















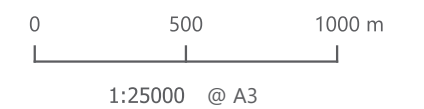
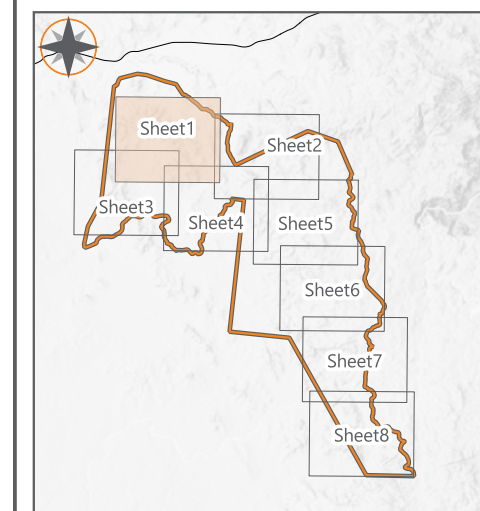
Chalumbin Wind Farm Ground Truthed REs within the Project Area

Figure 6.1 Sheet 1

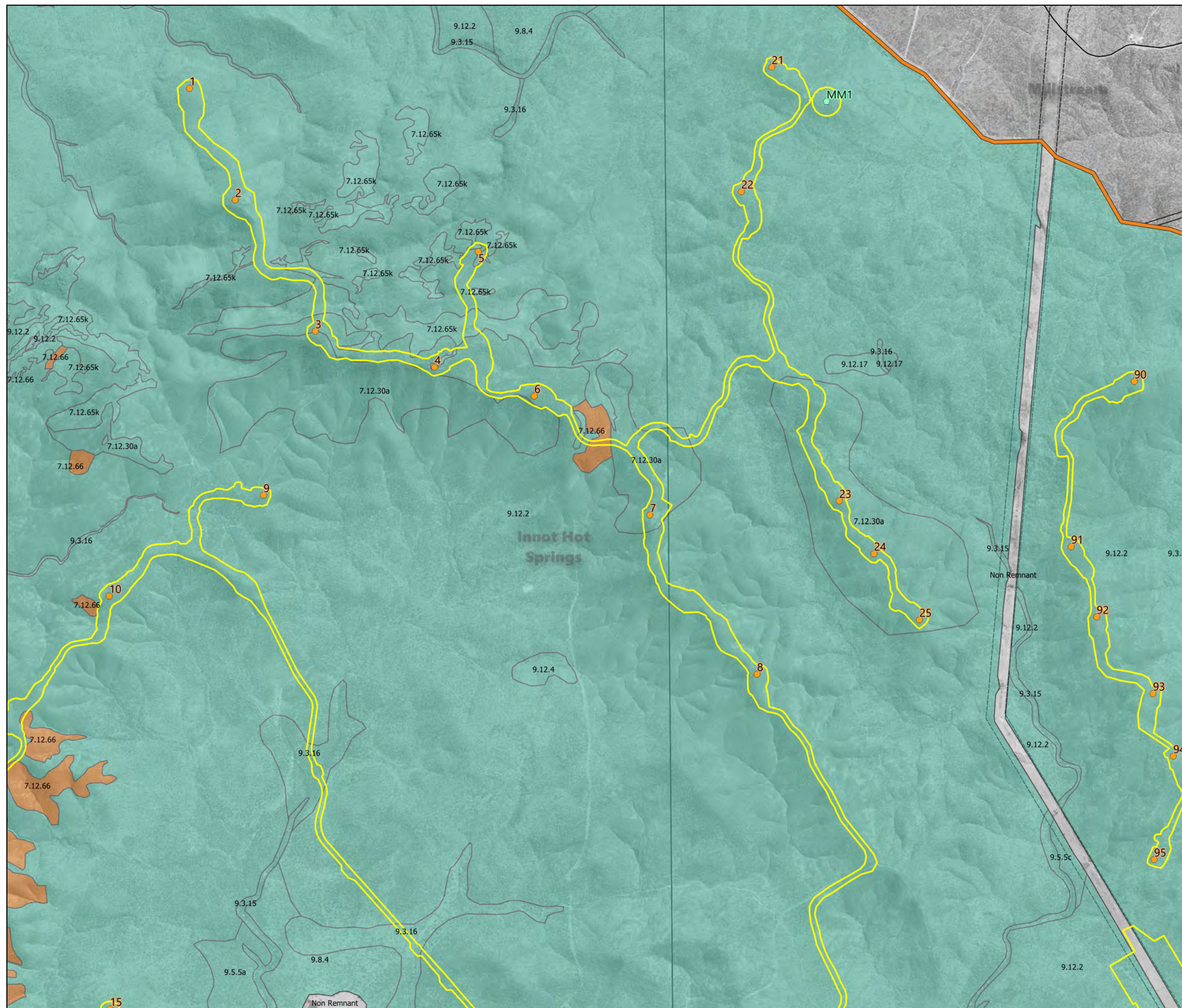
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 -  Met-mast
 -  Project Footprint
- Ground-truthed Regional Ecosystems
-  Endangered Remnant
 -  Of Concern Remnant
 -  Least Concern Remnant
 -  Endangered Regrowth
 -  Of Concern Regrowth
 -  Least Concern Regrowth
 -  Non Remnant
 -  Major Road
 -  River
 -  Creek
 -  Lot Type Parcel
 -  Easement

Date: 2021-12-12
Author: TOD

Reviewed: CC
Project: EPU-004
















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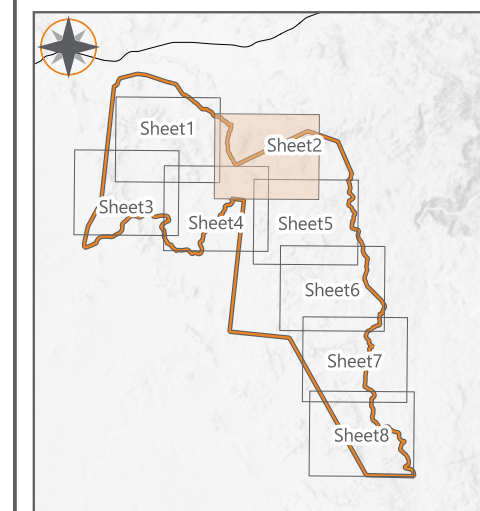
Chalumbin Wind Farm Ground Truthed REs within the Project Area

Figure 6.1 Sheet 2

-  Project Area
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 -  Met-mast
 -  Project Footprint
- Ground-truthed Regional Ecosystems
-  Endangered Remnant
 -  Of Concern Remnant
 -  Least Concern Remnant
 -  Endangered Regrowth
 -  Of Concern Regrowth
 -  Least Concern Regrowth
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 -  River
 -  Creek
 -  Lot Type Parcel
 -  Easement

Date: 2021-12-12
Author: TOD

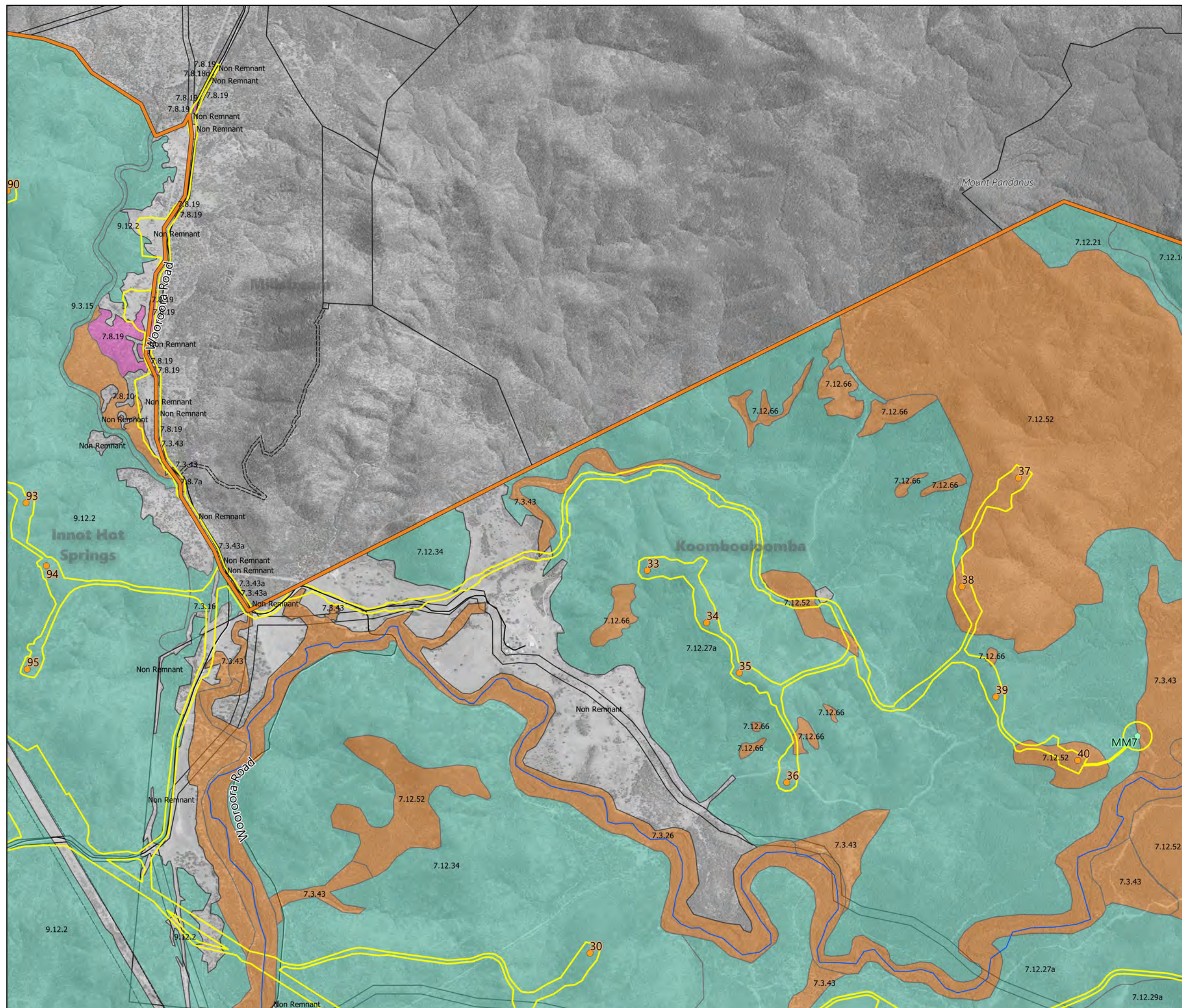
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Project: EPU-004



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






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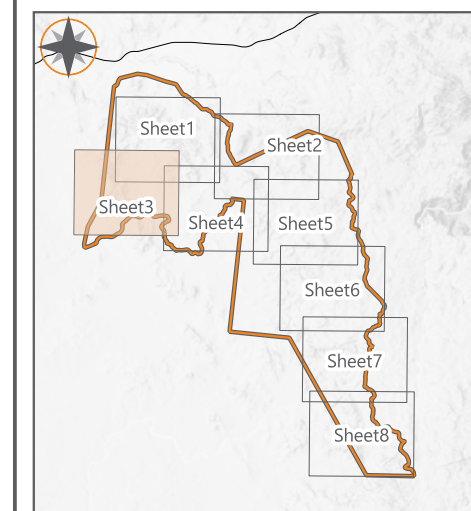


Chalumbin Wind Farm Ground Truthed REs within the Project Area

Figure 6.1 Sheet 3

-  Project Area
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 -  Met-mast
 -  Project Footprint
- Ground-truthed Regional Ecosystems
-  Endangered Remnant
 -  Of Concern Remnant
 -  Least Concern Remnant
 -  Endangered Regrowth
 -  Of Concern Regrowth
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 -  Non Remnant
 -  Major Road
 -  River
 -  Creek
 -  Lot Type Parcel
 -  Easement

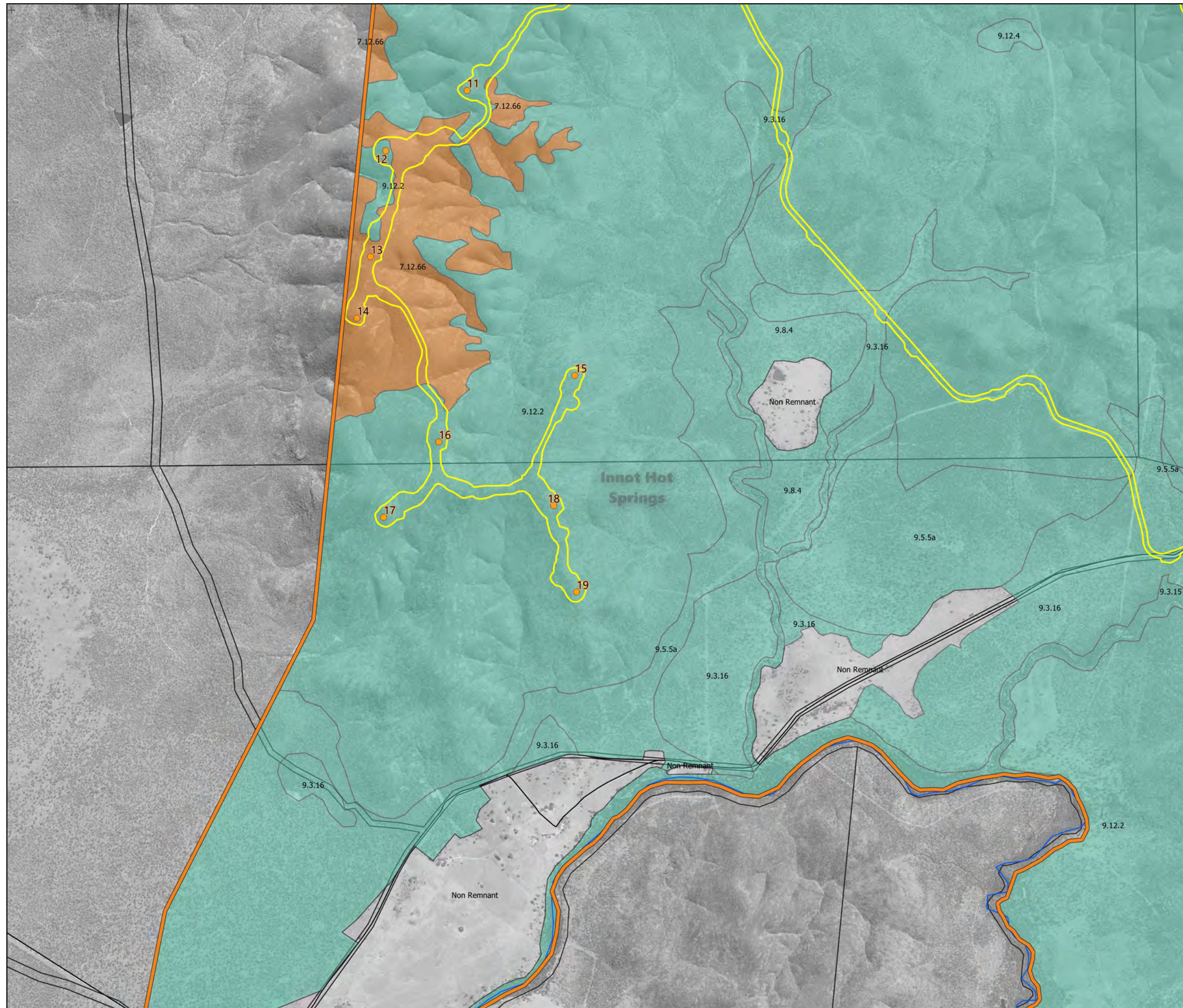
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 Author: TOD Project: EPU-004



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





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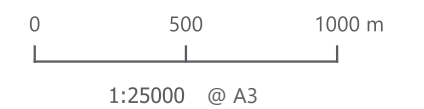
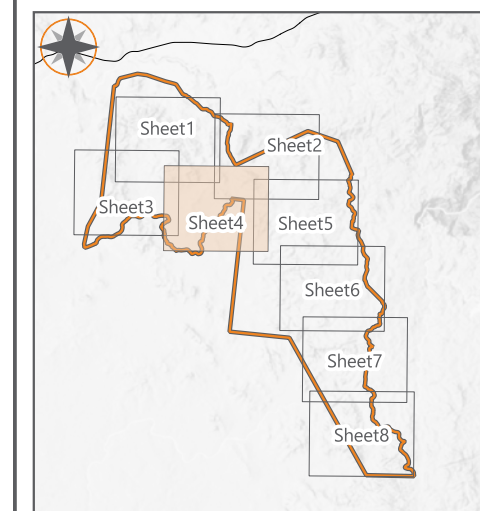
Chalumbin Wind Farm Ground Truthed REs within the Project Area

Figure 6.1 Sheet 4

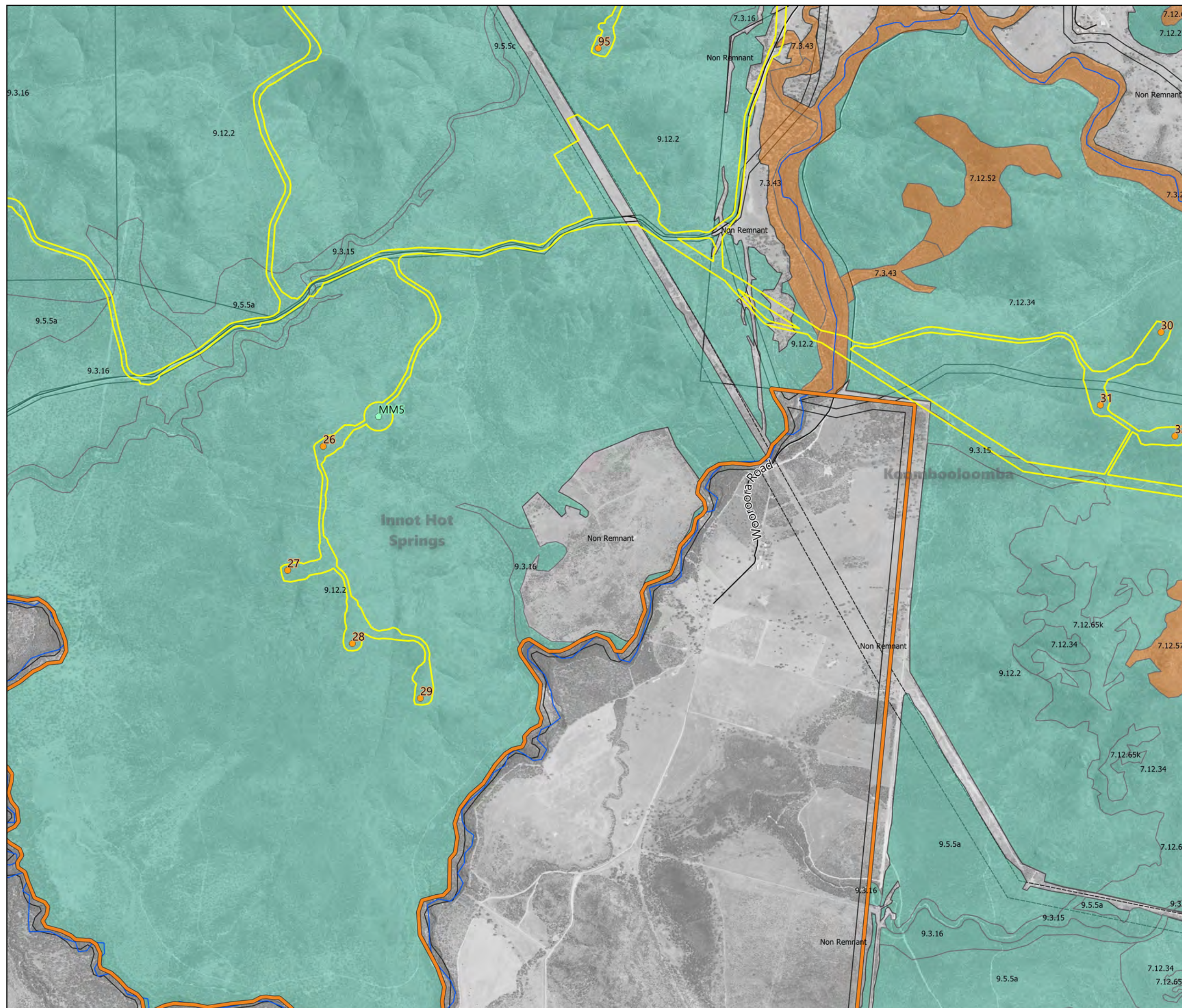
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 -  Met-mast
 -  Project Footprint
- Ground-truthed Regional Ecosystems
-  Endangered Remnant
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 -  Endangered Regrowth
 -  Of Concern Regrowth
 -  Least Concern Regrowth
 -  Non Remnant
 -  Major Road
 -  River
 -  Creek
 -  Lot Type Parcel
 -  Easement

Date: 2021-12-12
Author: TOD

Reviewed: CC
Project: EPU-004


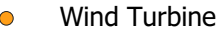





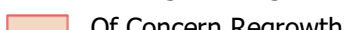


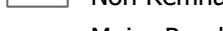



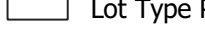


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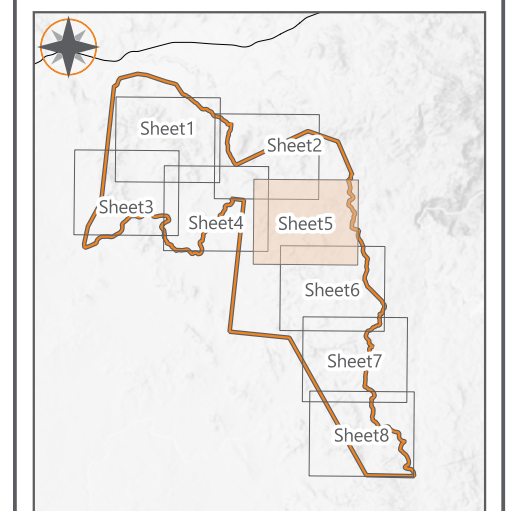


Chalumbin Wind Farm Ground Truthed REs within the Project Area

Figure 6.1 Sheet 5

-  Project Area
 -  Wind Turbine
 -  Met-mast
 -  Project Footprint
- Ground-truthed Regional Ecosystems
-  Endangered Remnant
 -  Of Concern Remnant
 -  Least Concern Remnant
 -  Endangered Regrowth
 -  Of Concern Regrowth
 -  Least Concern Regrowth
 -  Non Remnant
 -  Major Road
 -  River
 -  Creek
 -  Lot Type Parcel
 -  Easement

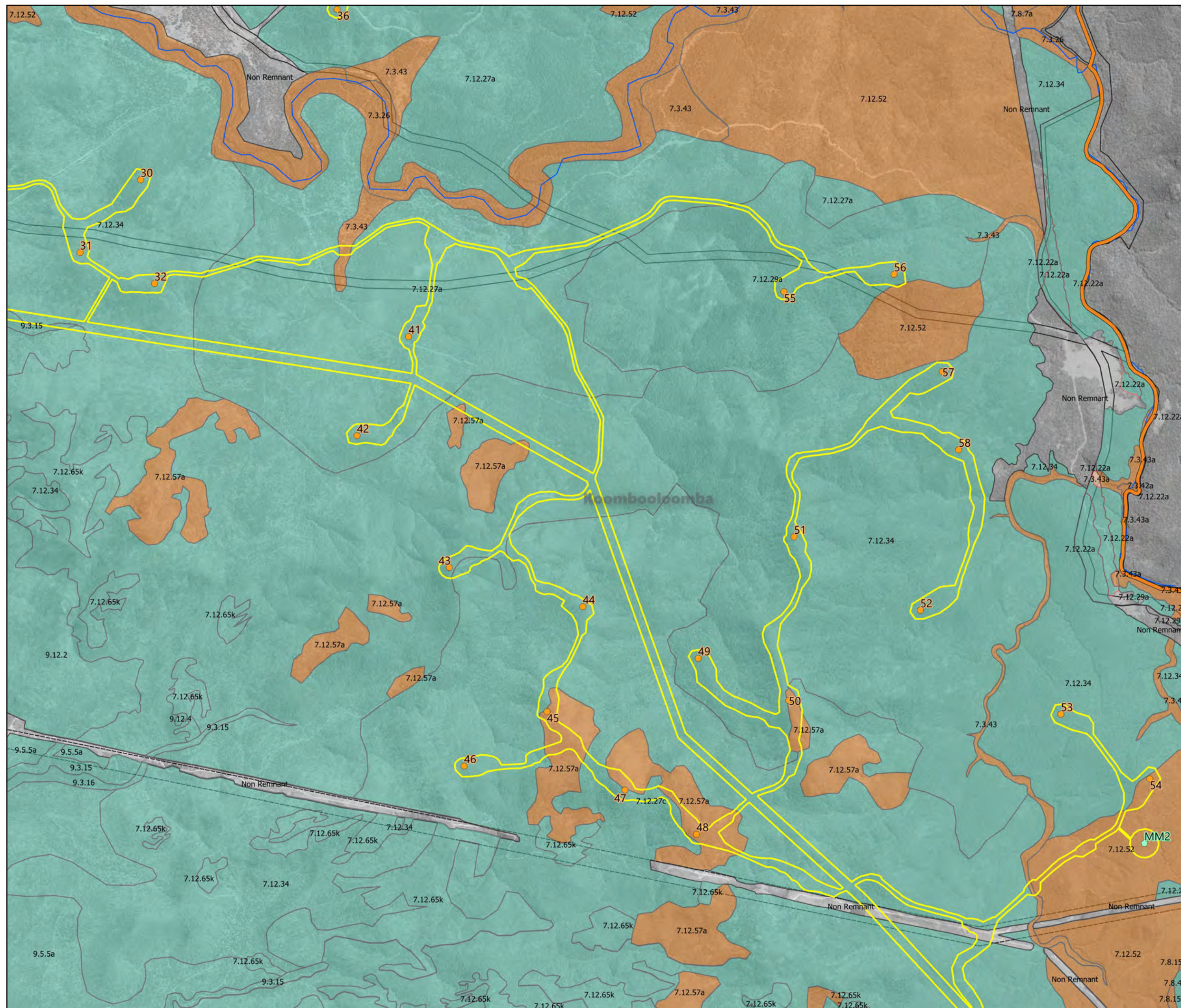
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 Author: TOD Project: EPU-004



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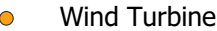






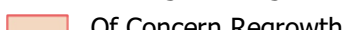


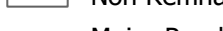


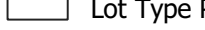
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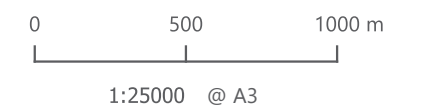
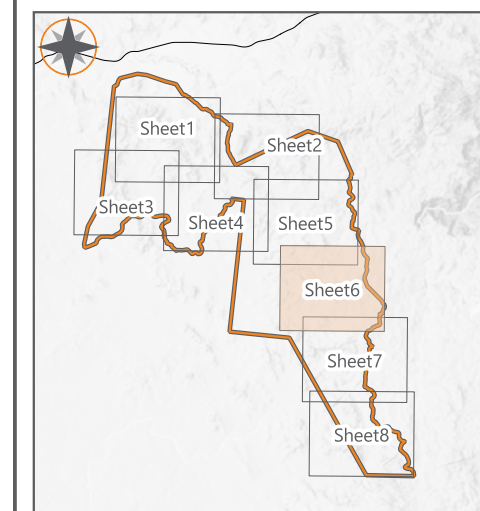


Chalumbin Wind Farm Ground Truthed REs within the Project Area

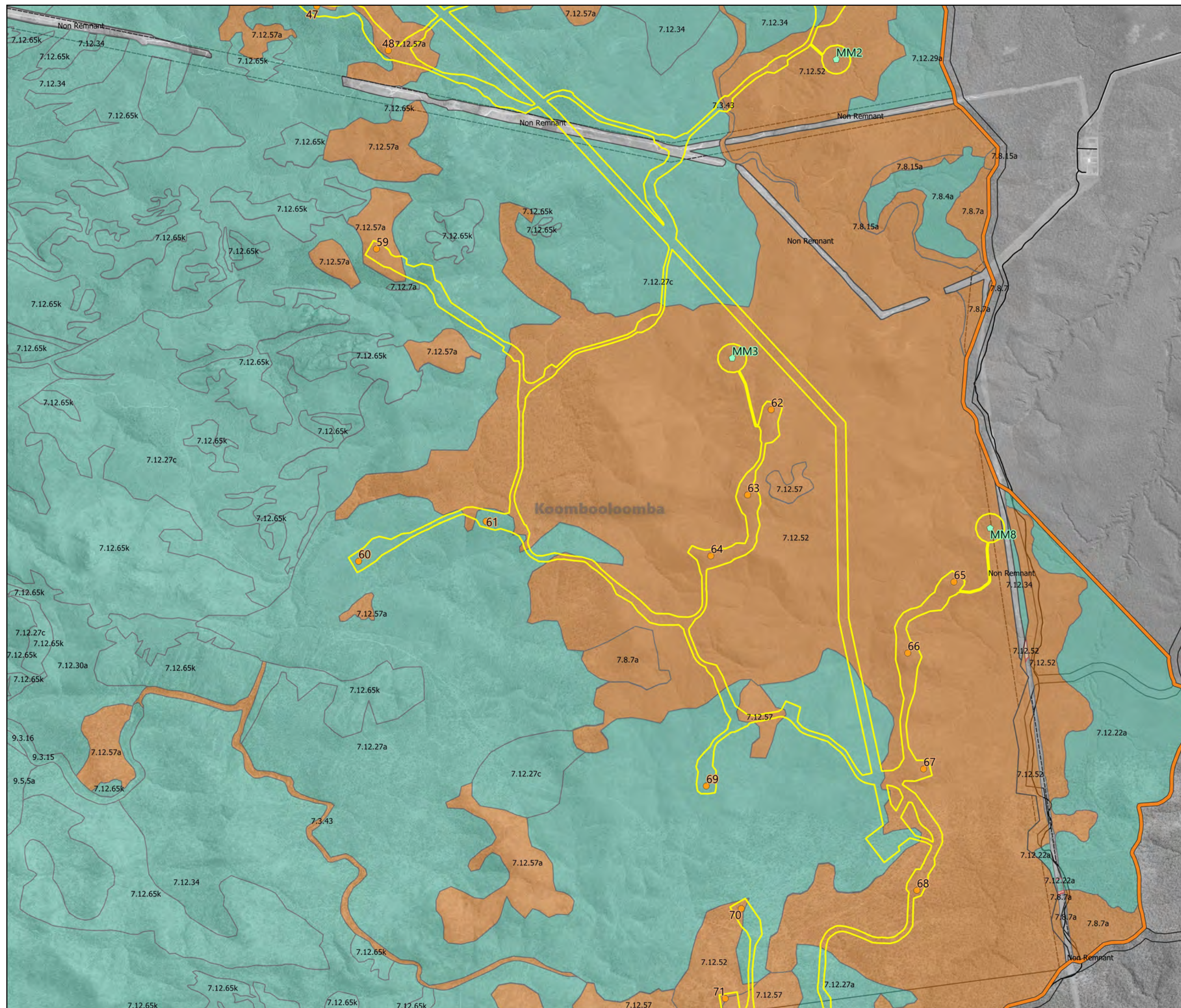
Figure 6.1 Sheet 6

-  Project Area
 -  Wind Turbine
 -  Met-mast
 -  Project Footprint
- Ground-truthed Regional Ecosystems
-  Endangered Remnant
 -  Of Concern Remnant
 -  Least Concern Remnant
 -  Endangered Regrowth
 -  Of Concern Regrowth
 -  Least Concern Regrowth
 -  Non Remnant
 -  Major Road
 -  River
 -  Creek
 -  Lot Type Parcel
 -  Easement

Date: 2021-12-12 Reviewed: CC
 Author: TOD Project: EPU-004















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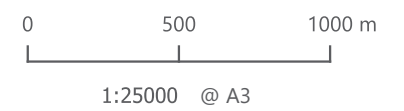
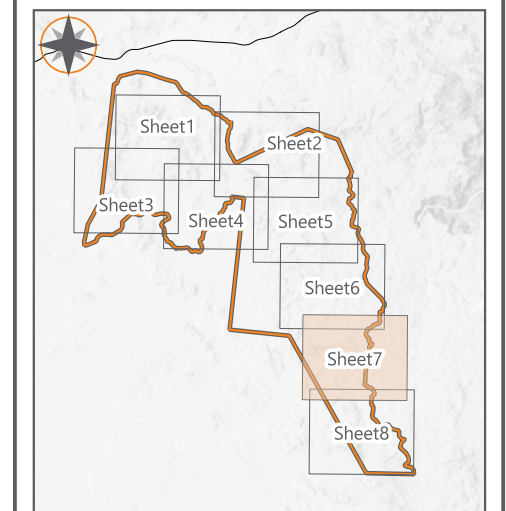


Chalumbin Wind Farm Ground Truthed REs within the Project Area

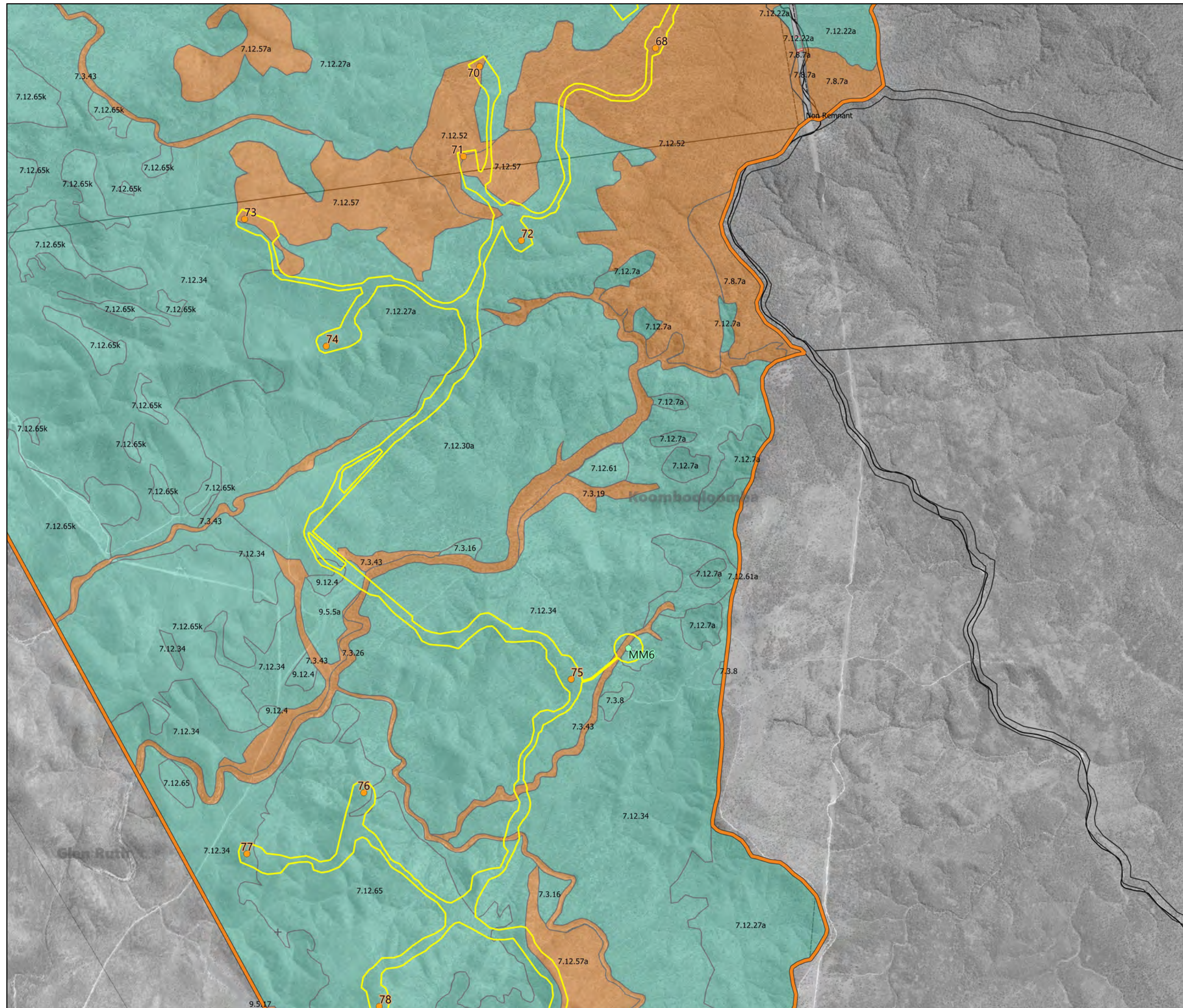
Figure 6.1 Sheet 7

-  Project Area
 -  Wind Turbine
 -  Met-mast
 -  Project Footprint
- Ground-truthed Regional Ecosystems**
-  Endangered Remnant
 -  Of Concern Remnant
 -  Least Concern Remnant
 -  Endangered Regrowth
 -  Of Concern Regrowth
 -  Least Concern Regrowth
 -  Non Remnant
 -  Major Road
 -  River
 -  Creek
 -  Lot Type Parcel
 -  Easement

Date: 2021-12-12 Reviewed: CC
 Author: TOD Project: EPU-004


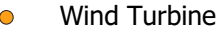






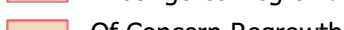
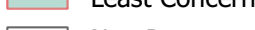






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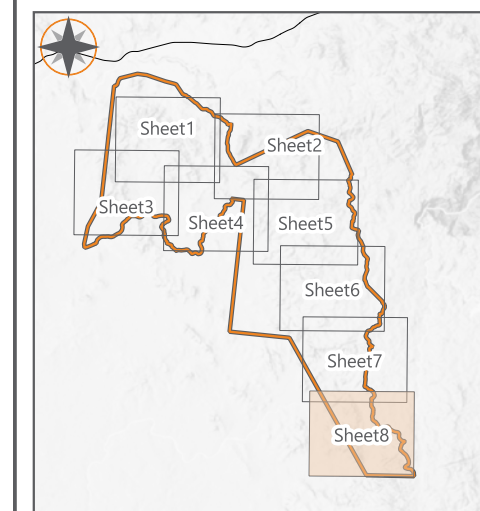


Chalumbin Wind Farm Ground Truthed REs within the Project Area

Figure 6.1 Sheet 8

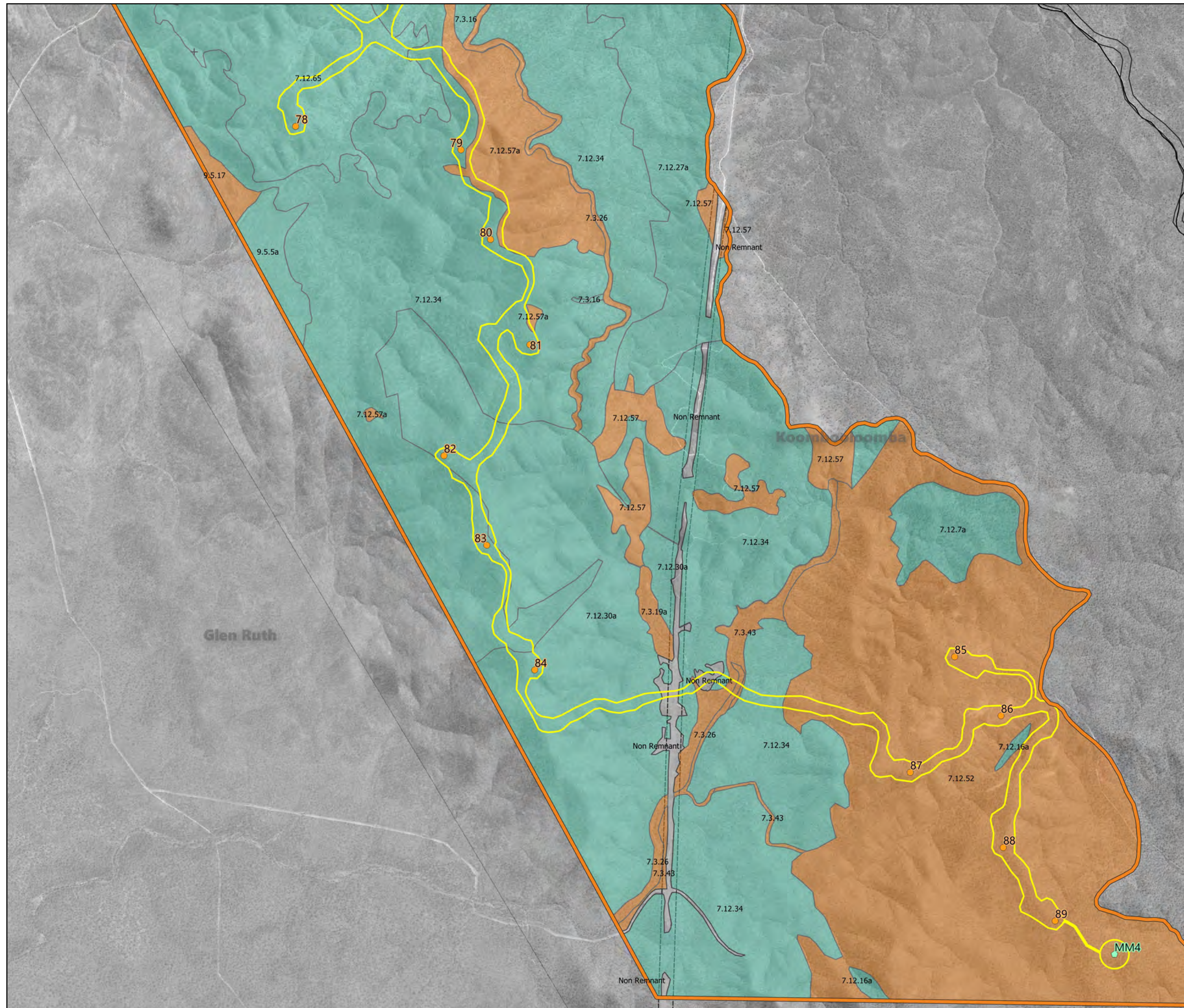
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 -  Met-mast
 -  Project Footprint
- Ground-truthed Regional Ecosystems
-  Endangered Remnant
 -  Of Concern Remnant
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 -  Endangered Regrowth
 -  Of Concern Regrowth
 -  Least Concern Regrowth
 -  Non Remnant
 -  Major Road
 -  River
 -  Creek
 -  Lot Type Parcel
 -  Easement

Date: 2021-12-12 Reviewed: CC
 Author: TOD Project: EPU-004



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Data Source(s):
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 Mines and Energy (2021)
 Queensland Imagery Whole Of State
 Satellite Public Basemap Service



6.1.2 Threatened Flora Species

Surveys confirmed the presence of five NC Act-listed threatened flora species (of which three are also listed under the EPBC Act) within the Project area, as described below. The locations of these threatened flora observations are mapped in **Figure 6-2**.

6.1.2.1 *Prostanthera clotteniana*

Nine records of *Prostanthera clotteniana* (Critically Endangered under the EPBC Act, Endangered under the NC Act) were noted across the Project area, all within the vegetation community RE 7.12.65 (rock pavement or areas of skeletal soil on granite and rhyolite of dry western or southern areas +/- shrublands to closed forests of *Acacia* spp. and/or *Lophostemon suaveolens* and/or *Allocasuarina littoralis* and/or *Eucalyptus lockyeri* subsp. *Exuta*):

- Eight sites within an area of approximately 130 ha on the Wooroora property, to the south of the existing powerline. These observations were within an altitude range of 780 – 790 m asl;
- One site was to the north of the existing powerline on the Wooroora property, at an altitude of 790 m.



Plate 6-1 *Prostanthera clotteniana*

6.1.2.2 *Triplarina nitchaga*

Eight records of *Triplarina nitchaga* (Vulnerable under both the EPBC Act and the NC Act) were noted within the Project area, all within the vegetation community RE 7.12.65 (rock pavement or areas of skeletal soil on granite and rhyolite of dry western or southern areas +/- shrublands to closed forests of *Acacia* spp. and/or *Lophostemon suaveolens* and/or *Allocasuarina littoralis* and/or *Eucalyptus lockyeri* subsp. *Exuta*) in the northwest of the Glen Gordon property, in the area known as Arthur's Seat. Arthur's Seat is one of two previously documented populations of the species (DEWHA 2008a). The species was recorded within an altitude range of 840 – 875 m asl.



Plate 6-2 *Triplarina nitchaga*

6.1.2.3 *Homoranthus porteri*

Homoranthus porteri (Vulnerable under both the EPBC Act and the NC Act) was recorded 30 times during the various vegetation surveys across the Project area, all within the vegetation community RE 7.12.65 (rock pavement or areas of skeletal soil on granite and rhyolite of dry western or southern areas +/- shrublands to closed forests of *Acacia* spp. and/or *Lophostemon suaveolens* and/or *Allocasuarina littoralis* and/or *Eucalyptus lockyeri* subsp. *Exuta*) in the following locations:

- In the northwest of the Glen Gordon property, in the vicinity and to the east of Arthur's Seat, within an altitude range of 830 – 860 m asl (corresponding to the same broad area where *Triplarina nitchaga* was also observed, see above);
- On an adjacent ridgeline to the east of the above site, at an altitude of approximately 920 m asl. Extensive protected plants surveys were conducted along the ridgelines in this part of the Project area, with individuals occurring in discrete pockets on the rocky pavements;
- An area to the south of the existing powerline in the Wooroora property, corresponding to the area where *Prostanthera clotteniana* was also observed (see above); and

- One site to the north of powerline easement in Wooroora, also corresponding to a *Prostanthera clotteniana* observation.



Plate 6-3 *Homoranthus porteri*

6.1.2.4 *Coleus amoenus*

Coleus amoenus is listed as Vulnerable under the NC Act and was confirmed present within the Project area. The species was recorded 41 times during field surveys. Records were observed in the north-west of Glen Gordon east of the area of Arthur's Seat, and distributed throughout the Wooroora property but mostly concentrated in the area north and south of the existing powerline. Associated REs in both Wooroora and Glen Gordon where *Coleus amoenus* was found include RE 7.12.65, 7.12.52, 7.12.66 and 7.12.34.



Plate 6-4 *Coleus amoenus*

6.1.2.5 *Dodonaea uncinata*
















Dodonaea uncinata is listed as Near Threatened under the NC Act and was confirmed present within the Project area. The species was observed 12 times all within RE 7.12.65 and the same area south and north of the existing powerline in the Woorooro property where *Prostanthera clotteniana* records occur.



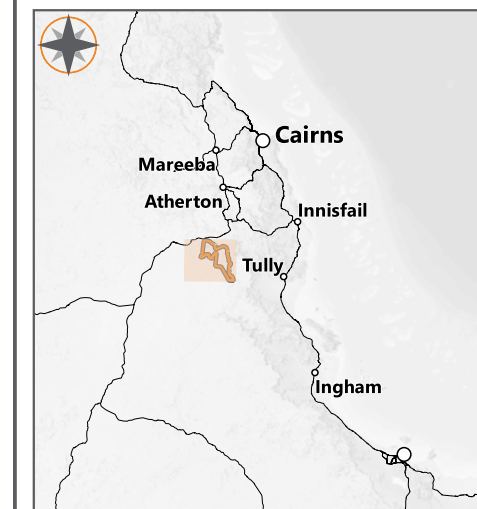
Plate 6-5 *Dodonaea uncinata*

Chalumbin Wind Farm Threatened Flora Observations

Figure 6.2

-  Project Area
 -  Wind Turbine
 -  Met-mast
 -  Project Footprint
- Threatened Flora Record**
-  *Homoranthus porteri*
 -  *Homoranthus porteri* & *Triplarina nitchaga*
 -  *Triplarina nitchaga*
 -  *Prostanthera clotteniana*
 -  *Coleus amoenus*
 -  *Dodonea uncinata*
-  Major Road
 -  River
 -  Creek
 -  Lot Type Parcel
 -  Easement

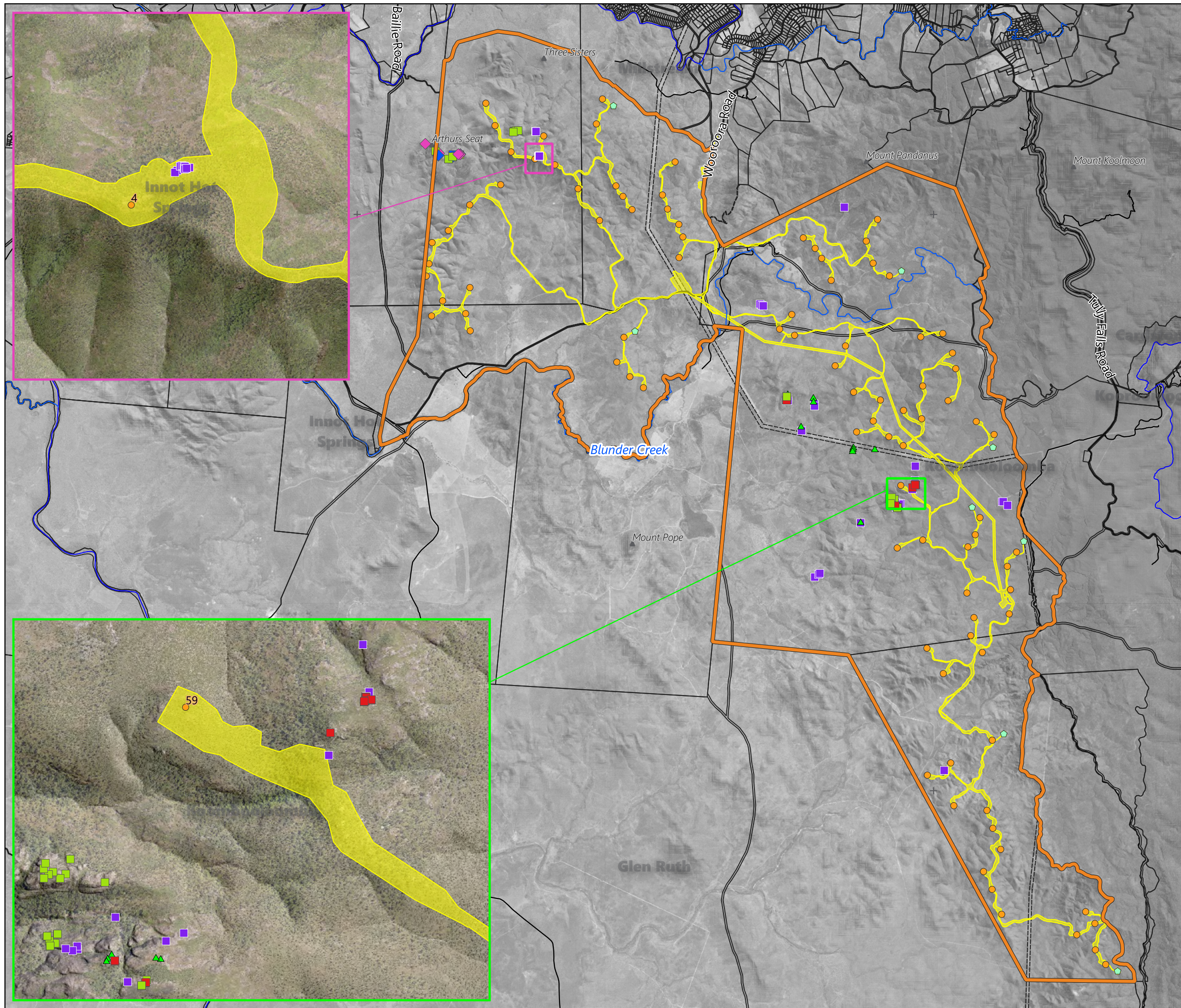
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 Author: TOD Project: EPU-004



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 Digital Cadastral Database - Department of Natural Resources, Mines and Energy (2021)
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6.1.3 All Flora Observations

All observations of non-listed native flora species were also recorded during the flora field surveys. A total of 151 native flora species were recorded during the surveys. A full species list is provided in **Appendix B**.

6.1.4 Pest Flora Species

Lantana camara (a category 3 weed under the *Biosecurity Act 2014* and a Weed of National Significance) was prevalent along alluvial zones and in moist gullies. No other significant pest flora species were observed in the Project area.

6.2 Fauna Survey Results

A revised likelihood of occurrence assessment has been undertaken based on the results of the desktop review and field surveys; this is presented in **Appendix C**.

6.2.1 Recorded Listed Threatened Fauna Species

Direct observation and / or potential evidence was recorded of the following NC Act and EPBC Act-listed threatened and / or migratory species:

- Northern greater glider (*Petauroides volans minor*);
- Yellow-bellied glider (Wet Tropics subspecies) (*Petaurus australis* unnamed *subsp*);
- Ghost bat (*Macroderma gigas*);
- Fork-tailed swift (*Apus pacificus*);
- Red goshawk (*Erythrotriorchis radiatus*);
- Black-faced monarch (*Monarcha melanopsis*);
- Spectacled monarch (*Monarcha trivirgatus* syn. *Symposiachrus trivirgatus*);
- Satin flycatcher (*Myiagra cyanoleuca*);
- Rufous fantail (*Rhipidura rufifrons*);
- White-throated needletail (*Hirundapus caudacutus*);
- Masked owl (*Tyto novaehollandiae kimberlii*); and
- Magnificent brood frog (*Pseudophryne covacevichae*).

In addition, the following species only listed on the NC Act were also recorded:

- Lumholtz tree-kangaroo (*Dendrolagus lumholtzi*);
- Short-beaked echidna (*Tachyglossus aculeatus*);
- Platypus (*Ornithorhynchus anatinus*);



-
- Tube-nosed insectivorous bat (*Murina florium*); and
 - Tapping green-eyed frog (*Litoria serrata*).

The locations of these observations are shown on **Figure 6-3**. Descriptions of these species and the habitats they were recorded in are provided in the following sections.