of the Project area given the absence of roosting habitat and limited foraging resources. The risk of interaction is further reduced through project siting away from key habitat features and the implementation of operational mitigation measures, including low wind speed curtailment where relevant. Indirect impacts, including disturbance and displacement, are expected to be negligible given the absence of maternity camps or significant foraging resources within or near the Project area and the highly mobile and transient nature of the species. On this basis, residual impacts are unlikely to result in a significant impact on the local or regional population.
Description of compensatory measures	None proposed
Description of implementation measures	Mitigation measures relevant to the Grey-headed Flying-fox will be implemented by the owner and operator of the Project and embedded within the Project's operational management framework. Monitoring and reporting will be undertaken in accordance with the approved Bat and Avifauna Management Plan, with outcomes reviewed to confirm effectiveness and inform compliance reporting as required.
Monitoring, reporting and evaluation	The Minister recommended that post-construction monitoring, reporting and adaptive management under the BAM Plan be used to manage any unforeseen impacts.

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6.3 Other birds

In addition to Brolga, a number of other threatened, migratory or protected bird species were either recorded or have the potential to occur within the project area, including raptors, migratory aerial species and wetland-dependent birds. While these species may occur within the broader landscape, the EES and the Minister's Assessment concluded that site use is generally limited, irregular or seasonal, and that the Project area does not support important habitat for these species.

Accordingly, these species were not identified as requiring species-specific avoidance or mitigation measures beyond the general design, operational controls, monitoring and adaptive management measures implemented for the Project. A summary of the application of the mitigation hierarchy and the species-specific guidelines supporting the Handbook is provided in Table 6, Table 7, Table 8 and Table 9 for White-throated Needletail, Fork-tailed Swift, several migratory shorebird species and the Black Falcon and Little Eagle respectively.

Table 6 Application of mitigation hierarchy for White-throated Needletail

Matter to be addressed	Description
Assessment methods	Desktop review of existing records and species ecology was undertaken and relevant literature. Field assessment relied on bird utilisation surveys (BUS) to characterise bird assemblages, flight behaviour and height distributions across the project area, with consideration of habitat suitability for aerial foraging species (Nature Advisory, 2022b).
Current site conditions and use	The White-throated Needletail was not recorded during field surveys. The project area is dominated by open agricultural land with very limited forested or tall treed habitat, which represents sub-optimal habitat for this aerial species that more frequently forages over forested landscapes. On this basis, any use of the site would be infrequent and transient, consistent with passage through the broader landscape rather than site reliance (Nature Advisory, 2022b). The Minister's Assessment accepts the EES conclusion that the Project area does not contain important or specialised habitat for the species, noting the lack of extensive forested areas that typically support foraging activity. The Minister notes that no White-throated Needletails were recorded during targeted field surveys, and that the species' occurrence in the region is irregular and opportunistic, reflecting broader migratory movements rather than site-specific use.
Description of potential impact pathways	The only credible impact pathway is collision with turbine blades during flight where individuals pass through the rotor-swept zone. This species is a highly mobile, fast-flying aerial insectivore that typically forages at high altitudes and moves rapidly across broad landscapes, with site use generally limited to transient over-flight rather than repeated or prolonged activity.
Description of measures for avoidance, minimisation and mitigation	The Minister's Assessment does not identify White-throated Needletail as requiring species-specific avoidance or mitigation measures. Project design incorporates turbine siting away from treed habitats and the application of turbine-free buffers around vegetation features, reducing potential interaction with aerial foragers. Broader operational measures applicable to birds, including turbine design parameters and standard construction and operational management controls, further minimise collision risk for occasional overflying individuals.
Description of predicted residual impacts	Given the absence of records, lack of preferred habitat, and application of standard avoidance and mitigation measures, the residual collision risk is low (Nature Advisory, 2022b). Any interaction, should it occur, would be limited to isolated individuals and is not expected to result in a significant impact on the population.

Matter to be addressed	Description
	The Minister's Assessment notes that while the species is capable of flying within the rotor-swept zone, the Assessment considers that any interactions with turbines would be infrequent, given the low likelihood of regular site use and the species' highly mobile behaviour
Description of compensatory measures	None proposed.
Description of implementation measures	Implementation of measures will be undertaken through the Project's design, construction and operational frameworks. Wind Prospect, as the Project developer, is responsible for finalising design-based measures, including turbine siting and layout outcomes, prior to construction. ENGIE, as the owner and operator of the Project, will be responsible for implementing construction and operational measures, including environmental management controls, monitoring and reporting, in accordance with approved management plans and permit conditions. These measures will be applied for the life of the Project.
Monitoring, reporting and evaluation	Monitoring, reporting and evaluation relevant to the White-throated Needletail will be undertaken through the Project's Bat and Avifauna Management Plan and broader compliance framework, implemented in accordance with permit conditions. Monitoring outcomes will be reviewed as part of routine compliance reporting, with adaptive management applied if unexpected impacts are identified. The Minister recommended that post-construction monitoring, reporting and adaptive management under the BAM Plan be used to manage any unforeseen impacts.

Table 7 Application of mitigation hierarchy for Fork-tailed Swift

Matter to be addressed	Description
Assessment methods	The Fork-tailed Swift was assessed through a combination of desktop review and bird utilisation surveys (BUS) undertaken as part of the broader avifauna assessment (Nature Advisory, 2022b). Desktop investigations included a review of existing records, species ecology, while field assessment focused on systematic BUS observations to characterise bird activity, flight behaviour and height distributions across the project area.
Current site conditions and use	Fork-tailed Swift was recorded in low numbers during bird utilisation surveys, consistent with occasional overflight rather than regular site use (Nature Advisory, 2022b). The project area is dominated by open agricultural land and does not support habitat required for roosting or breeding by the species. Any use of the site is therefore considered infrequent, transient and opportunistic, reflecting passage through the broader landscape rather than reliance on the project area. The Minister's Assessment accepts the EES conclusion that Fork-tailed Swift is not a regular or frequent user of the project area, and that the site does not provide important habitat for the species.
Description of potential impact pathways	The only credible impact pathway for Fork-tailed Swift is collision with turbine blades during flight. The species is a highly mobile, fast-flying aerial insectivore that typically forages at moderate to high altitudes and moves rapidly across large areas (Nature Advisory, 2022b). The Minister notes that while the species is capable of flying within the rotor-swept height, survey records indicate low numbers, and that any interactions with turbines would be infrequent given the species' broad distribution, high mobility and large population size.
Description of measures for avoidance, minimisation and mitigation	Standard design and operational measures applicable to birds, including turbine spacing, blade design and operational management controls, further minimise risk to occasional overflying individuals

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Matter to be addressed	Description
	The Minister did not require species-specific avoidance or mitigation measures for Fork-tailed Swift.
Description of predicted residual impacts	With avoidance and standard mitigation measures in place, the residual impact risk to Fork-tailed Swift is very low (Nature Advisory, 2022b). Given the species' infrequent and transient use of the project area, any interaction would be limited to isolated individuals and is not expected to result in a significant impact at a local or population level. The Minister's Assessment further notes that Fork-tailed Swift is not a controlling provision under the EPBC Act for this project, and that the EES assessment concluded that any potential impacts would be low and unlikely to have population-level consequences
Description of compensatory measures	None proposed
Description of implementation measures	Implementation of measures will be undertaken through the Project's design, construction and operational frameworks. Wind Prospect, as the Project developer, is responsible for finalising design-based measures, including turbine siting and layout outcomes, prior to construction. ENGIE, as the owner and operator of the Project, will be responsible for implementing construction and operational measures, including environmental management controls, monitoring and reporting, in accordance with approved management plans and permit conditions. These measures will be applied for the life of the Project.
Monitoring, reporting and evaluation	Monitoring, reporting and evaluation relevant to the Fork-tailed Swift will be undertaken through the Project's Bat and Avifauna Management Plan and broader compliance framework, implemented in accordance with permit conditions. Monitoring outcomes will be reviewed as part of routine compliance reporting, with adaptive management applied if unexpected impacts are identified. The Minister recommended that post-construction monitoring, reporting and adaptive management under the BAM Plan be used to manage any unforeseen impacts.

Table 8 Application of mitigation hierarchy for Latham's Snipe, Sharp-tailed Sandpiper, Common Greenshank, Curlew Sandpiper, Red-necked Stint

Matter to be addressed	Description
Assessment methods	Migratory shorebird species (Latham's Snipe, Sharp-tailed Sandpiper, Common Greenshank, Curlew Sandpiper and Red-necked Stint) were assessed through a combination of desktop review, targeted migratory shorebird surveys and broadscale habitat assessment undertaken as part of the flora and fauna impact assessment (Nature Advisory, 2022b). Desktop investigations included a review of existing records and species ecology. Field investigations comprised targeted surveys for migratory shorebirds within suitable wetland and riparian habitats, supplemented by bird utilisation surveys across the broader project area. A site-wide habitat assessment was also undertaken to identify the extent, condition and distribution of wetlands, waterways and seasonally inundated areas to determine habitat availability and likely patterns of use (Nature Advisory, 2022b).
Current site conditions and use	These species were recorded in low numbers or infrequently during targeted surveys, with observations limited to localised wetland and riparian habitats, including sections of the Shaw River, Back Creek and associated wetlands (Nature Advisory, 2022b). Suitable habitat within the project area is limited in extent and fragmented, and the site does not support large, permanent or regionally important wetlands. Survey results indicate that any use of the project area by these species is irregular, opportunistic and transient, consistent with their highly mobile migratory behaviour and reliance on broader regional wetland networks rather than the project area.

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Matter to be addressed	Description
	The Minister's Assessment notes Curlew Sandpiper, listed as a migratory species under the EPBC Act, as having the potential to occur infrequently in the region during migration or dispersal, primarily where suitable shallow wetland or mudflat habitat is available. The Assessment accepts the EES conclusion that the Project area does not support important migratory shorebird habitat, due to the limited extent and highly ephemeral nature of wetlands.
Description of potential impact pathways	Potential impact pathways for these migratory shorebird species include localised habitat disturbance during construction near wetlands and watercourses, and collision risk during operation. Collision risk is considered low given the species' typical low flight heights, the limited spatial extent of suitable habitat, and the absence of regular flight paths through the turbine layout. Habitat-related impacts are limited to areas adjacent to wetlands and riparian corridors and are spatially confined.
Description of measures for avoidance, minimisation and mitigation	Potential impacts to migratory shorebirds are addressed through set-backs from ephemeral wetlands (primarily for Brolga) and watercourses, application of turbine-free buffers around riparian and wetland habitats, and careful siting of infrastructure to minimise disturbance to areas of higher habitat value. Construction environmental management measures further reduce the potential for disturbance during works. These measures apply consistently across all species in this group and are considered sufficient given the limited and infrequent use of the project area. No additional species-specific mitigation or monitoring is required beyond general bird management measures.
Description of predicted residual impacts	Following the application of avoidance and mitigation measures, the predicted residual impacts to migratory shorebirds are low (Nature Advisory, 2022b). Given the low numbers recorded, limited and localised habitat availability, and the transient nature of site use, any residual impacts are expected to be very low, localised and temporary, and not significant at a population level for any of the species in this group. The Minister notes that any use of the Project area by these species would be irregular, dispersed and seasonal, reflecting broader landscape conditions rather than site-specific dependence. These species typically undertake low-level flights associated with foraging and movement between nearby wetlands, resulting in a low likelihood of interaction with turbines. The Minister considers that Curlew Sandpiper use of the site would be sporadic and in very low numbers, and that turbine collision risk is very low given the species' habitat preferences and flight behaviour.
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Description of compensatory measures	None proposed
Description of implementation measures	Implementation of measures will be undertaken through the Project's design, construction and operational frameworks. Wind Prospect, as the Project developer, is responsible for finalising design-based measures, including turbine siting and layout outcomes, prior to construction. ENGIE, as the owner and operator of the Project, will be responsible for implementing construction and operational measures, including environmental management controls, monitoring and reporting, in accordance with approved management plans and permit conditions. These measures will be applied for the life of the Project.
Monitoring, reporting and evaluation	Monitoring, reporting and evaluation relevant to the Latham's Snipe, Sharp-tailed Sandpiper, Common Greenshank, Curlew Sandpiper, Red-necked Stint will be undertaken through the Project's Bat and Avifauna Management Plan and broader compliance framework, implemented in accordance with permit conditions. Monitoring outcomes will be reviewed as part of routine compliance reporting, with adaptive management applied if unexpected impacts are identified.

Table 9 Application of mitigation hierarchy for Black Falcon and Little Eagle

Matter to be addressed	Description
Assessment methods	Black Falcon and Little Eagle were assessed through a combination of desktop review and bird utilisation surveys (BUS) undertaken as part of the broader avifauna assessment (Nature Advisory, 2022b). Desktop investigations included a review of existing records, species ecology and habitat preferences. Field-based assessment relied on systematic BUS observations to characterise raptor activity, flight behaviour and habitat use across the project area, supplemented by a broadscale habitat assessment to determine the availability of suitable foraging and nesting habitat.
Current site conditions and use	Black Falcon was not recorded during bird utilisation surveys undertaken within the Project area. Based on desktop review, regional records and species ecology, the species was assessed as having the potential to occur occasionally as a transient overflying or foraging individual, rather than as a regular or site-dependent user (Nature Advisory, 2022b). Little Eagle was not recorded during field surveys within the project area; however, the species has regional records and is known to occur at low densities across the broader landscape (Nature Advisory, 2022b). The project area is dominated by open agricultural land and does not support known nesting, roosting or breeding habitat for either species. Any use of the site by Black Falcon or Little Eagle is therefore considered occasional and transient, reflecting their wide-ranging behaviour and reliance on habitat resources beyond the project area rather than site dependence. The Minister's Assessment notes that Black Falcon is a rare and irregular visitor to the region and was not recorded during targeted surveys undertaken for the EES. The Assessment accepts the EES conclusion that the Project area does not provide important or specialised habitat for the species, and that any occurrence would likely be infrequent and transient, reflecting broader regional movements rather than site-specific use. The Minister's Assessment acknowledges Little Eagle as a species with the potential to pass through the Project area, noting that it is more common than Black Falcon but was recorded infrequently during surveys. The Assessment accepts the EES conclusion that the Project area does not support important breeding habitat for Little Eagle, with no nests or territories identified within or adjacent to the site.
Description of potential impact pathways	The primary potential impact pathway for Black Falcon and Little Eagle is collision with turbine blades during flight. Disturbance during construction is also considered unlikely given the absence of breeding activity within the site.
Description of measures for avoidance, minimisation and mitigation	Potential impacts to raptors are addressed through project design and layout, including turbine siting that avoids areas of higher habitat value and minimises interaction with linear landscape features. Standard design and operational measures applicable to birds, including turbine spacing, visibility of turbine structures and construction environmental management controls, further reduce the likelihood of collision or disturbance. These measures apply consistently to both species and are considered appropriate given their low levels of site use. The Minister's Assessment does not require species-specific avoidance or mitigation measures for Black Falcon.
Description of predicted residual impacts	With the application of standard avoidance and mitigation measures, the predicted residual impact risk to Black Falcon and Little Eagle is low (Nature Advisory, 2022b). Any interaction with project infrastructure would be limited to isolated individuals, and impacts are not expected to be significant at a local or population level. The Minister's Assessment concluded that while Black Falcon is capable of flying at heights that could intersect the rotor-swept zone, the Minister's Assessment considers that the likelihood of interaction is low, given the species' rarity, lack of regular site use and the absence of known nesting or foraging concentrations within or near the Project area.

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Matter to be addressed	Description
	The Minister's Assessment recognised that Little Eagle, as a soaring raptor, may occasionally fly within the rotor-swept height; however, the Assessment concludes that the risk of collision is low, given the limited frequency of records, the absence of nesting activity, and the open agricultural nature of the landscape.
Description of compensatory measures	None proposed
Description of implementation measures	Implementation of measures will be undertaken through the Project's design, construction and operational frameworks. Wind Prospect, as the Project developer, is responsible for finalising design-based measures, including turbine siting and layout outcomes, prior to construction. ENGIE, as the owner and operator of the Project, will be responsible for implementing construction and operational measures, including environmental management controls, monitoring and reporting, in accordance with approved management plans and permit conditions. These measures will be applied for the life of the Project.
Monitoring, reporting and evaluation	Monitoring, reporting and evaluation relevant to the Black Falcon and Little Eagle will be undertaken through the Project's Bat and Avifauna Management Plan and broader compliance framework, implemented in accordance with permit conditions. Monitoring outcomes will be reviewed as part of routine compliance reporting, with adaptive management applied if unexpected impacts are identified. The Minister recommended that post-construction monitoring, reporting and adaptive management under the BAM Plan be used to manage any unforeseen impacts.

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7 Response to Minister's Assessment

This chapter responds to the Minister's Assessment and specifically recommendations relevant to birds and bats, with a particular focus on Brolga and Southern Bent-wing Bat. These species represent the primary matters where the Minister's Recommendations intersect with the application of the Renewable Energy Development Handbook.

The purpose of this chapter is to provide a clear, recommendation-by-recommendation reconciliation, demonstrating how each relevant Minister's Recommendation has been addressed. The chapter draws on the technical assessments and mitigation measures presented elsewhere in this report and provides explicit cross-referencing to enable efficient regulatory review.

Where assessment methods reflect updated guidance, including the Renewable Energy Development Handbook and supporting species-specific guidelines, this is clearly identified. In these instances, the intent of the Minister's Recommendations has been retained, with contemporary guidance used to inform how those recommendations are implemented.

7.1 Overview of Minister's Findings

In July 2023, the Minister for Planning issued the Minister's Assessment under the *Environment Effects Act 1978* for the Willatook Wind Farm, concluding that the Project can proceed with acceptable environmental effects, subject to the implementation of specific modifications and strengthened mitigation measures, primarily in relation to Brolga and Southern Bent-wing Bat.

The Minister's Assessment requires that turbine-free buffers be expanded and refined, informed by updated scientific evidence and in consultation with the Department of Energy, Environment and Climate Action (DEECA), prior to approval of amended development plans.

For Brolga, the EES assessment was undertaken in accordance with the *Interim Guidelines for the Assessment, Avoidance, Mitigation and Offsetting of Potential Wind Farm Impacts on Brolga (Grus rubicunda) in Victoria* (Interim Brolga Guidelines) (DSE, 2012), which were the applicable guidance at the time and were accepted by the Minister as an appropriate basis for assessment.

In the Minister's Assessment, however, the Minister indicated that more recent scientific research and emerging policy directions should also be taken into account when finalising turbine-free buffers and mitigation measures. Accordingly, the Minister's recommendations for Brolga draw on the principles and evidence base reflected in the *Draft Brolga Assessment and Mitigation Standards for Wind Energy Facilities* (Draft Brolga Standard) (DELWP, 2020), which adopt a more habitat-based approach to defining breeding home ranges, wetland networks and disturbance buffers, rather than reliance on default buffer distances alone.

The Assessment placed particular emphasis on the protection of breeding wetlands and other potential wetland complexes, the application of disturbance buffers informed by habitat function to avoid impacts during the breeding period. In doing so, the Minister also highlighted the need for greater policy clarity and consistency in the application of Brolga protection measures across wind energy projects in Victoria.

For Southern Bent-wing Bat, the Minister identified collision risk as the principal impact pathway of concern and supported a strengthened avoidance and mitigation framework. This includes increased

buffers to habitat features, the application of adaptive management measures such as low wind speed curtailment, and an enhanced Bird and Bat Adaptive Management (BBAM) framework to respond to emerging operational data over the life of the Project.

For all other threatened birds and bats, and biodiversity matters more broadly, the Minister agreed with the conclusions of the EES that predicted impacts could be appropriately managed and are acceptable, subject to the implementation of the proposed mitigation and management measures. No additional species-specific modifications were required beyond those identified for Brolga and Southern Bent-wing Bat.

This chapter responds directly to the Minister's findings and recommendations, focusing on matters relevant to threatened birds and bats, and demonstrates how the Project has refined its design, assessment approach and mitigation framework to give effect to the Minister's Assessment in a manner consistent with the Handbook and the statutory planning framework.

7.2 Brolga

The Minister's Assessment identified Brolga as one of two priority species requiring further refinement of project design and mitigation measures beyond those assessed in the EES. While the EES assessment for Brolga was undertaken in accordance with the *Interim Guidelines for the Assessment, Avoidance, Mitigation and Offsetting of Potential Wind Farm Impacts on Brolga in Victoria* (DSE, 2012), which were accepted by the Minister as an appropriate basis for assessment at the time, the Minister also indicated that more recent scientific evidence and emerging policy directions should inform final outcomes including the application of the Draft Brolga Standard (DELWP, 2020).

Subsequent to the completion of the Willatook Wind Farm EES and the issue of the Minister's Assessment, the Victorian Government released Brolga guidelines that support the Handbook (DEECA, 2025), providing clear and formal guidance on the expectations for the assessment, design and mitigation of onshore wind farms within the Brolga range. These guidelines articulate a contemporary, habitat-based approach to defining breeding home ranges, wetland networks and turbine-free buffers, informed by updated scientific research and intended to promote greater policy clarity and consistency across projects.

In this context, additional post-EES work has been undertaken to refine the understanding of Brolga habitat use, breeding behaviour and landscape-scale wetland connectivity, and to align final design outcomes with the intent of the Minister's recommendations and the guidance of the Handbook. This work represents an iterative refinement of the Project and has been undertaken in consultation with the Department of Energy, Environment and Climate Action (DEECA).

7.2.1 Further Work Undertaken Post-EES

Following the Minister's Assessment, a program of targeted post-EES work was undertaken to inform the refinement of turbine-free areas and mitigation measures for Brolga. This work focused on improving spatial and temporal resolution of habitat use and ensuring that final design outcomes are consistent with contemporary science and policy intent (see Nature Advisory, 2026a). The key components of this work are summarised below.

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Wetland classification and buffer framework

Wetland identification and classification have been undertaken in accordance with the Handbook (Appendix 2) and are described in detail in the Brolga Impact Assessment (Nature Advisory, 2026). For the purposes of this document, it is sufficient to note that wetlands have been defined and refined through a combination of mapping, field assessment and hydrological analysis to ensure that those treated as constraints represent functionally relevant Brolga breeding habitat.

Through this process, wetlands were categorised as Brolga Breeding Wetlands and Potential Breeding Wetlands, consistent with the Handbook framework. Of the wetlands identified within the 5 km assessment area, 71 were excluded based on Handbook criteria, with 51 classified as Potential Breeding Wetlands and 7 as Breeding Wetlands.

Buffers were applied to these wetlands in accordance with the Handbook, forming Brolga Breeding Wetland Buffers that incorporate breeding, foraging and disturbance components. These buffers reflect both the spatial requirements of breeding pairs and movement corridors between wetlands, and provide the basis for avoidance and impact assessment.

Additional surveys

Additional targeted field investigations were undertaken to supplement the EES baseline, with a focus on confirming the location, extent and function of breeding wetlands, associated wetland networks and surrounding terrestrial habitat relevant to Brolga breeding and foraging behaviour (Nature Advisory, 2026a).

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Updated modelling

Updated habitat-based modelling was undertaken to delineate breeding home ranges and zones of influence around key wetlands, informed by contemporary research and applying a functional, landscape-scale approach rather than reliance on default buffer distances alone (Water Technology, 2026).

Design refinements

The turbine layout was iteratively refined in response to the updated survey data and modelling outcomes, with turbines removed or relocated to increase separation from breeding wetlands, wetland networks and areas identified as supporting higher Brolga use (Nature Advisory, 2026a).

Delineation of turbine-free areas

Refined turbine-free areas were delineated around breeding wetlands and associated wetland complexes, incorporating disturbance buffers and seasonal sensitivities consistent with the Minister's Assessment (Nature Advisory, 2026a). These areas form the basis of the final design response to Brolga-related recommendations.

7.2.2 Response to Minister's Recommendations

The following table sets out a recommendation-by-recommendation response to the Minister's Assessment in relation to Brolga. For each recommendation, the table identifies the specific

requirement, summarises the actions undertaken, and cross-references the relevant technical documentation demonstrating how the recommendation has been addressed.

In preparing this response, the Project has had regard to the Minister's findings and recommendations, as well as to the Renewable Energy Development Handbook and its supporting Brolga guidance, which provide contemporary direction on the assessment and design of wind energy facilities within the Brolga range. Where relevant, the application of this updated guidance is noted in the table to demonstrate alignment with current government policy settings.

A summary of each of the Minister's recommendations and their intent along with the Project response and outcomes is shown in Table 10.

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Table 10 Response to the EES Minister's Recommendations related to Brolga

Minister's Recommendation	Intent of Minister's Recommendation	Project Response and Application of Current Guidance	Outcome
Include Wetlands W1, W3, W4, W7, W10, W12 (26028), W13, 25241, 25710, 25721, 25729, 25731, 25741, 25816, 25932, 25941, FD2, FD16, FD21 and 12a as suitable brolga breeding wetlands within the brolga breeding home range unless they are permanently drained. [Minister notes wetland W4 is a synonym for wetland 25721. W7 is a synonym for wetland 25936. 26028 is a synonym for wetland W12e (part of the Cockatoo Swamp complex). 25241 appears to be an error as no such number is assigned to any wetland in the EES]	To ensure that confirmed Brolga breeding wetlands, and other wetlands with demonstrated suitability for breeding, are appropriately identified and incorporated within the delineation of breeding home ranges and turbine-free buffers, such that these wetlands remain suitable for continued breeding and are not adversely affected by turbine siting, disturbance or cumulative landscape effects. The recommendation reflects the Minister's emphasis on adopting a habitat-based approach to wetland classification and buffer delineation, informed by the habitat model articulated in the Draft Brolga Standard. It seeks to ensure that wetlands exhibiting characteristics suitable to support Brolga breeding are identified and turbine-free buffers implemented, consistent with the precautionary intent of the Assessment.	In response to the Minister's recommendation, wetlands within the Brolga Assessment Area were reassessed in accordance with Appendix 2 (Brolga Guidelines) of the Handbook. The assessment process commenced with identification of wetlands mapped through the Brolga Breeding Habitat Suitability Model (BBHSM), which provided the initial spatial framework for potential breeding habitat. These modelled wetlands were then subject to refinement through: • Review of verified historical breeding records (VBA and agency data); • Extensive targeted field surveys undertaken across multiple breeding seasons; • Direct landholder consultation regarding historical breeding activity and hydrological permanence; and • Detailed hydrological and hydraulic modelling to refine wetland boundaries, inundation regimes and fine-scale suitability for breeding. Through this process, wetlands were classified as either: • Breeding Wetlands – wetlands with confirmed breeding records or which meet BBHSM criteria and were validated as capable of supporting breeding; or • Potential Breeding Wetlands – wetlands exhibiting habitat characteristics suitable to support breeding but without confirmed breeding records.	All wetlands listed in the Minister's recommendation have been reviewed under the Brolga Guidelines (Appendix 2 of the Handbook). Confirmed and historical breeding wetlands (including W1, W4/25721, W12e/26028, 25729, 25741, and 25816) are incorporated within mapped Breeding Home Range buffers. Potential Breeding Wetlands meeting hydrological criteria have been incorporated into Breeding Home Range buffers where located within 2 km of a confirmed breeding wetland (e.g., W1, W10, FD21, W13). Further to the Minister's Recommendations, wetland 25956 was added as a Breeding Wetland and 25974 (WT6984) and 8201 as Potential Breeding wetlands that were included into Breeding Home Range buffers. No turbines are located within Breeding Wetland Buffers. Potential Breeding Wetlands located more than 2 km from a confirmed breeding wetland included W3, W7/25936, 25941, FD16 and 12a and are subject to disturbance buffers consistent with Appendix 2. A proposed turbine (T31) is located within the disturbance buffer of Wetland 12a (Potential Breeding Wetland), which would be subject to appropriate compensatory requirements. Wetland 25932, 25710, and 25731 did not meet the requirements of either Brolga Breeding Wetlands or Potential Breeding Wetlands.

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Minister's Recommendation	Intent of Minister's Recommendation	Project Response and Application of Current Guidance	Outcome
This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright		Consistent with Appendix 2 of the Handbook, Breeding Wetlands form the basis of Breeding Home Range delineation, with turbine-free buffers of 900 m (excluding blade) applied at the breeding home range scale. Potential Breeding Wetlands located within 2 km of a confirmed Breeding Wetland are incorporated within the aggregated Breeding Home Range and associated turbine-free buffer (Nature Advisory, 2026a). For Potential Breeding Wetlands located more than 2 km from a confirmed Breeding Wetland, a Breeding Home Range buffer is not applied. Instead, a Disturbance Buffer of 300m (excluding turbine blade) is applied in accordance with the Handbook to maintain functional suitability, consistent with the structured spatial methodology set out in Appendix 2. This approach ensures that wetlands suitable to support Brolga breeding are comprehensively identified and appropriately managed, while applying the contemporary government framework for breeding home range and buffer delineation.	Wetland 25241 is confirmed to be an error in the Minister's list.
Before a permit decision, Wind Prospect conduct additional assessments for: a) wetland 25698 to confirm if it is hydrologically unsuitable for brolgas or permanently drained b) wetland 25668 to determine the reasons for the LiDAR assessment reducing its extent [Minister notes that the recommended information, when gathered, should be discussed with	To ensure that wetlands 25698 and 25668 are accurately characterised in terms of hydrological function, spatial extent and suitability to support Brolga breeding, and that any potential under-classification arising from mapping methodology (including LiDAR-derived extent reductions) is resolved prior to permit determination. The recommendation reflects the Minister's concern that the breeding wetland and home range framework	In response to the Minister's recommendation, targeted hydrological reassessment of Wetlands 25698 and 25668 was undertaken, documented in the Water Technology Memorandum dated 22 January 2024. For Wetland 25698, review of aerial imagery, detailed LiDAR topography and site inspection confirmed that the wetland has been substantially modified by constructed drainage and does not demonstrate inundation characteristics consistent with Brolga breeding habitat. It was therefore determined to be hydrologically unsuitable to support breeding	In response to the Minister's recommendation, targeted hydrological reassessment of Wetlands 25698 and 25668 was undertaken and documented in the Water Technology Memorandum dated 22 January 2024, with outcomes incorporated into the updated Brolga Impact Assessment (Nature Advisory, 2026e) in accordance with Appendix 2 of the Renewable Energy Development Handbook (Brolga Guidelines).

Minister's Recommendation	Intent of Minister's Recommendation	Project Response and Application of Current Guidance	Outcome
DTP (Planning) and with DEECA BSW and should be provided to me as the responsible authority for consideration along with the planning permit application. If either wetland is found to be suitable for Brolga breeding, home range mapping should be provided similar to that recommended for other suitable breeding wetlands.]	be based on a precautionary and scientifically robust understanding of wetland hydrology and extent. It seeks to confirm whether wetland 25698 is hydrologically unsuitable or permanently drained, and to clarify whether the reduced mapped extent of wetland 25668 (as informed by LiDAR assessment) may have affected its classification and buffering. The intent is to ensure that, if either wetland is found to exhibit characteristics suitable to support Brolga breeding, it is appropriately incorporated within breeding home range delineation and associated turbine-free buffers, consistent with the habitat-based approach adopted in the Assessment.	and does not require breeding home range mapping. For Wetland 25668, the memorandum explains that the reduced mapped extent resulted from refined LiDAR-based topographic analysis, which more accurately delineated the functional wetland footprint and excluded elevated or drained areas. The revised boundary reflects the true hydrologically suitable area rather than a reduction in classification. Consistent with Appendix 2 of the Handbook (Brolga Guidelines), LiDAR-derived elevation data and hydrological modelling were used to refine wetland boundaries, assess inundation duration and confirm functional suitability, ensuring that classification reflects the true hydrologically capable footprint rather than historical or coarse-scale mapping. These investigations directly address the Minister's concerns regarding hydrological suitability and mapping accuracy.	Under the structured assessment framework: - Wetland 25668 was confirmed to be substantially modified by constructed drainage channels and incapable of retaining water to the depth and duration required to support Brolga breeding. It does not meet the hydrological criteria for Breeding or Potential Breeding Wetland classification and therefore does not require breeding home range or disturbance buffering. - A portion of wetland 25698 was assessed as exhibiting characteristics consistent with a Potential Breeding Wetland under Appendix 2, with one arm of the wetland has been permanently drained, reducing its effective hydrological extent. Noting the portion of the wetland meets the hydrological criteria is more than 2 km from a confirmed Breeding Wetland, a 300m Potential Breeding Wetland Buffer was applied and no turbine infrastructure is located within the disturbance buffer. Consistent with Appendix 2, LiDAR-derived elevation data and detailed hydrological modelling were used to refine wetland boundaries and confirm inundation capability. Applying the contemporary Handbook framework, neither wetland triggers additional breeding home range mapping beyond that already delineated, and management responses are proportionate to confirmed

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Minister's Recommendation	Intent of Minister's Recommendation	Project Response and Application of Current Guidance	Outcome
			hydrological function and spatial connectivity.
Following the outcome of assessments in Recommendation 2, the Minister for Planning issue: a) Planning Permit PA2201620 (Moyne Planning Scheme) for the Willatook wind energy facility with the conditions shown in Appendix G and subject to b) Planning Permit P22065 (Moyne Planning Scheme) for native vegetation removal with the conditions shown in Appendix H [Minster notes Wind Prospect to submit a revised permit application incorporating changes to the wind farm design that respond appropriately to provision of turbine free buffers to protect habitat for Brolga and for Southern Bent-wing Bat which this assessment recommends]	To ensure that the findings of the Minister's Assessment (particularly those relating to turbine-free buffers for Brolga and Southern Bent-wing Bat) are formally incorporated into the planning approval framework prior to permit issuance. The recommendation reflects the Minister's conclusion that the Project can proceed with acceptable environmental effects, subject to the completion of targeted additional assessments and the submission of a revised permit application that embeds design refinements and strengthened mitigation measures. It seeks to ensure that the final approved development plans and permit conditions give effect to the habitat-based buffer approach and adaptive management framework identified in the Assessment, before Planning Permit PA2201620 and Planning Permit P22065 are issued.	In response to the Minister's recommendation, a comprehensive updated Brolga Impact Assessment (Nature Advisory, 2026e) has been completed in accordance with the Handbook and its supporting Brolga Guidelines (Appendix 2), which now provide the formal government framework for assessment, mitigation and management of onshore wind farms within the Brolga range. This contemporary guidance replaces earlier interim and draft guideline documents and establishes a structured methodology for the identification of Breeding Wetlands, Potential Breeding Wetlands and associated buffers. The updated assessment incorporates additional survey data, refined hydrological and hydraulic modelling, application of the Brolga Breeding Habitat Suitability Model, and consultation with relevant agencies. The outcomes have informed further turbine layout refinements and the delineation of turbine-free areas consistent with the Minister's Assessment. These findings form the basis of the amended planning permit application for PA2201620 and P22065, ensuring that the final development plans and proposed permit conditions give effect to the Minister's recommendations and align with current government policy settings. All turbines (including blade sweep) are located outside Breeding Wetland Buffers.	Application of the updated Brolga assessment in accordance with Appendix 2 of the Handbook has resulted in expanded Breeding Home Range turbine-free buffers, application of Disturbance Buffers to relevant Potential Breeding Wetlands, removal and relocation of turbines to maintain appropriate separation distances, and a reduction in the overall number of turbines. A compensation and habitat enhancement package has also been incorporated to address any residual impacts. These outcomes embed the Minister's recommendations within the amended permit application. All turbines (including blade sweep) are located outside Breeding Wetland Buffers.
Amend Planning Permit PA2201620, as shown in Report 2 Appendix G, to require the brolga breeding wetland buffer to be:	To strengthen the protection of Brolga breeding habitat by adopting a consistent, habitat-based buffer framework that recognises the functional wetlands the same as	In response to the Minister's recommendation, breeding home range delineation and turbine-free buffers have been revised in accordance with both the Minister's Assessment and	Confirmed breeding wetlands and wetlands incorporated within 2 km breeding home range clusters including W1, W4/25721, W12c,e/26028, 25729, 25741, and 25816, and associated

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Minister's Recommendation	Intent of Minister's Recommendation	Project Response and Application of Current Guidance	Outcome
a) measured from the edge of the wetland b) increased from 700 metres to 900 metres from the 95-metre rotor blade length setback for any wetland within the 2-kilometre breeding home range of a wetland that holds water for at least 120 consecutive days at least once every 10 years (includes W1, W3, W4, W7, W10, W12 (26028), W13, 25710, 25731, 25741, 25816, 25932, 25941, FD2, FD16, FD21, 12a shown in Figure 9 of the Environmental Effects Statement Appendix C1) c) 1369 metres plus a disturbance buffer of 300 metres, and a 95-metre blade length setback for isolated wetlands that hold water for at least 120 consecutive days at least once every 10 years. [Minister supported recommendation (a), recommended (b) includes within home ranges all other wetlands within 2 km of identified historic or suitable breeding wetlands, and with the addition of a 300 m allowance for disturbance to constitute the overall turbine free buffer for Brolga breeding home ranges, did not support recommendation (c) noting that the same principle should apply to isolated breeding wetlands as for other breeding wetlands, that the home range should be considered to extend 600 m from the edge of the wetland, and a	breeding wetlands and incorporates an additional disturbance allowance within the overall turbine-free buffer. The recommendation reflects the Minister's conclusion that the original 700 m buffer did not adequately account for the spatial extent of Brolga breeding behaviour, including use of surrounding terrestrial habitat within the breeding home range. By requiring buffers to be measured from the edge of the wetland and increasing the setback to incorporate both a 600 m breeding home range and an additional 300 m disturbance allowance (together with the blade length setback), the Minister sought to ensure that breeding wetlands and associated habitat networks are afforded a precautionary and functionally meaningful level of protection. The recommendation also clarifies that isolated breeding wetlands should be treated consistently with other breeding wetlands, applying the same breeding home range and disturbance principles rather than a different or reduced buffer logic.	Appendix 2 of the Handbook (Brolga Guidelines). - Consistent with the Minister's recommendation: - Buffers are measured from the edge of the wetland; - A 600 m breeding home range has been delineated around confirmed Breeding Wetlands; - An additional 300 m disturbance allowance has been applied to constitute the overall 900 m turbine-free buffer, together with the blade length setback; and - The same home range and disturbance framework has been applied to both wetland complexes and isolated breeding wetlands, ensuring consistency in buffer treatment. In applying Appendix 2 of the Handbook, Breeding Wetlands and Potential Breeding Wetlands have been identified through the structured methodology (Nature Advisory, 2026a). Breeding Home Range buffers have been defined based on confirmed breeding status and spatial connectivity, rather than treating all modelled or functional wetlands as breeding wetlands. This ensures that buffers are applied in a manner that is both precautionary and consistent with the contemporary government framework. The revised buffer mapping has informed turbine layout refinements and removal/relocation of turbines to maintain the required separation distances, with outcomes embedded in the amended permit application.	connected wetlands within 2 km (including W1, W12w/6757, W10, FD21, W13) are incorporated within mapped Breeding Home Range turbine-free buffers of 600 m measured from the wetland edge and a 300 m disturbance allowance. All turbines are located outside Breeding Wetland Buffers, with residual interactions limited to a single turbine within a Potential Breeding Wetland disturbance buffer and minor linear infrastructure within the Cockatoo Swamp Breeding Wetland Buffer. Minor linear infrastructure (underground cabling and access tracks) is located within portions of the Cockatoo Swamp Breeding Wetland Buffer. These interactions are limited in extent, do not involve turbine placement, and are consistent with the Handbook, which provides for such infrastructure where avoidance is not practicable and impacts are appropriately minimised and compensated. Disturbance Buffer applied (Potential Breeding Wetlands >2 km from a confirmed Breeding Wetland) include FD2, W3, W7/25936, 25941, and FD16 were subject to disturbance buffers in accordance with Appendix 2, but do not trigger additional breeding home range delineation. A single turbine (T31) is located within the disturbance buffer of Wetland 12a (Potential Breeding Wetland), which would be subject to appropriate compensatory requirements. Where wetlands were determined not to meet the minimum evidence requirements to demonstrate Brolga breeding or through detailed hydrological and hydraulic

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Minister's Recommendation	Intent of Minister's Recommendation	Project Response and Application of Current Guidance	Outcome
further 300 m disturbance allowance added to constitute the turbine free buffer for that home range.]	This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright		assessment to be permanently drained or incapable of sustaining the inundation duration required for breeding (as documented in the updated technical assessment), breeding home range mapping has not been applied. Wetland 25932, 25710, and 25731 did not meet the requirements of either Brolga Breeding Wetlands or Potential Breeding Wetlands. Collectively, the revised buffer mapping has resulted in expanded turbine-free areas, removal or relocation of turbines to maintain separation distances, and a reduction in overall turbine numbers, giving practical effect to the Minister's recommendation.
Amend Planning Permit PA2201620, as shown in Report 2 Appendix G, to: a) avoid works from July to end of November b) require a brolga monitoring and compensation plan in consultation with the Department of Energy, Environment and Climate Action and to the satisfaction of the responsible authority. [Minister recommends measure within the construction environmental management plan requiring no construction from July to end of November is supported]	To minimise the risk of disturbance to Brolga during the breeding season by restricting construction activities during the peak nesting period (July to end of November) and by requiring a structured monitoring and compensation framework. The recommendation reflects a precautionary approach to managing potential indirect impacts associated with construction disturbance, including noise, movement and human activity, during the period when breeding wetlands and surrounding terrestrial habitat are most sensitive. The requirement for a Brolga monitoring and compensation plan seeks to ensure that any residual or unforeseen impacts are identified through ongoing monitoring and	The updated Brolga Assessment has applied the framework set out in Appendix 2 of the Handbook (Brolga Guidelines), which incorporates a 600 m breeding home range and an additional 300 m disturbance buffer to constitute the overall turbine-free buffer. The inclusion of the 300 m disturbance allowance is specifically intended to reduce the risk of behavioural disturbance to breeding Brolga from construction and operational activities. Consistent with this framework, turbine-free buffers have been expanded and construction activities will not occur within these delineated breeding home range and disturbance buffers. Construction activities within Breeding Home Range and disturbance buffers will be avoided during the breeding season where practicable. Where works cannot avoid the breeding season, targeted monitoring and adaptive mitigation will be implemented, including response measures if Brolga are detected within 300 m of activities. Quarry blasting will be subject to a Blast	Breeding Home Range and associated 300 m disturbance buffers have been incorporated into the final turbine-free mapping, preventing construction works within these areas during the breeding season. A targeted seasonal management framework will be implemented, including pre-breeding surveys, active nest exclusion zones, adaptive construction controls and specific management measures for higher-risk activities such as quarry operations. A proposal that would form the basis for a draft Brolga Compensation Plan has been prepared in accordance with the Handbook and will be refined/agreed in consultation with DEECA. Compensation is targeted to residual impacts associated with Wetland 12a and limited linear infrastructure within the Cockatoo Swamp Breeding Wetland Buffer.

Minister's Recommendation	Intent of Minister's Recommendation	Project Response and Application of Current Guidance	Outcome
	addressed through adaptive management and appropriate habitat compensation measures, developed in consultation with the Department of Energy, Environment and Climate Action and to the satisfaction of the responsible authority.	Management Plan and monitoring at nearby wetlands during the breeding season. In addition, a Brolga Monitoring and Compensation Plan will be prepared in consultation with DEECA and to the satisfaction of the Responsible Authority. This plan will formalise seasonal monitoring, adaptive response triggers, and compensation measures where required.	
As part of the Bat and Avifauna Management Plan, develop a mortality monitoring program of at least five years' duration that commences when the first turbine is commissioned [Minister notes this is generally supported, noting that the requirements may change following input from DEECA and DCCEEW]	To ensure that post-construction mortality monitoring for birds and bats is undertaken for a sufficient duration to robustly assess operational impacts and verify the effectiveness of avoidance and mitigation measures, particularly for priority species such as Brolga and Southern Bent-wing Bat. The recommendation reflects the Minister's precautionary approach and seeks to embed a structured, multi-year monitoring framework within the Bat and Avifauna Management Plan (BAM Plan), enabling adaptive management in response to operational data and ongoing consultation with relevant regulatory agencies.	The Bat and Avifauna Management Plan (BAM Plan) will include a mortality monitoring program commencing upon commissioning of the first turbine, consistent with the Minister's recommendation. The monitoring framework will be developed in accordance with the Handbook and its supporting species-specific guidance, including requirements relating to search effort, carcass persistence trials, searcher efficiency trials, reporting and adaptive management triggers. Consistent with the Minister's note, the detailed monitoring methodology will be finalised in consultation with DEECA and DCCEEW, and refined as necessary to reflect agency input and any evolving policy settings. This approach ensures that the monitoring program remains robust, proportionate and responsive to emerging operational evidence over the life of the Project.	A draft Bat and Avifauna Management Plan (BAM Plan) has been prepared to support the amended permit application. The BAM Plan includes a mortality monitoring program of at least five years' duration commencing upon commissioning of the first turbine, consistent with the Minister's recommendation. The final monitoring methodology will be developed in consultation with DEECA and DCCEEW and embedded within the permit framework to ensure implementation and adaptive management.

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7.3 Southern Bent-wing Bat

The Minister's Assessment identified Southern Bent-wing Bat as one of two priority species requiring further refinement of project design and mitigation measures beyond those assessed in the EES. While the EES assessment for Southern Bent-wing Bat was undertaken in accordance with the best available scientific evidence and relevant Victorian and Commonwealth guidance at the time, and was accepted by the Minister as an appropriate basis for assessment, the Minister identified collision risk as the principal impact pathway of concern and recommended a strengthened avoidance and mitigation framework.

Subsequent to the completion of the Willatook Wind Farm EES and the publication of the Minister's Assessment, the Victorian Government released updated species-specific guidance supporting the Handbook, providing clearer direction on the assessment and management of wind farm impacts on threatened bat species. This guidance articulates a contemporary, risk-based approach to collision risk assessment, turbine siting, operational curtailment and adaptive management, informed by updated research and intended to promote greater policy clarity and consistency across projects.

In this context, additional post-EES work has been undertaken to incorporate recent scientific findings and developing a range of additional design and operational mitigation measures with both the intent of the Minister's recommendations and the guidance of the Handbook (Nature Advisory, 2026b). This work represents an iterative refinement of the Project and has been undertaken in consultation with the Department of Energy, Environment and Climate Action (DEECA).

A summary of each of the Minister's recommendations and their intent along with the Project response and outcomes is shown in Table 11.

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Table 11 Response to the EES Minister's Recommendations related to Southern Bent-wing Bat

Minister's Recommendation	Intent of Minister's Recommendation	Project Response and Application of Current Guidance	Outcome
Amend Planning Permit PA2201620, as shown in Report 2 Appendix G, to: a) apply a minimum 200-metre turbine free buffer from potential foraging habitat b) revise conditions for the bird and bat adaptive management plan.	To further reduce collision risk to Southern Bent-wing Bat by strengthening spatial avoidance of key habitat features and enhancing the adaptive management framework governing operational mitigation and monitoring. The requirement for a minimum 200-metre turbine-free buffer from potential foraging habitat reflects the Minister's precautionary approach to managing collision risk in areas where bat activity may be elevated, including riparian corridors, wetlands and treed habitat. The revision of conditions relating to the Bird and Bat Adaptive Management Plan seeks to ensure that post-construction monitoring, curtailment measures and adaptive responses are formalised within the permit framework and are responsive to emerging operational data and agency input.	In response to the Minister's recommendation, the updated Bat Impact Assessment (Nature Advisory, 2026b) has been undertaken in accordance with the species-specific guidance supporting the Renewable Energy Development Handbook, which reflects contemporary research on Southern Bent-wing Bat behaviour, flight height and collision risk. Consistent with this guidance and the Minister's direction, a minimum 200-metre turbine-free buffer has been applied to mapped areas of higher-quality foraging habitat, including riparian corridors, wetlands and associated treed vegetation where bat activity is comparatively elevated. This buffer provides spatial separation between turbines and key habitat features identified through acoustic monitoring and habitat mapping. For remaining turbine locations, a detailed micro-siting process was undertaken to minimise overlap between the turbine rotor-swept zone and mapped habitat features. Turbine positions were iteratively refined to increase separation distances from wetlands, riparian vegetation, planted tree rows and linear treed corridors, reducing potential interaction where complete avoidance was not practicable. Additional design and mitigation measures implemented in accordance with the updated bat guidance include: - Increasing the minimum blade tip height to reduce overlap with recorded flight heights; - Application of operational mitigation measures, including low wind speed curtailment during higher-risk periods;	Application of the updated bat assessment and species-specific guidance has resulted in removal of several turbines in proximity to higher-activity habitat, including the treed riparian corridor along the Shaw River where most Southern Bent-wing Bat calls were recorded (Nature Advisory, 2026b). Additional turbines have been relocated through detailed micro-siting to reduce overlap between turbine zones of influence and mapped habitat features. The minimum blade tip height has been increased to reduce interaction with recorded flight heights, and operational mitigation measures, including low wind speed curtailment and adaptive management under the Bat and Avifauna Management Plan, have been incorporated into the amended permit framework. Collectively, these outcomes strengthen spatial avoidance and collision risk mitigation consistent with the Minister's recommendations.

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Minister's Recommendation	Intent of Minister's Recommendation	Project Response and Application of Current Guidance	Outcome
		Integration of collision risk monitoring and adaptive management measures within the Bat and Avifauna Management Plan. Collectively, these measures reflect a strengthened avoidance, minimisation and mitigation framework consistent with contemporary scientific evidence and the intent of the Minister's Assessment	
Recommended changes to BH05 to reflect the recommendations of my assessment, including: - Inclusion of low wind speed curtailment to mitigate potential impacts on Southern Bent-wing Bat, including: - the cut-in speed specified in the BBAM Plan is increased to at least 4.5 m/s between September and May for the life of the wind farm to help reduce potential bat mortalities. - the cut-in speed requirements should be applied to all turbines for the project - the cut-in speed of at least 4.5 m/s should be applied during additional months if any Southern Bent-wing Bat mortalities are recorded during winter - monitoring results should inform the potential for increasing the cut-in speed or the need to consider other effective management strategies if Southern Bent-	To strengthen operational mitigation for Southern Bent-wing Bat by mandating project-wide low wind speed curtailment during peak activity periods, ensuring consistent application across all turbines, and embedding an adaptive management framework whereby monitoring results can trigger seasonal extension or increased cut-in speeds if mortalities are recorded.	The Project has adopted nighttime low wind speed curtailment across all turbines, consistent with the Minister's recommendation and the species-specific guidance in Appendix 3 of the Handbook. Curtailment will apply from September to May, from 30 minutes before sunset to 30 minutes after sunrise, with a minimum cut-in speed of 4.5 m/s, applied to all turbines for the life of the wind farm. The curtailment regime incorporates additional risk-based parameters informed by species ecology and monitoring evidence, including activation when temperatures exceed 10°C, reflecting conditions of higher bat activity, and blade feathering below cut-in speed to minimise rotor movement during low wind conditions Importantly, the program is adaptive. A Bat and Avifauna Management (BAM) Plan will establish mortality monitoring and defined trigger thresholds. If Southern Bent-wing Bat mortalities are recorded, the Project commits to: - increasing the minimum cut-in wind speed (above 4.5 m/s) to achieve a higher level of collision risk reduction; - extending the duration of seasonal curtailment (including winter months if required); and/or - implementing additional mitigation measures consistent with Appendix 3 of the Handbook.	The Project will implement a project-wide, adaptive low wind speed curtailment regime for the life of the wind farm, commencing at a minimum 4.5 m/s cut-in speed during peak Southern Bent-wing Bat activity (September–May) and applied to all turbines (Nature Advisory, 2026b). This will be supported by blade feathering, defined monitoring protocols and adaptive management triggers under the BAM Plan. This framework establishes an operationally enforceable and scalable mitigation response that reduces predicted collision risk at commencement and provides a clear mechanism to further increase cut-in speeds, extend seasonal coverage (including winter if required), and implement additional measures if monitoring identifies Southern Bent-wing Bat mortalities, thereby achieving alignment with both the Minister's recommendation and Appendix 3 of the Handbook.

Minister's Recommendation	Intent of Minister's Recommendation	Project Response and Application of Current Guidance	Outcome
wing Bat mortalities are recorded.		This ensures the operational framework is precautionary at commencement and capable of being strengthened over time in response to empirical monitoring outcomes, consistent with the risk-based and adaptive management approach set out in the Handbook and reflected in the Minister's recommendation.	
The BBAM Plan should be updated to include suitable contingency measures should any Grey-headed Flying Fox mortalities be recorded during operation.	To ensure that, notwithstanding the low predicted risk to Grey-headed Flying-fox (GHFF), the BBAM Plan includes a precautionary and adaptive contingency framework so that any unexpected GHFF mortalities during operation trigger clear, enforceable management responses consistent with the risk-based approach in the Handbook.	The updated Bat and Avifauna Management (BAM) Plan incorporates specific contingency measures should any Grey-headed Flying-fox mortalities be recorded during operation. If a GHFF mortality is detected, the BAM Plan provides for: - immediate notification to DEECA and relevant authorities; - investigation of causal factors (including weather conditions, turbine operation parameters and spatial patterns); - review and, if required, modification of operational controls (including targeted curtailment during periods of elevated flying-fox activity); and - consideration of additional mitigation measures consistent with Appendix 3 guidance, where relevant. These measures are embedded within the broader adaptive management framework of the BAM Plan, ensuring proportional and responsive mitigation.	The BBAM/BAM Plan will include defined contingency triggers and management actions for Grey-headed Flying-fox, ensuring that any unexpected mortality results in timely investigation and implementation of strengthened operational mitigation where required.
The BBAM Plan should include suitable contingency measures should mortalities of other threatened birds, including threatened migratory species be recorded during operation.	To ensure the BBAM Plan embeds a precautionary and adaptive management framework so that any mortalities of other threatened bird species, including listed migratory species, trigger defined investigation and responsive	The updated Bat and Avifauna Management (BAM) Plan incorporates clear contingency triggers and response measures for any recorded mortalities of threatened birds, including EPBC Act-listed migratory species. If such mortalities are detected through post-construction monitoring, the Plan provides for:	The BBAM/BAM Plan will include defined triggers and adaptive management responses for threatened bird and migratory species mortalities, ensuring that any unexpected impacts are promptly investigated and addressed through

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Minister's Recommendation	Intent of Minister's Recommendation	Project Response and Application of Current Guidance	Outcome
A second follow-up search, a 'pulse search', would be undertaken to 60 metres during the warmer months (September to April) when microbats are more active.	confidence in the effectiveness of mitigation measures over time.	approved by DEECA and DCCEEW, and that monitoring outcomes are to inform ongoing management responses. In this context, the Project proposes that post-construction mortality monitoring will be undertaken for a minimum of two years, with the total duration (between two and five years) to be determined in consultation with, and subject to endorsement by, DEECA and DCCEEW through the BBAM Plan approval process. Monitoring will comprise monthly searches of a representative sample of turbines, supplemented by seasonal higher-frequency 'pulse' searches during peak bat activity periods (September to April), consistent with Handbook guidance.	consultation with, and endorsed by, DEECA and DCCEEW through approval of the BBAM Plan.

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7.4 Other threatened and migratory bird and bat species

The Minister's Assessment did not identify any additional species-specific recommendations for other threatened or migratory bird and bat species beyond those relating to Brolga and Southern Bent-wing Bat. Impacts to other listed species are to be managed through the overarching Bird and Bat Adaptive Management (BBAM/BAM) framework, including post-construction mortality monitoring, defined trigger thresholds and adaptive management responses.

Notwithstanding the absence of further species-specific requirements, the design refinements and operational mitigation measures adopted in response to the Minister's recommendations will provide broader benefit to other threatened and migratory species, as well as non-listed birds and bats. In particular, the application of expanded turbine-free buffers, micro-siting to reduce overlap with defined habitat features, increased minimum blade tip height, project-wide low wind speed curtailment, blade feathering below cut-in speed and a strengthened adaptive management regime collectively reduce collision risk and habitat interaction across a wider suite of species. These measures therefore extend beyond the priority species and represent an overall strengthening of the Project's avoidance and mitigation framework consistent with the risk-based and mitigation hierarchy principles set out in the Handbook.

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8 Monitoring, Reporting and Adaptive Management

This section outlines the monitoring, reporting and adaptive management framework for the Project. The framework is designed to validate impact predictions, ensure compliance with environmental outcomes, and provide a structured, proportionate response to any observed impacts, consistent with the Handbook and the impact triggers defined in Section 5.

The detailed monitoring methodologies, trigger thresholds, and management actions are set out in the Bird and Bat Adaptive Management Plan (BAM Plan) prepared for the Project (Nature Advisory, 2026f). This section provides a summary of that framework and its application.

8.1 Monitoring Program

Monitoring will be undertaken during both construction and operation to assess bird and bat utilisation, detect mortality events, and inform adaptive management. The program includes:

8.1.1 Brolga monitoring

Targeted Brolga monitoring will be undertaken to confirm ongoing use of breeding habitat and to detect any behavioural or disturbance responses to the Project. This includes:

- Monthly surveys during the Brolga breeding season (July–December) for the first two years of operation
- Monitoring of all identified Breeding and Potential Breeding Wetlands
- Targeted monitoring within 300 m of construction or disturbance activities, where relevant
- Recording of breeding activity, behaviour, flight paths and interaction with infrastructure

8.1.2 Bird utilisation surveys

Seasonal bird utilisation surveys will be undertaken during the first two years of operation to support a Before–After Control–Impact (BACI) assessment and identify any changes in site use, behaviour or species composition.

8.1.3 Bat activity monitoring

Ultrasonic bat detector surveys will be undertaken at ground level and at nacelle height to characterise bat activity within and below the rotor swept area. Monitoring will focus on Species of Concern and will inform the refinement of operational mitigation measures, including curtailment regimes.

8.1.4 Mortality monitoring

A formal carcass monitoring program will be implemented to detect and estimate bird and bat mortality associated with turbine operation. This will include:

- Monthly carcass searches at a representative subset of turbines

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- Pulse searches to improve detection of smaller species
- Application of correction factors for scavenger removal and detection efficiency
- Monitoring for a minimum of five years post-commissioning, with additional monitoring at five-year intervals for the life of the Project

8.2 Reporting

Monitoring results will be documented and reported to the relevant regulators in accordance with approval conditions. Reporting will include:

- Results of utilisation and mortality monitoring
- Identification of spatial and temporal patterns in impacts
- Assessment of performance against impact triggers and environmental outcomes
- Recommendations for refinement of mitigation and management measures

Incident reporting will be undertaken where mortality of listed species is detected, in accordance with relevant regulatory requirements.

8.3 Adaptive Management Framework

Management actions will be implemented in accordance with the impact triggers defined in Section 5, using a structured and proportionate adaptive management approach.

The framework comprises the following steps:

- Detection of trigger event – Identification of mortality, behavioural change or other indicators exceeding defined thresholds
- Investigation and verification – Assessment of the cause, extent and significance of the observed impact
- Implementation of mitigation measures – Application of additional or modified mitigation measures, which may include turbine-specific operational controls (e.g. curtailment) or changes to site management practices
- Monitoring of response – Ongoing monitoring to assess the effectiveness of implemented measures
- Escalation where required – Further management action where impacts persist or exceed acceptable levels

This framework ensures that management responses are responsive to observed conditions and proportionate to the level of risk.

8.4 Review and Continuous Improvement

The BAM Plan will be subject to periodic review to ensure it remains effective and consistent with best practice. Reviews will be informed by:

- Monitoring results and observed impacts

- Advances in scientific understanding and industry practice
- Feedback from regulators and stakeholders

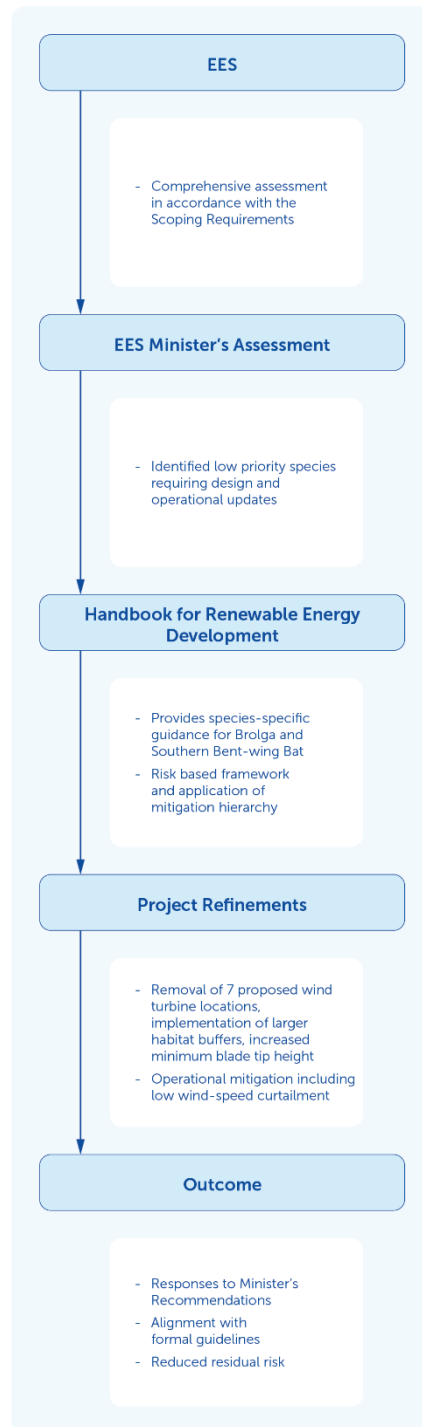
Updates to the BAM Plan will be implemented where required to ensure continuous improvement in impact management over the life of the Project.

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9 Summary

This report has demonstrated that the Willatook Wind Farm has been assessed and refined in a manner consistent with the *Handbook for the Development of Renewable Energy in Victoria* (DEECA, 2025), having regard to the findings of the EES and the Minister's Assessment. The assessment has applied the Handbook's risk-based framework, including structured site and context analysis, species-specific evaluation of impact pathways, and proportionate application of the mitigation hierarchy.



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Figure 6 Project evolution from assessment to refined design and outcomes

The evidence presented confirms that Brolga and Southern Bent-wing Bat were appropriately identified as priority species requiring refinement. Subsequent design evolution (including turbine removals, increased turbine-free buffers, adoption of a minimum 60 m blade tip height, operational curtailment measures, and strengthened monitoring and adaptive management provisions) demonstrates further avoidance and mitigation beyond that assessed in the original EES. For other threatened and migratory bird and bat species, the assessment confirms limited and localised occurrence and absence of important habitat, with impacts managed through the strengthened BAM framework.

While the Project was assessed through an EES prior to publication of the Handbook, the additional technical work undertaken demonstrates that the Project outcomes meet or exceed the contemporary expectations now set out in the Handbook. The assessment consolidates the findings of the EES and subsequent investigations through the lens of the current policy framework and confirms that the Project's design, mitigation measures and monitoring commitments are aligned with present-day regulatory standards.

Overall, the site-specific characteristics, survey evidence and refined design indicate a low likelihood of significant residual impacts on threatened bird and bat species. Notwithstanding the low risk identified, the Project incorporates a precautionary monitoring and adaptive management framework to respond to any unanticipated outcomes. This framework provides clear trigger thresholds, regulator oversight, independent auditing and the capacity to strengthen operational mitigation where required, ensuring that impacts remain acceptable over the life of the wind farm.

Accordingly, the Project represents a proportionate and contemporary application of the mitigation hierarchy, consistent with the Handbook, the Minister's Assessment and current best practice for renewable energy development in Victoria.

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