VNI West

Ecology

All EES documents, chapters, technical appendices, and attachments are available to view and download on the VNI West website at **vniwproject.com.au/EES**

EES Chapter 26 and ***Technical Appendix S*** provide the flora, fauna, and habitat values within and surrounding the Project, and the significance of potential ecological impacts to native vegetation and threatened species. Measures to avoid, minimise, and manage have also been outlined.

READ MORE ↗

Chapter 26: Ecology ↗

Technical Appendix S: Ecology ↗

EES Chapter 27 and ***Technical Appendix S*** also provide the biodiversity values and potential impacts of the Project, focussing on EPBC Act-listed Matters of National Environmental Significance.

READ MORE ↗

Chapter 27: Matters of National Environmental Significance ↗

Technical Appendix S: Ecology ↗

The Project is located in an area that has been largely cleared of native vegetation due to historical and ongoing agricultural land use. Open grazed pasture or cropping lands dominate the Project area with most remnant vegetation restricted to public roadsides and streamside areas with the occasional patch retained within farmland or as scattered trees. A range of ecological vegetation classes (EVCs) occur along the Proposed Easement, predominantly woodland and forest, with localised areas of mallee, grassland, and chenopod shrublands.

Due to the extent of historic vegetation clearance, it was considered a priority during the Project development phase to avoid and minimise impacts on ecological features as much as practicable. Sensitive areas prioritised for avoidance were identified through desktop and field assessments, as well as consultation with Traditional Owners, landholders, communities, and other stakeholders.

As described in section 7.1.2 of the *EES Executive summary*, *EES Chapter 6: Assessment framework,* and *EES Chapter 26: Ecology*, the options evaluation framework was based on the principles of the mitigation hierarchy for the Project, where 'avoidance' is the primary mechanism for protecting values (see page 4 of this fact sheet).

Key ecological areas avoided during this process included:

- Patho Plains Important Bird Area/Key Biodiversity Area
- Core re-introduction area for the critically endangered Plains Wanderer *Pedionomus torquatus*
- Kerang Wetlands Ramsar Site
- Northern Victorian Wetlands Key Biodiversity Area
- Kara Kara National Park
- Great Spectacle Lakes Complex
- St Arnaud Box-Ironbark Region Key Biodiversity Area/Important Bird Area
- Large wetland complexes
- Leaghur State Park
- Plumpton Wildlife Reserve, Benjeroop Wildlife Reserve, Quambatook Bushland Reserve, Wooroonook Lakes Wildlife Reserve, and Morrl Morrl and Mount Bolangum Nature Conservation Reserves
- Remnant vegetation within streamside corridors

Biodiversity and environment

The primary ecology impacts during construction relate to vegetation clearance and ground disturbance associated with towers and associated construction areas, temporary access tracks and stringing sites, as well as ancillary works (including laydown/workforce areas, terminal/reactor station works and localised vegetation clearance at access points and road intersections). Direct impacts include removal of native vegetation and habitat (patches and scattered trees, including hollow-bearing trees), threatened ecological communities (TECs) habitat, and habitats for threatened species. Indirect impacts may include impacts on migratory species, disruption to habitat connectivity, degradation of riparian vegetation, exacerbation of threatening processes (including pest animals and fire risk), and impacts on groundwater-dependent ecosystems (GDEs).

In addition to impacts within the defined construction footprint, there is potential for inadvertent impacts outside the footprint if activities extend beyond approved limits; this would be managed through clearly defined limits of disturbance (including No-Go-Zones where required) and environmental controls.

The Project would operate for approximately 50-100 years. Key ecology risks during operation relate to the ongoing presence of transmission towers and lines (including bird collision and electrocution risk), bushfire ignition risk, potential ongoing impacts on GDEs, and ongoing vegetation management beneath transmission lines (including low-level disturbance and the potential spread of weeds and pathogens).

Offsets for native vegetation would be required under Victoria's native vegetation removal regulations. Offset requirements have been determined using Department of Energy, Environment and Climate Action's (DEECA's) (Vic) native vegetation removal map to generate a native vegetation removal report. The need for offsets for TECs and listed species habitat under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) Environmental Offsets Policy would be confirmed once targeted surveys are completed and impacts are more fully defined.

Overall, while the Project would result in some unavoidable ecological impacts, the application of a rigorous avoidance and minimisation framework, together with targeted mitigation and offsetting measures, is expected to reduce these impacts to an acceptable level within the context of the modified landscape.

Native vegetation and threatened communities

During construction, it is estimated that the Project would result in unavoidable loss of approximately 116 ha of native vegetation patches, 475 large trees in patches, 130 large, scattered trees and 19 small, scattered trees. These impacts would be dispersed along the length of the approximately 240 km Proposed Easement. However, it is likely that the biodiversity and habitat impacts are overstated at this stage of the Project as lack of land access to private properties to conduct surveys has resulted in the EES adopting a conservative approach and assumes that 'worst case' losses would occur.

Flora and Fauna Guarantee Act 1988 (Vic) (FFG Act) listed threatened ecological communities confirmed to occur in the Proposed Easement and would therefore be impacted are Grey Box – Buloke Grassy Woodland, Northern Plains Grassland and Semi-arid Northwest Plains Buloke Grassy Woodland.

Ongoing vegetation management during operation would be required to maintain clearance heights and may result in low-level disturbance beneath the line, with an associated risk of weed and pathogen spread. These risks would be managed through biosecurity controls and the Vegetation and Habitat Management Plan. Although taller vegetation (mature height >9.1 m) within the Proposed Easement would be removed during construction, regrowth and germination may occur over time and would require periodic management. Vegetation maintenance would be undertaken in accordance with DEECA's utility installations exemption procedure (DEECA 2019), including a written agreement where required; native vegetation would be avoided where practicable, and any further tree removal would require separate approval and offsets. Overall, residual impacts are expected to be low.





Threatened flora and fauna

A total of five EPBC Act-listed threatened flora species and 19 EPBC Act-listed threatened fauna species were assessed as having a medium to high likelihood of occurrence within the Project Easement. Surveys have recorded the following EPBC Act-listed threatened species: Turnip Copperburr (flora), Brown Treecreeper, and Striped Legless Lizard (fauna).

FFG Act-listed flora and fauna species recorded to date include Buloke (flora), Umbrella Wattle (flora), Spiny Lignum (flora), Grey-crowned Babbler (fauna), Brown Toadlet (fauna), Samphire Skink (fauna) and Hooded Scaly-foot (fauna).

Overall, the ongoing application of the avoidance principle throughout detailed design and the implementation of proposed management measures during construction are expected to minimise residual impacts on threatened species to an acceptable level. Nevertheless, additional targeted surveys are required to determine the full extent of potential impacts.

Collision risk

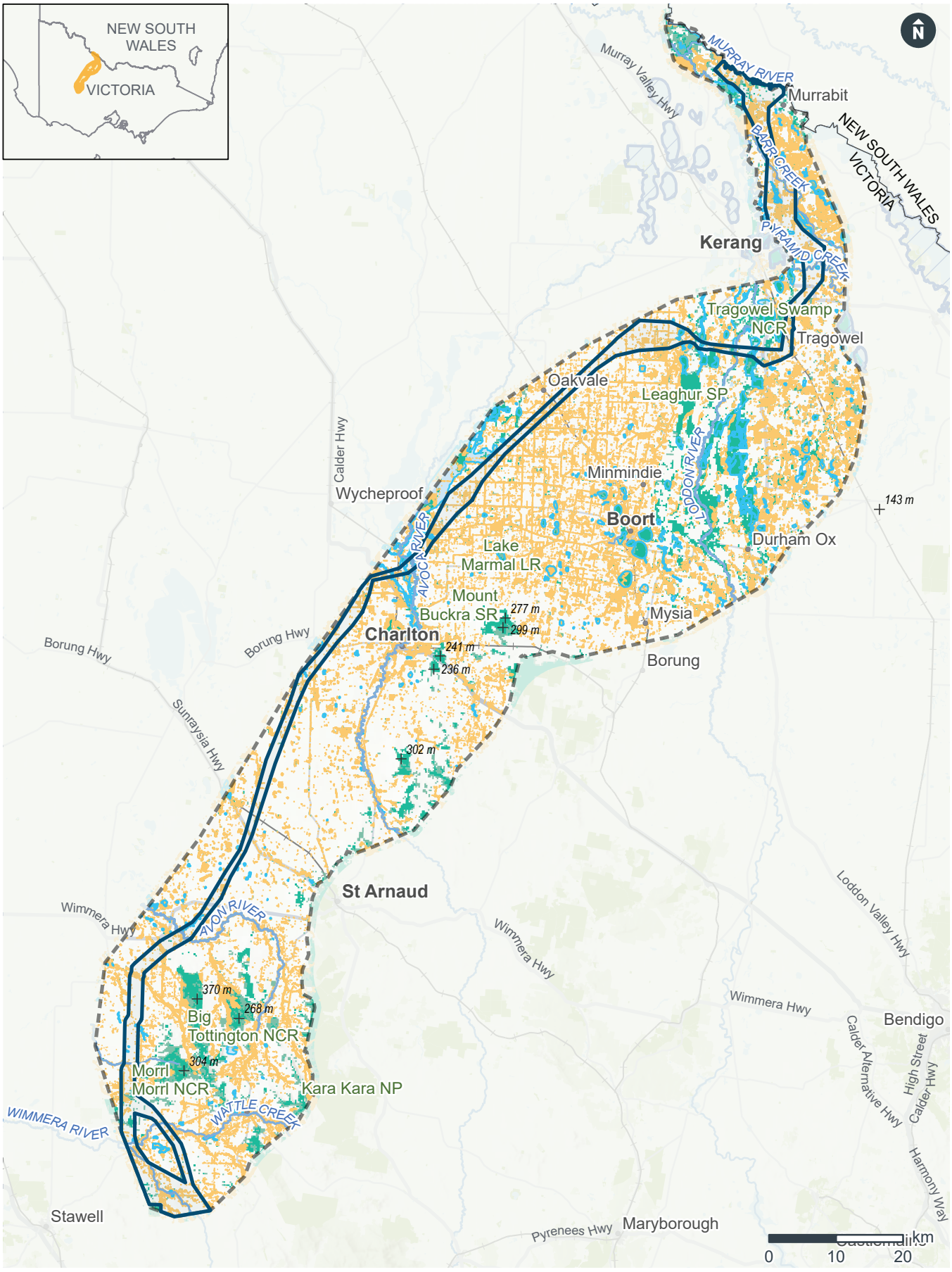
Collision risk is highest for larger, less agile species that fly in large flocks and/or at speed, particularly where the Proposed Easement traverses wetland landscapes and key bird movement corridors. These include shorebirds (e.g. Latham's Snipe), waterbirds (e.g. Brolga), raptors (e.g. the White-bellied Sea Eagle), and ground-dwelling birds (Plains Wanderer). Collision risk in other flying species such as bats is not considered a likely impact due to the nature of the lines. Mitigation would focus on priority locations identified during detailed design, including measures to improve line visibility (e.g. line marking/bird flight diverters), supported by the monitoring and adaptive management during early operations. These measures would be documented in a Collision Risk Management Plan, developed in consultation with DEECA.

Electrocution risk is highest for species that perch, roost, or nest on infrastructure, particularly large-bodied birds with broad wingspans. Overall, the electrocution risk for high-voltage transmission infrastructure is expected to be low due to structure height and clearances and would be further minimised through final design measures where required (including insulation and/or design refinement). While Carpet Pythons could potentially climb towers, electrocution is unlikely given that conductors are positioned many metres above the ground, and there are no adjacent trees to facilitate access.

Environmental Performance Requirements (EPRs)

EPRs have been developed to guide the ongoing investigations and the incorporation of results into design refinement. Mitigation measures would include, where required: No-Go Zones, weed monitoring and management, retaining and/or replanting understorey, timing of construction activities to avoid breeding seasons, and collision risk management. These measures would be implemented through topic-specific plans (including vegetation and habitat, biosecurity, wildlife, threatened species management, and collision risk management) prepared in conjunction with overarching plans. These include:

- Construction Environmental Management Plan (CEMP)
- Operational Environmental Management Plan (OEMP)
- Decommissioning Environmental Management Plan (DEMP)



LEGEND

- Option 5A Area of Interest
- Draft Corridor
- Wetland Current
- RAMSAR wetlands
- Endangered EVC
- High Strategic Biodiversity Value
- Medium Strategic Biodiversity Value
- High Points
- Localities

Route refinement process from Area of Interest to Draft Corridor showing strategic biodiversity values