


**Chalumbin Wind Farm**

Impacts to Magnificent broodfrog habitat

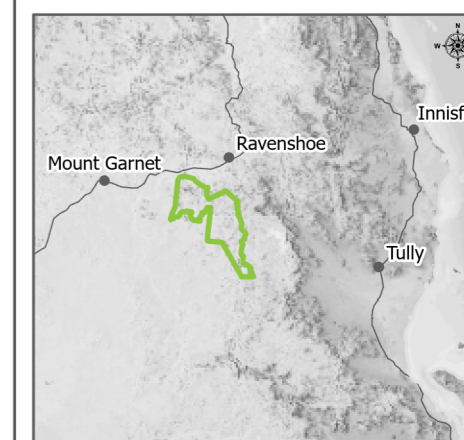
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**Figure 8.1**

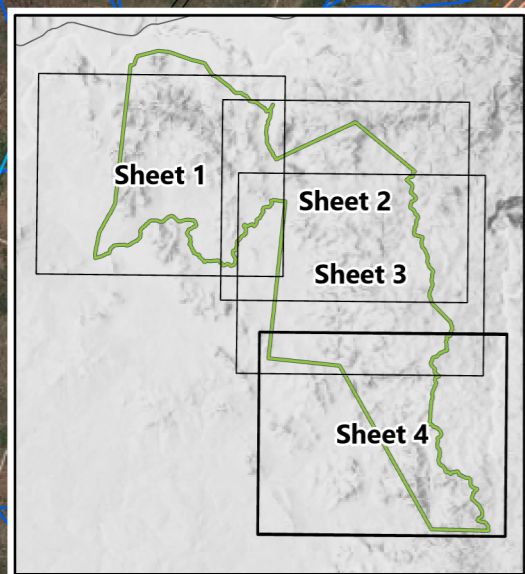
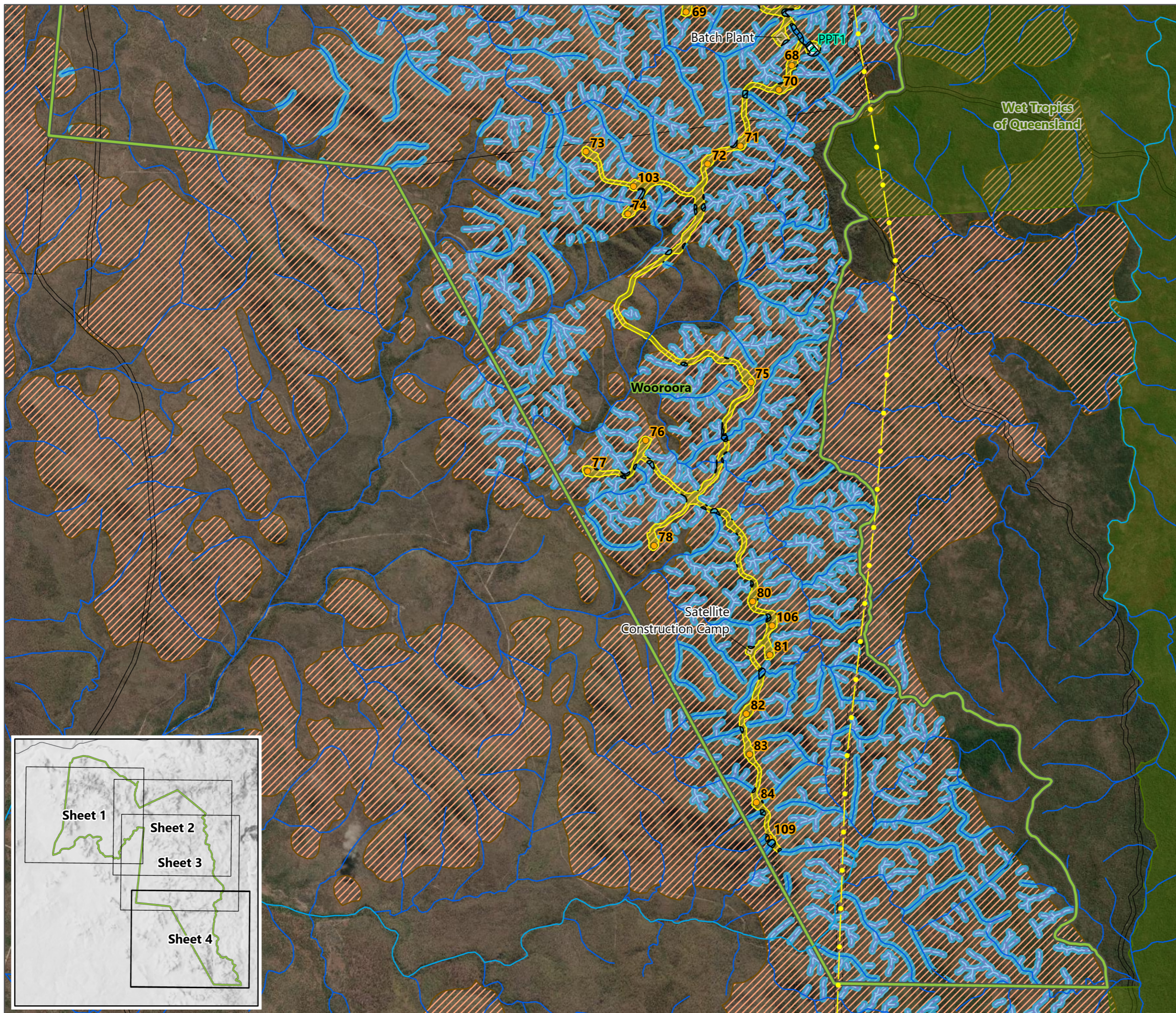
-  Project Area Boundary
-  Turbine
-  Met-mast
-  Facilities
- Clearance Envelope**
-  Stage 1
-  Stage 2
-  Potential habitat
-  Stream Order Zero watercourse (Gully)
-  Significant Residual Impact
-  Glen Gordon Volcanics
-  Existing HV Transmission Line
-  Watercourse
-  WTQ Boundary
-  Lot Boundary
-  Easement

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

Author: TOD  
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Scale: 1:50,000@A3  
Data Source(s):  
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### 8.4.2.2 Potential Operational Impacts from the Project and Relevant Mitigation

Potential impacts to magnificent brood frog during the operations phase will be very limited, as outlined in **Table 8-26**.

**Table 8-26 Potential Operational Impacts and Relevant Mitigation – Magnificent Brood Frog**

Potential Impact	Assessment	Mitigation
Indirect impacts such as smothering of vegetation by dust and accidental release of hazardous materials such as fuel	There is a very low risk of vehicles associated with Project operation causing indirect impacts on magnificent brood frog habitat due to the release of dust or hazardous materials.	Standard mitigation measures, implemented by way of an Operations EMP, are considered appropriate to manage this risk given the low probability of the species being active during the dry (non-breeding) season when dust is more likely to be created.
Weed and pest incursion	The Project has the potential to facilitate the spread of weeds and pest fauna through machinery, vehicles and materials brought to site from outside the Project area.	The Project area is currently subjected to existing weed and pest impacts. During operation of the Project, weed and pest control measures will be established to minimise the risk of the Project further exacerbating the issue.

### 8.4.2.3 Assessment of Significant Residual Impacts

The Project could potentially have a significant residual impact on the magnificent brood-frog (Vulnerable). A full significance assessment following the Significant Impact Guidelines (DoE 2013) is presented in **Table 8-27**.

**Table 8-27 Significant Residual Impact Assessment – Magnificent Brood Frog**

Significant Impact Criteria	Project Outcome
Lead to a long-term decrease in the size of an important population of a species	<b>Unlikely</b> As the species has a highly restricted range (associated with particular surface geology) it is considered that any population of magnificent brood frog within the Project area is part of an important population. The Project area is considered to contain habitat critical to the survival of the species, the vast majority of which will be retained. Aside from the sensitive design measures already employed for the Project, the measures proposed to manage vegetation clearing and fragmentation are expected to be effective in ensuring that the Project does not lead to a long-term decrease in the size of the Project area's population of magnificent brood frog.
Reduce the area of occupancy of an important population	<b>Unlikely</b> The proposed habitat removal associated with the Project is not concentrated in a manner that will remove one or more 4km <sup>2</sup> grid



Significant Impact Criteria	Project Outcome
	squares from the magnificent brood frog population's area of occupancy.
Fragment an existing important population into two or more populations	<p><b>Unlikely</b></p> <p>The Project area supports an important population of magnificent brood frog and contains habitat critical to the survival of the species, the vast majority of which will be retained.</p> <p>Risks of fragmentation are likely to be highest where access roads and overhead transmission line infrastructure crosses areas of critical habitat.</p> <p>Aside from the sensitive design measures already employed for the Project, the measures proposed to manage vegetation clearing and fragmentation are expected to be effective in ensuring that the Project does not lead to fragmentation of an existing important population into two or more populations.</p> <p>Large area of magnificent brood frog habitat will remain within the Project area post clearing. These retained and adjacent habitats will support the species and provide connectivity. The Project is not expected to fragment an existing population into two or more populations.</p>
Adversely affect habitat critical to the survival of a species	<p><b>Likely</b></p> <p>The Project will involve the removal of 120.5 ha of critical habitat for the magnificent brood frog (representing approximately 1.5 % of the potential critical habitat mapped within the Project area). Effective implementation of erosion and sediment control within the Project footprint will mean that areas of habitat at higher risk of influence from sediment runoff are not impacted. Sediment loss from within the Project footprint during construction and operation has been modelled as generally on par with, or better than, the existing conditions within the Project area (see <b>Appendix J</b>). Despite the extent of habitat remaining in the locality, coupled with the implementation of the proposed mitigation measures, the loss of 120.5 ha of critical habitat is considered likely to constitute a significant impact to the species.</p>
Disrupt the breeding cycle of an important population	<p><b>Likely</b></p> <p>Very little is known about the life cycle of the magnificent brood frog. It is considered likely that eggs are laid on moist soil in or near a seepage and that after hatching, the tadpoles make their way down the seepage or are washed into first order streams where development continues in small pools (McDonald et al, 2000). Construction activities have the potential to degrade and destroy seepage areas, which are dependent on climate factors and difficult to map year-on-year. Seepage areas would remain outside of the Project footprint.</p> <p>The Project could potentially disrupt the breeding cycle of an important population.</p>
Modify, destroy, remove or isolate or decrease the availability or quality of	<p><b>Unlikely</b></p>



Significant Impact Criteria	Project Outcome
<p>habitat to the extent that the species is likely to decline</p>	<p>The Project area contains critical habitat for the species, the vast majority of which will be retained within the Project area. Nevertheless, the Project will involve the removal of 120.5 ha of critical habitat for the magnificent brood frog.</p> <p>Large tracts of magnificent brood frog habitat will remain within the Project area post clearing which are connected to larger habitats in adjacent areas. These retained and adjacent habitats will support the species and provide connectivity. Rehabilitation activities will also aim to restore woodland habitats that will provide magnificent brood frog habitats over the short to medium term. Aside from the sensitive design measures already employed for the Project, the measures proposed to manage vegetation clearing and fragmentation are expected to be effective in ensuring that the Project does not lead to a decline in the species.</p>
<p>Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat</p>	<p><b>Unlikely</b></p> <p>Clearing activities associated with the Project have the potential to open up areas that may be subject to weed incursion and increased prevalence of pests.</p> <p>A preliminary Weed and Pest Management Plan has been prepared (see <b>Appendix F</b>) and includes management of weed spread, management of pest infestations (including specific advice for amphibian chytrid fungus) and monitoring effectiveness of control measures. This plan will be further developed by the Construction Contractor prior to works commencing on site.</p>
<p>Introduce disease that may cause the species to decline</p>	<p><b>Unlikely</b></p> <p>The magnificent brood frog is likely to be susceptible to the effects of amphibian chytrid fungus, the spread of which is considered to be responsible for the species' decline. Specific measures for controlling the spread of amphibian chytrid fungus have been incorporated into the preliminary Weed and Pest Management Plan (see <b>Appendix F</b>).</p>
<p>Interfere substantially with the recovery of the species</p>	<p><b>Unlikely</b></p> <p>The Project is not expected to interfere substantially with the recovery of the species. Clearing of habitat will be undertaken sequentially, and large areas of potential critical habitat will be retained across the Project area. This availability and connectivity of foraging and breeding habitat will ensure any magnificent brood frogs within the Project area will have available foraging and breeding resources. Fire will also be managed on site to ensure hot wildfires are minimised.</p> <p>Large tracts of habitat will remain within the Project area which are connected to larger habitats in adjacent areas. These retained and adjacent habitats will support the species and provide connectivity and maintain gene flow for the species.</p>





### 8.4.3 Mountain Mistfrog

As discussed in **Section 4.5.3**, the mountain mistfrog has not been recorded since 1990 and is possibly now extinct but may still persist in remote areas. It is a rainforest specialist with an obligate association with perennial streams. There is limited potential habitat for the mountain mistfrog within the Project area, which has been mapped as upland rainforest and wet sclerophyll forest alongside perennial streams.

#### 8.4.3.1 Potential Construction Impacts from the Project and Relevant Mitigation

Approximately 4 ha of potential habitat for mountain mistfrog occurs within the Project area and 220.5 ha occurs within the broader Study area. There is no potential habitat for mountain mistfrog within the proposed Project footprint.

Potential construction impacts and proposed mitigation measures for mountain mistfrog are discussed further in **Table 8-28**.

**Table 8-28 Potential Construction Impacts and Relevant Mitigation – Mountain Mistfrog**

Potential Impact	Assessment	Proposed Mitigation
Vegetation and habitat clearance	The Project will not result in any clearing of potential mountain mistfrog habitat.	Only minimal areas (3.8 ha) of potential habitat for mountain mistfrog have been mapped within the Project area. Project infrastructure has been sited to avoid clearing any of this habitat.
Fragmentation (of populations and habitat)	The Project will not result in any clearing of potential mountain mistfrog habitat.	Retained vegetation will be maintained through implementation of a Vegetation Management Plan to reduce hazards from fire, pest species, degradation and other potential impacts. This will assist in maintaining the integrity of the vegetation as habitat and will reduce disturbance to surrounding habitat and conservation areas.
Indirect impacts such as smothering of creek-side vegetation by dust and accidental release of hazardous materials such as fuel	Construction activities have the potential to result in indirect impacts on potential habitat for mountain mistfrog if not undertaken in accordance with the Construction EMP and associated sub-plans.	Smothering of creek-side vegetation by dust is not expected to pose a significant risk in this high-rainfall area. Dust generating activities will be minimised during dry, windy conditions and areas of exposed soils will be rehabilitated as soon as practicable, to minimise dust emissions. Dust suppression (water spraying) will be used during the dry season as necessary, including in areas of sensitive vegetation adjacent to the construction footprint if visible dust is observed. Accidental releases of hazardous materials in proximity to potential mountain mistfrog habitat is highly unlikely as these materials would be securely stored in dedicated areas within the construction compound, away from sensitive sites. Spills would be limited to small drips from machinery hoses and similar, and would be





Potential Impact	Assessment	Proposed Mitigation
		cleaned up immediately, with the waste disposed of in accordance with the Construction EMP.
Weed and pest incursion	The Project has the potential to facilitate the spread of weeds and pests through machinery, vehicles and materials brought to site from outside the Project area. The mountain mistfrog is likely to be particularly susceptible to the amphibian chytrid fungus.	The Project area is currently subjected to existing weed and pest impacts. During construction of the Project, weed and pest control measures will be established to minimise the risk of the Project further exacerbating the issue. A preliminary Weed and Pest Management Plan has been prepared (see <b>Appendix F</b> ) and includes management of weed spread, management of pest infestations (including specific advice for amphibian chytrid fungus) and monitoring effectiveness of control measures. This plan will be further developed by the Construction Contractor prior to works commencing on site.
Species mortality (vehicle collision, vegetation clearance)	During vegetation clearing, there is potential for direct mortality in the unlikely event that the mountain mistfrog is present. The risk of vehicle strike is negligible.	Clearing of habitat could potentially result in significant injury or death to individual mountain mistfrogs, however, it is highly unlikely that the species is present within the Project area and the proposed Project footprint does not intersect any potential habitat for the species. Clearing operations will be conducted in accordance with the provisions outlined in a sequential clearing procedure including the use of a fauna spotter catcher. The process will significantly mitigate any potential impacts associated with clearing operations ensuring and animals are detected providing procedures are followed and spotters are allowed ample opportunity to check areas before site clearing.
Erosion and sedimentation	Construction activities may alter surface water overland flow, leading to increased erosion and subsequent sedimentation of potential habitat for the mountain mistfrog.	A preliminary Erosion and Sediment Control Plan (ESCP) ( <b>Appendix I</b> ) and a Sediment and Erosion Management Plan ( <b>Appendix J</b> ) have been prepared for the Project and will be further developed by the Construction Contractor prior to works commencing on site. Implementation of these plans will minimise soil loss from the disturbance areas and subsequent sedimentation of nearby watercourses that may provide habitat for the mountain mistfrog.
Noise and lighting	These potential impacts are considered to be negligible risks for the mountain mistfrog.	Mitigation measures outlined in <b>Section 6.0</b> are considered appropriate to manage these negligible risks.
Reduced air quality		
Bushfire risk		





### 8.4.3.2 Potential Operational Impacts from the Project and Relevant Mitigation

Potential impacts to mountain mistfrog during the operations phase will be very limited, as outlined in **Table 8-29**.

**Table 8-29 Potential Operational Impacts and Relevant Mitigation – Mountain Mistfrog**

Potential Impact	Assessment	Mitigation
Indirect impacts such as smothering of creek-side vegetation by dust and accidental release of hazardous materials such as fuel	There is a very low risk of vehicles associated with Project operation causing indirect impacts on mountain mistfrog habitat due to the release of dust or hazardous materials.	Standard mitigation measures, implemented by way of an Operations EMP, are considered appropriate to manage this risk given the low probability of the species being present within the Project area.
Weed and pest incursion	The Project has the potential to facilitate the spread of weeds and pests, including the amphibian chytrid fungus, through machinery, vehicles and materials brought to site from outside the Project area.	The Project area is currently subjected to existing weed and pest impacts. During operation of the Project, weed and pest control measures will be established to minimise the risk of the Project further exacerbating the issue.

### 8.4.3.3 Assessment of Significant Residual Impacts

The Project is unlikely to have a significant residual impact on the mountain mistfrog (Critically Endangered). A full significance assessment following the Significant Impact Guidelines (DoE 2013) is presented in **Table 8-30**.

**Table 8-30 Significant Residual Impact Assessment – Mountain Mistfrog**

Significant Impact Criteria	Project Outcome
Lead to a long-term decrease in the size of a population	<b>Unlikely</b> The Project area is highly unlikely to support a population of mountain mistfrog, which has not been observed in the broader Study area since 1981 and is considered potentially extinct. The Project area supports a limited area of potential habitat for the species and none of this habitat will be cleared as a result of the Project. Aside from the sensitive design measures already employed for the Project, the measures proposed to manage vegetation clearing and fragmentation are expected to be effective in ensuring that the Project does not lead to a long-term decrease in the size of the Project area's mountain mistfrog population, should it be present.
Reduce the area of occupancy of the species	<b>Unlikely</b> The Project footprint has been designed to avoid clearing any potential habitat for the mountain mistfrog.





Significant Impact Criteria	Project Outcome
Fragment an existing population into two or more populations	<p><b>Unlikely</b></p> <p>The Project area is highly unlikely to support a population of mountain mistfrog.</p> <p>Risks of fragmentation are likely to be highest where access roads and overhead transmission line infrastructure crosses areas of critical habitat. The Project area supports a limited area of potential habitat for the species and none of this habitat will be cleared or bisected as a result of the Project.</p> <p>Aside from the sensitive design measures already employed for the Project, the measures proposed to manage vegetation clearing and fragmentation are expected to be effective in ensuring that the Project does not lead to fragmentation of an existing important population into two or more populations.</p>
Adversely affect habitat critical to the survival of a species	<p><b>Unlikely</b></p> <p>The Project area is highly unlikely to support a population of mountain mistfrog.</p> <p>The Project area supports a limited area of potential habitat for the species and none of this habitat will be cleared as a result of the Project.</p>
Disrupt the breeding cycle of a population	<p><b>Unlikely</b></p> <p>The Project area is highly unlikely to support a population of mountain mistfrog. The Project area supports a limited area of potential habitat for the species and none of this habitat will be cleared or bisected as a result of the Project. It is therefore unlikely that the Project would affect the breeding cycle of the species, should it be present.</p>
Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline	<p><b>Unlikely</b></p> <p>The Project area supports a limited area of potential habitat for the species and none of this habitat will be cleared or bisected as a result of the Project.</p>
Result in invasive species that are harmful to the critically endangered or endangered species becoming established in the critically endangered or endangered species' habitat	<p><b>Unlikely</b></p> <p>Clearing activities associated with the Project have the potential to open up areas that may be subject to weed incursion and increased prevalence of pests.</p> <p>A preliminary Weed and Pest Management Plan has been prepared (see <b>Appendix F</b>) and includes management of weed spread, management of pest infestations (including specific advice for amphibian chytrid fungus) and monitoring effectiveness of control measures. This plan will be further developed by the Construction Contractor prior to works commencing on site.</p>
Introduce disease that may cause the species to decline	<p><b>Unlikely</b></p> <p>The mountain mistfrog is likely to be susceptible to the effects of amphibian chytrid fungus, the spread of which is considered to be responsible for the species' decline. Specific measures for controlling</p>



Significant Impact Criteria	Project Outcome
	the spread of amphibian chytrid fungus have been incorporated into the preliminary Weed and Pest Management Plan (see <b>Appendix F</b> ).
Interfere with the recovery of the species	<p><b>Unlikely</b></p> <p>The Project is not expected to interfere substantially with the recovery of the species. No potential habitat for mountain mistfrog will be cleared and the Project will not isolate areas of potential habitat within the Project area to potential habitat within the broader Study area.</p>

## 8.5 Listed Threatened Bird Species

### 8.5.1 Buff-breasted Button-quail

As discussed in **Section 4.6.1.4**, the buff-breasted button-quail has not been recorded previously within the Project area nor the broader Study area. The Project is outside the species' known range as reported by Debus and Kirwan 2020 and BirdLife International 2020. The entire Project area is also higher than the species' reported upper elevation limit of 500 m (BirdLife International). The Project area is therefore not thought to provide habitat for the buff-breasted button-quail.

#### 8.5.1.1 Potential Construction Impacts from the Project and Relevant Mitigation

The Project area is considered highly unlikely to support the buff-breasted button-quail and hence construction impacts on this species are not anticipated.

#### 8.5.1.2 Potential Operational Impacts from the Project and Relevant Mitigation

The Project area is considered highly unlikely to support the buff-breasted button-quail and hence operational impacts on this species are not anticipated.

#### 8.5.1.3 Assessment of Significant Residual Impacts

The Project is unlikely to have a significant residual impact on the buff-breasted button-quail (Endangered). A full significance assessment following the Significant Impact Guidelines (DoE 2013) is presented in **Table 8-31**.

**Table 8-31 Significant Residual Impact – Buff-breasted Button-quail**

Significant Impact Criteria	Project Outcome
Lead to a long-term decrease in the size of a population	<p><b>Unlikely</b></p> <p>The Project area is highly unlikely to support a population of buff-breasted button-quail, which has not been definitively recorded since 2015 and has never been recorded in the broader Study area.</p>





Significant Impact Criteria	Project Outcome
	The entire Project area is above the reported upper elevation limit of the species and therefore does not provide habitat for the buff-breasted button-quail.
Reduce the area of occupancy of the species	<b>Unlikely</b> The Project area does not overlap with the species' area of occupancy as presented by Debus and Kirwan 2020, and BirdLife International 2020.
Fragment an existing population into two or more populations	<b>Unlikely</b> The Project area is highly unlikely to support a population of buff-breasted button-quail as it is outside the species' known range and does not provide habitat for the species.
Adversely affect habitat critical to the survival of a species	<b>Unlikely</b> The Project area is highly unlikely to support a population of buff-breasted button-quail. The Project area does not provide habitat for this species.
Disrupt the breeding cycle of a population	<b>Unlikely</b> The Project area is highly unlikely to support a population of buff-breasted button-quail. The Project area does not provide habitat for this species.
Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline	<b>Unlikely</b> The Project area does not provide habitat for the buff-breasted button-quail.
Result in invasive species that are harmful to the critically endangered or endangered species becoming established in the critically endangered or endangered species' habitat	<b>Unlikely</b> The Project area does not provide habitat for the buff-breasted button-quail. The Project area is already subject to established populations of invasive species (feral cat, feral pig) that are known to be threatening processes to this species. A preliminary Weed and Pest Management Plan has been prepared (see <b>Appendix F</b> ) which includes management of invasive species populations and monitoring the effectiveness of control measures. This plan will be further developed by the Construction Contractor prior to works commencing on site.
Introduce disease that may cause the species to decline	<b>Unlikely</b> The buff-breasted button-quail is not known to be susceptible to any particular disease. The Project area does not provide habitat for the buff-breasted button-quail.
Interfere with the recovery of the species	<b>Unlikely</b> The Project is not expected to interfere substantially with the recovery of the species. The Project area does not provide habitat for the buff-breasted button-quail.



## 8.5.2 Masked Owl

As discussed in **Section 4.6.1**, the masked owl was recorded at two locations within the Project area during the January 2021 surveys. Across the Project area, nesting habitat was mapped as rainforest, riparian forest and open eucalypt forest containing large trees (DBH > 41.2 cm) at a density of > 25 trees per hectare. Additional foraging habitat was mapped as rainforest, riparian forest and open eucalypt forest within a buffer area around nesting habitat based on a core home range of 155 ha. Potential within the broader Study area (where LIDAR data was not available to derive tree heights) was conservatively mapped as rainforest, riparian forest and open eucalypt forest.

### 8.5.2.1 Potential Construction Impacts from the Project and Relevant Mitigation

Approximately 15,315.7 ha of nesting habitat and 15,009 ha of additional foraging habitat for masked owl occurs within the Project area. Approximately 90,118.8 ha of potential habitat occurs within the broader Study area.

The Project will require clearing of masked owl habitat as summarised in **Table 8-32** and **Figure 8-2**.

**Table 8-32 Proposed Clearing of Masked Owl Habitat**

	Stage 1 Clearing	Stage 2 Clearing	Total Clearing
Nesting habitat	350.2 ha	179.3 ha	529.5 ha
Foraging habitat	225.9 ha	270.9 ha	496.8 ha
Total masked owl habitat	576.1 ha	450.2 ha	1,026.3 ha

Potential construction impacts and proposed mitigation measures for masked owl are discussed in **Table 8-33**.

**Table 8-33 Potential Construction Impacts and Proposed Mitigation – Masked owl**

Potential Impact	Assessment	Proposed Mitigation
Vegetation and habitat clearance	The Project will result in the clearing of 529.5.2 ha of nesting habitat and 496.8 ha of foraging habitat for the species.	<p>Large areas of masked owl habitat throughout the Project area will be retained.</p> <p>The Project design has sought to avoid and minimise clearing within nesting habitat.</p> <p>If practical during construction, micro-siting of access tracks will seek to avoid large hollow-bearing trees.</p> <p>Vegetation clearing will be minimised as much as practicable through micro-siting within the proposed Project footprint.</p> <p>Project infrastructure including laydown areas, construction compounds and substation have been sited in cleared areas where practicable to avoid clearing of potential habitat.</p> <p>Clearing of masked owl habitat will occur sequentially and in accordance with an approved Species Management Program.</p>





Potential Impact	Assessment	Proposed Mitigation
		<p>Unavoidable impacts to nesting trees will be mitigated through installation of nest boxes and/or translocated stags within retained habitat on a 1:1 basis.</p>
<p>Habitat fragmentation</p>	<p>The Project will result in the clearing of 1,026.3 ha of masked owl habitat.</p>	<p>Existing access tracks within the Project area were prioritised as part of the design to minimise any further clearing and fragmentation of vegetation communities.</p> <p>Vegetation clearing will be minimised as much as practicable through micro-siting within the proposed Project footprint.</p> <p>Retained vegetation will be maintained through implementation of a Vegetation Management Plan to reduce hazards from fire, pest species, degradation and other potential impacts. This will assist in maintaining the integrity of the vegetation as habitat and will reduce disturbance to surrounding habitat and conservation areas.</p> <p>Areas cleared for construction that are not required for the operational footprint will be sequentially rehabilitated as soon as practicable following construction.</p>
<p>Weed and pest incursion</p>	<p>The Project has the potential to facilitate the spread of weeds and pest fauna through machinery, vehicles and materials brought to site from outside the Project area.</p>	<p>The Project area is currently subjected to existing weed and pest impacts. During construction of the Project, weed and pest control measures will be established to minimise the risk of the Project further exacerbating the issue.</p> <p>A preliminary Weed and Pest Management Plan has been prepared (see <b>Appendix F</b>) and includes management of weed spread (with specific advice for key identified species), management of pest infestations and monitoring effectiveness of control measures. This plan will be further developed by the Construction Contractor prior to works commencing on site.</p>
<p>Species mortality (vehicle collision, vegetation clearance)</p>	<p>During vegetation clearing, there is potential for direct mortality if masked owls are present (i.e. denning in the hollow-bearing trees to be cleared). The risk of vehicle strike is negligible.</p>	<p>Clearing of habitat could potentially result in significant injury or death to individual masked owls, however clearing operations will be conducted in accordance with the provisions outlined in a sequential clearing procedure including the use of a fauna spotter catcher and retention of habitat trees overnight. The process will significantly mitigate any potential impacts associated with clearing operations ensuring masked owls are detected, provided procedures are followed and spotters are allowed ample</p>

















Potential Impact	Assessment	Proposed Mitigation
		<p>opportunity to check trees before felling. Hollow-bearing trees will be marked and hollows inspected where possible for the presence of arboreal fauna prior to tree-felling. Clearing protocols will be developed including methods for clearing hollow-bearing trees (e.g. remove surrounding trees on previous day) and check for any injured species. Any injured individuals will be taken to a vet for treatment.</p> <p>Where practicable, dead standing timber and living, hollow-bearing trees should be retained.</p>
Erosion and sedimentation	The masked owl is unlikely to be directly impacted by erosion and reduced water quality resulting from Project construction.	A preliminary Erosion and Sediment Control Plan (ESCP) ( <b>Appendix I</b> ) and a Sediment and Erosion Management Plan ( <b>Appendix J</b> ) have been prepared for the Project and will be further developed by the Construction Contractor prior to works commencing on site. Implementation of these plans will minimise soil loss from the disturbance areas.
Bushfire risk	Inappropriate fire regimes may be a threat to this species. The Project is not expected to increase the risk of high intensity bushfires in the Project area	A Bushfire Management Plan will be prepared prior to construction and will be implemented during all on-site activities. Fuel loads will be monitored and managed through activities such as controlled grazing, cool mosaic burns and weed management.
Noise and lighting	As the masked owl is a nocturnal species, there is the potential for it to be disturbed by noise and lighting impacts during Project construction.	Standard construction work hours will generally be between 6.30am and 6.30pm, therefore site lighting will be kept to the minimum required for safety. Where necessary, construction lighting will be directed to the required areas and designed to minimise light spill to adjacent areas. Construction equipment will be fitted with noise reduction devices where practicable and switched off when not in use
Dust emissions	There is limited scope for indirect impacts from dust emissions on this species resulting from Project construction.	Generally, dust is not expected to pose a significant risk in this high-rainfall area. Dust generating activities will be minimised during dry, windy conditions and areas of exposed soils will be rehabilitated as soon as practicable, to minimise dust emissions. Dust suppression (water spraying) will be used during the dry season as necessary.



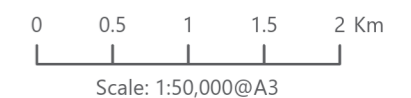
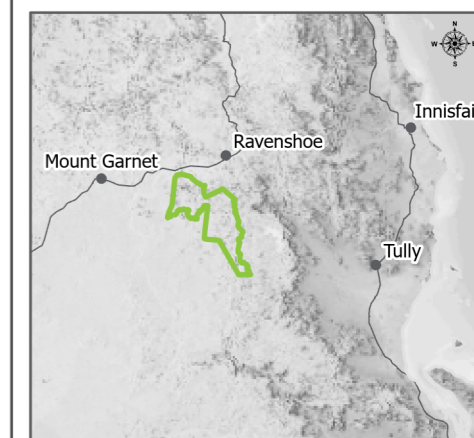
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Sheet 1 of 4

**Figure 8.2**

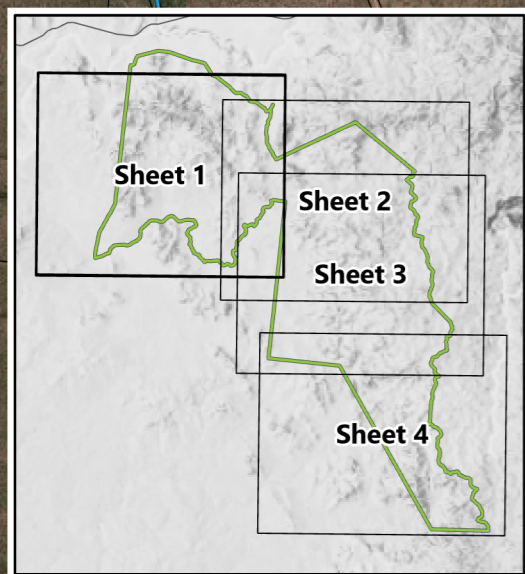
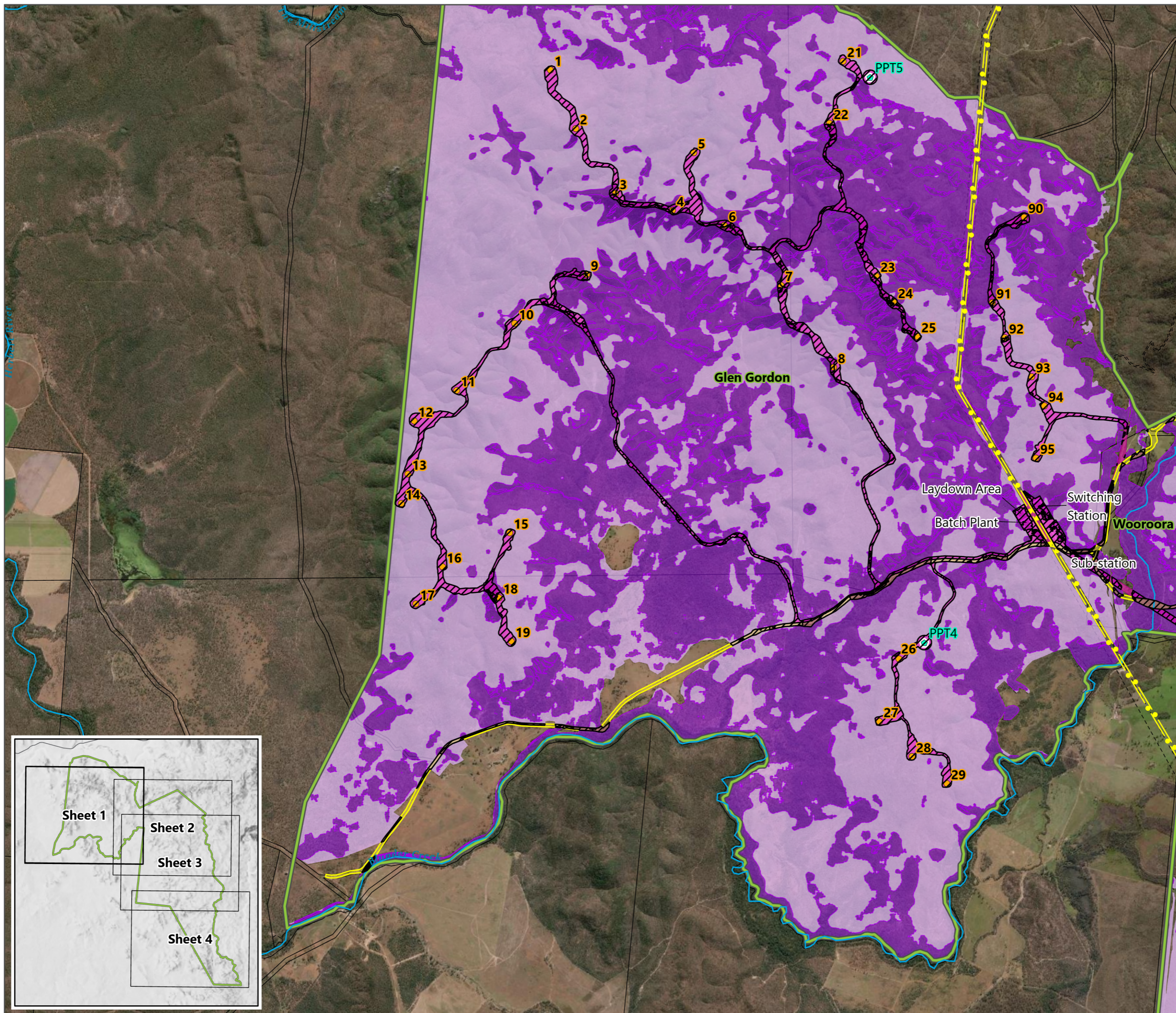
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
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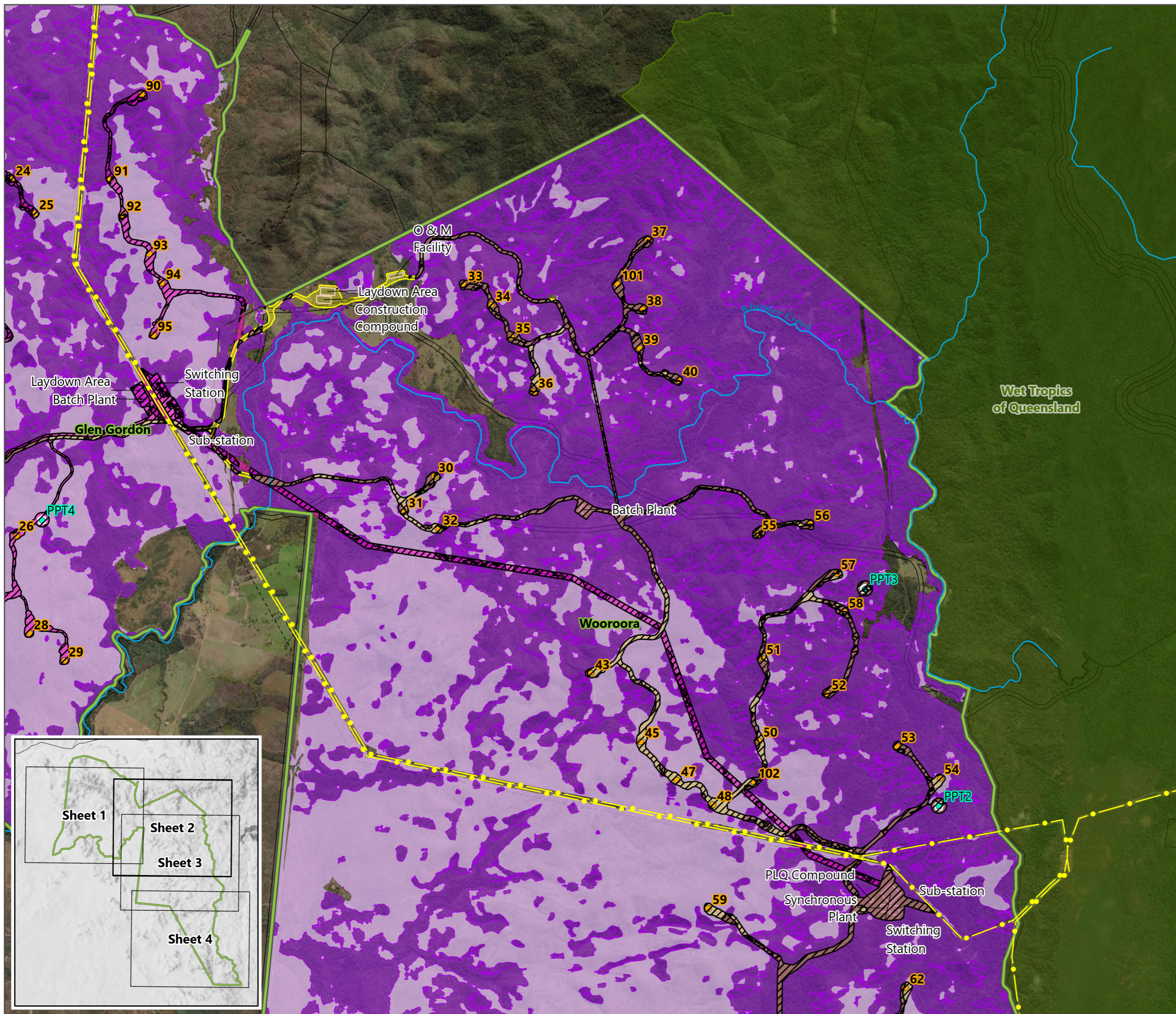




**Chalumbin Wind Farm**  
Impacts to Masked owl habitat  
Sheet 2 of 4

**Figure 8.2**

-  Project Area Boundary
-  Turbine
-  Met-mast
-  Facilities
- Clearance Envelope**
-  Stage 1
-  Stage 2
-  Significant Residual Impact
-  Nesting Habitat
-  Foraging Habitat
-  Existing HV Transmission Line
-  Watercourse
-  WTQ Boundary
-  Lot Boundary
-  Easement

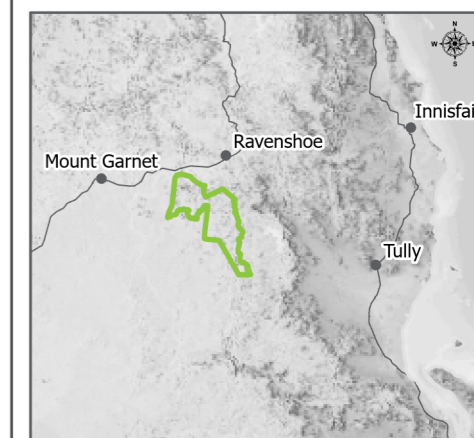


Wet Tropics  
of Queensland

Wooroora

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

Author: TOD  
Reviewed: NOD



Scale: 1:50,000@A3

Data Source(s):  
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