

Chalumbin Wind Farm

Desktop Offset Availability
Spectacled flying-fox

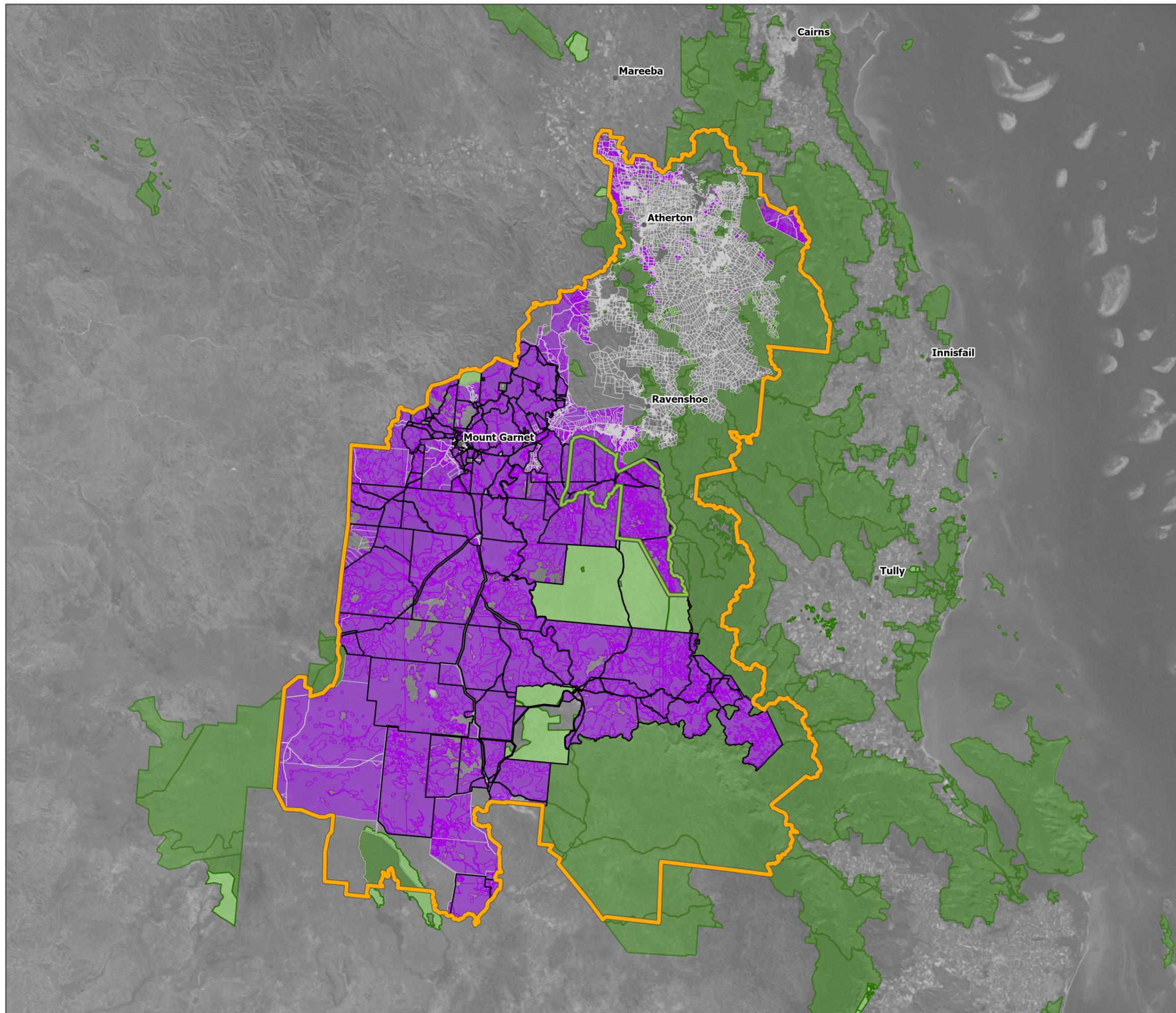
Figure 6.6

-  Project Area
-  Area of Investigation
-  Potential Offset Site
-  Potential Spectacled Flying-fox Habitat
-  Nature Refuge
-  Protected Area
-  Lot Boundary

Date: 16/10/2022
 Author: TOD
 Reviewed: NOD
 Project: EPU-004



Scale: 1:750,000@A3
 Data Source(s):
 Digital Cadastral Database - Department of Resources (2022)
 Earthstar Geographics, © State of Queensland (Department of Resources) 2022



7.0 Offset Area Selection

The results presented in the offset availability analysis suggest there is a high availability of prospective sites which may contain habitat for the MNES values requiring an offset. However, for several of the affected values the desktop search criteria, such as regional ecosystem associations, are too broad to be relied upon for selecting a prospective offset site. Priority was given to sites occurring within a State Biodiversity Corridor or where they could provide landscape scale connectivity between existing protected areas.

7.1 Strategic Offset Investment Corridors

Strategic Offset Investment Corridors (SOICs) are areas of largely intact remnant vegetation, generally linking or associated with protected areas, that have been identified by DES as strategic opportunities for environmental offsets. Under the Queensland Environmental Offsets Policy, proponents are recommended to preferentially seek offset opportunities within a SOIC, which can comprise conservation hubs (generally land adjacent to protected areas or otherwise of high conservation value) and corridors based on the Biodiversity Planning Assessment wildlife corridors.

There are currently no Strategic Offset Investment Corridors in either the Einasleigh Uplands or Wet Tropics bioregions.

7.2 Co-location Assessment

To ensure direct offsets are delivered in the most cost-effective manner possible, it is necessary to undertake an assessment of the co-location potential of each value requiring an offset to determine the degree of overlap between habitat requirements and the likelihood of being able to utilise the same offset site to acquit several values simultaneously. In particular, minimising the number of landholders to negotiate with can improve the likelihood of securing an offset in a timely manner and allow the proponent to focus resources more towards on-the-ground work and achieving conservation gains.

In the case of the magnificent brood frog, the limited known distribution of habitat for the species in conjunction with poorly understood habitat requirements made it challenging to identify possible offset sites with any level of certainty. The greatest colocation potential for sites suitable for both the magnificent brood frog and the riparian vegetation preferences of the koala, northern greater glider and masked owl exists where sightings of the brood frog have been recorded.

7.3 Preliminary Offset Areas

It is anticipated that the Project's residual impacts can be offset using three offset management areas on the two properties described below.

7.3.1 Wooroora Station

Wooroora Station is in the south of Tablelands Regional Council local government area, in the locality of Koombooloomba and approximately 14 km south of Ravenshoe. The property is partially affected by the Chalumbin Wind Farm and the landholder has expressed a willingness to enter into discussions regarding the use of areas on the property for the purposes of a land-based offset through an options agreement.

Although not within a Strategic Offset Investment Corridor (as there are currently none identified in either the Einasleigh Uplands or Wet Tropics bioregions), the Wooroora property is within an area of State biodiversity

significance as identified through a Biodiversity Planning Assessment using the Biodiversity Assessment and Mapping Methodology (BAAM) (as noted in the desktop searches included in Appendix B of the PER). It is adjacent to the WTQWHA for the majority of the property's eastern boundary. The recently published State of Wet Tropics report (WTMA 2021) indicates that landscape restoration is a practical action to buffer the WTQWHA and the region's waterways, distinctive biodiversity and nature-based economy from the worst effects of deforestation and climate change. In the Wet Tropics, biodiversity planting can potentially produce the fastest and most extensive recovery of all approaches to reforestation on former agricultural land because it removes many of the barriers to regeneration. However, it is noted that in some situations, forest regrowth can occur spontaneously over large areas through natural dispersal by weather, birds and fauna. This may be the case if intensive productive land use has not occurred for long periods (less than a decade) and sufficient patches of mature forest are nearby (WTMA 2021).

It is proposed that two offset management areas will be required to meet the specific habitat criteria of the MNES values.

Area 1 is in the northern part of the property and is adjacent to Ravenshoe State Forest 1 (to the north) and the WTQWHA (to the east) (see **Figure 7-1** and **Figure 7-2**). Vegetation comprises Of Concern RE 7.12.52 (*Eucalyptus resinifera*, *Corymbia intermedia*, *Allocasuarina littoralis*, *Syncarpia glomulifera*, *E. drepanophylla* +/- *E. reducta* woodland on granite and rhyolite in the dry to moist rainfall zone), Least Concern RE 7.12.27a (*Eucalyptus reducta* medium open forest and woodland on uplands and highlands on shallow granitic and rhyolitic soils, of the moist rainfall zone) and Of Concern 7.3.43 (*Eucalyptus tereticornis* open forest to woodland on uplands on well-drained alluvium). The aim of the offset would be to improve condition, protect this area from future degradation or habitat loss and provide connectivity to the protected area estate. This offset management area would provide habitat for all five MNES. The spectacled flying-fox has been historically recorded immediately to the north of this area, within the Ravenshoe State Forest 1. The greater glider has also been recorded throughout the area.

Area 2 is in the south of the property (see **Figure 7-3** and **Figure 7-4**) and will target the protection of landscape connectivity between the Koombooloomba South Forest Reserve and WTQWHA to the east, and Yourka Nature Refuge to the west, along an unnamed tributary of the Herbert River. The vegetation in the area demonstrates the natural transition from wet tall open forests dominated by eucalypts, through moist to dry open forests dominated by *E. portuensis* and *Corymbia citriodora* (REs 7.12.34, 7.12.52). with a watercourse situated on alluvial flats dominated by *E. tereticornis* open woodlands and *Casuarina cunninghamiana* woodlands (REs 7.3.43, 7.3.26). Project surveys have recorded both the northern greater glider proximal to the existing high voltage powerline easement and an individual magnificent brood frog within a stream order 1 watercourse within the proposed offset management area. This offset management area would provide habitat for all five MNES.

In the development of an Offset Management Plan it would be anticipated that the shape and location of the offset management areas may evolve in consultation with the landowner, with consideration of local-scale implementation constraints.

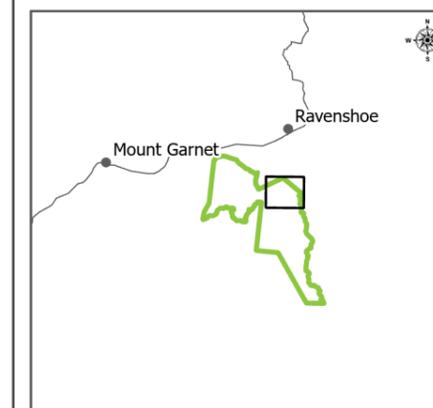
Chalumbin Wind Farm
Offset Management Area
Wooroora North

Figure 7.1

-  Project Area Boundary
-  Offset Management Area
- Koala Habitat**
-  Ancillary habitat trees
-  Locally important koala trees
- Magnificent Broodfrog Habitat**
-  MBF habitat (No Erosion Risk)
-  MBF habitat (Erosion Risk)
- Masked Owl Habitat**
-  Foraging Habitat
-  Nesting Habitat
- Greater Glider Habitat**
-  Denning Habitat
-  Foraging Habitat
- Clearance Envelope**
-  Stage 1
-  Stage 2
-  Watercourse
-  Protected Area Estate
-  Nature Refuge
-  WTQ Boundary
-  Lot Boundary
-  Easement

Date: 16/10/2022
Project: EPU-004

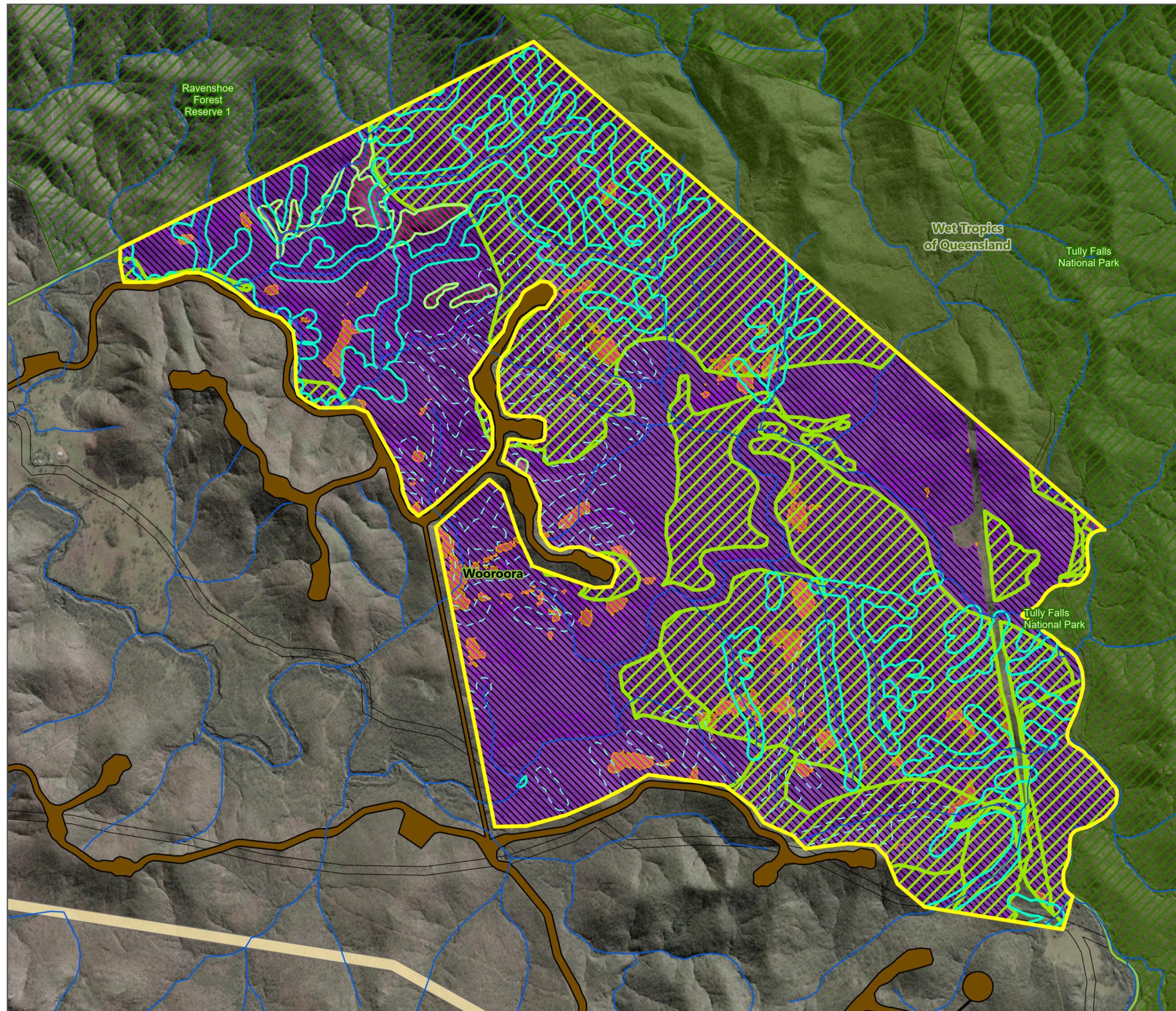
Author: TOD
Reviewed: NOD



0 500 1,000 m

Scale: 1:25,000@A3

Data Source(s):
Digital Cadastral Database - Department of Resources (2022)
Maxar



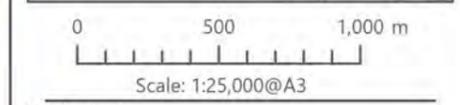
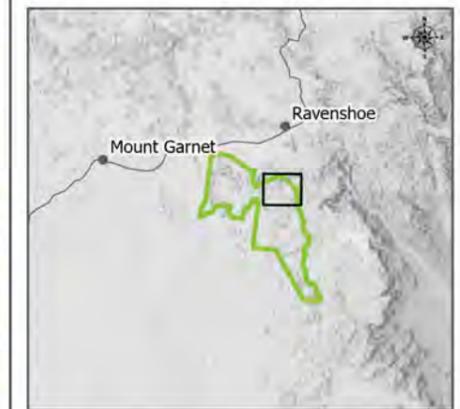
Chalumbin Wind Farm

Offset Management Area
Wooroora North - Magnificent
broodfrog

Figure 7.2

-  Project Area Boundary
-  Offset Management Area
- Magnificent Broodfrog Habitat**
-  MBF habitat (No Erosion Risk)
-  MBF habitat (Erosion Risk)
- Clearance Envelope**
-  Stage 1
-  Stage 2
-  Watercourse
-  Contour (10m)
-  Protected Area Estate
-  WTQ Boundary
-  Lot Boundary
-  Easement

Date: 3/11/2022 Author: TOD
Project: EPU-004 Reviewed: NOD



Data Source(s):
Digital Cadastral Database - Department of Resources (2022)
© State of Queensland (Department of Resources) 2022, Maxar

