REF Decision Statement

Central West Orana Renewable Energy Zone Transposition Project: Central Cluster

Transgrid is the proponent for the Central West Orana Renewable Energy Zone (CWOREZ) Transposition Project: Central Cluster. Transgrid is proposing to carry out transposition works, which would involve the systematic rearrangement of the conductors at selected locations along the transmission network to address the risk of voltage imbalances arising from the integration of the CWOREZ into Transgrid's existing network. The proposed activity involves the installation of transposition structures at Structures 356 and 432 on Line 5A3/5A5 and reconfiguration of conductors at Structure 518 on Line 5A3/5A5, situated immediately west of Mount Piper 330 kV substation, to return the conductors to the required configuration before entering the substation. The proposed activity would also involve the establishment of temporary construction work areas and level benches for plant and equipment, upgrades to existing access tracks, vegetation clearing and trimming, testing and commissioning, and rehabilitation of disturbed areas following construction.

A Review of Environmental Factors (REF) was prepared in June 2026 by Arup to assess the potential impacts of the proposed activity.

The REF has been prepared in accordance with the *Environmental Planning and Assessment Act 1979* (EP&A Act), *the Environmental Planning and Assessment Regulation 2021* (EP&A Regulation) and the Guidelines for Division 5.1 Guidelines approved under section 170 of the EP&A Regulation.

In considering the proposed activity, Transgrid has examined and taken into account matters affecting or likely to affect the environment by reason of that activity, as addressed in the REF.

As an authorised person on behalf of Transgrid, I discharge the duty as a determining authority under Division 5.1 of the EP&A Act and determine that:

- the proposed activity is not likely to have a significant impact on the environment and therefore an Environmental Impact Statement (EIS) is not required
- the proposed activity will not be carried out in a declared area of outstanding biodiversity value and is not likely to significantly affect threatened species, populations or ecological communities, or their habitats or impact biodiversity values, meaning a Species Impact Statement (SIS) and/or Biodiversity Development Assessment Report (BDAR) is not required
- the proposed activity may proceed as it is needed to address predicted voltage imbalance on a key 500 kV transmission line so Transgrid's transmission network can continue to operate safely and efficiently
- mitigation measures are required to eliminate, minimise or manage environmental impacts as documented in Appendix C of the REF
- the proposed activity is not likely to have a significant impact on matters of national environmental significance, or on the environment of Commonwealth land, and therefore referral to the Minister under the EPBC Act is not required.

[redacted]

Luke Fania
A/General Manager, Environmental Strategy and Planning
Transgrid
Date: 07/07/2026

Official

Transgrid

People. Power. Possibilities.

Review of Environmental Factors

Central West Orana Renewable Energy Zone (CWOREZ) Transposition Project: Central Cluster

June 2026

Certification

REF preparer	
I certify that I have prepared the contents of this REF document and, to the best of my knowledge, it is in accordance with the EP&A Act, the EP&A Regulation and the Guidelines approved under section 170 of the EP&A Regulation and the information it contains is neither false nor misleading.	
Name	Charlie Sammoun
Title	Principal Environmental Consultant
Company name	Arup Australia Pty Ltd
Signature	
Date	27/06/2026
REF reviewer/endorser	
I certify that I have reviewed and endorsed the contents of this REF document and, to the best of my knowledge, it is in accordance with the EP&A Act, the EP&A Regulation and the Guidelines approved under section 170 of the EP&A Regulation and the information it contains is neither false nor misleading.	
Name	Natalie Swannack
Title	Associate Environmental Planner
Company name	Arup Australia Pty Ltd
Signature	
Date	27/06/2026

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1. Introduction

The Central West Orana Renewable Energy Zone (CWOREZ) will enable more electricity to be generated and delivered using the existing Transgrid transmission network. The integration of the CWOREZ into the network would exacerbate voltage imbalance on 500 kV circuits between Transgrid's Bayswater 500 kV, Barigan Creek/Wollar 500 kV and Mount Piper 330 kV substations. Voltage imbalance can lead to reduced power quality, higher line losses, and system stability risks. To address these impacts, Transgrid is proposing to carry out transposition works, which would involve the systematic rearrangement of the conductors at selected locations along the transmission network.

Transposition would equalise phase impedances, minimise voltage imbalance, and ensure reliable, efficient operation of the network. Implementing transposition on these 500 kV transmission lines is essential to maintain compliance with standards, support renewable energy integration, and safeguard the performance of the National Electricity Market (NEM).

To facilitate a staggered delivery program for transposition and phase rollover works on each transmission line, the works have been packaged into three clusters. Each cluster will be approved through a standalone Review of Environmental Factors (REF) and are defined as follows:

- 'Northern Cluster' involves works along 500 kV transmission line 5A3/5A4 (Bayswater to Wollar).
- 'Central Cluster' involves works along 500 kV transmission line 5A3/5A5 (Wollar to Mount Piper).
- 'Southern Cluster' involves works along 500 kV transmission line 5A6/5A7 (Mount Piper to Bannaby).

An overview of the location of all structures is provided in Figure 1-1.

The scope of work covered in this REF is the construction and operation of transposition works within the 'Central Cluster'.

1.1. Proposed activity overview

The proposed activity comprises:

- Installation of transposition structures at Structures 356 and 432 on Line 5A3/5A5 between Transgrid's existing substations at Barigan Creek/Wollar and Mount Piper.
- Reconfiguration of conductors (a phase rollover*) at Structure 518 on Line 5A3/5A5, situated immediately west of Mount Piper 330 kV substation, to return the conductors to the required configuration before entering the substation.

*At each transposition location, conductors would be rotated 120° out of phase. The phase must be returned to its original configuration before reaching the destination substation. This is known as a 'phase rollover'.

The proposed activity would also involve establishment of associated works to facilitate construction, including construction work areas and level benches for plant and equipment, upgrades to existing access tracks, vegetation clearing and trimming, testing and commissioning, and rehabilitation of disturbed areas following completion of the works.

Further details of the proposed activity and construction methodology are provided in section 3.

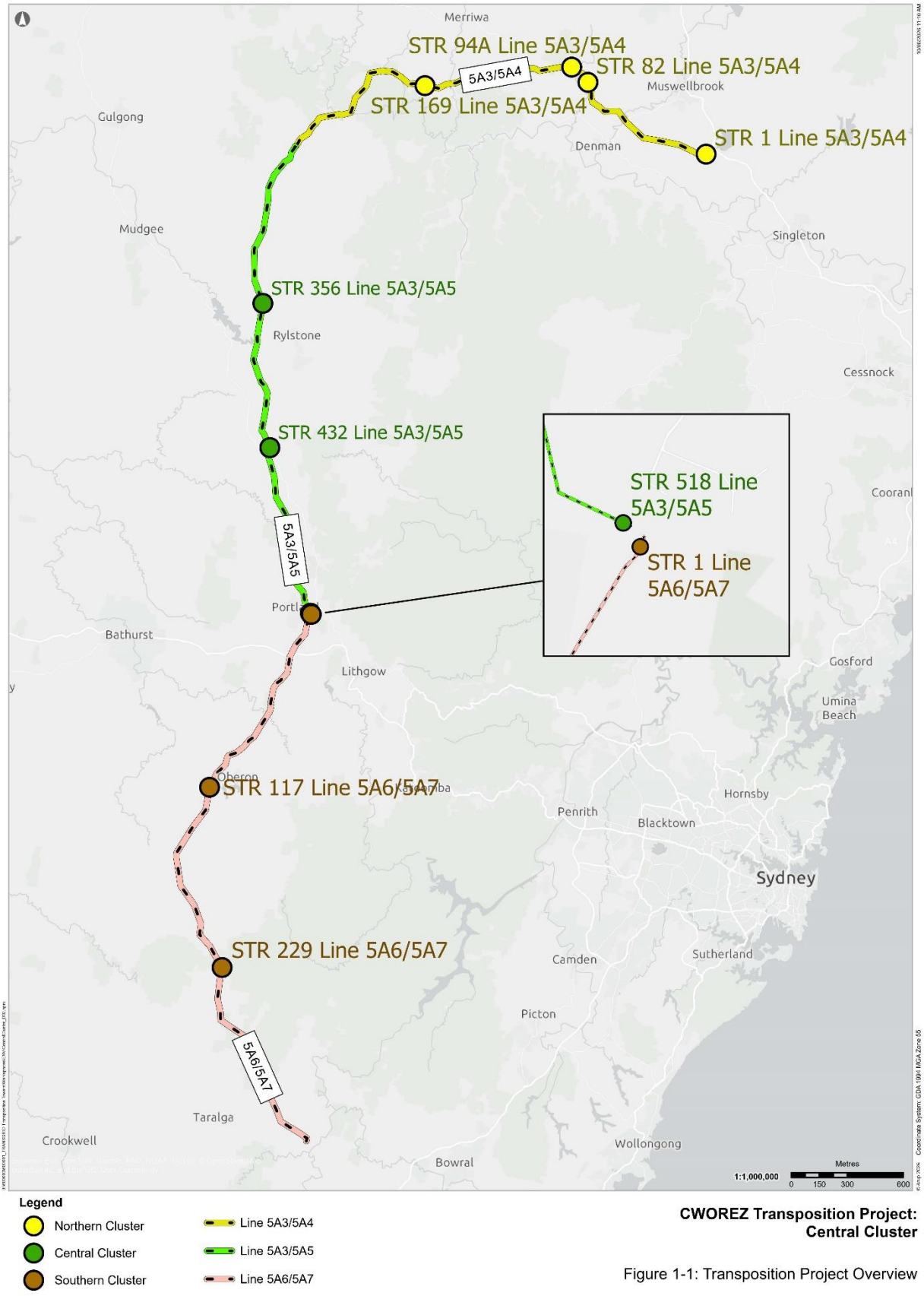


Figure 1-1: Transposition Project Overview

Figure 1-1 Transposition Project Overview

1.2. Purpose of the REF

For the purposes of this activity, NSW Electricity Networks Operations Pty Ltd as a trustee for NSW Electricity Networks Operations Trust (known as Transgrid) is the proponent and the determining authority under Part 5, Division 5.1 of the *Environmental Planning and Assessment Act 1979 (*EP&A Act).

The purpose of this REF is to assess the potential impacts of the proposed activity on the environment and to determine appropriate mitigation measures to reduce and manage those impacts. This REF has been prepared with consideration of the *Guidelines for Division 5.1 assessments* (DPHI, May 2026), section 171(1) of the Environmental Planning and Assessment Regulation 2021 (EP&A Regulation) and the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*.

The REF helps fulfil the requirements of section 5.5 of the EP&A Act, namely that Transgrid examines and takes into account matters affecting or likely to affect the environment by reason of the proposed activity, in a manner that is proportionate to the nature and risk of the activity.

The findings of the REF would be considered when assessing:

- Whether the proposed activity is likely to have a significant impact on the environment, in which case an environmental impact statement (EIS) is required.
- Whether the proposed activity will be carried out in a declared area of outstanding biodiversity value and/or is likely to significantly affect wilderness areas, threatened species, populations, ecological communities or their habitats, in which case a species impact statement (SIS) or biodiversity development assessment report (BDAR) is required.

2. Need for the proposed activity

2.1. Proposed activity objectives and need

As outlined in Section 1.1, the proposed activity is needed to address predicted voltage imbalance on a key 500 kV transmission line so Transgrid's transmission network can continue to operate safely and efficiently. Implementing line transposition will ensure the safe and reliable transmission of electricity within the 500 kV network; and enable the reliable integration of generation from the CWOREZ.

The key objectives of the proposed activity are to:

- Address predicted voltage imbalance on the 500 kV network affected by the integration of the CWOREZ.
- Maintain system stability and operational reliability.
- Support the secure and efficient integration of renewable energy into the NEM.

2.2. Relevant strategic plans and policies

Relevant strategic plans and policies in NSW applicable to the proposed activity are set out in Table 2-1, which includes a summary of the plan and its relevance to the proposed activity. National plans and policies for the proposed activity are set out in Table 2-2.

Table 2-1 Relevant NSW plans and policies for the proposed activity

Strategic plan/policy	Summary	Relevance
NSW Electricity Strategy (NSW Government, 2019)	A NSW strategy to deliver a reliable, affordable and sustainable electricity system to support a growing economy, while responding to ageing power stations, network congestion and rising electricity prices. Its objectives are to improve market efficiency and competition, ensure sufficient and flexible generation capacity to maintain energy security (including through an Energy Security Target), and enable the Government to respond to electricity emergencies, while protecting consumers and the environment.	The proposed activity supports and enables the NSW Government to meet the objectives of the NSW Electricity Strategy, through providing effective and reliable transmission of electricity from renewable energy generation projects.
Electricity Infrastructure Roadmap (NSW Government, 2020a)	A 20-year plan to make NSW's electricity system more affordable, clean and reliable as ageing coal-fired power stations retire. It coordinates investment in renewable energy generation, storage and transmission infrastructure to support the transition and provide certainty for industry and investors.	The proposed activity would ensure reliable, efficient operation of the state's electricity transmission network, and aligns with the NSW Government's Electricity Infrastructure Road Map.
Net Zero Plan Stage 1: 2020-2030 (NSW Government, 2020b)	NSW's 10-year plan to fast track emission reductions and adopt a pathway to achieve net zero emissions by 2050, with an objective to cut emissions by 35% by 2030 compared to 2005 levels. The plan prioritises driving the uptake of proven low emissions technologies, empowering consumers and businesses to make sustainable choices, investing in the next wave of emissions reduction innovation, and ensuring the NSW Government leads by example. It is designed to reduce emissions while supporting economic growth, lowering electricity costs and creating new jobs across NSW.	The proposed activity enables transmission of electricity from new and planned renewable energy generation connections. This facilitates meeting the emissions reduction targets and objectives of the NSW Government's Net Zero Plan.
NSW Transmission Planning Review 2025 (NSW Government, 2025)	An independent review of NSW's transmission planning arrangements was established to reduce duplication and improve coordination as the electricity system transitions to renewable energy. It recommends planning processes reforms, clarifying roles and responsibilities, and improving coordination between government and industry. Its outcomes intend to support timely, efficient transmission development needed for Renewable Energy Zones and the broader energy transition.	The proposed activity actively addresses the NSW Transmission Planning Review by improving transmission infrastructure to support the CWOREZ.
NSW Transmission Infrastructure Strategy (NSW Government, 2018)	Sets out the state's approach to modernising the transmission network to support a secure, affordable and clean energy system as the proportion of renewable generation increases. It aims to unlock investment in new energy projects by improving grid access, prioritise early development of transmission projects, and bolster domestic energy security by improving connections	The proposed activity would modernise the transmission network and improve efficiency and reliability of moving electricity across NSW to where it is needed. It directly supports the NSW

Strategic plan/policy	Summary	Relevance
	to interstate and regional energy resources. The strategy promotes development of transmission infrastructure to support renewable energy projects and regional economic growth.	Transmission Infrastructure Strategy's objectives.
Transgrid's NSW Transmission Annual Planning Report 2025 (Transgrid, 2025)	Transgrid's plan for the NSW transmission network to support the next phase of the energy transition. The report assesses future demand, generation and network constraints, identifies transmission development needs and non-network solutions, and presents investment priorities to maintain system security and reliability.	The proposed activity acts on the recommendations of Transgrid's Transmission Annual Planning Report 2025, through upgrading existing transmission infrastructure to improve efficiencies and safety.

Table 2-2 Relevant national plans and policies for the proposed activity

Strategic plan/policy	Summary	Relevance
Rewiring the Nation (Australian Government, 2025)	Rewiring the Nation is a Commonwealth initiative that invests in updating and expanding electricity transmission network to make clean energy more accessible, reliable and affordable for consumers. It provides funding mechanisms to support new and upgraded transmission infrastructure that connects renewable energy to homes, businesses and regions. The program is a key part of Australia's energy transition and supports national emissions reduction targets, including net zero by 2050.	The proposed activity would improve efficiency of transmission of renewable electricity generation within the CWOREZ within the transmission network, supporting the Commonwealth Government's Rewiring the Nation program.
Integrated System Plan (ISP) (Australian Energy Market Operator (AEMO), 2024)	The Integrated System Plan (ISP) is AEMO's system-wide roadmap for the transition of the National Electricity Market, setting out how generation, storage and transmission should develop in the short and long-term to meet consumer needs, energy and emissions targets. It identifies cost-effective and resilient infrastructure investments to support a secure, reliable and net-zero-ready electricity system by 2050. The ISP is updated every two years, reflecting extensive stakeholder consultation outcomes. It is used by Government and industry to guide energy policy and infrastructure investment decisions.	The proposed activity supports the ISP and transition to renewables through improving the efficiency of transmission infrastructure responsible for moving electricity from the CWOREZ across the state.

2.3. Alternative options considered and preferred option

Alternative options were considered for the proposed activity as identified in Table 2-3. As identified, the preferred option is Option 4.

Table 2-3. Alternative options considered and preferred option

Option	Overview and justification	Preferred option
Option 1 - 'Do Nothing'	The 'Do Nothing' scenario would cause significant network restraints following the commissioning of the CWOREZ and would restrict power flows from this area.	No
Option 2 – Danube Tower	This option would involve erecting a new tower in place of existing tension towers. This option was deemed unsuitable because it would require a substantially larger project footprint and incur greater costs compared to the preferred option.	No
Option 3 – Offset Towers	This option would involve erecting new towers around the structures proposed for Transposition. This option would require a significantly larger project footprint and was therefore deemed unsuitable.	No
Option 4 – Four Jumper Steel Poles	This option would involve the installation of four steel poles around each structure proposed for transposition. This option is the preferred option as it meets the project's objectives while enabling transposition to be completed more efficiently and within a smaller impact footprint than the alternative options.	Yes

3. Proposed activity description

3.1. Proposed activity scope

The proposed activity would involve the following scope of works:

- Installation of a transposition structure at Structure 356 and Structure 432 on Line 5A3/5A5. Each transposition structure would consist of four steel poles about 55 m high, installed around the existing steel lattice structures to support the rearrangement of the conductors (as shown in Figure 3-1).
- Reconfiguration of the conductor arrangement back to their original configuration (referred to as phase rollover) at Structure 518 on Line 5A3/5A5 next to Mount Piper 330 kV substation (referred to as Mount Piper Substation – West from herein). The reconfiguration of each phase of conductors is required as each phase must enter and leave the substation in the same phase order.
- Establishment of a main construction area work site (comprising the construction work site which includes an ancillary construction area and construction laydown area) at each transposition and phase rollover site for the laydown of equipment and materials and to support the operation of elevated work platform (EWP), cranes, brake and winch and other plant and equipment (as shown in Figure 3-2 to Figure 3-4).
- Establishment of level construction benches to support the safe use of EWPs, cranes and brake and winch equipment (for conductor stringing) as part of the transposition and phase rollover works. Each bench would be located in the construction work site.
    - The transposition sites construction benches would be about 105 m x 80 m around the base of each structure, each covering an area of about 8,400 m^2.
    - The phase rollover site construction bench would be about 80 x 80 m around the transmission structure, occupying an area of about 6,400 m^2.
- Repair and upgrade of about 2.25 km of existing formed access tracks to the construction works site at each work location.

- Vegetation disturbance and clearing would be required, including:
  - Removal of fallen timber, as well as trimming, lopping, or removal of vegetation that restricts vehicle access along existing access tracks.
  - Clearing of vegetation along the access tracks to be upgraded and within the construction work site at each transposition site and the phase rollover site.
- Testing and commissioning to ensure the transmission lines which have been transposed correctly, are safe and ready for return to service.
- Rehabilitation of disturbed areas and demobilisation.

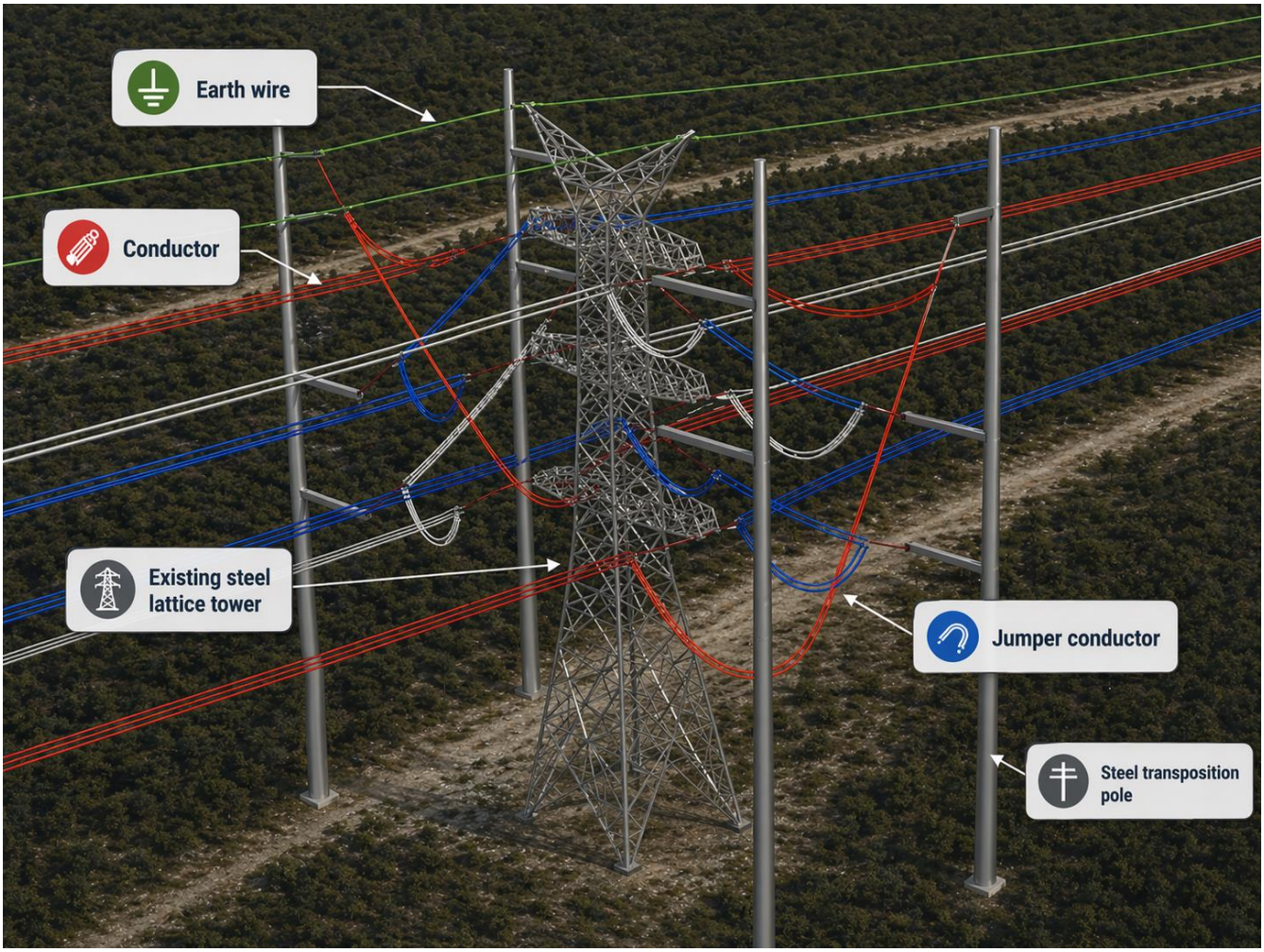


Figure 3-1 Schematic showing the four-pole transposition structure arrangement around the existing steel lattice structure

3.2. Proposed activity location

The proposed activity is located at three distinct locations along Line 5A3/5A5 in the Central West region of NSW. Table 3-1 provides a summary of each works location. Each work location is shown in Figure 3-2 to Figure 3-4.

Table 3-1 Summary of the proposed work locations

Work location	Local Government Area	Lot no/DP	Overview
Line 5A3/5A5 Transposition sites			
Structure 356	Mid-Western Regional	Lot 1 DP561075 and Lot 1262 DP1103548	Structure 356 is on privately owned land, with the surrounding area characterised by broadscale rural agricultural operations and remnant native forest. Dungeree State Forest is located approximately 75 m west of the impact area for Structure 356 and approximately 5 m west of the access track impact area at its closest point.
Structure 432	Mid-Western Regional	Lot 2 DP558443	Structure 432 is on privately owned land, with the surrounding area predominantly characterised by rural agricultural land comprising cleared fields and densely vegetated remnant native forests. Running Stream Creek is approximately 90 m west of the impact area for Structure 432.
Phase Rollover sites			
Structure 518 on Line 5A3/5A5 (Mount Piper Substation – West)	Lithgow City	Lot 103 DP1164619 and Lot 1 DP1092737	The phase rollover site on Line 5A3/5A5 is located to the immediate west of the Mount Piper substation, on the Electricity Transmission Ministerial Holding Corporation's (ETMHC) owned land, which is managed by Transgrid.

While the proposed activity would predominantly be in Transgrid's existing easements and on ETMHC-owned land, the existing easement around the transposition sites would be expanded. At these locations, the existing 70 m wide easement would be widened to approximately 120 m.

For the purpose of this REF:

- The 'impact area' has been defined as the area directly affected by the proposed activity. This includes:
  - The construction work sites at transposition and phase rollover sites (including the main construction area, the ancillary construction area and the construction laydown area, which would be used for the operation of plant and equipment, laydown of materials and equipment and construction bench establishment).
  - The network of existing access tracks, which require upgrade and maintenance.
- The study area has been defined as a 500 m buffer to the impact area.

The impact area showing the component areas and study area are shown in Figure 3-2 to Figure 3-4.

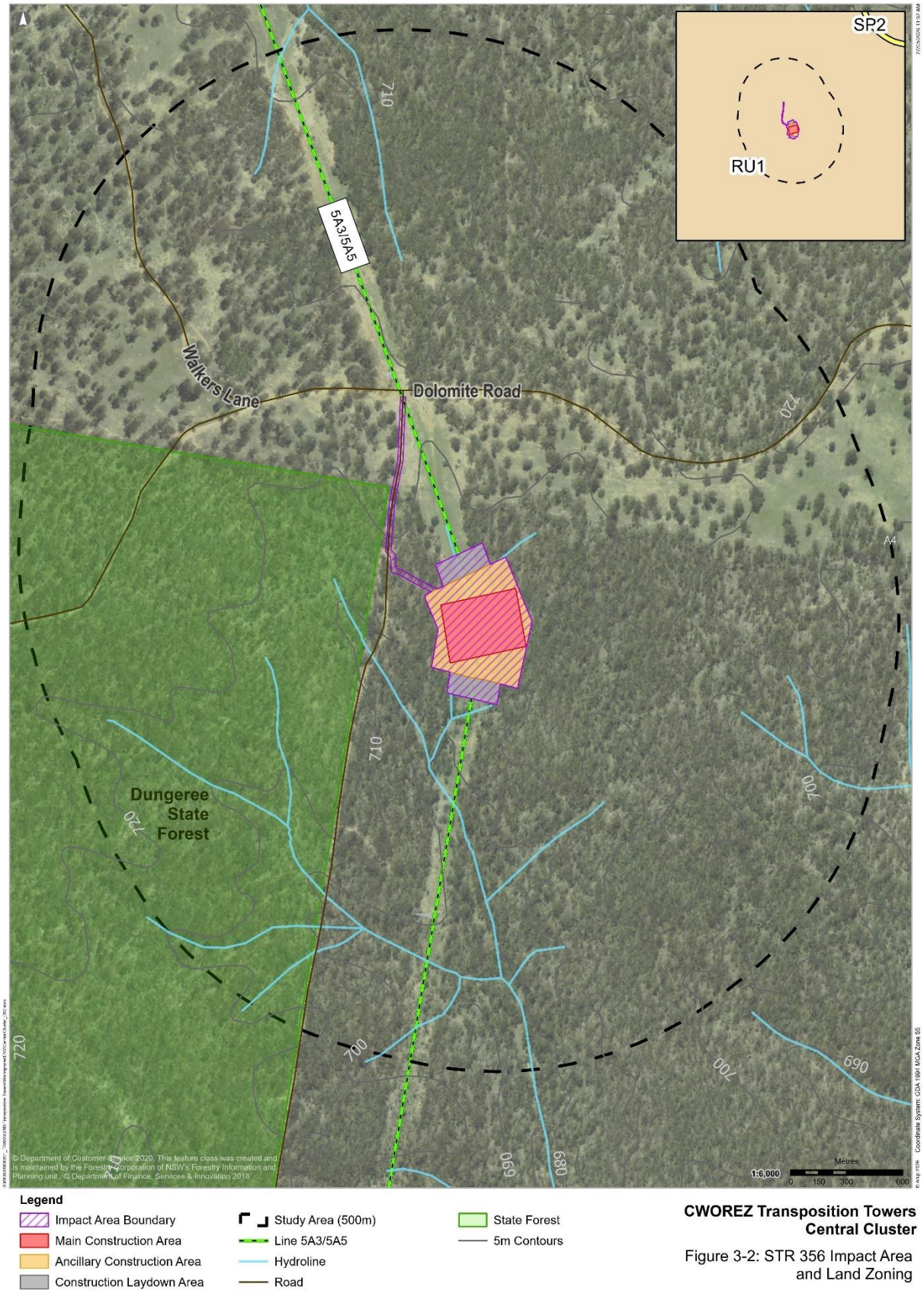


Figure 3-2 Structure 356 Impact Area and Land Zoning

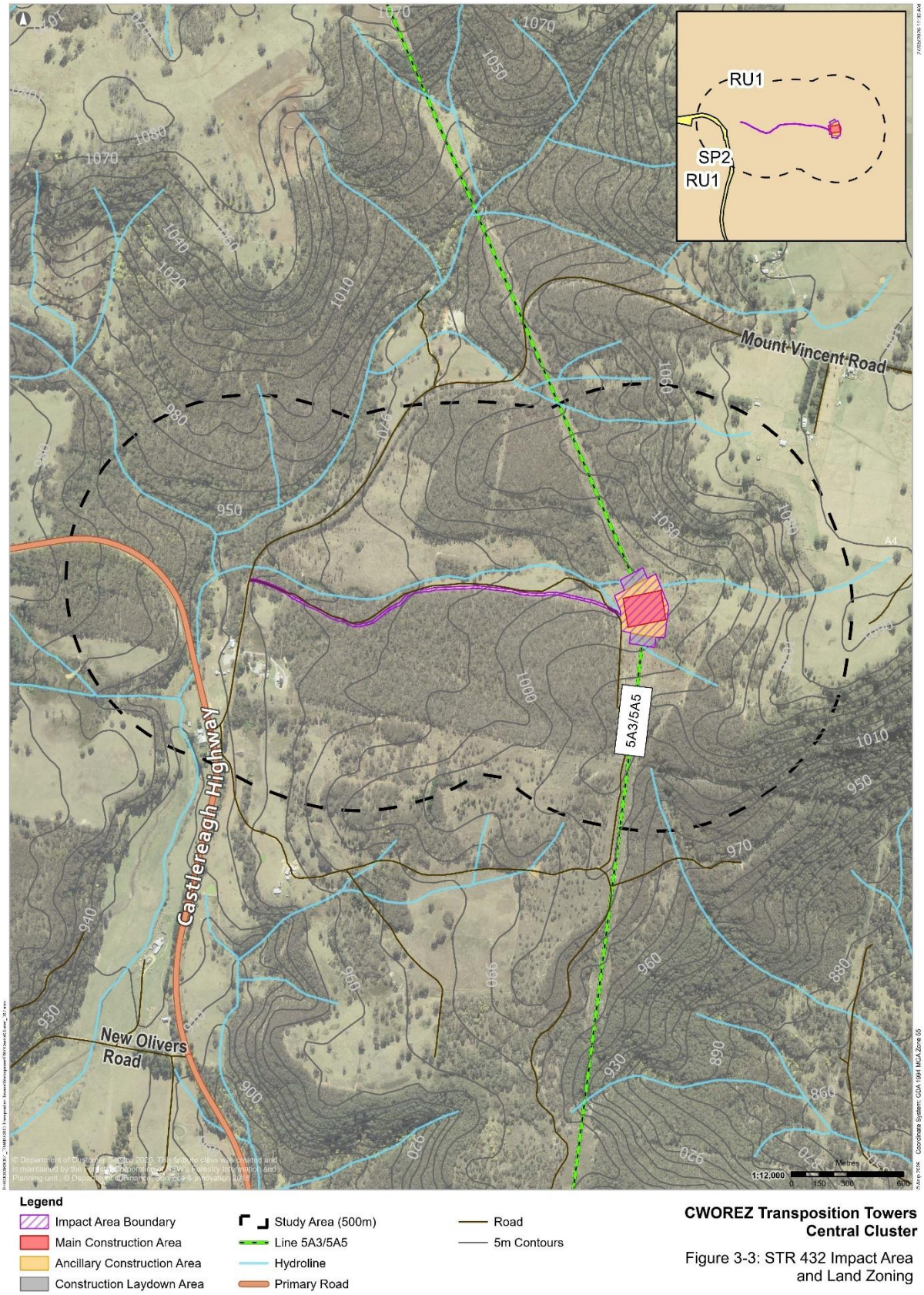


Figure 3-3 Structure 432 Impact Area and Land Zoning

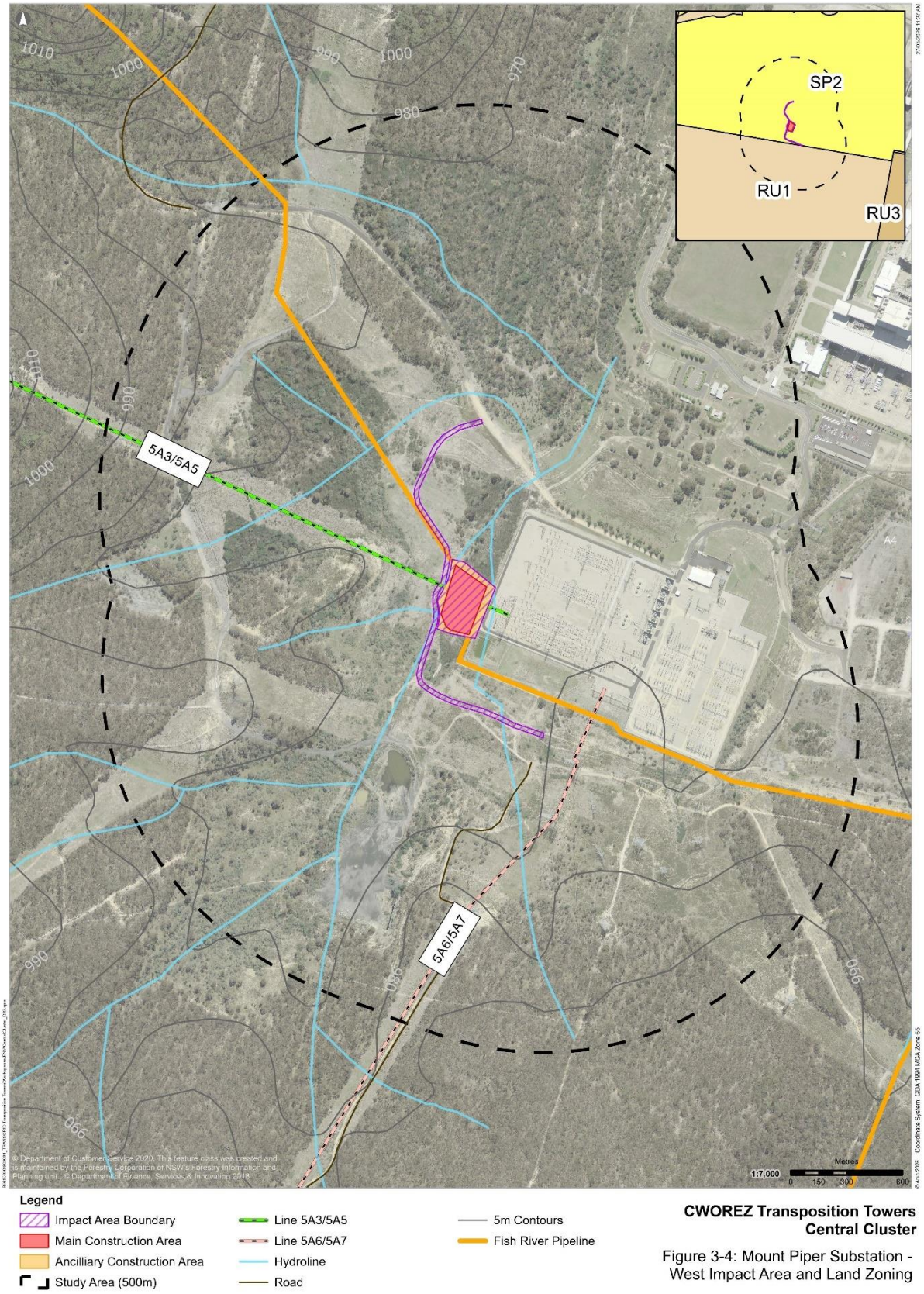


Figure 3-4 Structure 518 (Mt Piper Substation – West) Impact Area and Land Zoning

3.3. Construction activities

3.3.1. Construction methodology

An overview of the construction methodology and key activities is outlined in Table 3-2.

Table 3-2 Construction methodology and activities

Activity	Overview
Site establishment	
Upgrade of access tracks	Access to the work locations for all construction plant, equipment and vehicles would occur via existing access tracks. Work to existing access tracks would generally involve: • grading, pothole repair, and/or reshaping and widening of existing track. • removal of vegetation (including shrub or tree trimming or slashing and removal of small fallen trees) along the existing tracks. No removal of mature trees is anticipated. • laying and compaction of crushed rock or gravel, to improve the track surface and drainage. The existing access tracks that would require upgrades have been included in the proposed activity impact area shown in Figure 3-2 to Figure 3-4. The resulting width of upgraded access tracks is expected to be about 7 m wide, including drainage structures.
Construction work sites	To facilitate construction at the transposition and phase rollover sites, a construction work site (comprising a main construction area, ancillary construction area and construction laydown area) would be established at each location. The construction laydown area would serve as the temporary construction compound and be used for the laydown and storage of materials, siting demountable amenities, and supporting the use of construction vehicles, plant and equipment. Vegetation removal and ground disturbance would occur while establishing each construction work site. This would include removal of trees within the Structure 356 and Structure 432 impact area. It is expected that trees would either be manually felled using a chainsaw or mechanically felled using appropriate tree harvesting equipment. All low-lying vegetation would be slashed or removed using an excavator. Level construction benches would be established within the construction work site. Each bench would be wholly within the main construction area. Benches would be established using an excavator and grader to create a level platform for the safe operation of cranes, EWPs and other plant and equipment. Imported fill material may be required as part of the bench establishment. Surface rock and vegetation would be removed from the area of the bench. The construction benches would encompass an area of about 105 x 80 m at the transposition site and about 80 x 80 m at the phase rollover sites.
Construction - Transposition Works	
Steel pole installation	The installation of four steel poles at each structure proposed for transposition would typically begin with the excavation of a hole at each pole location using a drill rig, approximately 2.4 m wide and between 10 – 15 m deep, depending on soil conditions. Once excavated, steel reinforcement cages would be placed into the hole and backfilled with high-strength concrete to form the bored footing. The concrete would be left to cure for at least 28 days before installing the transposition poles and transposing the conductors.

Activity	Overview
	Once concrete has cured, the steel pole would be craned into position and secured to the footing using steel bolts. In some cases, direct embedment may be employed, whereby the pole is placed directly into the borehole and stabilised without a separate footing.
Conductor installation between transposition poles	Following the steel pole installation, stringing of conductors between each pole would occur and then left *in-situ* until the phase rollover works commences. An EWP and crane would be used to access the top of the tower to perform these works.
Phase rollover works	Phase rollover works involves removing the jumpers at the existing structure and installing conductors on the new poles to transpose the transmission line. In addition, the conductors would require reorientating at the substation end to correct the phase sequence. Access to the top of the structure to perform the works would be via an EWP. The stringing of the conductors may require the establishment of brake and winch sites within the designated construction works site. Prior to stringing, sheaves (pulleys) would be affixed to the tops of the transmission structures using an EWP to facilitate the passage of the wire. The stringing operation begins with the deployment of a lightweight draw wire or rope across the span to be strung. This wire would be lifted into position using a winch or crane and manually guided into the sheaves by work crews operating from an EWP. Once in place, the draw wire would be connected to the conductor drum and pulled through the sheaves under controlled tension using specialised tensioning and pulling equipment. Upon completion of the stringing and confirmation of correct tension, the conductor is terminated at each end securely into position, and the sheaves removed.
Demobilisation and rehabilitation	
Demobilisation and rehabilitation of disturbed areas	Following the completion of construction, disturbed areas would be restored to as close as practicable to the condition they were in before works commenced. Rehabilitation works may include regrading and appropriate seeding.

3.3.2. Construction plant, material and equipment

Key plant, materials, vehicles and equipment that would be used during construction include:

- Steel transmission poles
- Insulators
- Line fittings
- Conductor
- Cranes
- EWPs
- Excavator
- 4WD vehicles
- Articulated trucks/flatbeds
- Erosion and sediment controls
- Insulators
- Bulldozer
- Grader
- Roller
- BG28 drill rig
- Concrete agitator trucks
- Brake and winch equipment
- Chainsaw and vegetation removal equipment
- Aggregate (crushed rock and/or gravel)
- Imported fill material

3.3.3. Construction schedule

Construction is planned to start in Quarter 3 2026 and is expected to take about 12 months. The proposed activity start date may move due to program changes or other factors (such as outage constraints), but the duration of the construction activities would remain the same.

3.3.4. Construction hours

Noise generating works would be limited to the recommended standard hours for construction work outlined in the *Interim Construction Noise Guideline* (ICNG) (DECC, 2009) which are:

- Monday to Friday 7:00am to 6:00pm.
- Saturday 8:00am to 1:00pm.
- No works on Sundays or Public Holidays.

Work outside standard hours would only comprise:

- The delivery of materials outside standard hours requested by police or other authorities for safety reasons.
- Emergency work to avoid the loss of lives and/or property.
- Work timed to correlate with system planning outages.

If the need for additional noise generating works outside standard construction hours is identified following the determination of this REF, the works would require justification in accordance with the ICNG and the prior formal written consent of Environment Business Partner/Delivery.

3.4. Operation and maintenance

Following completion of construction, the existing maintenance and operation of the transmission line would continue. Routine maintenance includes:

- Regular inspections and the maintenance of the transmission line.
- Vegetation maintenance.
- Access track maintenance.

Only light vehicles and small to medium plant are expected to access the transmission line for these activities.

4. Statutory context

4.1. Approvals pathway

4.1.1. Environmental Planning and Assessment Act 1979

The EP&A Act and the EP&A Regulation provide the framework for development assessment in NSW. The EP&A Act contains a number of different planning approval pathways for the assessment of development proposals in NSW and is determined by relevant environmental planning instruments such as Local Environmental Plans (LEPs) and State Environmental Planning Policies (SEPPs).

As described below, the proposed activity would be permitted without development consent in accordance with the *State Environmental Planning Policy (Transport and Infrastructure) 2021* (Transport and

Infrastructure SEPP), and the proposed activity is therefore subject to the assessment requirements of Division 5.1 of the EP&A Act.

Transgrid is an Authorised Network Operator (ANO) under *the Electricity Network Assets (Authorised Transactions) Act 2015*. Transgrid is also a prescribed determining authority under Section 5.6 of the EP&A Act and Clause 3(3) and Schedule 1(4) of the EP&A Regulation, for development for the purposes of an electricity transmission or distribution network that is permitted without consent (within the meaning of the Transport and Infrastructure SEPP) and is operated or to be operated by the ANO. Accordingly, Transgrid is the proponent and determining authority for this proposed activity.

4.1.2. State Environmental Planning Policy (Transport and Infrastructure) 2021

The Transport and Infrastructure SEPP aims to facilitate the delivery of infrastructure across NSW. Section 2.44 of the Transport and Infrastructure SEPP provides that development for the purpose of an electricity transmission or distribution network may be carried out by or on behalf of an electricity supply authority or public authority without development consent on any land.

As this proposed activity meets the definition of development for the purposes of an electricity transmission or distribution network under Section 2.44 of the Transport and Infrastructure SEPP and would be carried out by Transgrid (an ANO), the proposed activity is permitted without consent.

4.2. Other relevant Commonwealth and NSW legislation

Other Commonwealth and NSW environmental legislation relevant to the assessment or determination of the proposed activity is outlined in Table 4-1.

Table 4-1. Relevant Commonwealth and NSW legislation

Legislation	Potential approval requirements	Relevance to the proposed activity	Permit/ approval/ licence requirement
Commonwealth legislation			
Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)	Under the EPBC Act, matters of national environmental significance (MNES) are considered to assist in determining whether the proposed activity should be referred to the Commonwealth Department of Climate Change, Energy, the Environment and Water (Cth DCCEEW).	MNES have been considered in Section 7.4 (Table 7-4). As no significant impacts are likely, the proposed activity has not been referred to Cth DCCEEW.	Not required.
NSW legislation			
Biodiversity Conservation Act 2016 (BC Act)	The BC Act lists a number of threatened species, populations, ecological communities and declared areas of outstanding biodiversity value to be considered in deciding whether there is likely to be a significant impact on threatened biota, or their habitats. If any of these could be impacted by the proposed activity, an assessment of significance that addresses the requirements of Section 7.3 of the BC Act must be completed to determine the significance of the impact.	As discussed in Section 6.4, the proposed activity would affect two Capertee Stringybark, a species listed as Vulnerable under the BC Act. While the proposed activity requires vegetation removal, none of the impacted vegetation communities are associated with a Threatened Ecological Community (TEC). It is unlikely that the proposed activity would have a significant	Not required.

Legislation	Potential approval requirements	Relevance to the proposed activity	Permit/ approval/ licence requirement
	Under Section 7.3 of the BC Act, the determining authority (being Transgrid) has a duty to take into account whether there is likely to be a significant effect on threatened species, ecological communities, or their habitats or whether the activity is to be carried out on a declared area of outstanding biodiversity value.	impact on Capertee Stringybark or any other threatened species, ecological communities or their habitats. The proposed activity would not be carried out on a declared area of outstanding biodiversity value.	
Heritage Act 1977 (Heritage Act)	Approval under Section 57(1) is required for works to a place, building, work, relic, moveable object, precinct, or land listed on the State Heritage Register. Section 57(2) provides that an exemption from the approval requirements of Section 57(1) can be sought in certain circumstances. An excavation permit is required under Sections 139(1) and (2) to disturb or excavate any land containing or likely to contain a relic. Section 139(4) provides that exceptions from the approval requirements of Sections 139(1) and (2) can be sought in certain circumstances.	There are no heritage-listed items near the proposed activity, and the works would not involve disturbing or excavating land containing, or likely to contain, a relic (see Section 6.6). Accordingly, no permits or approvals are required under the Heritage Act.	Not required.
National Parks and Wildlife Act 1974 (NPW Act) and *National Parks and Wildlife Regulation 2019* (NPW Regulation)	An Aboriginal heritage impact permit (AHIP) under Section 90 of the NPW Act is required to harm or desecrate an Aboriginal heritage object. If works are located in land reserved under the NPW Act, consent from NSW Department of Climate Change, Energy, the Environment and Water (National Parks and Wildlife Service) is required. The NPW Regulation includes provisions for Assets of Intergenerational Significance (AIS). An AIS can be any area of exceptional value, natural or cultural, that warrants special protection, including dedicated management measures. If works are located on land (or within close proximity of) identified as an Asset of Intergenerational Significance (AIS), a proposed activity must be consistent with the purpose of the AIS's declaration and Conservation Action Plan (CAP) (if relevant).	The proposed activity would not impact any registered Aboriginal heritage sites. Accordingly, a permit under section 90 of the NPW Act is not required. It is also not located on NPW land or within an identified Asset of Intergenerational Significance (AIS).	Not required.
Fisheries Management Act 1994	Dredging or reclamation works within key fish habitat waterways, and any works that block or obstruct fish passage on key fish habitat waterways, requires notification under Part 7 of the Fisheries Management Act.	Mount Piper Substation - West is located above the Fish River Pipeline, which is managed by WaterNSW and crosses beneath the Mount Piper substation site. However, the proposed works would not	Not required.

Legislation	Potential approval requirements	Relevance to the proposed activity	Permit/ approval/ licence requirement
		involve direct works to the pipeline. Under the *Fisheries Management Act 1994*, a Part 7 permit is required for dredging or reclamation works on key fish habitat waterways under section 201, and for works that would block or obstruct fish passage on key fish habitat waterways under section 219. As these works are not proposed at these sites, a Part 7 permit is not required.	
Water Management Act 2000 and *Water Management (General) Regulation 2025*	A controlled activity approval is required for waterfront land (the bed of any river, lake or estuary, and the land within 40 m of the highest bank of the river, the shore of the lake or the mean high-water mark of the estuary). Under section 64 of the Water Management (General) Regulation 2025, network operators are exempt from requiring a controlled activity approval if the activity is carried out on waterfront land other than within the bed or banks of a river, bed or shore of a lake, or bed to high water mark of an estuary and the activity does not cause a change in the course of the river and the activity is not likely to significantly affect the environment. The Water Management Act 2000 also requires approvals to extract groundwater within a Water Sharing Plan area, including a Water Access Licence (WAL) and Water Supply Work and Use Approval.	The impact area of the proposed activity at Structure 432 is within 40 m of mapped watercourses and therefore falls within the definition of waterfront land under the *Water Management Act 2000*. A controlled activity approval is required for works carried out in, on or under waterfront land. However, as Transgrid is a network operator, the proposed activity is exempt from the requirement for a controlled activity approval, as the works would be undertaken on waterfront land but not within the bed or banks of a river, and would not cause a change in the course of the waterway. Accordingly, no controlled activity approval is required for the proposed activity at Structure 432. The proposed activity is within two Water Sharing Plan areas: the Sydney's Greater Metropolitan Region Groundwater Source at Structures 432 and 356, and the NSW Murray-Darling Basin Porous Rock Groundwater Source at Mount Piper Substation – West. However, as the works are not expected to dewater more than 3 ML per year of groundwater, no WAL is required.	Not required.

5. Consultation

5.1. Consultation undertaken to date

Transgrid has consulted with relevant government agencies and the community in accordance with relevant legislation as summarised in this section.

5.1.1. Electricity Supply Act 1995

Section 45(4) of the *Electricity Supply Act 1995* requires that the local council be given a reasonable opportunity (no less than 40 days notification from the date on which the notice was given) to make submissions on the proposed activity.

Notification was provided to Mid-Western Regional Council and Lithgow City Council on 3 February 2026 in accordance with the *Electricity Supply Act 1995*. The Councils were provided with 40 days to provide a submission in accordance with Section 45(4) of the *Electricity Supply Act 1995*. The consultation period ended on 14 March 2026. No submissions were received.

5.1.2. Community consultation

Broader community consultation beyond directly affected landholders was not undertaken as the proposed activity is not considered to affect the broader community due to the small-scale and limited duration of construction activity at each construction works site. Potential impacts to the community are likely to be very localised to the area of work as discussed in Section 6.13 and are deemed unlikely to impact the broader community.

5.2. Future consultation

5.2.1. Notification to landholders

Prior to commencing works, all landholders would be notified of the proposed activity. The consultation would include, as a minimum:

- The timing and duration of the proposed construction works.
- Transgrid's contact details (phone and email of relevant Transgrid representative) should the community wish to obtain additional information on the project or have any specific requirements regarding property access or other issues.

5.2.2. REF publication

As the proposed activity has an estimated development cost of over $20 million, the REF will be published on Transgrid's website.

6. Environmental impact assessment

6.1. Land use

6.1.1. Existing environment

The impact areas for Structures 356 and 432 are located in the Mid-Western Regional LGA on land zoned RU1 Primary Production (refer to Figure 3-2 and Figure 3-3). The existing land use is rural, comprising cleared grazing land, native vegetation, existing access tracks and electricity transmission infrastructure. The Structure 356 impact area is adjacent to Dungeree State Forest, with the access track situated immediately outside the State Forest boundary. The Structure 432 impact area comprises mainly cleared grassy land with scattered trees, fragmented vegetation and an existing track connecting to Mount Vincent Road approximately 165 m north of the Neighbourhood Safe Place in the town of Running Stream.

The impact area for Mount Piper Substation – West is located in the Lithgow City LGA on land zoned SP2 Infrastructure (refer to Figure 3-4). The existing land use is electricity infrastructure within the broader Mount Piper energy precinct, which includes Mount Piper Power Station, Springvale Coal and associated transmission infrastructure. The WaterNSW Fish River Pipeline (Figure 3-4) crosses beneath the Mount Piper Substation - West impact area and wider study area.

6.1.2. Impact assessment

Construction

Impacts to land use during construction would result from temporary occupation of land, vehicle and plant movements, material laydown, access track upgrades and vegetation removal. However, impacts would be localised and minor and would not impact broader rural or industrial land uses surrounding the proposed activity.

Access track works would be limited to upgrades of existing tracks. No new access tracks are proposed. Given this, access track works would not impact the existing land use including Dungeree State Forest near Structure 356.

Within Structure 356 and 432 impact areas, vegetation removal would be required to support construction activities and easement widening. This would result in a temporary change to existing rural and vegetated land uses. In both locations, impacts would be localised and minor.

Within the Mount Piper Substation – West impact area, the proposed activity includes access track widening, however, the main construction areas shown on Figure 3-4 are on ETMHC-owned land. Works would be limited to above ground activities, with no excavation proposed at the phase rollover site. Impacts to existing land use would be minor. Provided the mitigation measures in Appendix C are implemented, no impacts to the WaterNSW Fish River Pipeline are expected.

Easement acquisition or landowner agreements would be needed for widened easements within the Structure 356 and 432 impact areas. No land acquisition for easement widening would be required for the Mount Piper Substation – West impact area, as works would be on ETMHC-owned land. Property acquisition would be managed in accordance with Transgrid's relevant procedures.

Overall, construction impacts on land use would be temporary, localised and minor, and would be managed through mitigation measures LU1, LU2 and LU3 in Appendix C.

Operation

During operation, the proposed activity would remain consistent with the existing transmission infrastructure land use. Operational impacts would mainly relate to widened easements within the Structure 356 and 432 impact areas.

Impacts would result from ongoing vegetation management to maintain minimum clearances, support bushfire management, and allow maintenance and emergency access. These impacts would be limited to the widened easement areas and are expected to be localised and minor. No impacts to existing land uses within the wider study areas are expected.

6.2. Geology and soils

6.2.1. Existing environment

The proposed activity is located within the Central Tablelands region of NSW. Landforms within the wider study areas for each structure generally comprise low ridgelines and side slopes dissected by minor drainage features. Existing transmission infrastructure, easements and access tracks are also present, and landforms appear to have been locally modified as a result of historical earthworks and grading.

Soil types within impact areas include:

- At Structure 432, the soil types are mapped as Kandosols, which are typically associated with poor water-holding capacity
- At Structure 356, the soil types are mapped as Kurosols, which commonly occur on slopes and are characterised by a distinct texture contrast profile.
- At Mount Piper Substation – West, the soil types are mapped as Kurosols as well as areas of unclassified soil that have been subject to extensive disturbance, reflecting the presence of highly modified ground conditions associated with existing infrastructure and historical land use.

The geology of the proposed activity consists generally of:

- Quartz-lithic to quartz-rich sandstone with conglomerate, mudstone, and siltstone from the Triassic age at Structure 432
- Sandstone, siltstone, and mudstone from the Permian age at Structure 356 and Mount Piper Substation – West.

Acid sulfate soils

NSW Department of Climate Change Environment Energy and Water's (DCCEEW) Acid Sulfate Soils Risk mapping (2024) and NSW Department of Planning, Housing and Infrastructure (DPHI) SEED mapping (2019) indicate that the impact areas are not within mapped areas of acid sulfate soil risk. The inland and elevated nature, combined with the absence of estuarine or coastal alluvial landforms, indicates that the likelihood of encountering acid sulfate soils during construction is low.

Contaminated land

A search of the NSW Environment Protection Authority's (NSW EPA) Contaminated Land Records (2026) database undertaken on 12 March 2026 returned no records of notified contaminated sites within 100 m of the proposed activity. The closest record of notice is located over 3.5 km west in Williwa Street, Portland.

Whilst there are no known sources of contamination, there may be potential for localised soil contamination within the study area due to the use of pesticides, imported fills, creosote treatments, and fuel leaks associated with the ongoing agricultural land use and transmission network infrastructure.

Naturally occurring asbestos

Naturally occurring asbestos is known to be associated with certain geological units within parts of NSW. However, the proposed activity is not within areas identified as having a high likelihood of naturally occurring asbestos, according to the Department of Primary Industries and Regional Development's (DPIRD) SEED dataset (2015). Given the geological context and historical disturbance associated with existing infrastructure, the risk of encountering naturally occurring asbestos is considered unlikely.

Salinity

The proposed activity is not within mapped salinity risk areas. Nearby surveyed areas for all three locations on eSPADE (DPHI, 2026) indicate that the region in general has no salting evident. This is consistent with assumptions of soil salinity, as the region is generally well-drained, and landforms do not exhibit characteristics commonly associated with dryland salinity. Additionally, existing land uses and vegetation patterns do not indicate salinity-related degradation.

Mine subsidence

Parts of the broader Central Tablelands region have been historically affected by underground coal mining. Available mine subsidence mapping shows that the proposed activity's impact area for each structure is not within active mine subsidence districts or areas subject to current mine subsidence management controls. While historical mining has occurred within the wider region (including Mount Piper Colliery, approximately 1.75 km northeast of the Mount Piper Substation – West impact area), no site-specific mine subsidence constraints have been identified.

6.2.2. Impact assessment

Construction

Construction activities have the potential to result in localised disturbance to soils and underlying geological materials through vegetation clearing, excavation, bench construction, and access track upgrades. Given the gently undulating to moderately sloping topography and the presence of existing transmission infrastructure and access tracks, ground disturbance would largely occur in areas that have been previously modified.

Soils within the impact area may be susceptible to erosion where disturbed; however, the risk of widespread or significant erosion is considered low given the limited extent and short duration of works within impact areas at each structure location. Areas of highly disturbed or unclassified soils, particularly within the impact area for Mount Piper Substation – West, further reduce the likelihood of encountering intact soil profiles of sensitivity.

With the implementation of mitigation measures in Appendix C, impacts to geology and soils during construction are expected to be minor and localised.

Operation

The proposed activity is not expected to result in any significant impacts on geology and soils as part of the ongoing operation of the transposition towers and phase rollover sites.

6.3. Hydrology and water quality

6.3.1. Existing environment

The study area is located in the Central Tablelands region of NSW. The hydrological environment is characterised by gently undulating terrain (shown in Figure 3-2 to Figure 3-4), including existing transmission easements and cleared areas, influencing existing overland flow conditions.

Regional surface water mapping (NSW Government & DCS Spatial Services, 2026) shows minor drainage features traverse the impact area at Structure 356 and 432. A review of satellite imagery has identified that these are not permanent watercourses, but likely ephemeral drainage lines and/or overland flow paths that respond to rainfall events. The ecology field surveys of the site undertaken as part of this REF observed that the watercourses have limited water present.

The built form associated with the impact area at Mount Piper Substation - West has likely modified the natural landscape and is expected to influence overland flows in this location. Site observation during ecology field surveys (Niche, 2026) indicated watercourses were highly modified drainage lines with concreted scour protection.

A small wetland area was also observed within the Structure 432 impact area. Watercourses and features within the study area are summarised in Table 6-1.

Table 6-1: Hydrological features within the study area

Name	Distance from impact area	Description	Strahler Stream Order
Structure 356			
Tributaries of Blind Creek	200 m north	Three 1st order streams are located within the northernmost portion of the study area, one of which intersects the transmission line. Blind Creek (the mainstem) is located 1 km north of the impact area.	1st
Tributaries of Stony Creek	Within the impact area	Several minor tributaries of Stony Creek are located within the southern section of the study area, many of which intersect the transmission line. Stony Creek (the mainstem) is located 2 km south of the impact area. An ephemeral 1st and 2nd order watercourse traverses the impact area. Subsurface water was observed during the ecology field survey but lacked standing surface or flowing water.	1st, 2nd, and 3rd
Structure 432			

Name	Distance from impact area	Description	Strahler Stream Order
Running Stream	90 m west	Running Stream is a large creek that runs from north to south, in the western side of the study area. The creek has multiple tributaries to the west, northwest, northeast, and east, that branch off towards the outskirts of the study area. Several of these tributaries intersect the transmission line.	1st, 2nd, and 3rd
Tributaries of Running Stream	Within the impact area	A 2nd order watercourse runs parallel (30 m north) to the access track, which branches into two 1st order streams that both intersect the impact area and transmission line. Minimal water was present during the ecology field survey.	1st and 2nd
Tributary of Jack Halls Creek	340 m south	A 1st order stream is located in the southeastern side of the study area. Jack Halls Creek (the mainstem) is 1.7 km southeast of the impact area.	1st
Mount Piper Substation - West			
Unnamed watercourse	Within the impact area	An unnamed 3rd order watercourse intersects the impact area, toward the western side of the construction zone and the southern segment of the access track. The drainage lines were identified as modified with concreted scour protection during the ecology field survey. The watercourse is also branched into multiple 1st and 2nd streams throughout the study area, many of which intersect the transmission line. A desktop assessment has not identified any clear mainstem.	1st, 2nd, and 3rd

Structures 356 and 432 are identified within a mapped area of groundwater vulnerability on the NSW Government's Sharing and Enabling Environmental Data (SEED) mapping portal, indicating that aquifers in this area have an increased susceptibility to contamination from human activity, influenced by various geological and hydrological factors.

As noted above, the impact area for Mount Piper Substation - West is near an industrialised area including the Mount Piper 330 kV substation and Mount Piper Power Station, which influences overland flow patterns and surface water quality. Mount Piper Substation - West lies within an area mapped as the Sydney Drinking Water Catchment,but is not located within any WaterNSW Special and Controlled areas (WaterNSW, 2021).

Natural surface runoff and surrounding land uses influence water quality within the impact area. A desktop review of NSW DCCEEW's River Condition Index (2023) indicates that the water quality surrounding each location is moderate.

A search of multiple online databases, including the NSW Flood Imagery Viewer (2020) and the Australian Flood Risk Information Portal (2026), has revealed that the impact area is not within flood prone land.

6.3.2. Impact assessment

Construction

Construction activities have the potential to result in temporary impacts to hydrology and water quality through soil disturbance, vegetation removal, movement of vehicles and plant, and the handling of fuels and chemicals. Potential impacts include localised erosion, sedimentation, and the mobilisation of sediments during rainfall events, particularly where ground disturbance occurs.

Localised excavation, ground disturbance, construction bench establishment, access track upgrades and storage of excavated material may temporarily increase the risk of erosion and sediment runoff. If not managed appropriately, there is potential for sediment-laden runoff to impact areas outside the construction areas.

No crossing of permanent waterways would be required as part of the proposed activity. The proposed activity would not substantially change the shape and/or contour of the land within the study area, meaning that flood behaviour would not be affected. As there would be no increase in impervious areas, the amount of runoff (overland flow) would remain unchanged as a result of the proposed activity.

Although deeper excavation (10 – 15 m) in the form of boring would be undertaken as part of the proposed activity, excavation would only occur over a short duration and unlikely to exceed a few days. As such, works are not expected to dewater more than three ML per year of groundwater. and no Water Access Licence (WAL) would be required for the proposed activity.

There is potential for impacts to water quality from accidental spills and leaks of fuels and oils from construction activities entering the environment through soils or surface runoff. For the proposed activity within the impact area at Mount Piper Substation – West, a Neutral or Beneficial Effect (NoRBE) assessment was undertaken (Appendix F) and concluded that the proposed activity would be expected to have a neutral effect on water quality.

Overall, impacts to hydrology and water quality are expected to be minor, temporary and localised and can be adequately managed with the implementation of mitigation measures in Appendix C which includes spill management procedures and erosion and sediment controls.

Operation

The proposed activity is not expected to result in ongoing impacts to hydrology or water quality during operation. The transposition tower works would not alter natural drainage patterns or increase impervious surfaces beyond existing conditions. Routine operation and maintenance activities would not introduce new sources of water pollution or result in any impact to hydrology.

6.4. Ecology

A specialist ecology assessment has been undertaken for the proposed activity. The full Biodiversity Assessment Report (BAR) is provided in Appendix D and informs the impact assessment below.

6.4.1. Methodology

The ecology assessment combined desktop review with targeted field assessments.

Desktop review consisted of searches of the NSW BioNet Atlas of Wildlife (Species sighting search), the Commonwealth EPBC Act Protected Matters Search Tool for Matters of National Environmental Significance, the NSW Plant Community Type (PCT) classification, and the NSW Asset of Intergenerational Significance (AIS) register, undertaken in August 2025 and updated in January 2026 over a 10 km radius around each site. The desktop review identified threatened biodiversity and migratory species with known or predicted occurrences, mapped vegetation, hydrology, and any AIS or Areas of Outstanding Biodiversity Value, and informed survey design.

Field assessments (surveys) were carried out by Niche on 26 August 2025 (Structure 432), 2 September 2025 (Structure 432 and Mount Piper Substation – West), and 2 October 2025 (Structure 356). Surveys across the impact area and adjoining study area confirmed vegetation communities and condition, identify habitat features (hollow-bearing trees, woody debris, burrows, rock overhangs, stick nests), record incidental flora and fauna, search for threatened flora, and assessed aquatic features. No targeted threatened species surveys were undertaken; species with a moderate or higher likelihood of occurrence have been assumed present for the purposes of impact assessment.

6.4.2. Existing environment

The proposed activity is located in the South Eastern Highlands and NSW South Western Slopes bioregions, in a landscape with a long history of disturbance from the existing transmission infrastructure, access tracks, and surrounding agricultural land use. Across the three sites, no Areas of Outstanding Biodiversity Value, no Important Habitat or Biodiversity Values (as defined under the Biodiversity Assessment Method), no AIS under the NPW Act, and no priority weeds or Weeds of National Significance (WONS) were mapped within or adjacent to the impact areas.

The PCTs confirmed through surveys within each impact area and their conditions are summarised in Table 6-2. Threatened species assessed as having a moderate or higher likelihood of occurrence are listed in Table 6-3. The area of native and non-native vegetation within the impact area for each site is summarised in Table 6-4. The remainder of this subsection summarises the site-specific environment by theme, with full details provided in the BAR (Appendix D).

Table 6-2 Plant community types within the proposed impact area (Niche, 2026)

PCT no.	PCT name	Condition	Impact area (ha)	BC Act TEC	EPBC Act TEC
Structure 356					
477	Inland Scribbly Gum – Red Stringybark – Black Cypress Pine – Red Ironbark open forest on sandstone hills in the southern Brigalow Belt South Bioregion and northern NSW South Western Slopes Bioregion	Low	1.06	No	No
477	Inland Scribbly Gum – Red Stringybark – Black Cypress Pine – Red Ironbark	Moderate	0.01	No	No

PCT no.	PCT name	Condition	Impact area (ha)	BC Act TEC	EPBC Act TEC
	open forest on sandstone hills in the southern Brigalow Belt South Bioregion and northern NSW South Western Slopes Bioregion				
477	Inland Scribbly Gum – Red Stringybark – Black Cypress Pine – Red Ironbark open forest on sandstone hills in the southern Brigalow Belt South Bioregion and northern NSW South Western Slopes Bioregion	High	1.21	No	No
Structure 432					
3369	Central Tableland Ranges Peppermint-Gum Grassy Forest	Low	0.70	No	No
3369	Central Tableland Ranges Peppermint-Gum Grassy Forest	Moderate	0.27	No	No
3735	Central Tableland Peppermint Shrub-Grass Forest	Low	1.26	No	No
3735	Central Tableland Peppermint Shrub-Grass Forest	Moderate	0.41	No	No
Mount Piper Substation – West					
3735	Central Tableland Peppermint Shrub-Grass Forest	Low	0.03	No	No
3747	Southern Tableland Western Hills Scribbly Gum Forest	Low	0.55	No	No

Table 6-3 Threatened species with a moderate or higher likelihood of occurrence (Niche, 2026)

Site	Scientific name	Common name	BC Act status	EPBC Act status	Likelihood of occurrence	Assessment outcome
Structure 356 – fauna						
Structure 356	*Ninox connivens*	Barking Owl	Vulnerable	Not listed	Moderate – assumed present	Significant impact unlikely provided mitigation implemented
Structure 356	*Ninox strenua*	Powerful Owl	Vulnerable	Not listed	Moderate – assumed present	Significant impact unlikely provided mitigation implemented
Structure 356	*Melanodryas cucullata cucullata*	South-eastern	Endangered	Endangered	Moderate – assumed present	Significant impact unlikely provided

Site	Scientific name	Common name	BC Act status	EPBC Act status	Likelihood of occurrence	Assessment outcome
		Hooded Robin				mitigation implemented
Structure 356	*Stagonopleura guttata*	Diamond Firetail	Vulnerable	Vulnerable	Moderate – assumed present	Significant impact unlikely provided mitigation implemented
Structure 356	*Phascolarctos cinereus*	Koala	Endangered	Endangered	Moderate – assumed present	Significant impact unlikely provided mitigation implemented
Structure 432 – flora						
Structure 432	*Eucalyptus cannoni*	Capertee Stringybark	Vulnerable	Not listed	Known – two individuals in impact area	Significant impact unlikely provided mitigation implemented
Structure 432 – fauna						
Structure 432	*Heleioporus australiacus*	Giant Burrowing Frog	Vulnerable	Endangered	Moderate – assumed present	Significant impact unlikely provided mitigation implemented
Structure 432	*Phascolarctos cinereus*	Koala	Endangered	Endangered	Moderate – assumed present	Significant impact unlikely provided mitigation implemented
Mount Piper Substation – West						
No threatened flora or fauna species with a moderate or higher likelihood of occurrence were identified at this site.						

Table 6-4 Native and non-native vegetation in the impact area by site (Niche, 2026)

Site	Native vegetation in impact area (ha)	Non-native vegetation in proposed impact area (ha)	Total vegetation in the impact area (ha)
Structure 356	2.28	0.13	2.41
Structure 432	2.65	0.31	2.95

Site	Native vegetation in impact area (ha)	Non-native vegetation in proposed impact area (ha)	Total vegetation in the impact area (ha)
Mount Piper Substation – West	0.60	0.66	1.26
Total (all sites)	**5.53**	**1.10**	**6.62**

Vegetation communities, weeds and habitat features

Structure 356

Native vegetation within the Structure 356 impact area comprises PCT 477 in low, moderate and high condition. PCT 477 is not consistent with a Threatened Ecological Community (TEC) under the BC Act or the EPBC Act. Vegetation communities at this site include structurally diverse forest and grassland habitat. Fourteen hollow-bearing trees (HBTs)[1] were recorded within the impact area, supporting 22 hollows and fissures of varying size. A further two HBTs occur outside the impact area. No stick nests, burrows or rock overhangs were recorded within the impact area No priority weeds or WONs were recorded within the impact area.

Structure 432

Native vegetation within the Structure 432 impact area comprises PCT 3369 and PCT 3735, both in low and moderate condition. Neither PCT is consistent with a TEC under the BC Act or EPBC Act. Forest and grassland habitat is present. Fourteen HBTs were recorded along the access track within the study area but none occur within the impact area. Large amounts of woody debris are present along the access track. One threatened flora species, *Eucalyptus cannoni* (Capertee Stringybark, Vulnerable under the BC Act, not listed under EPBC Act), was recorded within the study area; three individuals were located within the study area, of which two are within the impact area. No priority weeds or WONS were recorded within the impact area.

Mount Piper Substation – West

Native vegetation within the Mount Piper Substation – West impact area comprises PCT 3735 and PCT 3747, both in low condition only. A substantial proportion of the impact area is non-native (exotic) vegetation and sealed road surface. Neither PCT is consistent with a TEC. No HBTs, stick nests, burrows or rock overhangs were recorded within the impact area. No threatened flora and no priority weeds or WONS were recorded within the impact area.

Threatened flora and fauna

Structure 356

Five threatened fauna species (refer to Table 6-3) were assessed as having a moderate likelihood of occurrence. All five fauna species were assumed present for the purposes of impact assessment. No threatened migratory species were identified as likely to occur. No threatened flora were recorded within the impact area.

[1] Hollow-bearing trees are trees containing one or more hollows that provide nesting and shelter habitat for hollow-dependent fauna. The loss of hollow-bearing trees is listed as a Key Threatening Process under the BC Act.

Structure 432

Three threatened fauna species (refer to Table 6-3) were assessed as having a moderate likelihood of occurrence and assumed present. Two individuals of *Eucalyptus cannoni* occur within the impact area. A single wombat burrow was recorded under a tree along the access track, also outside the impact area

Mount Piper Substation – West

No threatened flora or fauna species were assessed as having a moderate or higher likelihood of occurrence.

Aquatic species and communities

Structure 356

Unnamed ephemeral first and second order watercourses occur within the impact area. Field assessments recorded damp soil conditions, indicating intermittent water flow. No Key Fish Habitat is mapped, and no threatened freshwater fish habitat was identified.

Structure 432

An unnamed second order watercourse runs parallel to and north of the access track with a well-vegetated riparian zone (outside the impact area). Two first order watercourses and a small wetland area, vegetated with *Poa siberiana*, intersect the impact area; minimal water was present during field assessment. No Key Fish Habitat is mapped within the impact area. Indicative habitat for the Southern, Purple-spotted Gudgeon is mapped downstream of the second order watercourse but is separated from the impact area by an existing road crossing and an online farm dam, which prevent fish passage upstream.

Mount Piper Substation – West

No natural aquatic habitat is present within the impact area. Drainage lines have been modified with concreted scour protection. Mapped Key Fish Habitat within the study area comprises concreted drainage structures and artificial dams that do not support important habitat for native aquatic species.

6.4.3. Impact assessment

Construction

Direct impacts

The proposed activity would result in full clearing of the impact area with an area of 6.62 ha across the three sites, 5.53 ha native vegetation and 1.10 ha non-native vegetation (refer to Table 6-4). Clearing comprises full clearing within the main construction footprint at each transposition/phase rollover site, and partial clearing (slashing, trimming and removal of small trees) as required along access tracks and within ancillary/laydown areas. These are discussed in further detail below.

Structure 356

Construction at Structure 356 would result in the removal of 2.28 ha native vegetation (PCT 477 in low, moderate and high condition), and the removal of 14 HBTs recorded within the impact area, supporting approximately 19 of the 22 recorded hollows. Two HBTs would be retained where avoidance is feasible.

Loss of HBTs is the principal residual ecological impact at this site and has potential to affect hollow-dependent fauna including the Barking Owl, Powerful Owl and arboreal mammals. Five threatened fauna species (Barking Owl, Powerful Owl, South-eastern Hooded Robin, Diamond Firetail, Koala) are assumed present and may be affected by clearing and habitat loss.

Tests of significance under the BC Act and significant impact criteria assessments under the EPBC Act for all five species concluded that, with the implementation of mitigation measures EC1, EC2 and EC3 in Appendix C, a significant impact on these species is unlikely.

To offset the loss of HBTs, hollow-replacement nestboxes would be installed at a ratio of four nestboxes per hollow removed prior to clearing, with installation and ongoing monitoring of occupancy and condition delivered through the mitigation measure EC7 in Appendix C. Ephemeral watercourses within the impact area would not be directly impacted and standard erosion and sediment control measures would be implemented.

There would be no impacts to the Wombat burrow observed along the access track as it is outside the impact area.

Structure 432

Construction at Structure 432 would result in the removal of 2.64 ha native vegetation (PCT 3369 and PCT 3735, low and moderate condition). No HBTs occur within the impact area. Two of three recorded individuals of *Eucalyptus cannoni* occur within the impact area.

Test of significance under the BC Act concluded that a significant impact on *Eucalyptus cannoni* is unlikely. Impacts to this species will be minimised through the implementation of mitigation measures EC1, EC2 and EC3 provided in Appendix C.

Three threatened fauna species (Giant Burrowing Frog, Koala, South-eastern Hooded Robin) are assumed present. Tests of significance and EPBC Act assessments on these species concluded a significant impact is unlikely with mitigation measures EC2 and EC3 provided in Appendix C.

Two first order watercourses and a small wetland area intersect the impact area. Localised erosion and sedimentation would be managed through EC1 and EC2 in Appendix C. The second order watercourse parallel to the access track would not be directly impacted.

Mount Piper Substation – West

Construction at Mount Piper Substation – West would result in the removal of 0.58 ha native vegetation (PCT 3735 and PCT 3747, low condition), within an already-modified substation environment. No HBTs are present and no threatened flora or fauna species were considered likely to occur. Potential impacts on PCTs are correspondingly low.

No natural aquatic habitat occurs within the impact area. Any potential effect on the modified drainage infrastructure or downstream would be managed through standard pollution and spill control measures EM4 and EM5 in Appendix C.

Indirect impacts

Indirect impacts during construction may include temporary habitat fragmentation, disturbance from noise and lighting, and increased risk of vehicle strike. These would be managed through the mitigation measures in Appendix C.

Biosecurity

Although no priority weeds or WONS were recorded within the impact areas, vehicle, plant and equipment movement has the potential to introduce or spread weed species. Vehicle and equipment wash-down procedures and other biosecurity and hygiene controls (Appendix C) would be implemented prior to and during construction at all three sites.

Operation

Operational impacts are expected to be minimal. The completed transposition towers and conductor rearrangement for Structures 356 and 432 would require the existing 70 m easement to be widened to 120 m. Mount Piper Substation – West is a phase rollover site and during operation would occupy a small permanent footprint within an already-modified easement. Vegetation clearing required during construction and to allow for the operational easement requirements would be subject to ongoing routine maintenance which would include some vegetation clearing. This would continue under Transgrid's standard easement management practices. Residual impacts comprise the permanent loss of small areas of native vegetation and the loss of 12 HBTs at Structure 356 (offset by nestbox installation as described above).

Given the availability of equivalent or better-condition adjacent habitat, the localised nature of impacts, and the absence of any TEC, the operation of the proposed activity is unlikely to adversely affect threatened species populations or broader ecological processes at any of the three sites.

With implementation of the mitigation measures in Appendix C, construction and operational impacts on ecology are not considered likely to be significant under the BC Act or EPBC Act.

6.5. Aboriginal heritage

A specialist Aboriginal heritage assessment has been prepared for the proposed activity. The proposed activity is not a low-impact activity as defined under Part 5, Division 2, Section 58 of the *National Parks and Wildlife Regulation 2019*, and an Aboriginal Objects Due Diligence Assessment (AODD) was therefore required. The full AODD is provided in Appendix E and informs the impact assessment below.

6.5.1. Methodology

The AODD has been prepared in accordance with both *the Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (DECCW, 2010) and Transgrid's *Aboriginal Cultural Heritage Due Diligence Assessment Procedure* (Transgrid, 2025). It included a review of the proposed activity, relevant heritage database searches, classification of the impact areas, and site inspection by a heritage specialist with participation from Bathurst Local Aboriginal Land Council (LALC).

6.5.2. Existing environment

All three impact areas lie within the traditional lands of the Wiradjuri People, on Country managed by the Bathurst LALC. All three impact areas are covered by Native Title claim NC2018/002 (Warrabinga-Wiradjuri #7), which was accepted for registration on 22 November 2018.

Aboriginal Heritage Information Management Systems (AHIMS) basic searches were undertaken on 23 May 2025, with an updated search on 13 May 2026 for each of the impact areas. No Aboriginal heritage items were identified within 200 m of the three impact areas.

Searches of the AHIP public register (5 August 2025), the World, National, Commonwealth and State Heritage registers and inventories, the Mid-Western Regional LEP and Lithgow City LEP identified no relevant Aboriginal heritage items within or adjacent to any impact area.

Given that each impact area is within 200 m of water, which is a landscape feature identified under the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW (*DECCW, 2010) and *Aboriginal Cultural Heritage Due Diligence Assessment Procedure* (Transgrid, 2025) as having potential for Aboriginal objects, site inspections were undertaken. These occurred on 2 September 2025 for Structure 432 and Mount Piper Substation – West, and on 2 October 2025 for Structure 356.

The site inspections found no Aboriginal objects or Potential Archaeological Deposits (PADs) present within the three impact areas. All three impact areas were assessed as having low potential to contain surface or subsurface Aboriginal heritage. Further detail is provided in the AODD in Appendix E.

6.5.3. Impact assessment

Construction

Construction of the proposed activity involves vegetation clearing, earthworks and access track upgrades that would disturb the ground surface.

On the basis of the AODD findings, no Aboriginal heritage objects would be impacted by the proposed activity, and no further investigation or impact assessment is required prior to works commencing at any of the three sites. Works would proceed with caution and in accordance with the unexpected finds provided in Appendix C. Should earthworks be required outside the assessed impact areas, further heritage assessment would be undertaken before those works commence.

Operation

Operation would not require ground disturbance beyond that established during construction. Routine operation and maintenance would be confined to existing disturbed areas within the widened easement and along access tracks and would not result in any impact to Aboriginal heritage.

6.6. Historic heritage

6.6.1. Existing environment

Historic heritage in the locality reflects rural settlement and agricultural development. A search of the Australian Heritage Database and State Heritage Inventory, undertaken in March 2026, identified no historic heritage items within the impact area of Structures 356, 432 or Mount Piper Substation - West. Searches were also conducted on 5 August 2025 of the following heritage databases:

- World Heritage Database
- Commonwealth Heritage List
- National Heritage List
- State Heritage Register
- State Heritage Inventory
- the Mid-Western Regional LEP
- the Lithgow City LEP.

The nearest heritage item is 1.2 km south of the impact area for Structure 432 and outside the study area. No heritage items were identified on any of these registers within proximity to any of the impact areas.

6.6.2. Impact assessment

Construction

No historic heritage items are located within the impact area or the wider study area. Given the separation distances to the nearest listed items, and the localised and temporary nature of the works, construction is not expected to impact historic heritage values.

Operation

The proposed activity is not expected to result in any operational impacts on historic heritage.

6.7. Noise and vibration

6.7.1. Existing environment

The existing noise environment associated with the impact areas at Structures 356 and 432 is typical of a rural area with densely vegetated areas including Dungeree State forest and some agricultural land uses. Minor noise sources within the impact areas include intermittent traffic noise from nearby minor roads and access tracks, as well as intermittent noise from the use of vehicles and machinery associated with agricultural activities.

The existing noise environment associated with the impact area at Mount Piper Substation - West is expected to be higher than at Structures 356 and 432 due to surrounding industrial land uses including from the neighbouring Mount Piper Substation – West and nearby Mount Piper Power Station.

Noise-sensitive receivers in the locality of all three impact areas are limited and mostly consist of rural residential dwellings and community facilities. A review of satellite imagery in February 2026 identified the nearest potential noise-sensitive residential receivers as follows (Figure B-5 and Figure B-6 in Appendix B):

- a presumed residential property on an unsealed track off Dolomite Road, about 700 m east of Structure 356
- a presumed residential property at 262 Mount Vincent Road, about 750 m northeast of Structure 432
- a presumed residential property at 62 Liddle Street, about 2 km from Mount Piper Substation - West.

Community facilities identified within the study area of Structure 432 include:

- a Rural Fire Service shed and neighbourhood safe space at 29 Mount Vincent Road, located 165 m southwest of the access track
- a former public school (‘Running Stream Public School’) at 23 Mount Vincent Road, located 260 m southwest of the access track.

These sites are unlikely to be used regularly.

No operating schools, childcare centres, hospitals or nursing homes have been identified within 1 km of the proposed activity.

6.7.2. Impact assessment

Construction

Construction activities, including construction traffic movements, would occur mainly during standard daytime construction hours and are expected to generate localised, temporary noise and minor vibrations.

However, due to likely irregular use of community facilities, the nearest sensitive receivers located outside of study areas and there are no nearby historic heritage assets, noise and vibration impacts are expected to be temporary and minor.

Construction noise would be managed in accordance with the mitigation measures in Appendix C.

Operation

The proposed activity would not introduce any substantial new operational noise source. The transposition towers are not expected to generate noticeable noise under normal operating conditions, and no ongoing vibration impacts are not expected.

Due to the distance of noise-sensitive receivers from the infrastructure, no operational noise impacts are expected.

6.8. Traffic and access

6.8.1. Existing environment

The proposed activity would be accessed via established access tracks and the surrounding local and regional road network. Named roads within the study area are summarised in Table 6-5 below.

Table 6-5 Named roads within the study area

Name	Classification
Structure 356	
Dolomite Road	Local
Walkers Lane	Local
Structure 432	
Castlereagh Highway	State
Mount Vincent Road	Local
Mount Piper Substation - West	
No named roads identified within the study area of Mount Piper Substation – West.	

Roads within the study area at all three sites are generally low-volume roads servicing rural properties, electricity infrastructure and/or local industry. Existing access tracks are present at all three sites and are used for routine inspection and maintenance of transmission infrastructure.

There are no schools, businesses or other sensitive land uses that currently have direct access within or near the impact area. Access to nearby residences and rural properties is provided by the existing local road network. Parking is not formalised at the sites and is generally limited to existing roadside areas and access tracks associated with maintenance activities.

6.8.2. Impact assessment

Construction

Construction would result in a temporary increase in vehicle movements associated with workforce access and the delivery of plant, equipment and materials. Vehicle movements would comprise light vehicles and a limited number of heavy vehicles required for delivery of some plant, materials and equipment.

Access would be via the existing local and regional road network and established access tracks, including upgraded access tracks. The proposed activity would upgrade about 2.25 km of existing access tracks for impact areas associated with Structures 356, 432 and Mount Piper Substation - West. No new access tracks, watercourse crossings, road upgrades or intersection upgrades are anticipated.

Access to Structure 356 would be via Tongbong Road and Dolomite Road, both of which are local unsealed roads. From the north, Dolomite Road provides connection to the existing L-shaped access track leading to the structure. Walkers Lane is not expected to be used for access.

Access to Structure 432 would be via Castlereagh Highway (B55), a State road, followed by Mount Vincent Road, which is a sealed local road. The access track connects to Mount Vincent Road, travelling from west to east towards structure 432. Other roads in the study area include several unnamed unsealed roads that are presumed to lead to private properties and bushland, however, these would not be used for access.

Access to Mount Piper Substation - West would be via Boulder Road, which is a sealed local road that is connected to an existing network of unnamed local roads that traverse through and around the Mount Piper industrial and energy precinct.

No temporary or permanent road or lane closures are expected. Access to nearby residences, rural properties and businesses would be maintained during construction. Given the low existing traffic volumes and established access arrangements, the temporary increase in construction traffic is not expected to impact the safety or operation of the surrounding road network.

Construction workers would park their vehicles within designated work areas or existing disturbed areas, and no additional parking provision outside the construction areas shown in Figure 3-2 to Figure 3-4 would be required.

Construction traffic and access impacts would be temporary, localised and minor, and adequately managed by implementing the mitigation measures detailed in Appendix C.

Operation

During operation, traffic generation would be limited to periodic inspection and maintenance activities, consistent with the existing operational levels.

No road upgrades ongoing access upgrades or additional parking would be required during operation. There would be no ongoing impact to the surrounding road network.

6.9. Air quality

6.9.1. Existing environment

Structures 356 and 432 impact areas are in a mainly rural and vegetated setting with limited nearby development. Air quality in the locality is expected to be typical of a rural environment, with few local emission sources.

Mount Piper Substation - West impact area is also located in a rural setting, but within a broader industrial and energy precinct associated with the Mount Piper Power Station and related infrastructure. Air quality in this area is likely to be influenced by surrounding industrial activities, although regional air quality is still generally good according to Air Quality NSW.

Potential sources of air emissions in the locality include smoke from controlled burns or bushfire, dust from vehicle use on unsealed roads and exposed ground surfaces, and vehicle emissions. A review of Air Quality NSW information indicates that air quality across the wider Central Tablelands is generally classified as good to fair.

A desktop search of the National Pollutant Inventory undertaken in March 2026 identified two registered facilities within 1 km of Mount Piper Substation - West impact area:

- Mount Piper Power Station
- Springvale Mount Piper Power Station Water Treatment Facility.

No registered pollutant inventory sites were identified within 1 km of the Structures 356 or 432 impact areas.

6.9.2. Impact assessment

Construction

Construction would have the potential to temporarily affect local air quality through dust generated by vegetation clearing, earthworks and vehicle movements on unsealed surfaces, and exhaust emissions from construction plant and vehicles.

Given the rural setting, separation distances to nearby receivers, and the limited scale and duration of works, construction air quality impacts are expected to be localised, temporary and minor, and would be adequately managed by mitigation measures identified in Appendix C.

Operation

The proposed activity is not expected to result in adverse impact on air quality. Aside from minor operational air emissions generated from maintenance activities, the transposition infrastructure itself would produce no air emissions during operation.

6.10. Hazards and risks

6.10.1. Existing environment

The proposed activity is located within areas containing existing electricity transmission infrastructure and access tracks in rural and industrial settings. The main hazards relevant to the proposed activity are electric and magnetic fields (EMF) associated with the existing transmission line and bushfire risk.

Electric and Magnetic Fields (EMF)

Electric and Magnetic Fields (EMF) are part of the natural environment and are also produced wherever electricity or electrical equipment is used. Electric fields are stronger with higher voltage and are greatest closest to wires and equipment, decreasing rapidly with distance. Most materials can block or reduce electric fields. Magnetic fields are also strongest near wires and electrical equipment and diminish quickly with distance, however, most materials do not shield magnetic fields.

Transgrid designs and maintains its assets in accordance with relevant Australian and International standards for EMF. In particular, Transgrid follows the *International Commission on Non-Ionizing Radiation Protection* (ICNIRP) 2010 Guidelines for limiting exposure to EMF. The Australian Radiation Protection and Nuclear Safety Agency (ARPANSA), the federal agency responsible for EMF-related human and environmental health, has adopted the ICNIRP guidelines which set exposure limits for various types of electrical equipment and the nature of the exposure.

Line 5A3/5A5 and Mount Piper Substation are existing sources of EMF.

Bushfire

Land prone to bushfire is categorised into 4 categories based on its risk of ignition and sustaining a fire:

- Category 0 – Represents a 100 m buffer around Category 1 to Category 3 vegetation.
- Category 1 – Highest risk of bush fire. Vegetation category consists of areas of forest, woodlands, heaths (tall and short), forested wetlands and timber plantations.
- Category 2 – Lower bush fire risk than Category 1 and Category 3, but higher than the excluded areas. Vegetation category consists of rainforests and lower risk vegetation parcels.
- Category 3 – Medium bush fire risk vegetation (higher than Category 2 and the excluded areas, but lower than Category 1). Vegetation category consists of grasslands, freshwater wetlands, semi-arid woodlands, alpine complex and arid shrublands.

A desktop review of NSW Rural Fire Service's bush fire prone land mapping on 30 March 2026 indicates the following (Figure B-5 to B-6 in Appendix B):

- Structure 356 impact area is in bushfire prone land mapped as Category 0, but immediately next to areas mapped as Category 1 and 2.
- Structure 432 impact area is in bushfire prone land mapped as Category 2, with Category 0 and 1 mapped in the wider area.
- Mount Piper Substation - West impact area is in bushfire prone land mapped as Category 0, with nearby areas mapped as Category 3.

The impact area associated with Mount Piper Substation – West is largely located in the existing transmission easement, where routine vegetation management maintains low fuel loads and reduces the effective bushfire hazard compared to mapped categories. The impact areas of Structure 356 and Structure 432 are partly located outside the existing easement, on land not currently managed to reduce fuel loads and associated bushfire risk. The landscape surrounding the impact areas of all structures contain areas representing higher risk for bush fire.

6.10.2. Impact assessment

Construction

EMF

During construction, EMF levels are unlikely to significantly change from the existing levels.

Bushfire

Construction would have the potential to increase bushfire ignition risk through the use of plant and equipment, vehicle movements and any hot works, particularly at Structures 356 and 432 where there is surrounding vegetation. The proposed activity would widen the easement around these structures. In the widened easement areas, vegetation would be cleared to maintain Transgrid's minimum clearance requirements. Bushfire risks would be managed in accordance with Transgrid's fire risk and hot works procedures and the mitigation measures detailed in Appendix C.

Operation

EMF

The proposed activity is not expected to result in a material change to existing EMF levels. Any localised change in the immediate vicinity of the infrastructure would remain consistent with the operation of the existing transmission line. All design would be undertaken in accordance with the relevant ICNIRP guidelines adopted by ARPANSA. Operational EMF impacts are not expected.

Bushfire

Bushfire risk is not expected to increase at Structures 356 and 432, as the easement would be widened and low fuel loads would be maintained in accordance with Transgrid's environmental management system. Similarly, bushfire risk is not expected to change at Mount Piper Substation - West.

The proposed activity is not expected to increase bushfire risk to surrounding land. Residual bushfire risk during operation is therefore considered to be low given the sufficient separation distances to classified vegetation is maintained for all structures.

Operation and maintenance of the transmission line would continue to be undertaken in accordance with Transgrid's Environmental Management System and mitigation measures provided in Appendix C.

6.11. Visual amenity

6.11.1. Existing environment

The visual character of Structures 356 and 432 are mainly within rural environments characterised by agricultural land uses, remnant native vegetation, and undulating terrain. The existing transmission line (Line 5A3/5A5), comprising distinct associated transposition towers and cleared easements, form an established visual element within the landscape. Visual receivers in the vicinity are limited and generally comprise dispersed rural dwellings and landholders, with views of the transmission line easement partially screened by vegetation, topography, agricultural-related infrastructure and buildings (refer to Figure B-5 & Figure B-6 in Appendix B).

As noted in Section 6.7, the nearest residential receiver is located on an unsealed track off Dolomite Road about 700 m east of Structure 356. Given the presence of existing transmission infrastructure and limited nearby receivers, visual sensitivity is considered low.

The visual environment associated with Mount Piper Substation – West is dominated by large-scale energy infrastructure, including Mount Piper Power Station and associated transmission infrastructure. The nearest residential receiver is located about 2 km from Mount Piper Substation - West at 62 Liddle Street. Given the existing industrial and energy infrastructure setting, visual sensitivity is considered low.

6.11.2. Impact assessment

Construction

During construction, temporary visual impacts would occur because of the presence of construction plant, equipment, materials, cranes, and elevated work platforms at each work site. Other minor visual impacts would also occur from vegetation removal. These impacts would be most noticeable at Structures 356 and 432, given the rural visual setting and the widening of the existing easement.

At these locations, visual impacts would be localised, temporary and minor at the nearest sensitive receiver about 700 m away. Construction activities would be confined to the construction areas and access tracks shown on Figure 3-2 to Figure 3-4 and would be screened by existing vegetation and landform.

At Mount Piper Substation - West, construction works would occur within the existing industrial environment with low visual sensitivity. Any temporary visual impacts associated with construction activities are not expected to result in noticeable changes to visual amenity. Overall, construction-related visual impacts would be temporary, localised and minor. Potential impacts would be managed by the mitigation measures in Appendix C.

Operation

Following completion of construction, the proposed activity is not expected to change the long-term visual character of the locality. Structures 356, 432 and Mount Piper Substation - West would remain visually consistent the substation and other transmission infrastructure. The appearance and height of Structures 356 and 432 would change, primarily due to the introduction of 55 m steel poles; however, the nearest sensitive receiver located approximately 700 m from Structure 356 and 750 m from Structure 432 (and outside the study areas) means that the visual impact remains minor. Vegetation clearing would also have an ongoing visual impact, particularly within the continued vegetation maintenance within the easement. Due to the distance to the nearest sensitive receiver, the impact remains minor.

6.12. Waste

6.12.1. Existing environment

Waste generated by the existing transmission infrastructure is limited and generally associated with routine inspection, maintenance and vegetation management activities. This may include small quantities of replaced infrastructure components, green waste and general maintenance waste.

6.12.2. Impact assessment

Construction

Waste material likely to be generated from construction of the proposed activity includes:

- general construction waste such as packaging and excess construction material
- excess spoil (may contain localised contamination)
- green waste from vegetation trimming
- waste oils, greases and lubricants from the maintenance of plant and equipment
- domestic and putrescible waste (including food scraps, bottles, cans and paper)
- waste from redundant conductors and fittings.

All waste generated during construction would be reused onsite if appropriate (including spoil and green waste), or otherwise classified, removed, transported and disposed from the site in accordance with the *Waste Classification Guidelines* (EPA, 2014), to avoid potential issues associated with odour generation, decreased visual amenity and animal/pest issues. Appropriately licenced local facilities would be used as much as possible for efficient waste disposal.

Clean green waste from vegetation trimming and removal would be chipped, mulched and reused on site. Additionally, where applicable, suitable vegetation would be retained for habitat during site rehabilitation. Offsite beneficial reuse would be in accordance with the *Mulch Order 2016* (NSW EPA 2026), must pose minimal risk of the presence of physical and chemical contaminants and be in compliance with the *Biosecurity Act 2015*, or, sent to a suitably licenced facility. Weed contaminated green waste would be disposed of offsite at a licenced waste management facility. Spoil excavated from the vicinity of existing structures may contain potentially contaminated soil due to potential leaching from grout and concrete used as part of the existing structure foundations. Where contaminated spoil material is encountered (including unexpected contamination) it would be appropriately contained, sampled, tested and disposed of at a suitable licensed waste management facility (in accordance with the *Waste Classification Guidelines* (EPA, 2014) or managed in situ, only where there is no unacceptable risk to human health or ecological values.

If not managed correctly, there is potential for waste generated during construction to result in litter, pollution or harm to the surrounding environment. Waste generation and disposal would be managed in accordance with the mitigation measures in Appendix C and include measures for appropriate storage, handling, reuse, recycling and lawful disposal.

Provided the mitigation measures in Appendix C are implemented, waste impacts are expected to be minor, temporary and localised.

Operation

The proposed activity is not expected to change the existing types and quantity of waste generated as part of the ongoing operation of Line 5A3/5A5.

6.13. Social and economic considerations

6.13.1. Existing environment

The proposed activity is within the Central West region of NSW, spanning the Mid-Western Regional and Lithgow City LGAs.

According to census data (Australian Bureau of Statistics, 2024a), the Mid-Western Regional LGA has a population of 26,214 people and a median age of 41.7 years old. Given that the LGA is 8,752 km² in area, the population density sits close to 3/km². Across the region, mining (15.9 per cent), health care and social assistance (11.1 per cent), and retail trade (9.2 per cent) are the largest industries of employment, with unemployment sitting at 4 per cent.

Lithgow City is a slightly smaller LGA, with a population of 20,740 people. Additionally, the median age is 47.2 years old, the area is 4,551 km², and the population density is about 4.6/km². In the LGA, health care and social assistance (12.7 per cent), public administration and safety (10.2 per cent), and retail trade (9per cent) are the largest employment industries, with unemployment being 5.5 per cent (Australian Bureau of Statistics, 2024b).

Line 5A3/5A5 forms part of the existing electricity transmission network that supports the National Electricity Market.

6.13.2. Impact assessment

Construction

Short-term social impacts during construction may include minor increases in noise, dust, and construction traffic, and temporary impacts to social amenity specifically due to the presence of construction personnel and equipment. However, property access would be maintained and no residential or commercial access would be impacted. Potential impacts resulting from noise and vibration, traffic and access, and visual amenity are discussed in sections 6.7.2, 6.8.2 and 6.11.2.

Construction may result in minor positive economic effects through short-term employment and local expenditure by construction personnel. Overall, construction-related social and economic impacts are expected to be minor, temporary and localised, and would be managed by the implementation of mitigation measures outlined in Appendix C for noise and vibration, traffic and access and visual amenity.

Operation

The proposed activity would not cause adverse social or economic impacts during operation.

The proposed activity would lead to long-term positive outcomes by supporting the reliable operation of the transmission network and facilitating renewable energy integration from the CWOREZ.

6.14. Cumulative impacts

6.14.1. Existing environment

A review of the NSW Major Projects Portal was undertaken in March 2026 to identify State Significant Development (SSD) and State Significant Infrastructure (SSI) projects within or near the study area. These include:

- The Mount Piper Battery Energy Storage System (BESS) - an SSD located adjacent to the Mount Piper Power Station within the Lithgow City LGA. The project involves the development of a large-scale battery energy storage facility and has received planning approval through the NSW planning system. The BESS project is proposed to be constructed about 500 m from Mount Piper Substation - West. Construction is planned to commence in 2027, delivered in five phases across 18-24 months.

- The Mount Piper to Wallerawang Transmission Line Project - an SSI project involving the development of a new 330 kV transmission line between the Mount Piper and Wallerawang substations. The project is currently undergoing assessment by DPHI and intersects the broader Lithgow region. The project would involve augmentation at the Mount Piper Substation which is adjacent to the Mount Piper Substation - West impact area. Construction is planned to commence in late 2026.
- The Ben Bullen Wind Farm - an SSD project, requiring the construction, operation, and decommissioning of a wind farm with an estimated capacity of up to 500 megawatts, including up to 64 wind turbines, a BESS, and associated infrastructure. The project is currently in the preparation of an Environmental Impact Statement, with Secretary's Environmental Assessment Requirements issued by the DPHI.

No other SSD or SSI projects were identified on the Major Projects Portal as being located near Structures 356 or 432, or within the Mid-Western Regional LGA at the time of this assessment.

6.14.2. Impact assessment

Cumulative impacts are incremental environmental impacts resulting from past, present and reasonably foreseeable future actions. While impacts may be minor in isolation, they can become significant when considered together.

The assessment of cumulative impacts focused on the interactions between the proposed activity and other nearby projects, particularly when construction or operational periods overlap.

Construction

The proposed activity involves short-duration, localised construction works at three discrete sites, each of which would be constructed progressively rather than concurrently.

There is potential for some overlap in construction timeframes for the proposed activity at Mount Piper Substation - West with other energy-related projects, including the Mount Piper BESS and the Mount Piper to Wallerawang Transmission Line Project. However, construction works for the proposed activity would occur within ETMHC-owned land, and be limited in scale and duration. As such, any cumulative construction impacts, such as temporary increases in traffic movements, noise or visual disturbance, would be minor and localised and temporary.

No major projects were identified in close proximity to Structures 356 and 432 impact areas that are likely to overlap with construction activities. The rural setting and low density of development in these areas further reduces the likelihood of cumulative impacts arising from concurrent construction activities.

Overall, given the local scale, limited footprint, temporary nature and short duration of the proposed activity, cumulative construction impacts with other approved or proposed projects are expected to be minor, temporary and localised.

Operation

No adverse cumulative impacts are anticipated during operation. Operational activities would be limited to routine maintenance within the easement and access tracks. Accordingly, cumulative operational impacts are not expected.

7. Consideration of statutory factors

7.1. Section 5.5 of the EP&A Act

Under Section 5.5 of the EP&A Act, the determining authority (being Transgrid) has a duty to consider the effect of the proposed activity on the environment and the effects on any wilderness areas. Table 7-1 provides a summary of how each factor has been considered.

Table 7-1. Consideration of Section 5.5 of the EP&A Act

Factor	Comment
5.5 (1). Examine and take into account in a manner proportionate to the nature and risk of the activity all matters affecting or likely to affect the environment by reason of that activity.	All potential environmental impacts have been considered and assessed in Section 6.
5.5 (3). Consider the effect of an activity on any wilderness area (within the meaning of the *Wilderness Act 1987*) in the locality in which the activity is intended to be carried on.	The proposed activity is not within a mapped wilderness area. As such, the proposed activity would not affect any wilderness areas.

7.2. Section 171 of the EP&A Regulation

The *Guidelines for Division 5.1 assessments* and Section 171(2) of the EP&A Regulation details environmental factors that must be taken into account when considering the likely impact of an activity on the environment. Table 7-2 provides a summary on how each environmental factor has been considered.

Table 7-2. Consideration of Section 171(2) factors

Factor	Potential impact
(a) any environmental impact on a community.	No community impacts are expected. The proposed activity would not cause any significant adverse impacts associated with land use, noise, traffic and access, air quality, electromagnetic force (EMF) exposure or to the economic environment, due to the scale of the proposed works and the location of construction work sites from receivers. Any impacts would be limited to the duration of construction only and are discussed in sections 6.1, 6.7, 6.8, 6.9, and 6.10. While new structures up to 55 m high would be installed around existing transmission line structures, these are viewed in the context of the existing infrastructure and not near any residential receivers or public land, as discussed in Section 6.11. Similarly, vegetation removal associated with widening the existing easement from 70 m to 120 m around the transposition sites would not be visible to any receivers, also discussed in Section 6.11.

Factor	Potential impact
(b) any transformation of a locality.	The proposed activity is not expected to transform a locality and would not change the overall use and amenity of the locality. Impacts resulting from the proposed activity are discussed in sections 6.1 and 6.11, and would be localised and minor in nature.
(c) any environmental impact on the ecosystems of the locality.	The proposed activity would not have a significant impact on the ecosystems of the locality (refer to Section 6.4 and Appendix D and would remove up to 5.5 hectares of native vegetation and up to 14 hollow bearing trees within the impact area.
(d) any reduction of the aesthetic, recreational, scientific or other environmental quality.	The proposed activity is not expected to reduce the aesthetic, recreational or scientific values of the landscape during construction or operation.
(e) any effect on a locality, place or building having aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific or social significance or other special value for present or future generations.	The proposed activity would not impact a locality, place or building that has aesthetic, cultural, historical, scientific or social significance, or other special value for present or future generations (refer also to sections 6.5, 6.6 and Appendix E).
(f) any impact on the habitat of protected animals (within the meaning of the *Biodiversity Conservation Act 2016*).	Impacts on flora and fauna have been assessed in Section 6.4, associated with the removal of 5.5 hectares of native vegetation however the proposed activity would not have a significant impact on the habitat of protected animals (refer to Section 6.4 and Appendix D. Implementation of mitigation measures to avoid and minimise impacts to habitat of protected animals are included in Appendix C.
(g) any endangering of any species of animal, plant or other form of life, whether living on land, in water or in the air.	The proposed activity would not endanger any species of animal, plant or other form of life, whether living on land, in water or in the air. Section 6.4 and Appendix D confirm that impacts from the proposed activity would not be significant.
(h) any long-term effects on the environment.	The proposed activity would result in some long-term effects to the environment due to native vegetation removal within the impact area however this would not have a significant impact (refer to Section 6.4 and Appendix D).
(i) any degradation of the quality of the environment.	Construction activities have potential to degrade the quality of the environment (land use, soils, water, noise, air and waste), however, potential impacts would be minor and temporary in nature (as discussed in sections 6.1, 6.2, 6.3, 6.7, 6.9, and 6.12) and would be managed by implementing the mitigation measures in Appendix C.
(j) any risk to the safety of the environment.	The proposed activity is not expected to result in any increase in risk to the safety of the environment above existing levels. This includes risks associated with bushfire which would be managed through easement distances and EMF

Factor	Potential impact
	which would not be increased during operation (refer to Section 6.10).
(k) any reduction in the range of beneficial uses of the environment.	There would be no long-term reduction in the range of beneficial uses of the surrounding environment as a result of the proposed activity.
(l) any pollution of the environment.	During construction, potential pollution may occur from noise, dust, vehicle/plant emissions and accidental oil and chemical spills. These impacts would be temporary and minor in nature and managed through the implementation of appropriate mitigation measures in Appendix C. In the long term, there would be no increase in pollution as a result of the proposed activity (refer to sections 6.7, 6.9, and 6.12).
(m) any environmental problems associated with the disposal of waste.	All waste materials generated during construction would be reused where possible, recycled, or disposed of in accordance with the Waste Classification Guidelines (NSW EPA, 2014) at a facility that can lawfully accept the waste. Providing waste is managed in accordance with the mitigation measures in Appendix C, no environmental problems from the disposal of waste are anticipated due to the proposed activity (refer to Section 6.12).
(n) any increased demands on resources (natural or otherwise) that are, or are likely to become, in short supply.	The proposed activity would require the necessary use of widely available resources and construction materials which are not considered in short supply. Where possible the proposed activity would reuse materials (refer to Section 6.12).
(o) any cumulative environmental effect with other existing or likely future activities.	As identified in Section 6.14, there is potential for minor cumulative impacts to result from overlapping energy-related development activities around Mount Piper Substation – West. Given the short-term and small-scale nature of the works at Mount Piper Substation - West, cumulative impacts are not expected to be significant. No cumulative impacts are likely to arise with works at Structure 356 and Structure 432.
(p) any impact on coastal processes and coastal hazards, including those under projected climate change conditions.	The proposed activity is not located within a coastal area and as such, would not affect any coastal processes and coastal hazards, including those under projected climate change conditions.
(q) applicable local strategic planning statements, regional strategic plans or district strategic plans made under the Act, Division 3.1.	Relevant strategic plans have been identified in Section 2.2. The proposed activity is consistent with the plans and would deliver on the objectives of local, district and State strategies for energy supply in NSW.
(r) other relevant environmental factors.	All other relevant environmental factors have been considered and assessed in Section 6 of this REF.

7.3. Section 171A of the EP&A Regulation

Section 171A of the EP&A Regulation outlines environmental matters that must be taken into account when considering the likely impact of a proposed activity within a regulated catchment (being Sydney Drinking Water Catchment, Sydney Harbour Catchment, Georges River Catchment and Hawkesbury-Nepean Catchment).

Mount Piper Substation - West impact area is the only site mapped within the Sydney Drinking Water Catchment. Table 7-3 provides a summary of how each environmental matter has been considered.

Table 7-3. Consideration of Section 171A matters

Matter	Comment
State Environmental Planning Policy (Biodiversity and Conservation) 2021	
6.6 Water quality and quantity (1)(a) whether the development will have a neutral or beneficial effect on the quality of water entering a waterway,	Clause (3) of Section 6.6 of the Biodiversity and Conservation SEPP states that clause (1)(a) does not apply for development on land within the Sydney Drinking Water Catchment. Structures 356 and 432 are not mapped within the Sydney Drinking Water Catchment. A Neutral or Beneficial Effect (NorBE) assessment has therefore been undertaken for these works and is provided in Appendix F. The assessment concluded that, with the implementation of the proposed safeguards and mitigation measures, the activity is likely to have a neutral or beneficial effect on water quality.
(b) whether the development will have an adverse impact on water flow in a natural waterbody,	There are no instream works required as part of the proposed activity so there would be no adverse impacts on water flow in a natural water body (refer to Section 6.3).
(c) whether the development will increase the amount of stormwater run-off from a site,	The proposed activity would not increase the amount of stormwater runoff from the impact area because there is no increase in impervious area resulting from the proposed activity (refer Section 6.3).
(d) whether the development will incorporate on-site stormwater retention, infiltration or reuse,	The proposed activity does not require on-site stormwater retention, infiltration or reuse.
(e) the impact of the development on the level and quality of the water table,	The duration of excavation and dewatering within the impact area is estimated to occur over a few days so the proposed activity would not impact the level and quality of the water table (refer Section 6.3).
(f) the cumulative environmental impact of the development on the regulated catchment,	The impacts from the proposed activity are minor and temporary and would be managed through the implementation of mitigation measures in Appendix C so there would be no cumulative environmental impact on the regulated catchment.

Matter	Comment
(g) whether the development makes adequate provision to protect the quality and quantity of ground water	The mitigation measures in Appendix C would be implemented to ensure protection of groundwater quality and quantity.
6.7 Aquatic ecology (a) whether the development will have a direct, indirect or cumulative adverse impact on terrestrial, aquatic or migratory animals or vegetation,	The proposed activity does not directly interact with any waterway or riparian habitat, and no impact on aquatic ecology is anticipated (refer Section 6.4).
(b) whether the development involves the clearing of riparian vegetation and, if so, whether the development will require— (i) a controlled activity approval under the *Water Management Act 2000*, or (ii) a permit under the *Fisheries Management Act 1994,*	The proposed activity would minimise disturbance to native vegetation, including instream, fringing, and riparian areas, wherever possible. The proposed activity would avoid impacts to the concrete watercourse mapped as Key Fish Habitat to the east of the impact area for Mount Piper Substation - West.
(c) whether the development will minimise or avoid— (i) the erosion of land abutting a natural waterbody, or (ii) the sedimentation of a natural waterbody,	The proposed activity would minimise and avoid the erosion and sedimentation of watercourses through the implementation of mitigation measures HW1 to HW3 in Appendix C.
(d) whether the development will have an adverse impact on wetlands that are not in the coastal wetlands and littoral rainforests area,	No wetlands would be impacted by the proposed activity.
(e) whether the development includes adequate safeguards and rehabilitation measures to protect aquatic ecology,	The proposed activity includes adequate safeguards and mitigation measures to protect aquatic ecology.
(f) if the development site adjoins a natural waterbody—whether additional measures are required to ensure a neutral or beneficial effect on the water quality of the waterbody.	The proposed activity does not adjoin a natural waterbody.
6.8 Flooding (1) the likely impact of the development on periodic flooding that benefits wetlands and other riverine ecosystems	The proposed activity would not affect flooding that results in release of pollutants or affect floodwaters into wetlands and other riverine ecosystems.
6.9 Recreation and public access (1)(a) the likely impact of the development on recreational land uses in the regulated catchment, and	The proposed activity is not expected to impact on recreational land use within the Sydney Drinking Water Catchment or any other regulated catchment.
(b) whether the development will maintain or improve public access to and around foreshores without adverse impact on natural waterbodies, watercourses, wetlands or riparian vegetation.	No part of the proposed activity is within a foreshore area, and no impact on natural waterbodies, watercourses, wetlands or riparian habitats would result from the proposed activity.
EP&A Regulation (for works within Sydney Drinking Water Catchment)	
Section 171A(3) (a)(i) will have a neutral or beneficial effect on water quality, and	NorBE assessment has been undertaken for the proposed activity (refer Appendix F). The proposed activity is expected to have a neutral

Matter	Comment
(ii) is consistent with the NorBE Guideline within the meaning of *State Environmental Planning Policy (Biodiversity and Conservation) 2021*, Part 6.5	effect on water quality and is consistent with the NorBE Guideline.

7.4. Matters of National Environmental Significance (MNES) under the EPBC Act

Under the EPBC Act, Transgrid is required to consider matters of national environmental significance (MNES), to assist in determining whether the proposed activity should be referred to the Commonwealth Department of Climate Change, Energy, the Environment and Water. Table 7-4 provides a summary of how MNES have been considered.

Table 7-4. MNES under EPBC Act

MNES/Commonwealth Land	Potential impact
Any impact on a World heritage property?	No. There are no World Heritage sites within the study area.
Any impact on a National heritage place?	No. There are no National Heritage sites within the study area.
Any impact on any wetlands of international importance?	No. There are no wetlands of international importance within the study area.
Any impact on a Commonwealth listed threatened species or ecological communities?	No. The proposed activity would not have a significant impact to Commonwealth listed threatened species or ecological communities (refer to Section 6.4 and Appendix D).
Any impacts on a Commonwealth listed migratory species?	No. Commonwealth listed migratory species were not identified within the impact area.
Any impact on a Commonwealth marine area?	No. The proposed activity is not within a Commonwealth marine area.
Any impact on the Great Barrier Reef Marine Park?	No. The proposed activity is not within the Great Barrier Reef Marine Park.
Does the proposed activity involve a nuclear action (including uranium mines)?	No. The proposed activity does not involve a nuclear action.
Does the proposed activity involve a water resource, in relation to unconventional gas development and large coal mining development?	No. The proposed activity does not involve a water resource in relation to unconventional gas development and large coal mining development.
Is the proposed activity likely to have a significant impact on the environment on Commonwealth land?	No. The proposed activity would not occur on Commonwealth (Crown) land.

7.5. Consideration of Ecologically Sustainable Development

Obligations under the EP&A Act require that Transgrid protects the environment by conducting its operations in compliance with the principles of ecologically sustainable development (ESD), namely:

- The precautionary principle
- Intergenerational equity
- Conservation of biological diversity and ecological integrity

- Improved valuation, pricing and incentive mechanisms.

The principles of ESD have been applied during the proposed activity design and assessment. Mitigation measures (Appendix C) would be applied to avoid or minimise impacts.

8. Environmental management

Transgrid is committed to carrying out its activities and services, including the proposed activity, in a manner that minimises pollution and environmental impacts, and complies with relevant legislation, industry standards and codes of practice. To support this commitment, Transgrid maintains an Environmental Management System (EMS) that is certified under the international standard ISO 14001. All works undertaken for the activity would be consistent with the EMS. Environmental mitigation measures have been included in Appendix C to avoid and minimise environmental impacts identified in this REF.

A Construction Environmental Management Plan (CEMP) shall be prepared and submitted to an Environment Business Partner/Delivery for review and endorsement four weeks prior to the commencement of works, including site establishment. The CEMP shall be prepared in accordance with Transgrid's *Preparation and Approval of Environmental Management Plans* Procedure. The CEMP shall incorporate all mitigation measures identified within this REF.

In addition to the Contractor's Environmental Supervisor, Transgrid shall appoint an Environmental Business Partner to regularly check that the proposed activity is being carried out in compliance with all environmental approval and legislative conditions.

The operation of the activity would be managed in accordance with Transgrid's certified Environmental Management System. Due diligence environmental checks, including environmental information generated from GIS where relevant, would be undertaken before any maintenance works are carried out. No new environmental constraints or mitigation measures have been identified as part of this REF that are relevant to the ongoing operation and maintenance of the asset.

9. Conclusion

The CWOREZ Transposition Tower Installation project: Central Cluster has been assessed under Part 5, Division 5.1 of the EP&A Act. This REF has examined and considered in a manner proportionate to the nature and risk of the activity, matters affecting or likely to affect the environment by reason of the proposed activity, including consideration of other NSW and Commonwealth legislation. The REF has considered and assessed environmental impacts in accordance with Section 171 of the EP&A Regulation.

The key environmental impacts identified as part of this REF include:

- Moderate likelihood of direct impacts with a total of up to 5.53 hectares of native vegetation being removed and low to moderate likelihood of indirect impacts to biodiversity and threatened species from construction works. Biodiversity assessment (including field surveys and tests of significance for select threatened species) has assessed these impacts as not significant (details in Appendix D)
- Minor erosion and sedimentation impacts from excavation activities during construction
- Minor temporary noise impacts generated from construction activities, plant, and vehicles
- Minor temporary impacts to water and air quality generated from excavation activities, dust generation, increased emissions, and spills

- Minor waste generation during construction.

Mitigation measures to avoid, minimise and/or manage potential environmental impacts for the proposed activity have been included in Appendix C.

Considering the assessment of the impacts detailed in this REF and the associated specialist reports (including the Biodiversity Assessment Report in Appendix D and Aboriginal Objects Due Diligence Assessment in Appendix E), it is concluded that:

- the proposed activity is not likely to significantly affect the environment and therefore an Environmental Impact Statement is not required.
- the proposed activity is not likely to significantly affect threatened species, ecological communities or their habitats and would not be carried out in a declared area of outstanding biodiversity value, therefore a Species Impact Statement (SIS) and/or Biodiversity Development Assessment Report (BDAR) is not required.

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Appendix A Scope summary and Aboriginal heritage and ecological due diligence assessments

The following table provides a summary of the proposed activity scope of works, associated key constraints and the due diligence assessments for ecology and Aboriginal heritage (TLF = Truncated Landscape Feature and FLF = Full Landscape Feature as per Transgrid's Aboriginal Heritage Due Diligence Assessment Procedure).

Scope of works						National Park	Ecology (500m)	Known heritage (200m)		Aboriginal heritage due diligence assessment				
Structure ID	Works	Construction bench	Access works	Veg clearing	Waterway crossing	Type	Ecology constraint (and due diligence assessment)	Historic heritage	Aboriginal heritage	Site level of disturbance (LoD)	Work activity LoD	Matrix risk rating	TLF/ FLF* (200m)	Further assessment
Structure 356	Installation of four steel poles around the existing structure	Yes	Upgrade of existing track where required	Veg trimming along access tracks and construction area	No	No	Ecological constraints and impacts are assessed in Section 6.4 of the REF and the BAR in Appendix D. The assessment identified native vegetation, hollow-bearing trees and potential threatened fauna habitat within the impact area. Tests of significance concluded that significant impacts are unlikely with implementation of the mitigation measures provided in Appendix C.	No	No	Moderately-to-highly disturbed	Moderate	Moderate	Yes, the site is within 200m of waters.	Site inspection was undertaken on 2 October 2025. No Aboriginal objects or PADs were identified.
Structure 432	Installation of four steel poles around the existing structure	Yes	Upgrade of existing track where required	Veg trimming along access tracks and construction area	No	No	Ecological constraints and impacts are assessed in Section 6.4 of the REF and the BAR in Appendix D. The assessment identified native vegetation, potential threatened fauna habitat and *Eucalyptus cannoni* within the	No	No	Moderately-to-highly disturbed	Moderate	Moderate	Yes, the site is within 200m of waters	Site inspection was undertaken on 2 September 2025. No Aboriginal objects or PADs were identified.

Scope of works						National Park	Ecology (500m)	Known heritage (200m)		Aboriginal heritage due diligence assessment				
Structure ID	Works	Construction bench	Access works	Veg clearing	Waterway crossing	Type	Ecology constraint (and due diligence assessment)	Historic heritage	Aboriginal heritage	Site level of disturbance (LoD)	Work activity LoD	Matrix risk rating	TLF/ FLF* (200m)	Further assessment
							impact area. Tests of significance concluded that significant impacts are unlikely with implementation of the mitigation measures provided in Appendix C.							
Mount Piper Substation - West	Reconfiguration of conductors and other equipment	Yes	Upgrade of existing track where required	Veg trimming along access tracks and construction area	No	No	Ecological constraints and impacts are assessed in Section 6.4 of the REF and the BAR in Appendix D. The impact area is highly modified and no threatened flora or fauna species were assessed as having a moderate or higher likelihood of occurrence.	No	No. [redacted]	Highly disturbed.	Moderate	Moderate	Yes, the site is within 200m of waters	Site inspection was undertaken on 3 September 2025. No Aboriginal objects or PADs were identified.

Appendix B Figures – Environmental constraints

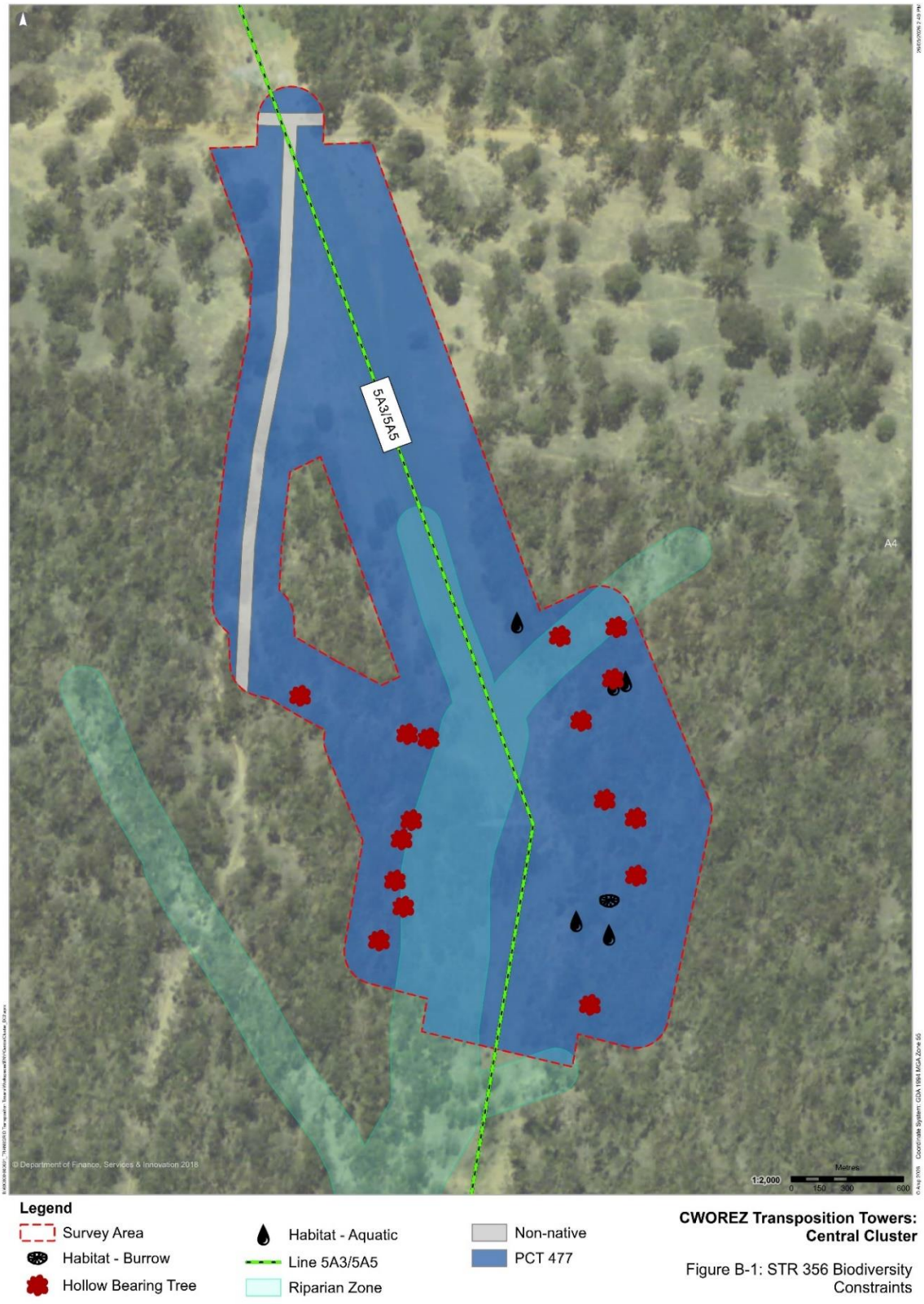


Figure B-1 Structure 356 Biodiversity Constraints

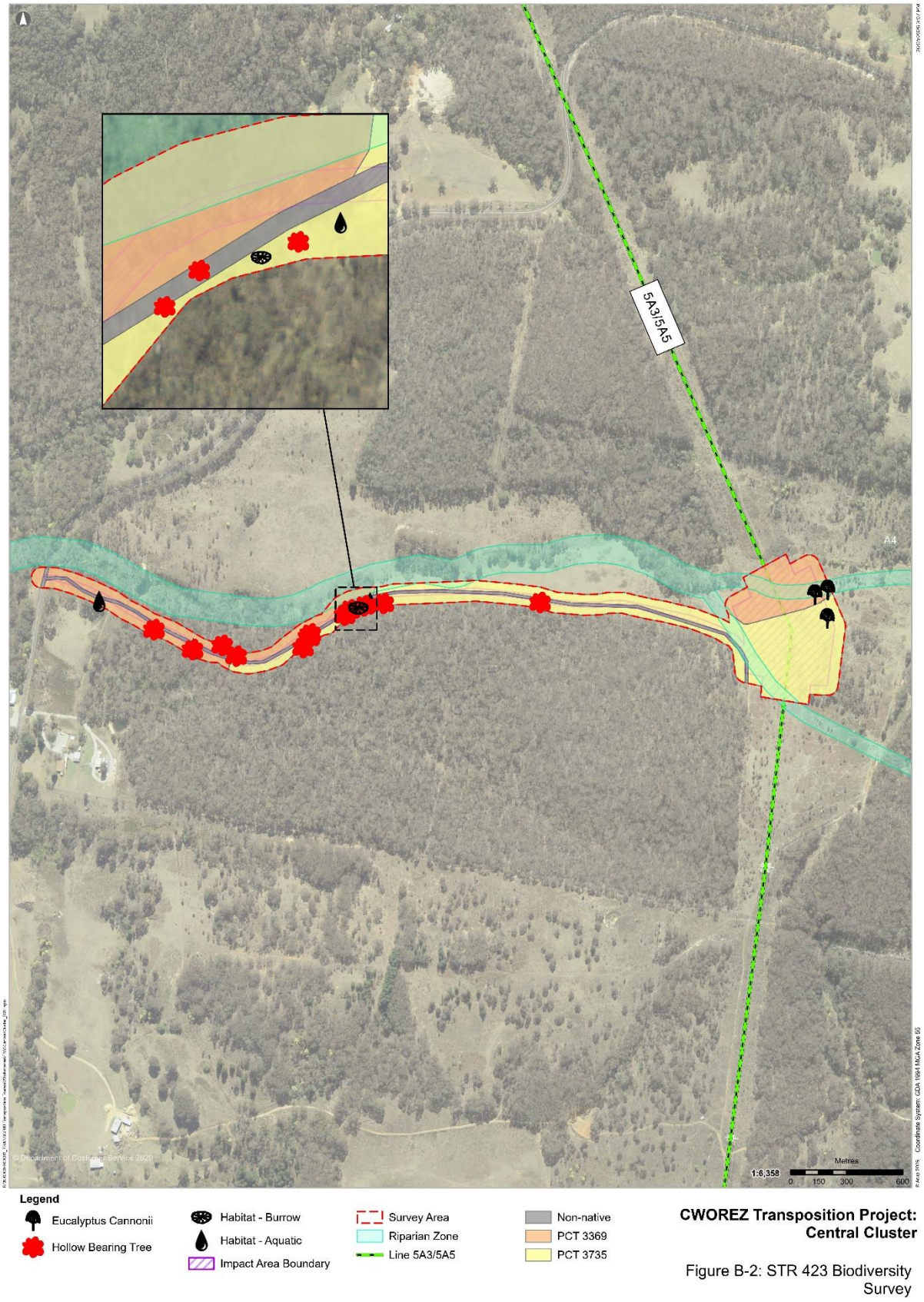


Figure B-2 Structure 432 Biodiversity Constraints

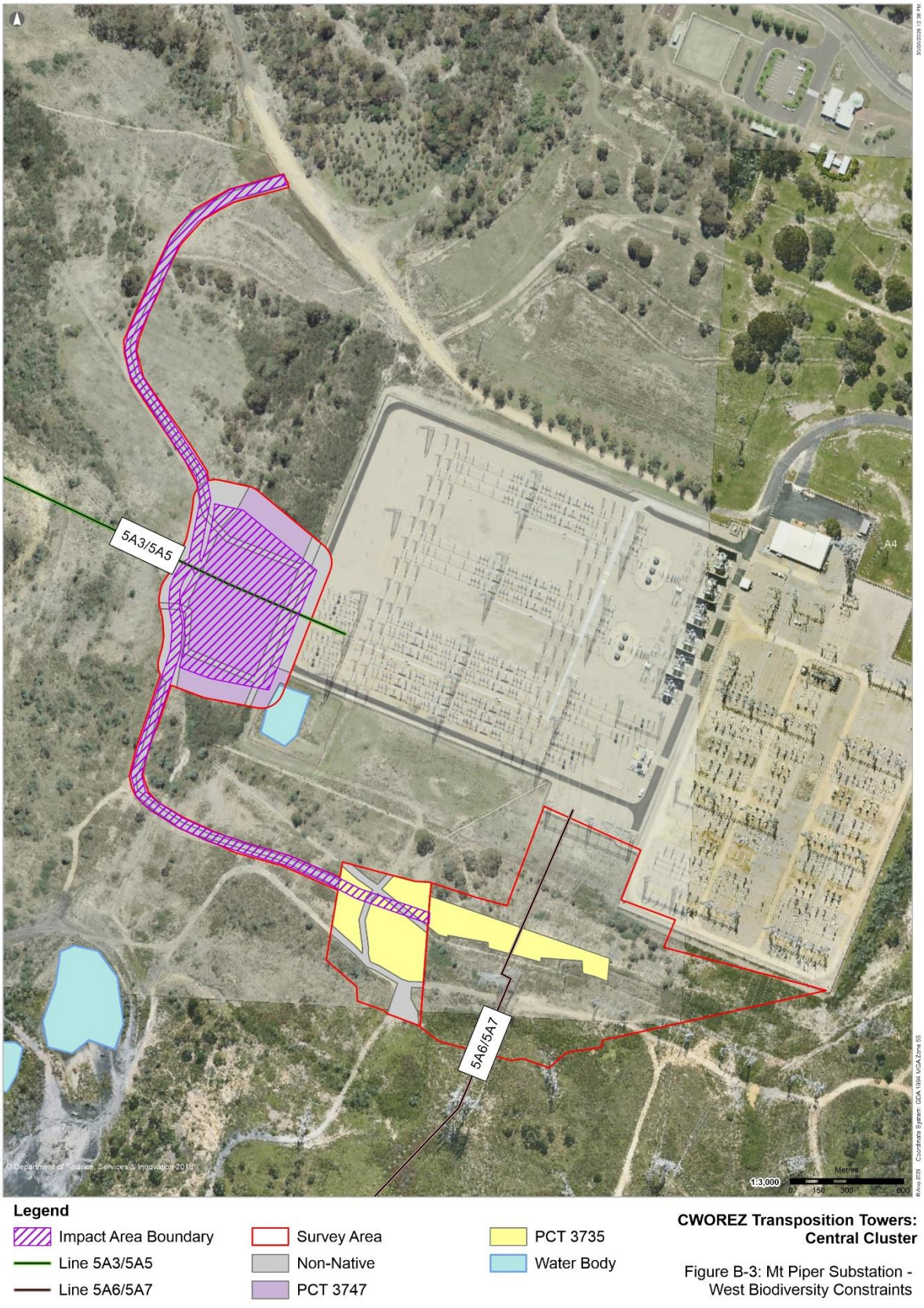


Figure B-3 Mount Piper Substation - West Biodiversity Constraints

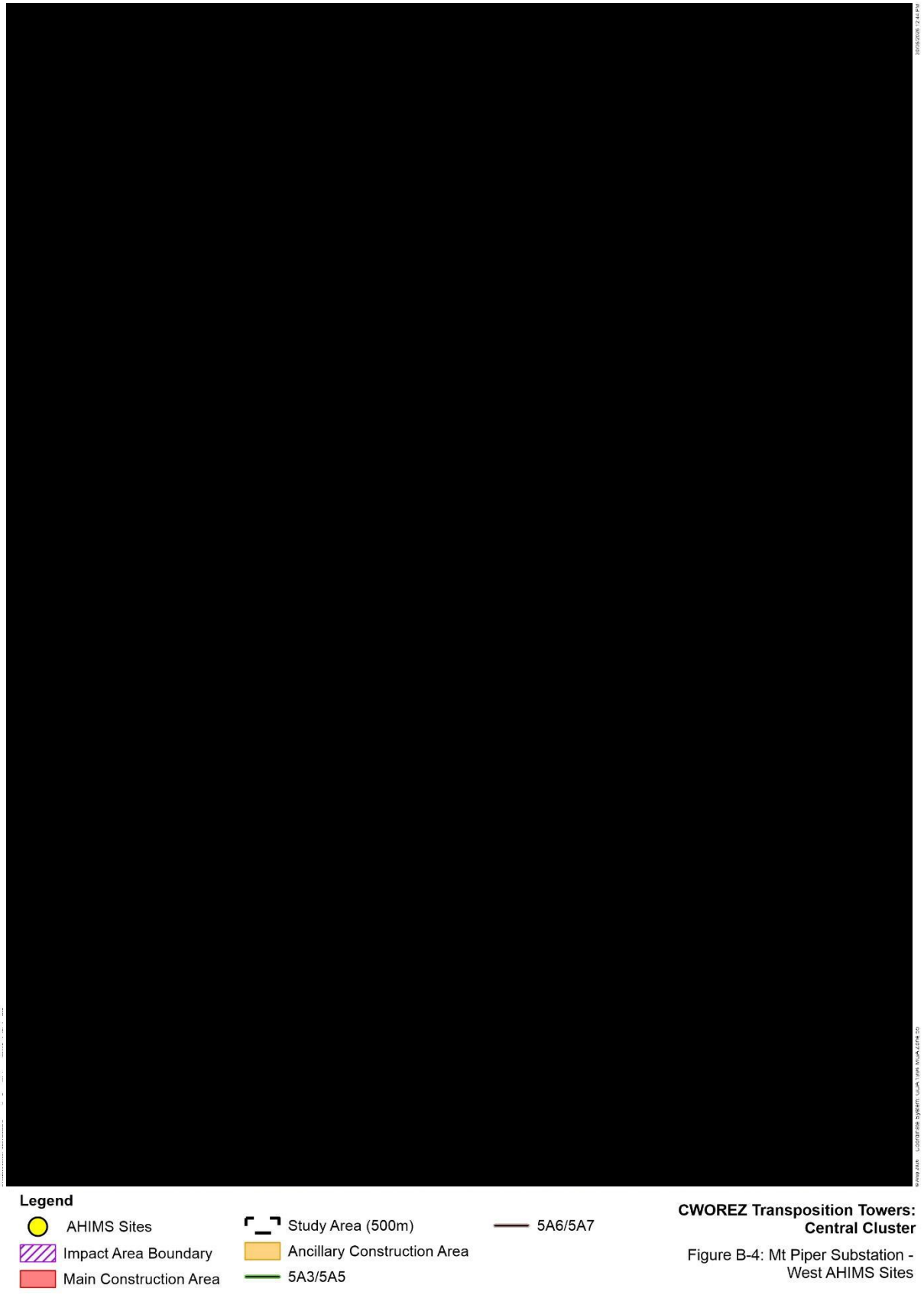


Figure B- 4 Mount Piper Substation – West AHIMS Sites

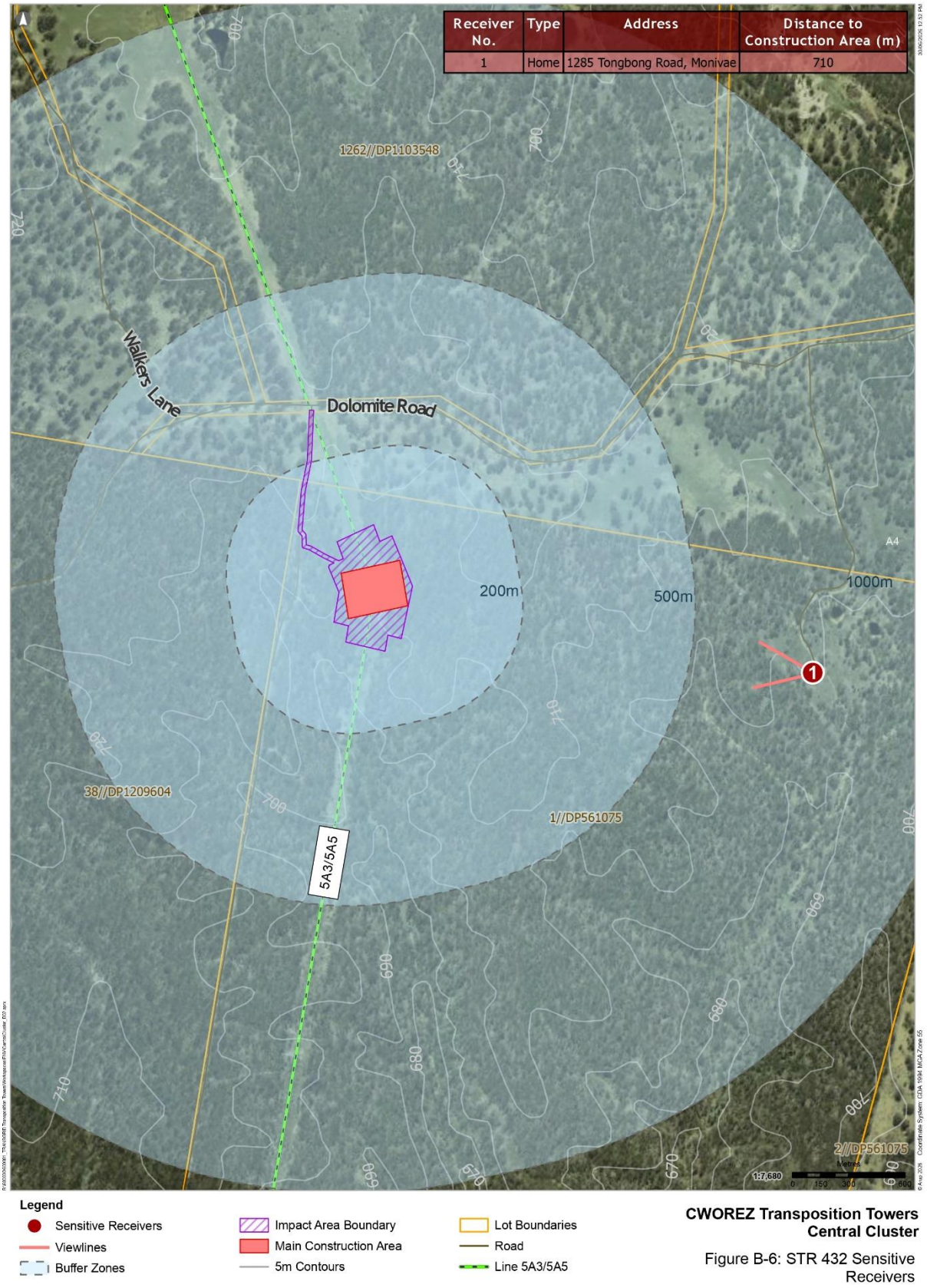


Figure B-5 Structure 356 Sensitive Receivers

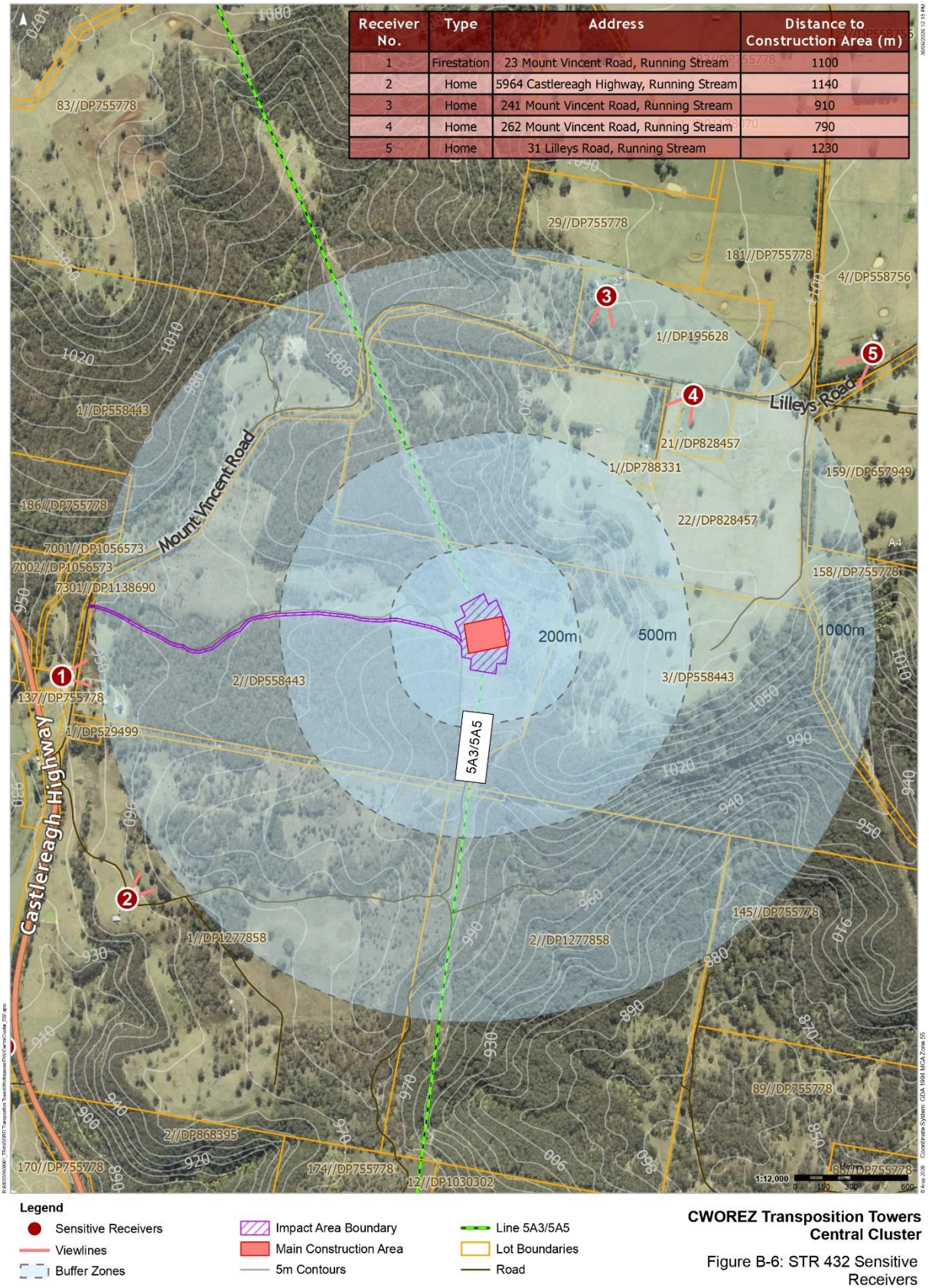


Figure B-6 Structure 432 Sensitive Receivers

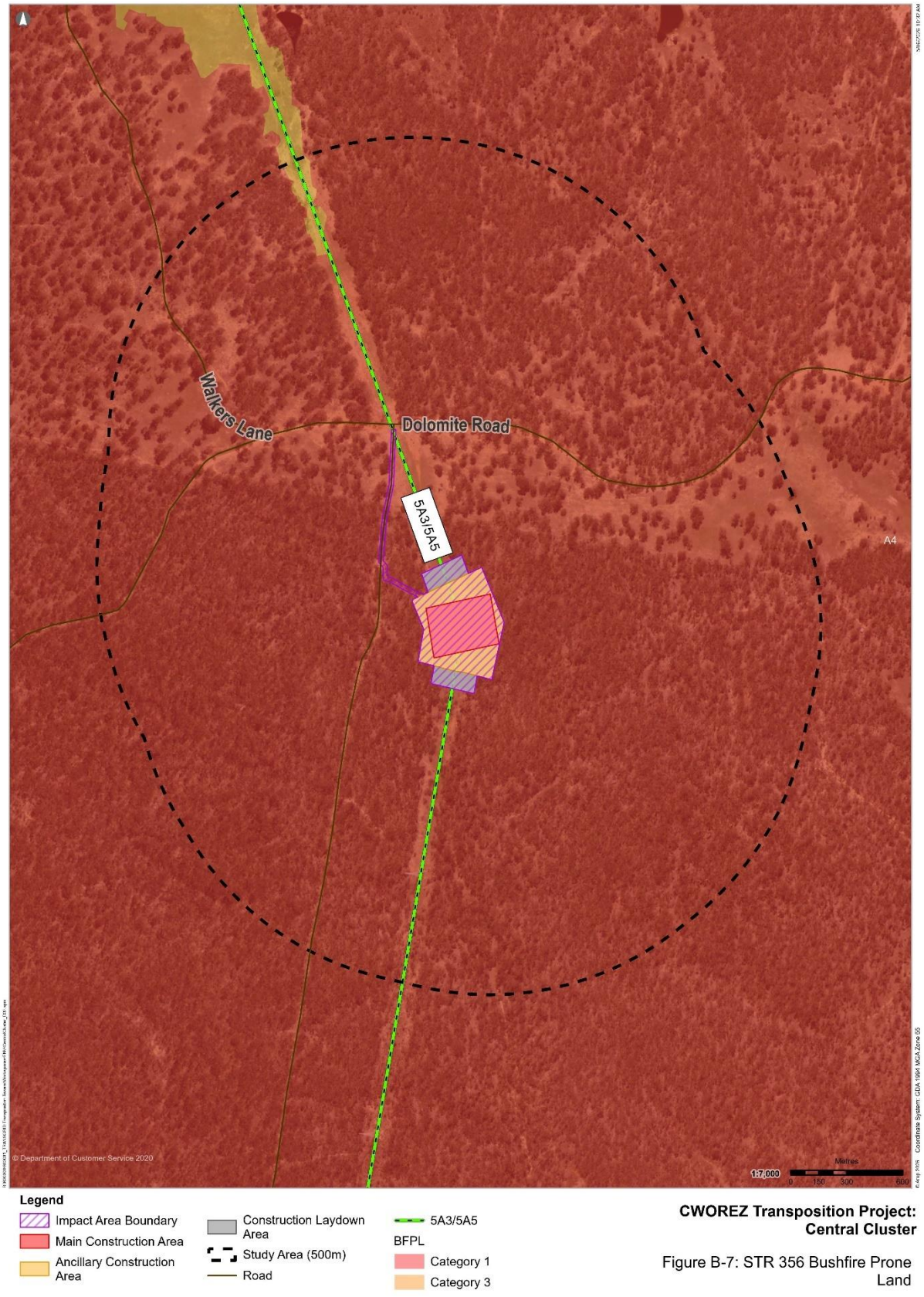


Figure B-7 Structure 356 Bushfire Prone Land

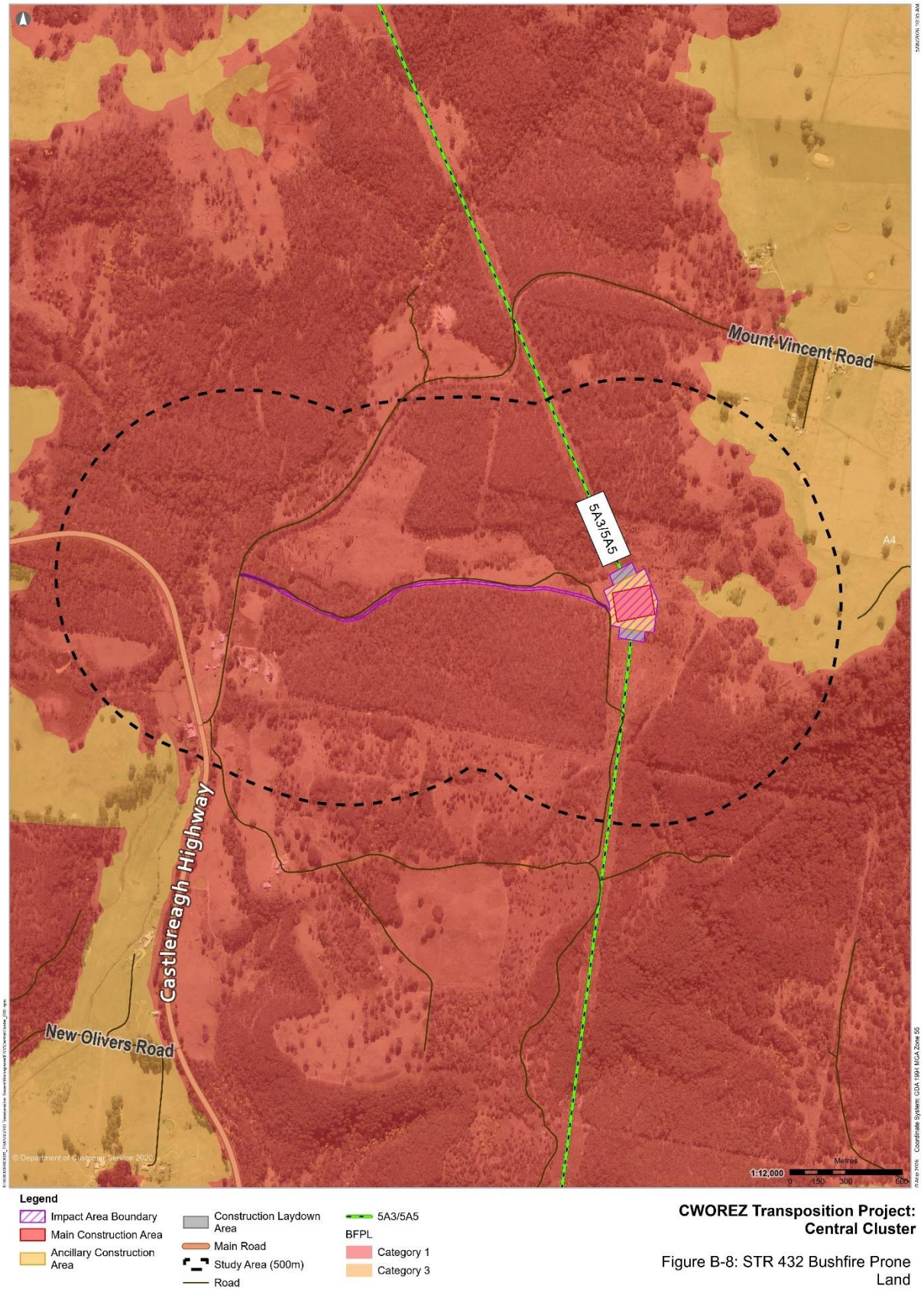


Figure B- 8 STR 432 Bushfire Prone Land

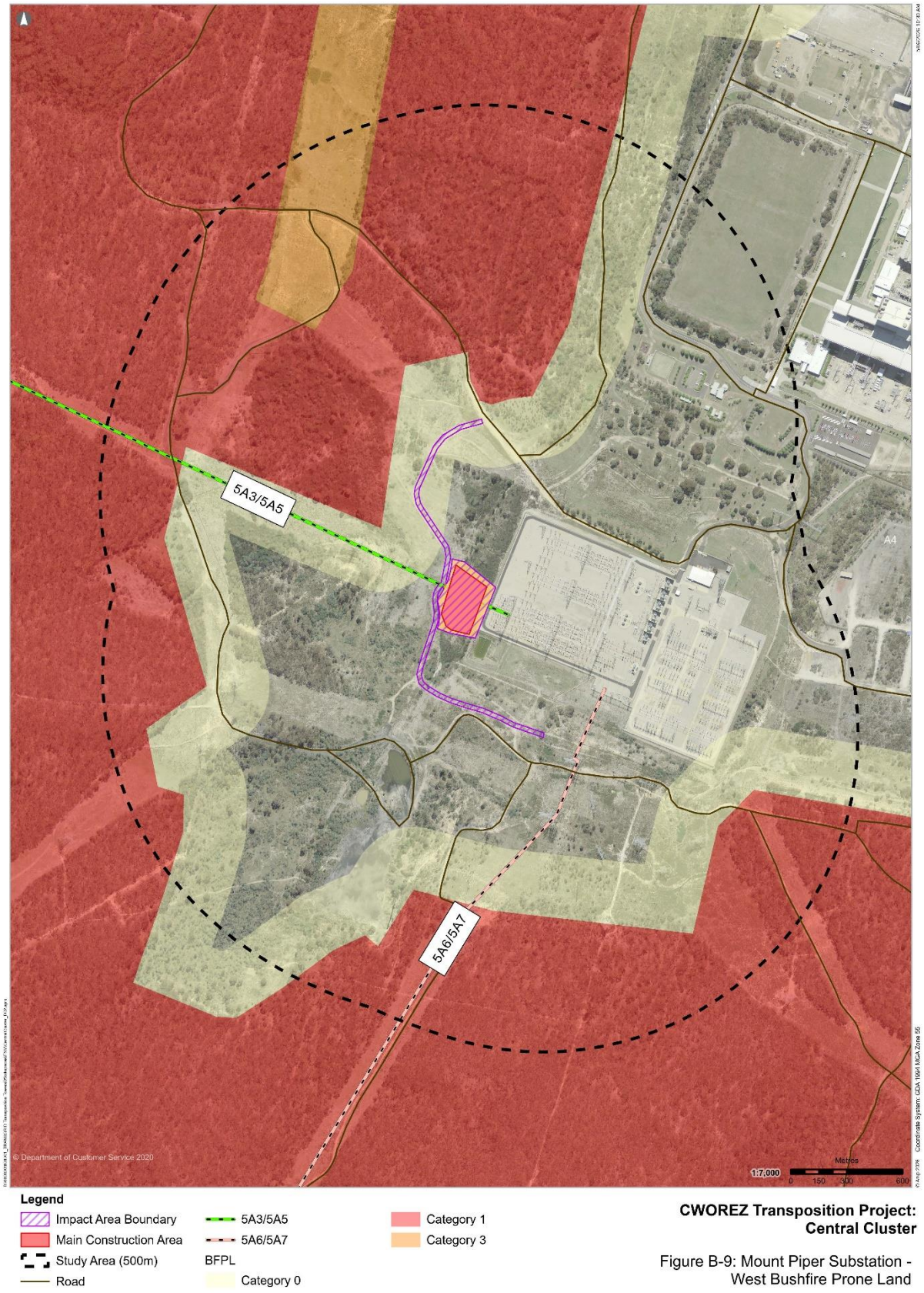


Figure B- 9 Mount Piper Substation – West Bushfire Prone Land

Appendix C Mitigation measures

Mitigation measures	
Environmental management and incident response	
EM1	A Construction Environmental Management Plan (CEMP) or other approved document shall be prepared and submitted to the Environment Business Partner/Delivery (Transgrid Environment Business Partner) for review and endorsement four weeks prior to the commencement of works, including site establishment and vegetation removal. The CEMP shall be prepared in accordance with Transgrid's *Preparation and Approval of Environmental Management Plans* Procedure and include all environmentally sensitive areas identified in Appendix B. Where works are near identified sensitive areas, a specific site plan shall be prepared.
EM2	All workers shall be inducted onto the CEMP, including the environmental mitigation measures and sensitive areas identified in this REF. Training shall be given to workers, as appropriate. Records shall be kept of this induction and training.
EM3	An Environmental Supervisor shall be included as part of the construction staff to oversee implementation of the CEMP and ensure that all mitigation measures are effectively applied. In addition to the Environmental Supervisor, Transgrid shall appoint an Environment Business Partner to ensure that the work is being carried out in accordance with all environmental approval and legislative conditions.
EM4	All refuelling activities shall be in appropriate locations away from environmentally sensitive areas with controls to reduce potential for spills. Environmental spill kits containing spill response materials suitable for the works being undertaken shall be kept on site at all times and be used in the event of a spill. Any spills shall be contained, cleaned up promptly and immediately reported to the Transgrid site representative.
EM5	All chemicals or other hazardous substances shall be stored in a bunded area and away from any drainage lines/pits. The capacity of the bunded area shall be at least 130% of the largest chemical volume contained within the bunded area. The location of the bunded enclosure/s shall be documented and shown on the site plans.
Land use	
LU1	Landholders shall be notified at least seven days prior to the commencement of the proposed activity on their property.
LU2	On completion of the work, disturbed areas shall be stabilised and returned to as close to original condition or as otherwise agreed with the landholder.
LU3	Works within privately owned land shall be undertaken in accordance with Property Management Plans.
Geology and soils	
GS1	A Soil and Water Management Plan (SWMP) shall be prepared by a suitably qualified and experience person and implemented and maintained in accordance with relevant sections of *Managing Urban Stormwater: Soil and Construction Volume 1* (Landcom, 2004) ('the Blue Book) (particularly Section 2.2) and *Managing Urban Stormwater: Soil and Construction Volume 2A – Installation of Services* (DECC, 2008a) and submitted to the Transgrid

Mitigation measures	
	Environment Business Partner for endorsement prior to commencement of ground disturbance works.
GS2	Vehicles and equipment shall remain on existing roads and nominated site access. Vehicles and equipment shall be free of mud, soil or vegetated matter prior to access onto public roads.
GS3	Any imported fill shall be certified at source location (e.g. Quarrymaster or landholder) as pathogen and weed free Excavated Natural Material (ENM) or Virgin Excavated Natural Material (VENM) in accordance with the Protection of the *Environment Operations Act 1997* (POEO Act) and the Waste Regulation.
GS4	Any excavated material suspected of showing evidence of contamination shall be kept separate from other materials and stored such that contamination does not spread. This material shall be sampled and analysed by a National Association of Testing Authorities (NATA) Registered laboratory and managed in accordance with the *Waste Classification Guidelines* (EPA, 2014), the Guidelines on the Duty to Report Contamination (EPA, 2015) and the *Contaminated Land Management Act 1997*.
GS5	The CEMP shall include an unexpected finds process that outlines how to identify and manage contaminated soils (including acid sulphate soils and naturally occurring asbestos), material and groundwater.
Hydrology and water quality	
HW1	No refuelling or bulk herbicide preparation shall occur within 40 m of natural or constructed drainage lines or water bodies.
HW2	Water management for excavations shall be documented in the SWMP and implemented on-site. Controls may include: • Use of diversion drains (or similar) to reduce water flow into excavations and off-site. • Separation of clean and dirty water, where possible • Methodology for intercepted/collected water (eg regular monitoring, treatment and discharge). • Installation of appropriate erosion control devices (sediment fence, coir logs, sandbags, etc), including monitoring and maintenance.
HW3	Spoil shall be stockpiled in a manner to avoid the possibility of sediments entering stormwater drains, waterways or migrating off-site.
Ecology	
EC1	Vegetation disturbance and removal shall be minimised as far as practicable.
EC2	The following shall be implemented where vegetation removal is required: • Exclusion zones/no-go zones shall be established and clearly marked to indicate the approved clearing boundary. • Hollow-bearing trees/stags to be retained shall be marked with flagging tape and exclusion fencing. • Where possible, trees are to be felled into the approved clearing area and away from adjacent vegetation or exclusion zones. • Prior to clearing, grassland habitat shall be inspected by a suitably qualified ecologist for habitat features for potential threatened species and allow for relocation or dispersal into adjacent habitat.
EC3	Hollow bearing trees removal protocol shall be implemented:

Mitigation measures	
	• Removal of hollow-bearing trees, where required, must be supervised by a suitably qualified ecologist with wildlife handling experience. • Pre-clearance checks shall be carried out of hollows by a suitably qualified person prior to impacts to hollow bearing trees. • All hollow bearing trees to be felled should be inspected immediately prior to felling by a suitably qualified ecologist, including decorticating bark where present. If fauna are found to have returned or remain in trees to be cleared, these trees are to be retained temporarily for up to 24 hours. After this time, an appropriate means should be determined by the project ecologist to safely remove non-threatened fauna. Handling of fauna for removal should be undertaken by a suitably trained ecologist. • Felled trees should be inspected for small hollows that may not have been observed from the ground during surveys. If present, hollows should be inspected by the ecologist and any native fauna should be relocated or allowed to disperse into adjacent habitat. Any injured fauna should be transferred to a nearby vet or recognised wildlife carer for further assessment. • Consideration shall be given to utilising an excavator with grab attachment or climbing arborist to gently lower hollows to avoid the risk of injury to native fauna which may occupy hollows. The approach shall be discussed with the ecologist ahead of the pre-clearing inspection.
EC4	To avoid impacts to woody habitat (potential habitats residing in woody debris), the following shall be implemented: • Where timber is required to be removed for construction, it is to be retained and relocated into adjoining habitat where practicable. • Stockpiling of felled vegetation shall occur away from clearing works wherever possible, so that animals displaced during vegetation clearing do not seek shelter in vegetation stockpiles that are to be sheared and mulched.
EC5	If wombat burrows are present in the construction work area, earthworks in and around wombat burrows shall include measures to exclude wombats from burrows before works start, monitoring of burrow use and installation of one-way gates to prevent re-entry.
EC6	In the case where a threatened species is encountered on site during construction or clearing activities, the following procedure is to be followed: • Stop works immediately. • Notify the project environment manager or project supervisor. • Notify the project ecologist. The ecologist is to undertake an impact assessment and determine if a significant impact is likely to occur, develop management options and notify the appropriate departments. • If it is determined that no significant impact will occur, work can resume. • If it is determined that a significant impact is likely, consultation with the appropriate departments must be undertaken, and all necessary approvals obtained. • Work may recommence upon the advice of the ecologist and in consultation with Transgrid.
EC7	To offset impacts associated with the loss of hollow bearing trees, the following measures shall be implemented: The removal of hollows for the purpose of the proposed works shall be replaced with high-quality artificial hollows based on the following ratios: - A ratio of 1:1 for every hollow ≥8cm diameter - A ratio of 1:2 for hollows <8cm diameter

Mitigation measures	
	• Artificial hollows shall be installed in consultation with an ecologist, in accordance with the recommendations provided in the Biodiversity Assessment and with consideration to the size classes being removed, suitable locations, opportunities at the site, landowner agreements and accessibility for future monitoring • Artificial hollows shall be installed within three months of hollow removal • Artificial hollows monitoring and maintenance shall be as specified in the Biodiversity Assessment Report.
EC8	Machinery must be inspected for wildlife prior to operation. Measures to mitigate the risk of vehicle strike should be implemented, including speed limits, training and signage.
EC9	All properties with known biosecurity issues shall be identified and included in the CEMP/SEP. Controls may include: • Wash down procedures to reduce the spread of weeds via vehicles and machinery. • Cleaning of vehicle tyres, undersides and radiator grills before leaving a property. • Cleaning of footwear and minimising soil movement between locations (either on machines, plant, equipment or materials). • Importing weed-free material. • Working from clean areas towards weedy areas to reduce the spread of weeds. • Selecting and using pesticides in accordance with Transgrid's Use of Pesticides and Schedule of Approved Pesticides. • Maintaining communication records with landowners regarding biosecurity requirements. • All weed material removed during the construction works should be disposed of at a suitable waste facility.
Heritage	
HE1	In the event that a site or artefact (as defined by the *National Parks and Wildlife Act 1974* or *Heritage Act 1977*) is identified during construction works, works shall cease at the location and no further harm to the object shall occur. The find shall be immediately reported to Transgrid, and the regulator in accordance with legislation. No work shall commence in the vicinity of the find until any required approvals have been given by the regulator. Should skeletal remains be encountered during the activity, works shall stop immediately, the area secured to prevent unauthorised access and the NSW Police, Department of Planning, Housing and Infrastructure (DPHI) and Transgrid contacted.
Noise and vibration	
NV1	Noise generating works shall be in accordance with the *Interim Construction Noise Guideline* (DECC, 2009): • 7:00am – 6:00pm Monday to Friday • 8:00am – 1:00pm Saturdays • No work on Sundays or Public Holidays. Work outside normal hours, on Sundays and public holidays shall only comprise: • The delivery of materials outside normal hours requested by police or other authorities for safety reasons. • Emergency work to avoid the loss of lives and/or property. • Work timed to correlate with system planning outages. Other noise generating works outside of the standard construction hours shall require the prior formal written consent of Transgrid's Environment Business Partner and require justification in accordance with the Guideline.

Mitigation measures	
NV2	Construction equipment shall be maintained regularly as per manufacturer's recommendations and less noise-emitting equipment shall be selected where possible.
NV3	Noise affected neighbouring properties (refer Section 6.7) shall be notified on the timing and duration of the construction works at least seven days prior to commencing work.
Traffic and access	
TA1	Transportation and equipment delivery movements on public roads shall be in accordance with Transport for NSW and Council requirements.
TA2	Traffic, transportation and access mitigation and management strategies shall be documented in the CEMP and implemented on-site. These may include: • The management of the delivery of equipment and materials. • Access to and from the site including nominated roads and site access tracks. • Parking.Speed limits.
TA3	Access track works shall be in accordance with the *Soils and Construction Volume 2C Unsealed Roads* (DECC, 2008b) or other relevant standard agreed to in consultation with NPWS, Forestry NSW, Crown or RFS (for fire trails and roll-overs).
TA4	Construction activities shall be managed to maintain property access and site security. Existing gates shall be left in the condition in which they were found, access for landowners and other authorised users shall be maintained where practicable, and work areas shall be secured when unattended.
Air quality	
AQ1	Air quality mitigation and management strategies shall be documented in the CEMP and implemented on-site. This may include: • Avoiding vehicle and machinery idling as much as possible. • Reducing vehicle speeds when in the vicinity of residences to minimise the generation of nuisance dust. • Progressively revegetating and/or rehabilitating disturbed areas as works are completed. • Dust suppression including water spraying of unsealed surfaces, covering stockpiles and materials during transportation.
Hazards and risk	
HR1	All designs shall be in accordance with the *International Commission on Non-Ionizing Radiation Protection* (ICNIRP) Guidelines for limiting exposure to EMF (ARPANSA, 2010).
HR2	Transgrid's *Hot Works and Fire Risk Procedure* shall be adhered to for planning and undertaking all hot and fire risk works. This process shall be documented and implemented in accordance with the CEMP.
Visual amenity	
VA1	All construction plant, equipment, waste and excess materials shall be contained within the designated boundaries of the work site and shall be removed from the site at the earliest opportunity following the completion of construction.
Waste	

Mitigation measures	
WA1	Waste mitigation and management strategies shall be documented in the CEMP and be in accordance with Transgrid's Waste Management Procedures and associated Work Instructions.

Appendix D Biodiversity Assessment Report

Transgrid Transposition Towers – Central Cluster

Biodiversity Assessment Report

Prepared for Arup on behalf of Transgrid
1 July 2026



Excellence in
your environment.

Document control

Project number	Client	Project manager	LGA
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Executive Summary

Context

Niche Environment and Heritage (Niche) have been commissioned by ARUP, on behalf of Transgrid, to prepare a Biodiversity Assessment Report (BAR) for the proposed installation of transposition towers and phase three rollover sites (the proposed activity). The work is needed to support the Central West Orana Renewable Energy Zone (CWOREZ), which will bring more renewable energy, such as wind and solar power, into the electricity network. Once CWOREZ is operating, more electricity will move through the existing Transgrid network. This may create an imbalance in the flow of electricity on some 500 kV transmission lines, which can reduce power quality, increase energy losses and affect the stability of the network. To manage this, Transgrid proposes to rearrange the electrical conductors at selected locations, known as transposition sites.

This BAR identifies and evaluates biodiversity constraints within the Study Area and is prepared to support the Review of Environmental Factors (REF) for the proposed activity under Part 5 of the *NSW Environmental Planning and Assessment Act 1979* (EP&A Act). The report assesses the potential ecological risks associated with the proposed activity and provides recommendations to support design refinement and impact avoidance, where practicable.

The assessment also considers biodiversity values and matters of significance listed under the *NSW Biodiversity Conservation Act 2016* (BC Act), the *Fisheries Management Act 1991* (FM Act) and the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

The area of study for the proposed works was provided by Transgrid to Niche in August and September 2025 and consists of the proposed works areas (henceforth referred to as the Subject Sites) and a 30m buffer (henceforth referred to as the Study Area).

At each of the three proposed work areas, each Subject Site marks the total area required to complete the proposed works, representing the maximum extent of vegetation clearing and direct impacts to biodiversity, serving as the primary focus of this assessment. For the purpose of this assessment, it is assumed all vegetation within the Subject Site will be cleared for the purpose of the proposed works.

The proposed works would include:

- Installation of four new steel pole transmission structures at each transposition site (Structures 356 and 432)
- Conductor reconfiguration works at the phase rollover site, located west of the Mount Piper 330 kV substation (Mount Piper Substation - West)
- Establishment of level construction benches at each Subject Site to support the safe operation of elevated working platforms and cranes as part of structure assembly and conductor reconfiguration
- Vegetation clearing
- Construction and upgrade of access tracks to the transposition locations.

In addition, the existing transmission line easement in the area at Structure 356 and 432 would be widened from 70 metres to 120 metres.

Methods

Relevant databases, including the NSW BioNet Atlas of Wildlife (Species sighting search) and the Commonwealth EPBC Act Protected Matters Search Tool (PMST) for Matters of National Environmental Significance (MNES) were reviewed prior to the site assessment to inform biodiversity survey design. Database searches within the locality (a

10 km radius around each Subject Site) were conducted in August 2025 and updated in January 2026 to identify threatened biodiversity and migratory species with known or predicted occurrences in the locality.

Initial site assessment was undertaken across the three sites by Rosemary Hulak on the 26th of August and 2nd of October 2025. The field assessment consisted primarily of Rapid Data Points (RDPs) to ascertain the vegetation and habitat present within the Study Area, including the presence of Plant Community Types (PCTs) and Threatened Ecological Communities (TECs). Potential suitable threatened flora and fauna habitat and any incidental fauna and flora lists were also recorded within the Study Area. No targeted surveys were undertaken.

Key Results

The key outcomes of the desktop and field inspection are summarised as follows:

Mount Piper Substation – West Subject Site:

The site visit determined that PCT 3735 *Central Tableland Peppermint Shrub-Grass Forest* occurs in low condition and PCT 3747 *Southern Tableland Western Hills Scribbly Gum Forest* occurs in low condition within the Subject Site and some non-native vegetation. PCT 3735 and PCT 3747 are not associated with any TECs under the BC Act or the EPBC Act. This site provided forest and grassland habitat but had no hollow-bearing trees (HBTs).

STR 356 Subject Site

The site visit determined that PCT 477 *Inland Scribbly Gum - Red Stringybark - Black Cypress Pine - Red Ironbark open forest on sandstone hills in the southern Brigalow Belt South Bioregion and northern NSW South Western Slopes Bioregion* occurs in low, moderate and high condition. PCT 477 is not associated with any TEC under the BC Act or the EPBC Act. This site provided forest and grassland habitat, with 16 HBTs recorded within the Study Area and 14 HBTs within the Subject Site. A large amount of woody debris was also present throughout the Subject Site.

STR 432 Subject Site

The site visit determined that PCT 3369 *Central Tableland Ranges Peppermint-Gum Grassy Forest* occurs in low and moderate condition and PCT 3735 *Central Tableland Peppermint Shrub-Grass Forest* occurs in low and moderate condition within the Subject Site. PCT 3735 and PCT 3747 are not associated with any TEC under the BC Act or the EPBC Act. This site provided forest and grassland habitat with 14 HBTs within the Study Area but no HBTs recorded within the Subject Site. Two individuals of Capertee Stringybark (*Eucalyptus cannoni*), listed as Vulnerable under the BC Act, were recorded within the Subject Site.

Threatened Species Assessment

One threatened flora species, Capertee Stringybark, listed as Vulnerable under the BC Act, was identified within the STR 432 Subject Site and is considered to have a known likelihood of occurrence. Therefore, a test of significance was undertaken for this species.

Based on habitat suitability within each Subject Site, six fauna species listed under the BC Act were considered to have a moderate or higher likelihood of occurrence, four of which are also listed under the EPBC Act. Species and the relevant Subject Site determined to require further impact assessment include:

- Giant Burrowing Frog (*Heleioporus australiacus*) – STR 432
- South-eastern Hooded Robin (*Melanodryas cucullata cucullata*) – STR 356
- Koala (*Phascolarctos cinereus*) – STR 432 and STR356
- Diamond Firetail (*Stagonopleura guttata*) – STR 356
- Barking Owl (*Ninox connivens*) – STR 356 and,

– Powerful Owl (*Ninox strenua*) – STR 356.

These species were assumed present on site, and tests of significance under the BC and EPBC Act (where relevant) were undertaken.

Impact Assessment

The Project would result in the following impacts to native vegetation:

Mount Piper Substation - West:

– 0.03 ha of native vegetation (PCT 3735)
– 0.56 ha of native vegetation (PCT 3747)

STR 356

– 2.28 ha of native vegetation (PCT 477)

STR 432

– 0.97 ha of native vegetation (PCT 3369)
– 1.67 ha of native vegetation (PCT 3735)

The Project would also result in the removal of 14 HBTs.

Due to the geographical separation of the sites, assessments of significance were undertaken separately at each site. Where appropriate, species were assessed in clusters based on shared habitat requirements (e.g. woodland birds and cave-dwelling bats).

Outcomes of assessments of significance are as follows:

Biodiversity Conservation Act Five-part Test of Significance

BC Act Five-part Tests of Significance were undertaken for the following entities across the three sites. All assessments concluded that provided the proposed mitigation measures were implemented, significant impact under the BC Act would be **unlikely** to any of the below species:

– Giant Burrowing Frog
– South-eastern Hooded Robin
– Koala
– Diamond Firetail
– Barking Owl
– Powerful Owl
– Capertee Stringybark

Commonwealth Environment Protection and Biodiversity Conservation Act Significant Impact Criteria Assessments

EPBC Act Significant Impact Criteria assessments were undertaken for the following entities across the three sites. All assessments concluded that provided the proposed mitigation measures were implemented, significant impact under the EPBC Act would be **unlikely** to any of the below species:

– Giant Burrowing Frog
– South-eastern Hooded Robin

- Koala
- Diamond Firetail

Conclusion and recommendations

A number of recommendations have been made to minimise and mitigate potential impacts, including:

- Avoidance of threatened flora species (Capertee Stringybark) present within the STR 432 Subject Site.
- Vegetation clearing extent management
- Weed management
- Pre-clearance surveys
- Sediment control
- Hygiene protocols
- Presence of suitably qualified and vaccinated ecologist or fauna handler during vegetation clearance
- Retain HBTs where possible. If removal is unavoidable install compensatory high quality artificial hollows based on the following ratios
  - A ratio of 1:1 for every hollow ≥8cm diameter
  - A ratio of 1:2 for hollows <8cm diameter.
- Removal of HBTs would be supervised by a suitably experienced ecologist
- Retain other habitat features where possible to avoid impacts to fauna habitat.

Based on the above outcomes and implementation of the mitigation measures, the Project is considered unlikely to result in significant impacts to threatened biodiversity.

Glossary and list of abbreviations

Term or abbreviation	Definition
AOBV	Area of Outstanding Biodiversity Values
BAM	Biodiversity Assessment Method
BAR	Biodiversity Assessment Report
BC Act	*NSW Biodiversity Conservation Act 2016*
BDAR	Biodiversity Development Assessment Report
BOS	Biodiversity Offset Scheme
BV	Biodiversity Values
Cm	Centimetre(s)
CEMP	Construction Environmental Management Plan
Cth	Commonwealth
DBH	Diameter at breast height
DCCEEW	Department of Climate Change, Energy, the Environment and Water
DPI	Department of Primary Industries (now DPIRD)
DPIE	Department of Planning, Industry and Environment
DPIRD	Department of Primary Industries and Regional Development (formerly DPI)
EPBC Act	*Commonwealth Environment Protection and Biodiversity Conservation Act 1999*
EP&A Act	*NSW Environment Planning and Assessment Act 1979*
FM Act	*NSW Fisheries Management Act 1994*
Ha	Hectare(s)
HBT	Hollow-bearing tree
IHM	Important Habitat Mapping
IBRA	Interim Biogeographic Regionalisation for Australia
Km	Kilometre(s)
KTP	Key Threatening Process
LGA	Local Government Area
LLS	Local Land Services
M	Metre(s)
Niche	Niche Environment and Heritage
NSW	New South Wales

Term or abbreviation	Definition
PCT	Plant Community Type
PMST	Protected Matters Search Tool
RDP	Rapid Data Point
SEED	Sharing and Enabling Environmental Data in NSW
SIC	Significant Impact Criteria
SIS	Species Impact Statement
SVTM	State Vegetation Type Map
TBDC	Threatened Biodiversity Database Collection
TEC	Threatened Ecological Community
ToS	Five-part Test of Significance
TPZ	Tree Protection Zone
VRZ	Vegetation Riparian Zone
Waterfront land	As per the Water Management Act 2000: – (a) the bed of any river, together with any land lying between the bed of the river and a line drawn parallel to, and the prescribed distance inland of, the highest bank of the river, or – (a1) the bed of any lake, together with any land lying between the bed of the lake and a line drawn parallel to, and the prescribed distance inland of, the shore of the lake, or – (a2) the bed of any estuary, together with any land lying between the bed of the estuary and a line drawn parallel to, and the prescribed distance inland of, the mean high water mark of the estuary, or – (b) if the regulations so provide, the bed of the coastal waters of the State, and any land lying between the shoreline of the coastal waters and a line drawn parallel to, and the prescribed distance inland of, the mean high water mark of the coastal waters, where the prescribed distance is 40 metres or (if the regulations prescribe a lesser distance, either generally or in relation to a particular location or class of locations) that lesser distance. Land that falls into 2 or more of the categories referred to in paragraphs (a), (a1) and (a2) may be waterfront land by virtue of any of the paragraphs relevant to that land.
WoNS	Weed of National Significance

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1 Introduction

1.1 Context

Niche Environment and Heritage (Niche) have been commissioned by ARUP, on behalf of Transgrid, to prepare a Biodiversity Assessment Report (BAR) for the proposed installation of transposition towers and rollover sites (the proposed activity). The work is needed to support the Central West Orana Renewable Energy Zone (CWOREZ), which will bring more renewable energy, such as wind and solar power, into the electricity network. Once CWOREZ is operating, more electricity will move through the existing Transgrid network. This may create an imbalance in the flow of electricity on some 500 kV transmission lines, which can reduce power quality, increase energy losses and affect the stability of the network. To manage this, Transgrid proposes to rearrange the electrical conductors at selected locations, known as transposition sites.

The proposed activity comprises three discrete locations, Mount Piper Substation - West, STR 356 and STR 432, collectively referred to as the Central Cluster. This BAR identifies and evaluates biodiversity constraints within the Study Area and is prepared for assessment under Part 5 of the *NSW Environmental Planning and Assessment Act 1979* (EP&A Act).

The assessment considers biodiversity values and matters of significance listed under the *NSW Biodiversity Conservation Act 2016* (BC Act) and the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

1.2 Purpose and objectives

The primary objectives of this BAR are to describe and assess ecological values that occur within the Study Areas and to determine whether the Project is likely to have a significant impact on threatened biodiversity. This includes:

- NSW BC Act Tests of Significance (ToS) and Commonwealth EPBC Act Significant Impact Criteria (SIC) assessments for threatened species and threatened ecological communities (TECs) potentially impacted by the removal native vegetation or other significant habitat features, where relevant
- Assessment of potential impacts to mapped Key Fish Habitat (KFH [Wybong Creek, Tunbridge Creek]), according to the requirements of Department of Primary Industries (DPI) (2013)
- Proposed mitigation measures to protect terrestrial and aquatic biodiversity values, based upon the determination of clearing and each Subject Site and final scope of works/methodology.

1.3 Project background

1.3.1 Assessment Areas

The proposed transposition site locations are shown in Figure 1 and detailed in Table 1.

The area of study for the two transposition sites and the rollover site listed in Table 1 and described in Section 1.3.2 were provided by Transgrid to Niche in August and September 2025 and consists of the proposed works areas (henceforth referred to as the Subject Site) and a 30m buffer (henceforth referred to as the Study Area [Figure 2]). Updates to the Study Area and Subject Site were received in October 2025, February 2026, and May 2026. The Subject Sites and Study Areas are shown in Figure 1 and Figure 2.

The Subject Site marks the total area required to complete the proposed works, representing the maximum extent of vegetation clearing and direct impacts to biodiversity, serving as the primary focus of this assessment.

For the purpose of this assessment, it is assumed all vegetation within the Subject Site will be cleared for the purpose of the proposed works.

The Study Area comprises the total area investigated for the purpose of this BAR and accounts for both direct impacts within each Subject Site and potential indirect impacts to surrounding areas that may occur as a result of the proposed works.

1.3.2 Proposed works

The terms 'the Project' and 'proposed works' are used throughout the report to refer to all works and activities proposed for each Subject Site. At the time of reporting, the Project design is currently at concept level stage, and the final alignment of the transposition towers and details of the key design components and construction methodology are subject to change.

The proposed works would include:

- Installation of four new steel pole transmission structures at each transposition site (Structures 356 and 432)
- Conductor reconfiguration works at the phase rollover site located west of the Mount Piper 330kV substation (Mount Piper Substation - West)
- Establishment of level construction benches at each Subject Site to support the safe operation of elevated working platforms and cranes as part of structure assembly and conductor reconfiguration
- Vegetation clearing
- Construction and upgrade of access tracks to the Subject Site locations.

In addition, the existing transmission line easement in the area at Structure 356 and 432 would be widened from 70 metres to 120 metres (Figure 1).

1.4 Legislative context

The following legislation and planning documents have been considered in this Biodiversity Assessment Report:

- *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act)
- *NSW Environmental Planning and Assessment Act 1979* (EP&A Act)
- *NSW Biodiversity Conservation Act 2016* (BC Act)
- *NSW Biosecurity Act 2015* (BS Act)
- *NSW Fisheries Management Act 1994* (FM Act)
- *NSW Water Management Act 2000* (WM Act).

Table 1: Site locations

Subject Site	Lot and DP	Address	Size of Study Area (ha)	Size of Subject Site (ha)	Land zone	Bioregion/ Subregion	Mitchell landscape	Local Government Area (LGA)	Land use	Waterways	Nearby conservation areas (distance)
Mount Piper Substation - West	Lot 103 DP1164619, Lot 1 DP1092737	350 Boulder Rd, Portland NSW 2847	2.27	1.26	RU1, SP2	South Eastern Highlands / Capertee Uplands	Capertee Plateau	Lithgow City	Primary production, Infrastructure	Strahler 3rd Order watercourse runs through Study Area	Gardens of Stone State Conservation Area (within ~5km)
Line 5A3/5A5 Structure 356 (STR 356)	Lot 1 DP561075, Lot 1262 DP1103548	Dolomite Rd, Monivae NSW 2850	5.09	2.41	RU1	NSW South Western Slopes / Capertee Valley	Capertee Plateau	Mid-western Regional	Primary production	Strahler 1 waterway runs through Study Area	Dungeree State Forest (within ~200m)
Line 5A3/5A5 Structure 432 (STR 432)	Lot 2 DP558443	23 Mount Vincent Rd, Running Stream NSW 2850	6.06	2.95	RU1	South Eastern Highlands / Capertee Uplands	Capertee Slopes	Mid-western Regional	Primary production	Strahler 1 waterway runs through Subject Site. Unnamed Strahler 2 runs adjacent to Study Area	Capertee National Park (within ~8km)

1.4.1 Commonwealth Environment Protection and Biodiversity Conservation Act 1999

The purpose of the EPBC Act is to ensure that actions likely to result in a significant impact on Matters of National Environmental Significance (MNES) undergo an assessment and approval process. Under the EPBC Act, an action includes a project, undertaking, development or activity. An action that 'has, will have or is likely to have a significant impact on MNES is deemed to be a controlled action and may not be undertaken without prior approval from the Commonwealth minister for the Department of Climate Change, Energy, Environment and Water (DCCEEW).

The EPBC Act identifies MNES as:

- World heritage properties
- National heritage places
- Wetlands of international importance (Ramsar wetlands)
- Threatened species and ecological communities
- Migratory species
- Commonwealth marine area
- Nuclear actions (including uranium mining)
- The Great Barrier Reef Marine Park
- A water resource, in relation to coal seam gas development and large coal mining development.

Listings deemed relevant to the Project are assessed in accordance with relevant guidelines.

1.4.2 NSW Environmental Planning and Assessment Act 1979

The EP&A Act provides an assessment framework for the consideration of threatened species, populations, ecological communities and their habitats. The Project will be assessed under Part 5 of the EP&A Act. Section 7.3 of the BC Act, the Five-part Test of Significance, sets the criteria for determining whether a proposal is likely to have a significant impact on threatened biodiversity.

For an activity under Part 5 of the EP&A Act an activity will be likely to significantly affect a threatened species if:

- It is likely to significantly affect threatened species or ecological communities, or their habitats, according to the Five-part Test of Significance (Section 7.3 of the BC Act)
- It is carried out in a declared Area of Outstanding Biodiversity Value (AOBV).

Under Part 5 of the EP&A Act, if it is determined that an activity is likely to significantly affect a threatened species the preparation of a Species Impact Statement (SIS), or, if the proponent elects to participate in the Biodiversity Offsets Scheme (BOS), a Biodiversity Development Assessment Report (BDAR), would be required.

1.4.3 NSW Biodiversity Conservation Act 2016

The BC Act establishes a framework for assessing and offsetting biodiversity impacts from proposed development. The purpose of the BC Act is to "maintain a healthy, productive and resilient environment for the greatest well-being of the community, now and into the future, consistent with the principles of ecologically sustainable development". It provides for:

- Threatened species and ecological communities
- AOBV (previously critical habitat under the Threatened Species Conservation Act 1995)
- Key Threatening Processes (KTPs)

– Private land conservation agreements
– The BOS
– Biodiversity assessment requirements
– Biodiversity certification of land.

1.4.4 NSW Biosecurity Act 2015

The BS Act provides for the management and control of priority and environmental weeds by local control authorities. All private landowners, occupiers, public authorities and councils are required to control weeds on their land under Schedule 1 of the BS Act. Priority weeds and Weeds of National Significance (WoNS) are discussed in Section 3.3.4.

1.4.5 NSW Fisheries Management Act 1994

The FM Act aims to conserve, develop and share the fishery resources of the State for the benefit of present and future generations to:

– Conserve fish stocks and KFH
– Conserve threatened species, populations and ecological communities of fish and marine vegetation
– Promote ecologically sustainable development, including the conservation of biological diversity.

Protection is provided by integrating the conservation of threatened species, endangered populations and Endangered Ecological Communities into development control processes under the EP&A Act.

This assessment addresses the potential impact of the Project on threatened species, populations and ecological communities listed under the FM Act. An assessment of potential impacts to areas of KFH and KTPs also forms part of this assessment.

1.4.6 Water Management Act 2000

The object of the WM Act is the sustainable and integrated management of the state's water for the benefit of both present and future generations.

Under the WM Act, an approval is required to undertake controlled activities on waterfront land, unless that activity is otherwise exempt. Applicants that are not exempt must obtain a controlled activity approval from DPE Water before commencing the controlled activity.

Waterfront land is the bed of any river, lake or estuary and any land within 40 metres of the highest bank of the river, the lake shore or the mean high-water mark of the estuary. Under the WM Act, controlled activities include:

– Carrying out work
– Removing material from waterfront land, such as plants or rocks
– Depositing material on waterfront land, such as gravel or fill
– Any activity which affects the quantity or flow of water in a water source.

According to the WM Act, the carrying out of controlled activities must avoid or minimise land degradation, including soil erosion, compaction, decline of native vegetation and where possible land must be rehabilitated.

The Water Management (General) Regulation 2025 specifies a number of exemptions to controlled activity approvals. Niche understands that Transgrid would be considered a network operator according to these regulations, being licensed under the *Electricity Supply Act 1995*. This exemption applies to the construction, modification, repair, maintenance, or emergency work on the network operator's water, gas or electricity infrastructure, or a pipeline licensee's pipeline and its associated infrastructure. This exemption only applies if:

- *"the activity is carried out in, on or under waterfront land relating to a river, estuary or lake, other than in or on*
  - *The bed or banks of a river, or*
  - *The activity does not cause any change in the course of the river"*.

The WM Act is supported by a series of guidelines, including the *Guidelines for riparian corridors on waterfront land* (DPE Water, 2022a). This guideline defines the widths of Vegetated Riparian Zones (VRZ's) (hereafter referred to as 'riparian buffers' to be maintained, based upon stream order according to the Strahler System of ordering watercourses, measured from the top of the highest bank on both sides of the watercourse. The guideline also includes design principles and overarching management measures for work on waterfront land. Other supporting guidelines considered in the development of this assessment include:

- Guidelines for instream works on waterfront land (DPE Water, 2022b)
- Guidelines for watercourse crossings on waterfront land (DPE Water, 2022c).

2 Methods

2.1 Desktop assessment

The desktop assessment was initially undertaken in August 2025 and updated in January 2026. It utilised the following databases and resources to identify areas of potential biodiversity value, threatened flora and fauna, threatened ecological communities, and migratory species and populations that occur, or have the potential to occur, within the locality (10-kilometre radius around the Subject Site):

- NSW BioNet Atlas of Wildlife – Species sighting search
- NSW Planning Portal
- NSW BioNet Vegetation Classification database
- NSW State Vegetation Type Map (SVTM)
- Commonwealth EPBC Act Protected Matters Search Tool (PMST) for Matters of National Environmental Significance (MNES)
- NSW Threatened Biodiversity Data Collection (TBDC)
- Biodiversity Values (BV) Map
- Biodiversity Assessment Method (BAM) Important Habitat Mapping (IHM)
- NSW Department of Primary Industries and Regional Development (DPIRD) Fisheries NSW Spatial Data Portal.

2.1.1 Likelihood of occurrence assessment

A list of threatened flora and fauna under the BC Act and/or EPBC Act within the locality was determined from database searches. This list was analysed to determine species or their habitat with potential to be impacted by the proposed activity.

The likelihood of species occurring within the Study Area was evaluated on a species-by-species basis to determine likelihood of occurrence. Five categories for 'likelihood of occurrence' (Table 4) were attributed to species after considering criteria such as known records, presence or absence of important habitat features in the Study Area and applying professional judgement. Full assessments can be viewed in Annex 2.

Table 2: Likelihood of occurrence criteria

Likelihood rating	Threatened flora criteria	Threatened and migratory fauna criteria	Implication of Likelihood rating
Known	The species was observed within the Study area.	The species was observed within the Study area.	BC Five-part Test of Significance / EPBC Significant Impact Criteria assessment required
High	It is likely that a species inhabits or utilises habitat within the Study area.	It is likely that a species inhabits or utilises habitat within the Study area.	Additional survey and/ or BC Five-part Test of Significance / EPBC Significant Impact Criteria assessment required
Moderate	Potential habitat for a species occurs on the site. Adequate field survey would determine if there is	Potential habitat for a species occurs on the site and the species may occasionally utilise that	Additional survey and/ or BC Five-part Test of Significance / EPBC

Likelihood rating	Threatened flora criteria	Threatened and migratory fauna criteria	Implication of Likelihood rating
	a 'high' or 'low' likelihood of occurrence for the species within the Study area.	habitat. Species unlikely to be wholly dependent on the habitat present within the Study area.	Significant Impact Criteria assessment required
Low	It is unlikely that the species inhabits the Study area.	It is unlikely that the species inhabits the Study area. If present at the site, the species would likely be a transient visitor. The site contains only very common habitat for this species which the species would not rely on for its on-going local existence.	Nil further assessment required
None	The habitat within the Study area is unsuitable for the species.	The habitat within the Study area is unsuitable for the species.	Nil further assessment required

2.1.2 Aquatic desktop assessment

Assessment of aquatic habitats has been completed from the desktop, including a review of photo data and observations recorded by the field survey team.

The aquatic desktop assessment included a review of the NSW DPIRD Fisheries Spatial Data Portal (2026) in addition to the review of the PMST tool for aquatic MNES. NSW DPIRD incorporates a range of relevant data sets, including:

- KFH
- Threatened species distribution in NSW
- Condition of freshwater fish communities in NSW.

Riparian buffer widths considered within this assessment are those detailed in the *Guidelines for riparian corridors on waterfront land* (DPE Water, 2022a). The VRZs specified in DPE Water (2022a) are essentially equivalent to those outlined in Attachment E of the BAM (DPIE, 2020a).

The riparian widths defined in the *Policy and Guidelines for Fish Habitat Conservation and Management* (DPI 2013) have not been utilised in this assessment. This is because these widths are not consistent with those defined by DPE Water (2022a) and the BAM (DPIE, 2020a). These widths would also in many places across the project site exceed the current level of vegetated riparian vegetation present.

2.2 Field survey

2.2.1 Site assessment

Initial site assessment was undertaken across the three sites (Table 3 and shown in Figure 2) by Niche ecologist Rosemary Hulak on the 26th of August and 2nd of October 2025. The field assessment consisted primarily of Rapid Data Points (RDPs) to ascertain the vegetation and habitat present within the Study Area, including the presence of TECs. Potential suitable threatened flora and fauna habitat and any incidental fauna and flora incidentally noted during the inspection were also recorded within the Study Area.

Table 3: Area of survey and Subject Site

Site	Study Area (Ha)	Subject Site (Ha)
Mount Piper Substation - West	2.27	1.26
STR 356	5.09	2.41
STR 432	6.06	2.95
Total	13.42	6.62

The Study Areas were traversed, identifying and recording the following site attributes:

- Plant Community Types (PCTs) and TECs and condition present within, or close to, the area investigated
- Non-native vegetation
- Flora and fauna habitat assessment to record the presence/ absence of key habitat constraints (e.g., presence of tree hollows, large logs, exfoliating rock, microhabitats, aquatic features) for threatened species predicted to occur within the Subject Site
- Rapid habitat assessment of any aquatic habitat to support the desktop evaluation of potential impacts to the aquatic environment
- Incidental threatened flora and fauna sightings.

No targeted surveys were undertaken at these sites.

2.2.2 Rapid Data Points

A total of 48 RDP, including nine RDPs across the Mount Piper Substation West rollover site,17 RDPs across STR 356 and 22 RDPs across STR 432, were completed to collect data used for PCT alignment, descriptions and justifications. The location of these RDPs is shown in Figure 2.

RDPs included the collection of the following data:

- Overstorey dominants
- Midstorey dominants
- Groundcover dominants
- Structure
- Landscape position
- Soil properties
- Photos.

2.2.3 Habitat assessment

During the field assessment, searches for any suitable fauna habitat were completed throughout the Study Area. The following habitat features were assessed:

- Hollow bearing trees including stags (diameter at breast height [DBH]), tree species and size of hollow were recorded
- Koala use trees
- Stick nests and burrows
- Surface rock and rocky outcrops
- Aquatic features.

The location of any of these habitat features across the Study Area is shown in Figure 2.

Opportunistic observations

Targeted surveys were not originally part of the scope of the initial BAR site inspection. However, opportunistic observations were undertaken during site assessments, identifying all species of fauna confidently detected within the Study Area, as well as indirect signs of habitat use and existing or historic land-use disturbances that may have influenced habitat suitability. Threatened flora with potential to occur (based on BioNet search results) were opportunistically surveyed by meander transect (and GPS location recorded where detected), except for species which cannot be reliably detected within the survey timeframe. Due to seasonal and site access limitations, targeted surveys for flora and fauna species were not undertaken as part of the Central cluster BAR The location of these incidental observations is shown in Figure 2.

2.3 Targeted surveys

While suitable fauna habitat for several threatened species was identified within the Study Area, targeted surveys were not undertaken as part of this assessment. In some instances, surveys were not considered warranted due to the intensive effort required and the low likelihood that the proposed impacts would result in a significant effect, given species mobility and the availability of suitable adjacent habitat. In other cases, seasonal constraints and site access limitations precluded targeted survey effort. Any records of threatened species identified during the initial site investigation were documented as incidental observations.

2.4 Limitations

Rapid data collection has been employed in this investigation. Methods were tailored to the nature of expected impacts and habitat quality of the Study Area in order to provide sufficient data to undertake informed impact assessments.

Numerous threatened plant and animal species are cryptic or difficult to detect. For instance, some cryptic plant species are more easily detected at certain times of the year, such as during flowering events. Some fauna can only be detected during certain seasons (e.g., migration patterns or intra-torpor periods). These limitations are reduced by undertaking a habitat assessment, and assuming cryptic species are present if suitable habitat is present within the Study Area.

It is important to note that the indicative distribution mapping for threatened aquatic species listed under the FM Act provided in the DPI Fisheries spatial data portal (DPIRD 2026) is considered conservative. The indicative distribution mapping should not be considered to represent the known range or extent of occurrence of the species. These distributions are modelled and while they may include stream segments where the species has been recorded, individual records and associated information such as date and survey type are not made available. The indicative distribution modelling also includes stream segments where environmental conditions are the same as a stream segment where the species is known to occur (predicted occurrence based upon MaxEnt analysis, modelling that predicts species occurrences by identifying the greatest spread of distribution using limits of the environmental variables of locations where the species has been recorded), as well as expert opinion.

Most of the initial field survey completed as part of this BAR was completed in late winter. This has resulted in grassy vegetation not having any flower or seed heads which made floristic identification more difficult. Where identification to species was not possible, identification to genus was completed and included in the site description (Annex 1). No threatened species were considered to have been misidentified due to this seasonal limitation.

3 Results

3.1 Desktop assessment

3.1.1 Likelihood of occurrence assessment

A total of seven threatened species, comprised of one threatened flora species and six threatened fauna species, listed under the BC Act and EPBC Act, have been identified as having a moderate or higher likelihood of occurring within the Study Area (Table 10):

- Capertee Stringybark
- Giant Burrowing Frog (*Heleioporus australiacus*)
- South-eastern Hooded Robin (*Melanodryas cucullata cucullata*)
- Koala (*Phascolarctos cinereus*)
- Diamond Firetail (*Stagonopleura guttata*)
- Barking Owl (*Ninox connivens*)
- Powerful Owl (*Ninox strenua*).

These species, where relevant, have been assessed for significant impacts in accordance with BC Act and EPBC Act significant impact criteria. This is discussed further in Section 3.5 and Section 4.3.

No listed migratory species were identified as being likely to occur on site.

Table 4: Threatened species with a moderate or higher likelihood of occurrence

Site	Scientific name	Common name	BC Act	EPBC Act	Habitat on site	Likelihood	Assessment required
Fauna							
STR 432	*Heleioporus australiacus*	Giant Burrowing Frog	V	E	Moderate number of recent records within 10kms of site and some suitable breeding habitat within 300m of 2nd order stream adjacent to the access track.	Moderate	Intensive survey required, not recommended for this site. Assume presence, undertake BC and EPBC assessments of significance.
STR 356	*Melanodryas cucullata cucullata*	South-eastern Hooded Robin	E	E	Recent records in adjacent dry sclerophyll woodland. Potential breeding and foraging habitat on site, in both woody and non woody areas of site.	Moderate	Intensive survey required, not recommended for this site. Assume presence, undertake BC and EPBC assessments of significance.
STR 356	*Phascolarctos cinereus*	Koala	E	E	Recent records close to both sites and Koala feed trees noted on both sites.	Moderate	Intensive survey required, not recommended for this site. Assume presence, undertake BC and EPBC assessments of significance.
STR 432						Moderate	Intensive survey required, not recommended for this site. Assume presence, undertake BC and EPBC assessments of significance.

Site	Scientific name	Common name	BC Act	EPBC Act	Habitat on site	Likelihood	Assessment required
STR 356	*Stagonopleura guttata*	Diamond Firetail	V	V	Records located close to site and in similar dry sclerophyll habitat. Potential breeding and foraging habitat.	Moderate	Intensive survey required, not recommended for this site. Assume presence, undertake BC and EPBC assessments of significance.
STR 356	*Ninox connivens*	Barking Owl	V	Not listed	Dense cluster of suitable hollows. Older 2011 record found within 1km of site.	Moderate	Unable to survey adequately due to seasonal limitations. Assume presence, undertake BC Five-part Test of Significance.
STR 356	*Ninox strenua*	Powerful Owl	V	Not Listed	Dense cluster of suitable hollows. 2023 record found within 15km of site.	Moderate (Assumed Present)	Unable to survey adequately due to seasonal limitations. Assume presence, undertake BC Five-part Test of Significance.
Flora							
STR 432	*Eucalyptus cannoni*	Capertee Stringybark	V	Not Listed	Three individuals recorded during site assessment within Study Area, including two individuals within Subject Site. 26 records within 10 km and two records within 250 m in 2019.	Known	Undertake BC Five-part Test of Significance.

CE = Critically endangered

E = Endangered

V = Vulnerable

3.1.2 Areas of outstanding biodiversity value and critical habitat

A total of four AOBV are present within NSW. No AOBV have been recorded within the proposed transposition sites or associated access tracks.

3.1.3 BAM Important Habitat Map

The Important Habitat Map is a map approved by the NSW State Government, identifying areas of habitat considered important for the survival of threatened species in the wild. No areas of Important Habitat Mapping are mapped within the Study Areas.

3.1.4 Biodiversity values map

The Biodiversity Values Map and Threshold Tool identify areas with high biodiversity value, such as good-quality native vegetation, threatened species habitat, TECs, and areas sensitive to development impacts. The map is prepared by the Department of Climate Change, Energy, the Environment and Water under Part 7 of the *NSW Biodiversity Conservation Regulation 2017*.

No areas of Biodiversity Values as mapped on the Biodiversity Values Map and Threshold Tool are mapped within the Study Areas.

3.2 Validated vegetation

A review of existing vegetation as mapped in the NSW SVTM (NSW DCCEEW 2022) was undertaken prior to conducting the field survey. Following the field survey, area quantities of native vegetation and non-native vegetation within the Subject Site were quantified (provided in Table 5).

NB: The totals of native vegetation in Table 5 may not equal the sum of the PCT condition states (i.e. vegetation zones) in Table 6. This is a result of rounding associated with the extracted vegetation calculations of the spatial vegetation mapping completed. This is also applicable to the proposed total area of clearing for STR 432 in Table 5.

Table 5: Extent of native and non-native vegetation within the Subject Site

Site	Area of native vegetation within the Subject Site (ha)	Area of non-native vegetation within the Subject Site (ha)	Total area of clearing within Subject Site (ha)
Mount Piper Substation - West	0.60	0.66	1.26
STR 356	2.28	0.13	2.41
STR 432	2.65	0.31	2.95
Total	**5.53**	**1.10**	**6.62**

3.2.1 Plant Community Types

Table 6 provides details of the PCTs and the condition of these PCTs that were validated as occurring within the Subject Site. The extents of this vegetation mapping are shown in Figure 2.

Table 6: PCTs and TECs recorded at the proposed transposition sites

PCT No.	PCT Name	Condition	Subject Site (ha)	Vegetation Zone aligns with BC TEC	Vegetation Zone aligns with EPBC TEC	Associated TEC
Mount Piper Substation - West						
3735	Central Tableland Peppermint Shrub-Grass Forest	Low	0.03	No	No	The PCT is not consistent with a TEC
3747	Southern Tableland Western Hills Scribbly Gum Forest	Low	0.56	No	No	The PCT is not consistent with a TEC
0	Non-native (Exotic Vegetation)		0.30	No	No	The PCT is not consistent with a TEC
9996	Non-native (Road)		0.36	No	No	The PCT is not consistent with a TEC
STR 356						
477	Inland Scribbly Gum - Red Stringybark - Black Cypress Pine - Red Ironbark open forest on sandstone hills in the southern Brigalow Belt South Bioregion and northern NSW South Western Slopes Bioregion	Low	1.06	No	No	The PCT is not consistent with a TEC
477	Inland Scribbly Gum - Red Stringybark - Black Cypress Pine - Red Ironbark open forest on sandstone hills in the southern Brigalow Belt South Bioregion and northern NSW South Western Slopes Bioregion	Moderate	0.01	No	No	The PCT is not consistent with a TEC
477	Inland Scribbly Gum - Red Stringybark - Black Cypress Pine - Red Ironbark open forest on sandstone hills in the southern Brigalow Belt South Bioregion and northern NSW South Western Slopes Bioregion	High	1.21	No	No	The PCT is not consistent with a TEC

PCT No.	PCT Name	Condition	Subject Site (ha)	Vegetation Zone aligns with BC TEC	Vegetation Zone aligns with EPBC TEC	Associated TEC
9996	Non-Native (Road)		0.13	No	No	The PCT is not consistent with a TEC
STR 432						
3369	Central Tableland Ranges Peppermint-Gum Grassy Forest	Low	0.70	No	No	The PCT is not consistent with a TEC
3369	Central Tableland Ranges Peppermint-Gum Grassy Forest	Moderate	0.27	No	No	The PCT is not consistent with a TEC
3735	Central Tableland Peppermint Shrub-Grass Forest	Low	1.26	No	No	The PCT is not consistent with a TEC
3735	Central Tableland Peppermint Shrub-Grass Forest	Moderate	0.41	No	No	The PCT is not consistent with a TEC
9996	Non-native (Road)		0.31	No	No	The PCT is not consistent with a TEC

3.2.2 Threatened ecological communities

No native vegetation that aligned with a TEC was recorded during the site assessment, hence no additional assessment of these communities as undertaken within this report.

3.2.3 Threatened Flora

The site assessment did not include targeted surveys but did include meander surveys to identify PCTs. These surveys recorded 3 incidental threatened flora species records within the Survey area. Threatened flora recorded are provided in Table 7 and locations shown on Figure 2. Mitigation and avoidance measures for these species are detailed in Section 5.

Table 7: Incidental threatened flora species records

Site Name	Scientific name	Common name	BC Act	EPBC Act	Description
STR 432	*Eucalyptus cannoni*	Capertee Stringybark	V	Not Listed	3 individuals recorded within PCT 3369 Moderate on the eastern edge of site; two plants are located within the Subject Site.

3.2.4 Priority weeds and Weeds of National Significance

The presence of Priority Weeds of the Central Tablelands Local Land Services (LLS [DPI, 2023]) and Weeds WoNS (Weeds Australia, 2012) were assessed during RPD surveys across all sites. No Priority Weeds or WoNS were identified within the Study Area.

3.3 Fauna habitat

3.3.1 Fauna habitat features

A summary of terrestrial habitat features which may provide potential habitat for a range of fauna species including threatened species is provided in Table 8.

Table 8: Fauna habitat constraints recorded within Study Area

Site	Hollow-bearing trees (HBT)	Burrows	Stick Nest	Surface rock	Rock overhang/ cliff	Woody debris
Mount Piper Substation - West	No	None recorded	None recorded	Substrate gravelly, however no distinct surface rock	None recorded	Minimal
STR 356	Yes, significant number of good quality hollows	None recorded	None recorded	Substrate gravelly, however no distinct surface rock	None recorded	Yes, large amounts across the site
STR 432	Yes, HBTs along the access track	Yes - one large burrow, likely a wombat burrow, under	None recorded	Substrate gravelly, however no distinct surface rock	None recorded	Yes, large amounts across access road

Site	Hollow-bearing trees (HBT)	Burrows	Stick Nest	Surface rock	Rock overhang/ cliff	Woody debris
		tree along access track				

3.3.2 Hollow Bearing Trees and hollows

HBTs were recorded at two of the three sites assessed. The number and size of hollows recorded at each site are summarised in Table 9 and shown in Figure 2. A complete set of HBT data is provided in Annex 2.

A total of 30 HBTs, comprising 42 hollows/fissures, were recorded within the Study Area. Of these, 14 HBTs containing 22 hollows occur within the Subject Site and would be impacted by the proposed works.

Table 9: Summary of hollow-bearing tree data

Subject Site	HBTs within the Study Area	Hollows / fissures within the Study Area	HBTs within the Subject Site	Hollows / fissures within the Subject Site
Mount Piper west Substation	0	0	0	0
STR 356	16	24	14	22
STR 432	14	18	0	0
Total	30	42	14	22

3.3.2.1 Threatened fauna hollow requirements

Different species of hollow-dependent fauna require specific hollow sizes, as well as hollows above a certain height above the ground to be used as habitat. Two species of hollow-dependent fauna were considered as having a moderate likelihood of occurring within the Study Area, Barking Owl and Powerful Owl. A list of threatened fauna hollow requirements and the number of suitable hollows present within the Study Area have been summarised in Table 10.

Table 10. Preferred hollow sizes and number of hollows for threatened hollow-dependent fauna

Scientific name	Common Name	Required hollow sizes	Required hollow height above ground	Hollows within the Study Area		Hollows within the Subject Site	
				STR 356	STR 432	STR 356	STR 432
Ninox connivens	Barking Owl	≥20cm diameter	≥4m	3	4	2	0
Ninox strenua	Powerful Owl	≥20cm diameter	≥4m	3	4	2	0

3.4

3.5 Aquatic habitat and biodiversity values

The desktop aquatic assessment identified the following threatened species (including aquatic MNES) as potentially occurring within the Central cluster Study Area:

- Flathead Galaxias (*Galaxias rostratus*) – Critically Endangered
- Murray Crayfish (*Euastacus armatus*) - Endangered
- Southern Purple Spotted Gudgeon (*Mogurnda adspersa*) - Endangered
- Trout Cod (*Maccullochella macquariensis*) - Endangered
- Macquarie Perch (*Macquaria australasica*) - Endangered
- Australian Grayling (*Prototroctes maraena*) - Endangered
- Murray Cod (*Maccullochella peelii*) - Vulnerable

None of these species are considered likely to occur within the project areas on basis of lack of potential habitat identified through indicative habitat mapping and habitats observed during the field survey. While possible habitat for these species have been mapped on the PMST across each Subject Site and corresponding localities, these areas are not included in indicative habitat mapping by DPIRD (which is considered the more accurate resource), with the exception of the Southern Purple Spotted Gudgeon.

Indicative habitat for the Southern Purple Spotted Gudgeon is mapped within 10 kilometres of site STR 432. The Southern Purple Spotted Gudgeon is considered to have a low likelihood of occurrence at site STR 432, given the downstream dam appears to present a barrier to fish habitat upstream, and the suboptimal habitats present within the Subject Site. Aquatic habitat within the Subject Site at this site would be highly ephemeral and not considered to be important to this species. Downstream habitats parallel to the existing access track, may be more suitable, but these are not proposed to be directly impacted.

A summary of aquatic habitat present within the Study Area is summarised Table 13, with site photos presented in Annex 5.

Table 11: Aquatic habitats assessed within Subject Site

Subject Site	Aquatic habitat description	KFH considerations	Indicative mapping for threatened species (DPIRD 2026)	FM Act and WM Act considerations regarding riparian buffer.	Further considerations
Mount Piper Substation - West	No aquatic habitat at the site, drainage lines are modified with concreted scour protection. The drainage structures does not support important habitat for native aquatic species.	The mapped KFH is a concreted drainage structure on site (goes partly under the road) and artificial dams.	None	The mapped watercourses and waterbodies would align with the definition of 'waterfront land' under the DPIRD Fisheries Guidelines. The proposed works do not require disturbing or altering waterways nor do they include the upgrading of any causeways. Under the WM Act, a natural channel artificially improved is considered a watercourse. A 10 m riparian buffer applies to the first order watercourses, and a 30 m riparian buffer applies to the third order watercourse. Works involving the clearing or disturbance of riparian vegetation on waterfront land (within 40 m of the top of bank), only, may be exempt from requiring a Controlled Activity Approval.	N/A
STR 356	Unnamed ephemeral 1st and 2nd order watercourses occur within the site. Field assessments identified evidence of damp soil conditions	No KFH mapped at the site.	No threatened freshwater fish habitat occurs at the site. Field observations did not identify suitable habitat for threatened aquatic species.	The mapped watercourses and waterbodies would align with the definition of 'waterfront land' under the DPIRD Fisheries Guidelines and definitions of	N/A

Subject Site	Aquatic habitat description	KFH considerations	Indicative mapping for threatened species (DPIRD 2026)	FM Act and WM Act considerations regarding riparian buffer.	Further considerations
	associated with the ephemeral watercourses.			waterways under the WM Act guidelines. Works involving the clearing or disturbance of riparian vegetation on waterfront land (within 40 m of the top of bank), only, may be exempt from requiring a Controlled Activity Permit Approval.	
STR 432	An unnamed 2nd order watercourse runs parallel to and north of the existing access track. The riparian zone is heavily vegetated, with *Eucalyptus spp.* and rushes, and the creek contains aquatic habitat, including aquatic macrophytes and snags. This watercourse will not be directly impacted. Two 1st order watercourses and wetland area intersect the Subject Site; this area is vegetated with *Poa sieberiana*. Minimal water was present during the field assessment, unlikely to support any important fish habitat even under high rainfall conditions.	No KFH mapped at the site.	No threatened freshwater fish habitat occurs at the site. Indicative habitat for the Southern Purple Spotted Gudgeon is mapped downstream of the unnamed 2nd order watercourse, although this is separated by an existing road crossing and an online farm dam upstream of this crossing that is anticipated to prevent fish passage.	The mapped watercourses and waterbodies would align with the definition of 'waterfront land' under the DPIRD Fisheries Guidelines. The proposed works do not require disturbing or altering waterways nor do they include the upgrading of any causeways. Under the WM Act, a natural channel artificially improved is considered a watercourse. Works involving the clearing or disturbance of riparian vegetation on waterfront land (within 40 m of the top of bank), only, may be exempt from requiring a Controlled Activity Approval.	The drainage lines are highly disturbed with clearing present in large portions of the Subject Site.

4 Impact Assessment

4.1 Overview

The potential impacts discussed in this section are based on database research, existing mapping, and a site visit. The site visit included collection of data on biodiversity values within the Study Area using rapid data points.

Impacts are categorised as direct or indirect as described in DPIE (2018), which states:

> "*Direct impacts* are those that directly affect habitat and individuals. They include, but are not limited to, death through predation, trampling, poisoning of the animal/plant itself and the removal of suitable habitat. When applying each factor, consideration must be given to all of the likely direct impacts of the proposed activity or development.
>
> *Indirect impacts* occur when Project-related activities affect species, populations, or ecological communities in a manner other than direct loss. Indirect impacts can include loss of individuals through starvation, exposure, predation by domestic and/or feral animals, loss of breeding opportunities, loss of shade/shelter, deleterious hydrological changes, increased soil salinity, erosion, inhibition of nitrogen fixation, weed invasion, fertiliser drift, or increased human activity within or directly adjacent to sensitive habitat areas. As with direct impacts, consideration must be given, when applying each factor, to all of the likely indirect impacts of the proposed activity or development."

4.2 Terrestrial ecological values

4.2.1 Potential impacts

An assessment of the potential impacts of the Project on biodiversity and a likelihood rating of Known, High, Moderate, Low or None has been assigned to each of the potential impacts listed in Table 14.

Table 12: Assessment of direct and indirect impacts as a result of the Project

Impact	Extent of impact as a result of the Project		
	Mount Piper Substation – West	STR 356	STR 432
Direct impacts			
Removal or modification of native vegetation	Known: The total maximum area of native PCTs to be removed is up to 0.60 ha (Table 5). The vegetation to be removed is not consistent with a TEC.	Known: The total maximum area of native PCTs to be removed is up to 2.28 ha (Table 5). The vegetation to be removed is not consistent with a TEC.	Known: The total maximum area of native PCTs to be removed is up to 2.65 ha (Table 5). The vegetation to be removed is not consistent with a TEC.
Loss of individuals of a threatened species	High: The removal of native vegetation may result in death or injury to a limited number of threatened species. Two Capertee Stringybark individuals are located within the Subject Site on STR 432. Recommendations for avoidance	Low: The removal of native vegetation and HBTs from STR 356 is not likely to result in the loss of individuals of a threatened species. Mitigation measures have been included in Section 0 to prevent loss of individuals of a threatened	Low: The removal of native vegetation and HBTs from STR 432 is not likely to result in the loss of individuals of a threatened species. Mitigation measures have been included in Section 0 to prevent loss of individuals of a threatened

Impact	Extent of impact as a result of the Project		
	Mount Piper Substation – West	**STR 356**	**STR 432**
	and mitigation are provided in Section 5. The impact of the removal of these two threatened Eucalypts within the local context is assessed in Appendix 4.	species during removal of HBTs and other potential threatened species habitat.	species during removal of HBTs and other potential threatened species habitat.
Removal or modification of threatened species habitat other than native vegetation (micro-habitat features)	**Known:** known habitat for the Capertee Stringybark will be removed from the Mount Piper Substation – West Subject Site. No other threatened species habitat is expected to be impacted within this site.	**Moderate**: vegetation to be removed may provide potential habitat for locally occurring threatened species. A total of 22 hollows will also be removed from the Subject Site, which may provide potential breeding habitat for locally occurring threatened fauna.	**Low**: vegetation to be removed may provide potential habitat for locally occurring threatened species. No hollows will be removed from the STR 432 Subject Site.
Death through trampling or vehicle strike	**Moderate**: The clearing of vegetation has the potential to increase the risk of injury or death from trampling during construction or from vehicle strike as a result of disturbance and increased fragmentation. Recommendations for avoidance and mitigation are provided in Section 5.		
Death through poisoning	**Low**: No poisons are proposed to be used. Harmful substances used in construction would all be controlled as per required Australian Standards.		
Fragmentation	**Moderate**: The loss of vegetation as a result of the Project would exacerbate existing fragmentation. Recommendations for avoidance and mitigation are provided in Section 5.		
Indirect impacts			
Predation by domestic and/or feral animals	**Low:** Temporary edge effects would present during construction, however as revegetation with native seed would be required post-construction, it is not expected that the Project would result in increased predation. Recommendations for avoidance and mitigation are provided in Section 5.		
Loss of shade/shelter	**Moderate**: The clearing of vegetation would result in some loss of shade and shelter, predominantly from the edge of vegetated stands, with small areas of traverses through vegetation. The proposed construction methodology will limit tree removal, and only vegetation that sits inside the Subject Site will be cleared for necessary infrastructure upgrades. Recommendations for avoidance and mitigation are provided in Section 5.		
Loss of individuals through starvation	**Low:** Considering the home range of these species and the area to be impacted, it is unlikely that the clearing of vegetation as a result of the Project would result in loss of individuals through starvation. he proposed construction methodology will limit tree removal, and only vegetation that sits inside the Subject Site will be cleared for necessary infrastructure upgrades.		
Loss of breeding opportunities	**None**: no hollows or other high quality habitat features were recoded within the Subject Site. The proposed works is unlikely to result in a loss of breeding opportunities.	**High:** The removal of 22 hollows from the Subject Site will reduce the availability of breeding habitat within the locality and therefore result in a reduction of breeding opportunities for local fauna.	**None**: no hollows or other high quality habitat features were recoded within the Subject Site. The proposed works is unlikely to result in a loss of breeding opportunities.
Loss of individuals through exposure	**Low:** Habitat to be removed consists of linear strips of vegetation, predominantly at the edge of vegetated stands, with small areas of traverses through vegetation. Given the resources available in immediately adjacent areas and the limited and peripheral nature of vegetation clearing to be		

Impact	Extent of impact as a result of the Project		
	Mount Piper Substation – West	STR 356	STR 432
	undertaken, the clearing of vegetation is considered unlikely to cause a loss of individuals through exposure.		
Edge effects (noise, light, traffic)	Low: Temporary edge effects resulting in an increase in noise, light and traffic would present during construction. However, as revegetation with native seed and weed management would be required post-construction, it is not expected that the Project would result in a long-term increase in edge effects. Recommendations for avoidance and mitigation are provided in Section 5.		
Deleterious hydrological changes	Low: The Project would not result in long-term impacts to hydrology beyond the construction stage.		
Weed invasion	Moderate: Clearing of vegetation may provide opportunity for the emergence of higher volumes of exotic species. Recommendations for avoidance and mitigation are provided in Section 5.		
Increased human activity within or directly adjacent to sensitive habitat areas	Low: The Project will result in increased human activity, but only for the duration of construction. The lasting impact should be negligible.		

4.2.2 Key threatening processes

As part of an assessment of impacts under the BC Act and EPBC Act, consideration must be given as to whether the action proposed constitutes, or is part of, a KTP or is likely to result in the operation of, or increase the impact of, a KTP on threatened biodiversity. The KTPs listed in Table 13 are known to exist or have the potential to be exacerbated by the Project.

Of the six KTPs identified as operating presently or historically, three are considered to increase as a result of the Project, including:

- Clearing of native vegetation
- Loss of hollow-bearing trees
- Removal of dead wood and dead trees.

Table 13 identifies the relevant Subject Site(s) where each KTP may occur or be increased by the Project. Where a KTP applies to more than one Subject Site, the nature and extent of impact may vary between sites depending on the extent of vegetation clearing, hollow-bearing tree removal, habitat disturbance and/or modification proposed at each location.

Table 13: Key Threatening Processes that are known or have the potential to be affected by the Project

Key Threatening Process	BC Act	EPBC Act	Operating presently or historically	Increased by Project	Subject Site(s) where KTP may occur or be increased
Alteration to the natural flow regimes of rivers, streams, floodplains & wetlands	Yes	No	Yes	No	Mount Piper Substation – West STR 356 STR 432
Clearing of native vegetation	Yes	Yes	Yes	Yes	Mount Piper Substation – West STR 356 STR 432
Invasion of native plant communities by exotic perennial grasses	Yes	No	Yes	No	Mount Piper Substation – West STR 356 STR 432
Loss of hollow-bearing trees	Yes	No	Yes	Yes	STR 356 STR 432
Novel biota and their impact on biodiversity	No	Yes	Yes	No	Mount Piper Substation – West STR 356 STR 432
Removal of dead wood and dead trees	Yes	No	Yes	Yes	STR 356 STR 432

4.3 Threatened species and ecological communities

4.3.1 Significant Impact Assessments

Significant impact assessments were completed for all species identified with a moderate or higher likelihood of occurrence within the Study Area and threatened species recorded during targeted surveys. Species were assessed in accordance with the relevant legislation's (BC or EPBC Act) significant impact criteria.

A summary of the outcome of these assessments is detailed in Section 4.3 and Table 14. The full assessments are available in Annex 4 for the BC Act Five-part Test of Significance and Annex 5 for the EPBC Act Significant Impact Criteria 1.1 assessment.

Due to the geographical separation of the sites, assessments of significance were undertaken separately for each site. Species with similar habitat requirements were assessed in groups, as below (e.g. woodland birds)

4.3.1.1 BC Act Five-part Tests of Significance:

Seven threatened species across the three sites were assessed for significant impacts in accordance with the BC Act Five-part Test of Significance:

- Capertee Stringybark
- Giant Burrowing Frog
- Koala
- South-eastern Hooded Robin
- Diamond Firetail

– Barking Owl
– Powerful Owl

A breakdown of these BC Act listed threatened fauna species by each Subject Site is provided in Section 4.3.4.

4.3.1.2 EPBC Act Significant Impact Criteria Assessment:

Four threatened species across the three sites were assessed for significant impacts in accordance with the EPBC Act Significant Impact Criteria:

– Giant Burrowing Frog
– South-eastern Hooded Robin
– Koala
– Diamond Firetail

A breakdown of these EPBC Act listed threatened fauna species by each Subject Site is provided in Section 4.3.4.

4.3.2 Threatened ecological communities

No threatened ecological communities were mapped as occurring within the Central Cluster Subject Sites.

4.3.3 Threatened flora

As discussed in Section 3.2.2, one threatened flora species Capertee Stringybark is known to occur within the Subject Site. Through random meander surveys conducted in September 2025, three individuals of this species were recorded within the PCT 3369 Moderate within the Survey Area for Structure 342. Two of these individuals are situated within the Subject Site. As such, assessments of significance under the BC Act were completed for this species and are provided in Annex 4. A summary of this assessment is presented in Table 14.

Table 14: Assessment of significance summary table for threatened flora either known to occur within Subject Site

Subject Site	Common name	BC Act	Outcome of BC Act Five-part Test of Significance (ToS)	EPBC Act	Outcome of EPBC Act Significant Impact Criteria (SIC) Assessment	Potential for impact	Formal assessment outcomes
STR 432	Capertee Stringybark	V	ToS completed. Significant impact unlikely.	Not listed	Not applicable	The proposed activities would impact known suitable habitat for the Capertee Stringybark in the form of clearing up to 2.65 ha of open forest/woodland vegetation. A total of three juvenile individuals (~2m tall) were recorded within the Study Area, two of which are located within the Subject Site (Figure 2.3). This species is locally frequent, with 545 records within 10km. Given that all 3 individuals are located within an area previously cleared, it is likely they have grown back either as regrowth or grown from seed from a larger population. On this basis, it is considered highly likely that additional individuals occur within surrounding areas of higher-quality habitat beyond the Study Area. However, as the surrounding area was severely burnt in the 2019/2020 bushfires, and the age of the BioNet records in the area, the status of the local population is unknown and may be less than previously measured. All measures should be taken to avoid impact to all Capertee Stringybark individuals on site.	Provided mitigation and avoidance measures are implemented, works are **unlikely** to cause a significant impact to this species

Subject Site	Common name	BC Act	Outcome of BC Act Five-part Test of Significance (ToS)	EPBC Act	Outcome of EPBC Act Significant Impact Criteria (SIC) Assessment	Potential for impact	Formal assessment outcomes
						Mitigation measures are detailed in Section 5. Provided these mitigation measures are implemented, as far is reasonably practical, it is unlikely that the proposed activities would result in adverse effects on the life cycles of these species such that a local population is placed at risk of extinction.	

4.3.4 Threatened fauna

As discussed in Section 3.4, six threatened fauna species were considered as having a moderate or higher likelihood of occurring on site and that may be significantly impacted by the Project. Assessments of significance under the BC Act and EPBC Act were completed and are provided in Annex 4 and Annex 5, respectively, and outcomes are provided in Table 15.

Table 15: Candidate fauna impact assessment

Subject Site	Common name	BC Act	Outcome of BC Act Five-part Test of Significance (ToS)	EPBC Act	Outcome of EPBC Act Significant Impact Criteria (SIC) Assessment	Potential for impact	Formal assessment outcomes
STR 432	Giant Burrowing Frog	V	ToS completed. Significant impact unlikely.	V	SIC completed. Significant impact unlikely.	The proposed activities would impact potentially suitable habitat for the Giant Burrowing Frog in the form of clearing up to 2.65 ha of open forest/woodland vegetation adjacent to two 1st order streams. Due to the small size of the site, the area of possible habitat (namely the Strahler 1 and 2 streams and 300m adjacent to these aquatic features) potentially covers the entire Subject Site. However suitable breeding habitat is limited to the Strahler 2 stream, as neither of the Strahler 1 streams provides the necessary soaks or pools to facilitate breeding. Additionally, the Subject Site is at the western edge of this species distribution, and it is outside of the known range. This is supported by the closest record occurring just under 10 km to the east of the Subject Site (within the known range). Overall, it is unlikely that the proposed activities would result in adverse effects on the life cycles of these species such that a local population is placed at risk of extinction.	Works are **unlikely** to cause a significant impact to this species

Subject Site	Common name	BC Act	Outcome of BC Act Five-part Test of Significance (ToS)	EPBC Act	Outcome of EPBC Act Significant Impact Criteria (SIC) Assessment	Potential for impact	Formal assessment outcomes
STR 432	Koala	E	ToS completed. Significant impact unlikely.	E	SIC completed. Significant impact unlikely.	The proposed activities would impact potential foraging and/or breeding habitat for the koala in the form of clearing up to 2.65 ha of open forest/woodland vegetation. Much of this vegetation is low to moderate condition and contains secondary food trees and mature eucalypts suitable for breeding. However, there are no primary food trees associated with the PCTs (3735 and 3369) found within the Subject Site. Furthermore, given the widespread distribution of this species, coupled with the small number of records within 10 km of the Subject Site, larger areas of more intact vegetation adjacent to the Subject Site and relatively small area to be cleared, it is unlikely that the proposed activities would result in adverse effects on the life cycles of these species such that a local population is placed at risk of extinction.	Works are **unlikely** to cause a significant impact to this species
STR 356	Diamond firetail	V	ToS completed. Significant impact unlikely.	V	SIC completed. Significant impact unlikely.	The proposed activities would impact potential foraging and/or breeding habitat for these threatened woodland birds in the form of clearing up to 2.28 ha of open forest/woodland vegetation. Much of this vegetation is high condition and contains good structural diversity with	Works are **unlikely** to cause a significant impact to this species
STR 356	South-eastern Hooded Robin	E	ToS completed. Significant impact unlikely.	E	SIC completed. Significant impact unlikely.		

Subject Site	Common name	BC Act	Outcome of BC Act Five-part Test of Significance (ToS)	EPBC Act	Outcome of EPBC Act Significant Impact Criteria (SIC) Assessment	Potential for impact	Formal assessment outcomes
						the presence of mature eucalypts, fallen timber and open grassy areas. However, given the widespread distribution of these species, coupled with the large areas of intact vegetation adjacent to the Subject Site and relatively small area to be cleared, it is unlikely that the proposed activities would result in adverse effects on the life cycles of these species such that a local population is placed at risk of extinction.	
STR 356	Koala	E	ToS completed. Significant impact unlikely.	E	SIC completed. Significant impact unlikely.	The proposed activities would impact potential foraging and/or breeding habitat for the koala in the form of clearing up to 2.28 ha of open forest/woodland vegetation. Much of this vegetation is high condition and contains secondary food trees and mature eucalypts suitable for breeding. However, there are no primary food trees associated with the PCT (477) found within the Subject Site. Furthermore, given the widespread distribution of this species, coupled with the large areas of intact vegetation adjacent to the Subject Site and relatively small area to be cleared, it is unlikely that the proposed activities would result in adverse effects on the life cycles of	Works are **unlikely** to cause a significant impact to this species

Subject Site	Common name	BC Act	Outcome of BC Act Five-part Test of Significance (ToS)	EPBC Act	Outcome of EPBC Act Significant Impact Criteria (SIC) Assessment	Potential for impact	Formal assessment outcomes
						these species such that a local population is placed at risk of extinction.	
STR 356	Barking Owl	V	ToS completed. Significant impact unlikely.	Not listed	Not applicable	The proposed activities would impact potential foraging and/or breeding habitat for the owls in the form of clearing up to 2.28 ha of open forest/woodland vegetation and two suitably sized hollow bearing trees from the Subject Site. Loss of hollow bearing trees is a key threatening process for owls, including loss of breeding habitat and loss of habitat for the owls' prey species. Without impact mitigation measures, the removal of these hollows may lead to a decline of the local population. To avoid a significant impact to the life cycle of these species' mitigation measures such as a stop work protocol to avoid disturbance to any breeding pairs from the Project as well as artificial hollow replacement and/ or hollow salvage will be implemented.	Works are **unlikely** to cause a significant impact to this species
STR 356	Powerful Owl	V	ToS completed. Significant impact unlikely.	Not listed	Not applicable		

4.4 Aquatic ecological values

4.4.1 Threatened aquatic species

There are no aquatic species considered to be threatened under the FM Act that will be impacted by the Project.

4.4.2 Potential impacts to aquatic habitat

The Project design is currently at concept level stage and the final alignment and details of the key design components are subject to detailed design and site constraints. The required works will vary at project area, however no in stream works or any watercourse crossing upgrades are proposed.

Given the presence or proximity of waterways, however, indirect impacts should be considered. These may include erosion and sedimentation or changes to local flow conditions as a result of drainage modifications. These indirect impacts are likely to be highly localised and temporary in nature. It is anticipated that the risk of potential erosion and sedimentation impacts could be effectively managed through appropriate site management and control measures. In addition, standard mitigation measures have been recommended to assist the Project in avoiding, minimising and managing potential impacts to aquatic habitats.

It is recommended that the final design avoid impacting any mapped KFH.

The WM Act is supported by a series of guidelines, with these guidelines including design principles and overarching management measures for work on waterfront land. It is recommended that these guidelines be considered in the development of the project design including:

- Guidelines for riparian corridors on waterfront land (DPE Water, 2022a).
- Guidelines for instream works on waterfront land (DPE Water, 2022b)
- Guidelines for watercourse crossings on waterfront land (DPE Water, 2022c).

The Policy and guidelines for fish habitat conservation and management (Fairfull 2013) provides recommended standard design, mitigation and management measures for the protection of aquatic ecosystems. The following sections are recommended to be considered during the development of project designs:

- Section 3.3: General requirements for developments
- Section 6: General waterway management.

Potential indirect impacts, recommended mitigation measures and the residual risks are provided in Section 5.3.2. Given the Project is located within areas of existing infrastructure and prior disturbance or modification, it is not expected to materially increase the likelihood or extent of disturbance.

4.4.3 Key threatening processes

The Project is not considered likely to contribute to the operation of any KTP's listed under the EPBC Act or FM Act.

4.4.4 Permits and consultation

Under section 201 of the FM Act, Transgrid is required to undertake the proposed works in accordance with their existing Fisheries permit (for maintenance of watercourse crossings).

It is recommended that DPI Fisheries are consulted regarding the proposed works and any further requirements.

A controlled activity approval may be required to carry out certain types of activities on waterfront land. On the basis of the current works description:

– If works are occurring within waterfront land (40 metres from the top of bank) but not affecting the bed or banks of a river, or causing any change in the course of the river, the project may be exempt from a Controlled Activity Permit.

5 Impact Mitigation

This section details how the proposal would, in the first instance, avoid impacts to biodiversity, then use mitigation measures where avoidance is not possible.

5.1 Overview

Conceptually, the best approach to managing the impacts of development on biodiversity starts by examining the potential for impact avoidance. Once exhausted, impact minimisation represents the next level of consideration. The last and least preferable option is the use of compensation methods such as habitat replacement or biodiversity offsets. The following sections provide a broad narrative for the consideration of this conceptual framework.

Recommendations may be refined following the detailed design stage of the Project. The following should be considered as a minimum:

- Avoid biodiversity impacts as far as reasonably practicable
- Minimise and mitigate impacts where avoidance is not possible

The Project design is currently at concept level stage, and the final alignment and details of the key design components and construction methodology are subject to change. As such, mitigation measures need to be reviewed for appropriateness and incorporated into the resulting project construction environmental management plan (CEMP) following finalisation of detailed design.

Provided suggested avoidance and mitigation measures are implemented, the Project is expected to have relatively minor impacts on biodiversity given the level of disturbance at the Study Area as a result of historic clearing and ongoing operational use of the transmission line.

5.2 Impact avoidance

The Project has been designed to avoid impacts to biodiversity values and minimise vegetation disturbance by utilising the existing cleared areas and areas of lower biodiversity value adjacent to the current transmission tower wherever possible. However, complete avoidance of all biodiversity values is not possible due to the engineering requirements of the Project, which require the installation of transposition towers in specific arrangements relative to existing high-voltage transmission towers. These technical constraints may limit the avoidance measures that will be able to be undertaken for this project.

The following recommendations should be considered at the detailed design stage to avoid impacts to flora, fauna, and their habitats:

- Disturbance of vegetation must be limited to that which has been assessed in the REF as the Subject Site with no-go zones established around areas of native vegetation to be retained.
- If clearing of vegetation is required outside the Subject Site these areas will need to be assessed by an ecologist for potential impacts to TECs, threatened species and their habitats.
- Avoid areas of creeklines and drainage to protect water quality and threatened fauna that inhabit the waterways, where possible.
- Retain habitat features where possible to avoid impacts to fauna habitat, including:
  - Large trees (greater than 50 cm diameter breast height) and stags
  - Hollow bearing trees



  - Large hollow logs
  - Bush-rock.
- Hollow bearing trees may be retained by:
  - Locating new structures and benches to allow trees to be retained wherever possible
  - Pruning trees rather than removing to retain hollow sections
  - Poisoning HBT's within the easement and retaining stags where impact cannot be avoided to retain hollows while still ensuring vegetation clearance requirements are maintained.
- Consider options to avoid removing the Capertee Stringybark individuals within the STR 432 Subject Site through detailed design processes, such as establishing a Tree Protection Zone (TPZ).

To avoid significant impacts to recorded and potentially occurring threatened species from within each Subject Site, it is recommended that vegetation and habitat clearing to not be conducted during threatened species breeding seasons.

This assessment takes a particular focus on mitigating the impact from removal of potential breeding hollows as these are a limiting resource, essential for breeding, and take a long time to develop and for hollow dependant species. Table 16 identifies the breeding seasons for hollow dependant threatened species recorded or considered likely to occur within each Subject Site. The breeding seasons represent the approximate months in which each species is expected to breed, while the rearing period refers to the time when dependent young are being cared for and may be more susceptible to impacts. Table 16 assesses likely breeding seasons against the project schedule for vegetation clearing in order to inform required mitigation measures.

Table 16. Key breeding periods for hollow dependant threatened species with a moderate or higher likelihood of occurring within the Study Areas

Scientific name	Common Name	BC Act	EPBC Act	Subject Site identified as likely to provide habitat	Breeding season (+rearing young)	Project schedule for vegetation clearance
Ninox connivens	Barking Owl	V	Not listed	STR 356	August to November (to ~ January)	Nov/Dec 26
Ninox strenua	Powerful Owl	V	Not listed	STR 356	May to October (to ~ December)	Nov/Dec 26

As detailed in Table 16 the two threatened owl species assessed as likely to occur have differing but overlapping breeding seasons spanning May through until the end of January, including fledging. This makes avoidance of breeding seasons a challenge. The current project schedule may be revised due to a variety of factors however this is the current known schedule. Revising this schedule to avoid breeding times will be further considered. Measures are provided below in Table 17 for the scenario where breeding times cannot be avoided. This process will involve consultation with the Project Ecologist to mitigate the risk of impact to any threatened species breeding cycle.

5.3 Impact Minimisation

5.3.1 Terrestrial Mitigation measures

To further minimise any impacts to flora, fauna and their habitat, it is recommended that the following mitigation measures should also be employed. Specific mitigation measures for each expected impact are detailed below in Table 17.

Table 17: Impact mitigation measures and recommendations

Potential impact	Proposed mitigation	Procedure	Timing	Sites that impact and mitigation measure applies
General				
All	Training	An induction process should be put in place for the training of relevant construction personnel to ensure awareness of the following as a minimum: – Awareness and understanding of management procedures detailed in this table. – Awareness and understanding of potential threatened species on site. – Awareness and understanding of the unexpected threatened species find procedure (below). – Awareness of the exclusion fencing and its purpose.	Pre-construction and during construction	Mount Piper Substation - West STR 356. STR 432
Habitat				
Removal of vegetation	Native vegetation avoidance	– An exclusion zone (no go zone) to be established and marked to indicate the limit of clearing boundary. – Trees to be retained within the footprint are to be clearly marked with spray paint and HBTs/stags should be marked with flagging tape and exclusion fencing established. – Suitably qualified ecologist is to mark and identify all HBTs/stags previously recorded during the site assessment. – Where possible, trees are to be felled to fall into the clearing area and away from adjacent vegetation or exclusion zones.	Pre-construction	Mount Piper Substation - West STR 356. STR 432
Habitat removal or modification of threatened	Pre-clearance survey	– Vegetation, including hollows should be inspected immediately prior to (on the day of) clearing by a suitably qualified ecologist to identify	Pre-construction	Mount Piper Substation - West STR 356. STR 432

Potential impact	Proposed mitigation	Procedure	Timing	Sites that impact and mitigation measure applies
species (micro-habitat features) during key breeding times		the presence of any native fauna and allow for relocation or dispersal into adjacent habitat. – In the instance threatened species are nesting/breeding within or adjacent to the Subject Site works must not commence until the Project Ecologist can confirm that the threatened species breeding would not be impacted by the Project.		
	Comprehensive pre-clearance inspections for habitat removal during key breeding times	In the instance habitat removal during key breeding periods for local threatened fauna cannot be avoided, the following measures are proposed: – Removal of, or covering of, potential breeding hollows prior to the breeding season should be considered in consultation with the Project Ecologist – A project ecologist is to be present on site during comprehensive inspections – Pre-clearance surveys are to be conducted for all hollows at a minimum of 24 hours prior to commencing habitat removal or covering hollows – Hollows are to be inspected using a combination of climbers or elevated work platforms, and endoscope inspections for hard-to-reach hollows – If any fauna are identified during these inspections, the Project Ecologist is to be notified immediately, and the stop works procedure is to be followed – The Project Ecologist will determine when works may resume without impacting the breeding/fledging of hollow dependant threatened fauna species.	Pre-construction and during construction	Mount Piper Substation - West STR 356. STR 432
		If a single or multiple young or dependent-juvenile Powerful Owl or Barking Owl is observed within a hollow to be removed, the following measures are to be taken: – The hollow is to be marked and left undisturbed – The tree is to remain undisturbed until the owls move on naturally.		

Potential impact	Proposed mitigation	Procedure	Timing	Sites that impact and mitigation measure applies
		– All hollows within that HBT are to be re-inspected prior to removal of hollows. – Clearing of surrounding, non HBT vegetation can proceed with caution in the presence of the Project Ecologist		
	Hollow bearing tree removal protocol	– Removal of hollow bearing trees must be supervised by a suitably qualified ecologist with wildlife handling experience. – Pre-clearance checks should be carried out on each hollow by a suitably qualified person prior to impacts to hollow-bearing trees. – All trees to be felled should be inspected immediately prior to (on the day of) felling by a suitably qualified ecologist. Inspections should include decorticating bark, where present. If fauna are found to have returned or remain in trees to be cleared, these trees are to be retained temporarily for up to 24 hours. After this time an appropriate means should be determined by the project ecologist to safely remove non threatened fauna. Handling of the fauna for removal should be undertaken by suitably trained individual (Ecologist). – Felled trees should be inspected for small hollows that may not have been observed from the ground during surveys. If present, hollows should be inspected by the Ecologist and any native fauna be relocated or allowed to disperse into adjacent habitat. Any injured fauna should be transferred to a nearby vet or recognised wildlife carer for further assessment, – Consider utilising an excavator with grab attachment or climbing arborist in order to gently lower hollows to avoid risk of injury to native fauna which may occupy hollows. Discuss approach with the Project Ecologist ahead of pre-clearing inspection.	Pre-construction	Mount Piper Substation - West STR 356. STR 432
Weed invasion	Weed management	– Vehicles to be free of weeds/seeds prior to commencing construction. – All weed material removed during the construction works should be disposed of in a suitable waste facility.	Pre-construction, During construction	Mount Piper Substation - West STR 356. STR 432

Potential impact	Proposed mitigation	Procedure	Timing	Sites that impact and mitigation measure applies
Pathogen spread	Hygiene protocols	– Footwear to be thoroughly cleaned and disinfected in accordance with Saving our Species hygiene guidelines for invasive plants and pathogens (NSW DPIE, 2020) before and after entering the subject land. – Any plant or equipment used for in-stream works to be cleaned and disinfected prior to construction. – Disinfecting solutions should be prevented from entering any water bodies.	Pre-construction, During construction	Mount Piper Substation - West STR 356. STR 432
Fragmentation	Removal of grassland habitat	– Unnecessary ground disturbance to be avoided where possible. – Grassland habitat should be inspected immediately prior to (on the day of) clearing by a suitably qualified ecologist to inspect habitat features for potential threatened species and allow for relocation or dispersal into adjacent habitat.	During construction	Mount Piper Substation - West STR 356. STR 432
Removal and storage of woody habitat	Reuse of habitat features on site	– Where it is required to be removed for the Project, timber is to be retained and relocated into adjoining habitat where practicable. – Stockpiling of felled vegetation is to occur away from clearing works wherever possible, so that animals displaced during vegetation clearing do not seek shelter in vegetation stockpiles that are to be sheared and mulched	During construction	Mount Piper Substation - West STR 356. STR 432
Removal of Threatened flora	Tree protection	– All Capertee Stringybark individuals are to be clearly flagged by an ecologist before any works commence. – Tree protection for retained trees must include establishment of a TPZ around the dripline.	Pre-construction During construction	STR 432
Removal of animal burrows	Exclusion methods	– Earthworks in and around wombat burrows may require measures to exclude wombats from burrows prior to commencement of earthworks, including monitoring of use of burrows and installation of one-way gates to prevent re-entry to burrows (Transgrid, 2022)	Pre-construction, During construction	STR 356. STR 432

Potential impact	Proposed mitigation	Procedure	Timing	Sites that impact and mitigation measure applies

Loss of hollows	Supplementary hollows	– Supplementary hollows will be installed with the aim of retaining pre clearing habitat value for hollow dependant threatened species. High-quality supplementary hollows will be installed at the following ratios as a minimum:
		  – 1:1 for every hollow ≥8cm diameter
		  – 1:2 for hollows <8cm diameter
		– Artificial hollows are to be installed, based on the estimated size and number of hollows removed, as provided in this report.
		– Artificial hollows are to be selected and installed in consultation with an ecologist to ensure the correct type and positioning in order to appropriately compensate for hollows lost and potential target species (including threatened species identified in this assessment).
		– The type of hollow will depend on landowner considerations, as well as thermal properties, longevity, suitability to target species and availability of log hollows for reuse. Hollows types may include insulated nest boxes, re-used log hollows and carved hollows.
			Pre-construction, During construction, post-construction	STR 356.
				STR 432

Construction				
Harm through trampling Harm through vehicle strike	Pre-clearing inspection	– Retained native vegetation adjacent to each Subject Site must be clearly marked as an exclusion zone. – Machinery must be inspected for wildlife prior to operation – Implement temporary construction speed limits. Speed limit signage is to be displayed throughout the Subject Site for the duration of the proposed works – All construction personnel are to be made aware of the potential collision risk with wildlife each day prior to beginning work	Pre-construction; During construction	Mount Piper Substation - West STR 356. STR 432
	Exclusion zones	Vehicle or machinery access, storage of equipment or materials and temporary site infrastructure is restricted within exclusion zones.		Mount Piper Substation - West STR 356. STR 432

Potential impact	Proposed mitigation	Procedure	Timing	Sites that impact and mitigation measure applies
	Unexpected Finds	In the case where a threatened species is encountered on site during construction or clearing activities, the following procedure is to be followed (adapted from (RTA, 2011): – Stop works immediately – Notify the project environment manager or project supervisor. – Notify the project ecologist. The ecologist is to undertake an impact assessment and determine if a significant impact is likely to occur, development management options and notify the appropriate departments. – If it is determined that no significant impact will occur, work can resume. – If it is determined that a significant impact is likely, consultation with the appropriate departments must be undertaken, and all necessary approvals obtained. – Work may recommence upon the advice of the ecologist and in consultation with Transgrid.		Mount Piper Substation - West STR 356. STR 432
Changes to hydrology and introduction of pollutants	Sediment and pollutant control	– Erosion and sediment control plan to be incorporated into the CEMP. – Sedimentation and erosion controls to be maintained throughout works. – Localised buffer zones and spill apparatus to be available on-site at all times. – All plant and machinery retained in good working order.		Mount Piper Substation - West STR 356. STR 432

5.3.2 Supplementary hollow installation

As part of the proposed works, artificial hollows are to be installed to replace those that are removed as part of the proposed works. Table 18 details the requirements of the hollow supplementation.

Table 18. Hollow supplementation details

Action	Response
Objective	To retain pre-clearing habitat values by replacing removed hollows with high quality artificial hollows
Minimum ratio	– A ratio of 1:1 for every hollow ≥8cm diameter – A ratio of 1:2 for hollows <8cm diameter.
Required hollow types	The following is a list of possible hollow options for the replacement of hollows removed as a part of the proposed works: – Constructed timber hollows – Carved hollows (using hollow hog method) – Repair and reinstallation of removed hollows
Configuration	The following is a list of the required hollow configurations based on the hollow sizes to be removed: – Two large-sized artificial hollows for threatened owls – 18 medium-sized artificial hollows for medium sized mammal species (e.g., gliders, phascogales) – One small artificial hollow for microbats
Timing	Replacement hollows are to be installed prior to hollow removal to provide adequate habitat for fauna that may be occurring inside Subject Sites to escape to.
Monitoring and maintenance	Artificial hollow monitoring and maintenance is to be carried out quarterly for the first year after installation, followed by yearly visits for another four years, totalling five years or monitoring and maintenance.

5.3.3 Aquatic Mitigation measures

Potential direct and indirect impacts, recommended mitigation measures and the residual risks are addressed in Table 19 and Table 20. Generally, the residual impact of construction and operational impacts are low, with the exception of unavoidable disturbance to areas of mapped watercourses (channel zone, bed and banks) during construction. Given the Project will occur in the context of existing infrastructure or past land disturbance, the Project is not anticipated to significantly increase the risk or operation of any disturbances.

Table 19: Aquatic ecology project impacts and recommended mitigation measures (construction)

Impact pathway	Potential impact	Severity	Likelihood	Mitigation measures	Residual risk
Clearance of vegetation, earthworks during construction in proximity to waterways	Bank destabilisation and associated erosion and sedimentation temporarily decreasing stream condition.	Low.	Moderate.	Erosion and sedimentation control and revegetation as required. Limit vegetation removal where possible. Minimise disturbance to native vegetation, including instream, fringing, and riparian areas, wherever possible. This may include marking areas of vegetation to be retained during work.	Low. Mitigation measures including soil and erosion control would reduce this overall risk.
Flood and flow paths during construction	Temporary construction facilities have potential to impact local flooding conditions by altering flow depths, velocities, or flow paths. Alternatively, portable buildings and large unsecured construction objects have potential to affect flooding. They can be carried away by deep floodwaters and worsen local flood conditions by blocking bridges, culverts, and flood control structures downstream.	Low.	Low. The likelihood of a major flood occurring during construction is low.	Where possible, ancillary construction facilities should be located above areas that are susceptible to flooding.	Low. The severity and likelihood of this risk occurring are low. Local aquatic habitat may be temporarily altered by a change in hydraulics. However, this is not expected to change the ecology of the waterway.
Spills and leaks from ancillary facilities and plant.	Leaks and spills of chemicals and other hazardous construction materials, and uncontrolled discharge of contaminants to receiving waterways. This could cause runoff and create localised downstream impacts to waterway.	Moderate.	Moderate.	Standard bunding and storage measures of fuel, chemicals and equipment. Spill management procedures should be established and spill kits to be made available. Monitoring and maintenance of facilities.	Low. Mitigation measures would substantially reduce this risk.
Stockpiles	Movement of loose material stored within the Study Area has the potential for sedimentation within adjoining waterway and result in habitat degradation. Discharges of sediment-laden stormwater from stockpiles may result in an increase of any particulate-bound contaminant loading	Moderate.	Moderate.	A CEMP would need to carefully consider mitigation measures on a site-specific basis to reduce the likelihood of uncontrolled releases in order to reduce this risk significantly. Stockpiles should be managed to be secure against rainfall or flood events. Further recommendations to inform the design and construction stages of the works are provided in section 4.5.	Low. Mitigation measures would substantially reduce this risk.

Impact pathway	Potential impact	Severity	Likelihood	Mitigation measures	Residual risk
	to natural waterways, water pollution and toxicity issues to resident biodiversity plus stimulation of the growth of nuisance plants, algae, and cyanobacteria from increased nutrients.				

Table 20: Project impacts and recommended mitigation measures (operation)

Impact pathway	Potential impact	Severity	Likelihood	Mitigation measures	Residual risk
Erosion/water quality	The proposed road and surrounding landform should be designed to withstand natural variability in stream flow to avoid generating erosion issues.	Low.	Low.	Monitoring and maintenance as required.	Low.
	The proposed works are not expected to have any significant effect on the overall aquatic habitat quality in Wybong Creek given the existing causeway.	Low.	Low.		Low.
Water quality	Potential for erosion and sedimentation unlikely to be significantly increased in contrast to existing causeway.	Low.	Low	Monitoring and maintenance as required.	Low.
Removal of riparian vegetation	Low - Removal of riparian vegetation is not expected to directly affect the waterway.	Low.	Low.	Affected landforms should be designed to be long term stable to compensate for the removal of any vegetation. Revegetation of any disturbed areas where practicable.	Low.

5.4 Offsetting

As these sites were assessed under Part 5 of the EP&A Act, and as the proposed works does not trigger a BDAR, offsetting is not required.

5.4.1 Offsets for aquatic species and environments

General policy seven in the *Guidelines for fish habitat conservation and management* (DPI 2013) identify that:

"No net loss of KFH – Significant environmental impacts (direct and indirect) are to be offset by environmental compensation."

It is considered that the project would not result in significant environmental impacts to aquatic systems within each Subject Site. This is in consideration with the following:

- No significant impacts to any threatened aquatic biota listed under the FM Act are considered likely to occur.
- Potential impacts to aquatic habitats would be small scale and localised.
- The project would not significantly increase the operation of any KTPs.
- The assessment has identified modified aquatic habitats within the Study Area and locality. The scale of potential impacts in this context is not considered significant.
- The potential for direct and indirect impacts during construction is further managed through the provision of a comprehensive suite of mitigation measures specific to aquatic habitats, including the avoidance of sensitive habitat features, erosion and sediment control, and the establishment of stable bank forms following work.

In light of the factors listed above, no net loss of KFH, or significant impacts to threatened aquatic species are anticipated to occur as a result of the project. As such, no offsets for aquatic species or KFH under the FM Act are proposed.

6 Conclusion

The proposed activity would result in the following impacts to native vegetation:

Mount Piper Substation - West

- 0.03 ha of native vegetation (PCT 3735)
- 0.56 ha of native vegetation (PCT 3747).

STR 356

- 2.28 ha of native vegetation (PCT 477).

STR 432

- 0.97 ha of native vegetation (PCT 3369)
- 1.67 ha of native vegetation (PCT 3735).

The Project may also result in the removal of up to 22 hollows from 14 HBTs and has the potential to impact threatened species and threatened species habitat. Seven threatened species have been identified as known and likely to occur in the proposed Subject Site. The risk of significant impact to these species has been assessed through tests of significance under the BC and EPBC Act where relevant.

Proposed mitigation measures have been presented to reduce impacts to the identified biodiversity values and their adoption aims to reduce impacts so that no significant impact is expected, as demonstrated by the outcomes of BC and EPBC Significant Impact Assessments in Annex 4 and Annex 5, respectively.

A number of recommendations have been made to avoid, minimise and mitigate potential impacts, regarding the following aspects:

- Avoid impacts to known individuals of Capertee Stringybark wherever possible. Consider options to redesign the Subject Site to avoid this species including a buffer to minimise potential for indirect impacts.
- Avoid or minimise impacts to moderate or high condition PCTs and maximise use of cleared or low condition PCTs.
- Retain HBTs where possible. If removal is unavoidable install compensatory high quality supplementary hollows with the aim of retaining pre clearance habitat value for hollow dependant threatened species. This will be based on the following ratios as a minimum:
  - 1:1 for every hollow ≥8cm diameter
  - 1:2 for hollows <8cm diameter.
- Removal of HBTs would be supervised by a suitably experienced ecologist
- A stop work protocols to avoid the Project impacting threatened species identified during pre-clearance surveys as breeding in hollows within the or adjacent to the Subject Site.
- Vegetation clearing extent management.
- Weed management.
- Pre-clearance surveys.
- Sediment control.
- Hygiene protocols.
- Presence of suitably qualified ecologist or fauna handler during vegetation clearance and construction.

Based on the outcomes of the assessment and implementation of the proposed mitigation measures, the Project is considered **unlikely** to result in significant impacts to threatened biodiversity.

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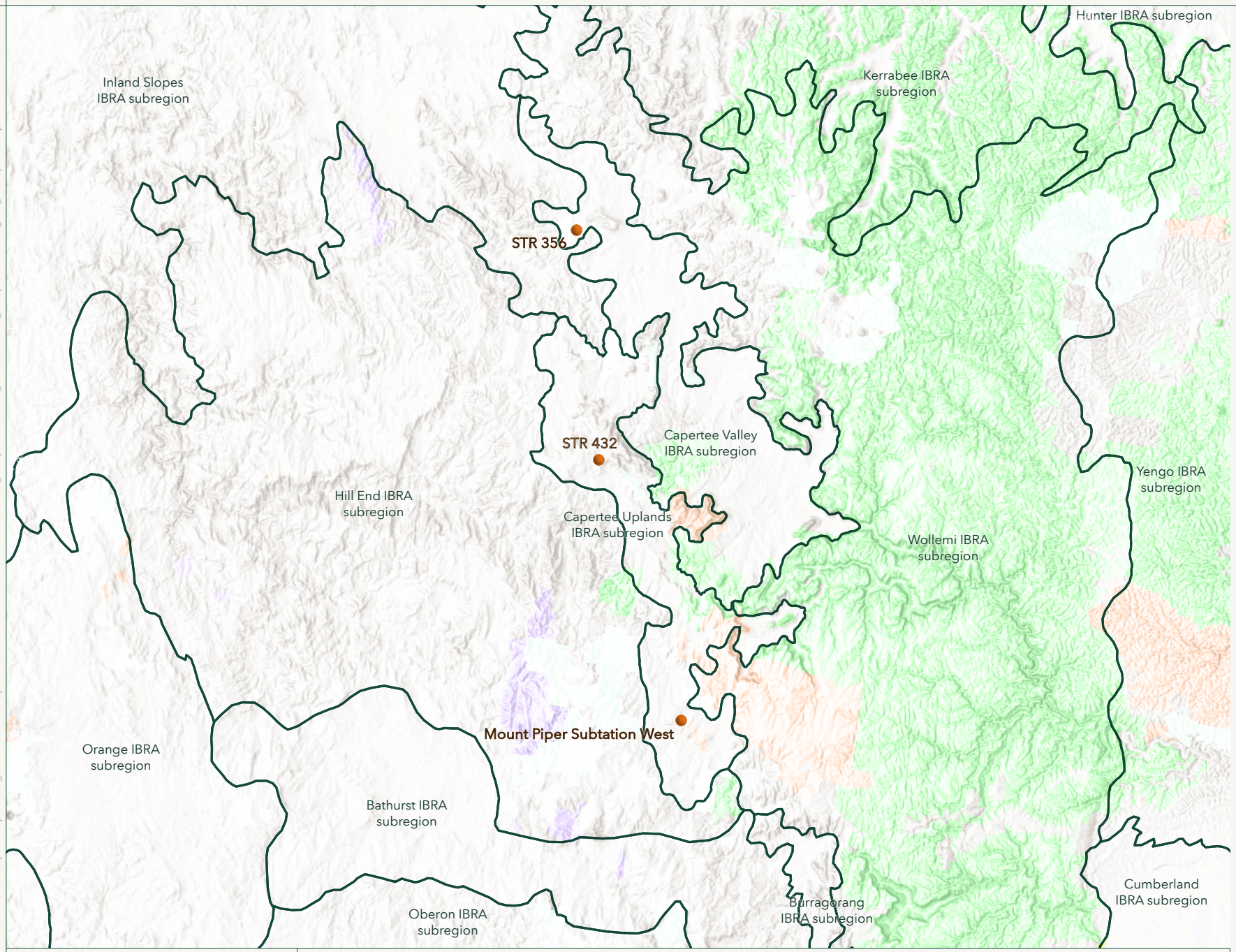
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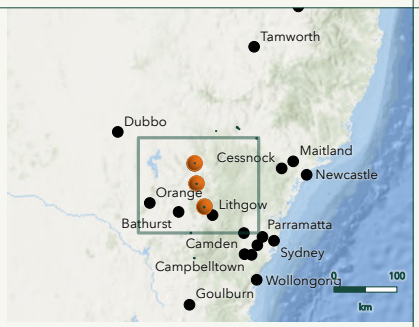
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Annex 1
Figures

Excellence in
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Subject Site

IBRA Subregion

Protected Areas of NSW

- National Park
- Nature Reserve
- Historic Site
- Regional Park
- Aboriginal Area
- State Conservation Area
- State Forest

Figure 1

Project Overview central cluster

Transgrid Transposition Towers Project

Niche PM: Rosemary Hulak
Niche Proj. #: 9216
Client: Arup

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GDA2020 MGA Zone 56

NSW Office of Environment and Heritage's BioNet Atlas, which holds the data from a number of custodians. Data Obtained 03/09/2025. | Map reference: / Subject area: / PlacePoint: / Hillshade: Esri, USGS/ Local Government Area: / World_Ocean_Base: Esri, GEBCO, Garmin, NaturalVue/ Subject Site: / NPWS Reserve: / State Forest: / Lot: / Hillshade: Esri, CGIAR/ Transparency Mask: / World Imagery: Earthstar Geographics | Watercourses, Waterbodies, Road and Rail alignments, Protected areas of NSW © Spatial Services 2021. | Niche uses GDA2020 as standard for all project-related data. In order to ensure that data from numerous sources and coordinate systems is aligned, on-the-fly transformation to GDA2020 MGA Zone 56 is used in the map above. For ease of reference, the grid tick marks and labels shown around the border of the map are presented in GDA2020 MGA Zone 56. | Print Date: 4/03/2026

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Figure 2.1: Mount Piper Subtation West

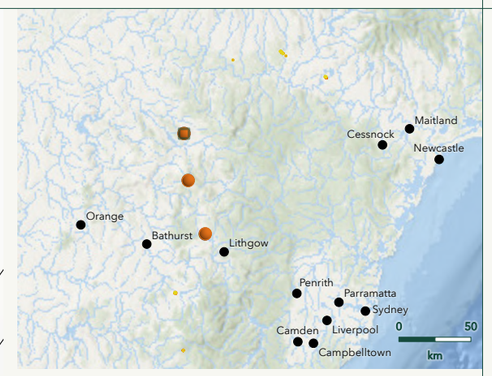
Biodiversity Constraints central cluster

Transgrid Transposition Towers Project

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Niche Proj. #: 9216
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NSW Office of Environment and Heritage's BioNet Atlas, which holds the data from a number of custodians. Data Obtained 03/09/2025. | Survey method: / Subject Site: / Map reference: / PlacePoint: / Subject area: / Hillshade: Esri, USGS/ World_Ocean_Base: NIWA, GeosciencesAustralia, Esri, GEBCO, Garmin, NaturalVue/ Incidental fauna: / Aquatic assessment: / Detected flora (Niche 2025): / Incidental flora: / Fauna habitat point: / Fauna habitat area: / Floristics RDP: / Key Fish Habitat 2 - Lines: © State of New South Wales through Department of Primary Industries and Regional Development 2025/ Key Fish Habitat 2 - Areas: © State of New South Wales through Department of Primary Industries and Regional Development 2025/ Study Area: / Project boundaries: / BAM plot locations: / Waterbody: / NPWS Reserve: / State Forest: / Lot: / Hillshade: Sources: Esri, Vantor, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap, and the GIS user community/ BC TEC: / EPBC TEC: / Validated vegetation : / Biodiversity Values Map (DCCEEW): / Potential vegetated riparian zone: / Mangoola BSA: Niche/ Transparency Mask: / World Imagery (WGS84): Esri, Maxar, Earthstar Geographics, and the GIS User Community | Watercourses, Waterbodies, Road and Rail alignments, Protected areas of NSW © Spatial Services 2021. | Niche uses GDA2020 as standard for all project-related data. In order to ensure that data from numerous sources and coordinate systems is aligned, on-the-fly transformation to GDA2020 MGA Zone 56 is used in the map above. For ease of reference, the grid tick marks and labels shown around the border of the map are presented in GDA2020 MGA Zone 56. | Print Date: 11/05/2026





- Study Area
- Subject Site
- Floristics RDP

Fauna habitat

- Woody habitat features
- Burrow

HBT hollows by size class (cm)

- hollows 0-5 (1)
- hollows 6-10 (4)
- hollows 11-15 (11)
- hollows 16-20 (5)
- hollows 20-39 (2)
- hollows >40 (1)
- Hollows suitable for Barking Owl and Powerful Owl

Vegetation Zones

- 477: High
- 477: Moderate
- 477: Low
- Not Native (Road)

Biodiversity Values (DCCEEW)

- Biodiverse riparian land
- Potential vegetated riparian zone

Hydrography

Strahler stream order

- 1
- 2

Protected Areas of NSW

- State Forest

Administrative and Property Boundaries

- Lot

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Figure 2.2: STR 356

Biodiversity Constraints central cluster

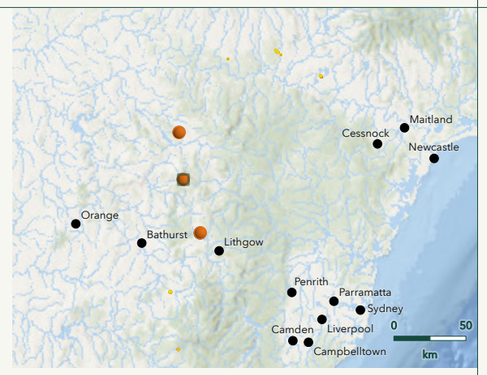
Transgrid Transposition Towers Project

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Study Area
Subject Site
Floristics RDP
Aquatic assessment

Observed fauna
Crimson Rosella (*Platycercus elegans*)
Common Eastern Froglet (*Crinia signifera*)

Threatened flora records (Niche 2025)
Eucalyptus cannonii

Bionet (09/03/2025)
Eucalyptus cannonii

Fauna habitat
Woody habitat features
Burrow
HBT hollows by size class (cm)
hollows 6-10 (7)
hollows 11-15 (4)
hollows 16-20 (1)
hollows 20-39 (2)
hollows >40 (3)
Hollows suitable for Barking Owl and Powerful Owl

Vegetation Zones
3369: Moderate
3369: Low
3735: Moderate
3735: Low
Not Native (Road)

Biodiversity Values (DCCEEW)
Biodiverse riparian land
Potential vegetated riparian zone

Hydrography
Strahler stream order
1
2
3

Administrative and Property Boundaries
Lot

Drawn by: PenelopeGeering File: C:\OneDriveSyncFolder\Niche\GIS - APRX - APRX\a9200\a9216_Transposition Towers_NSW\Pro\a9216_TranspositionTowers_BAR_NSW.aprx Last updated: 11/05/2026 5:01 PM

Figure 2.3: STR 432

Biodiversity Constraints central cluster

Transgrid Transposition Towers Project

Niche PM: Rosemary Hulak
Niche Proj. #: 9216
Client: Arup

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m
GDA2020 MGA Zone 56

NSW Office of Environment and Heritage's BioNet Atlas, which holds the data from a number of custodians. Data Obtained 03/09/2025. | Survey method: / Subject Site: / Map reference: / PlacePoint: / Subject area: / Hillshade: Esri, USGS/ World_Ocean_Base: NIWA, GeosciencesAustralia, Esri, GEBCO, Garmin, NaturalVue/ Incidental fauna: / Aquatic assessment: / Detected flora (Niche 2025): / Incidental flora: / Fauna habitat point: / Fauna habitat area: / Floristics RDP: / Key Fish Habitat 2 - Lines: © State of New South Wales through Department of Primary Industries and Regional Development 2025/ Key Fish Habitat 2 - Areas: © State of New South Wales through Department of Primary Industries and Regional Development 2025/ Study Area: / Project boundaries: / BAM plot locations: / Waterbody: / NPWS Reserve: / State Forest: / Lot: / Hillshade: Esri, Geoscience Australia, NASA, NGA, USGS/ BC TEC: / EPBC TEC: / Validated vegetation : / Biodiversity Values Map (DCCEEW): / Potential vegetated riparian zone: / Mangoola BSA: Niche/ Transparency Mask: / World Imagery (WGS84): Esri, Maxar, Earthstar Geographics, and the GIS User Community | Watercourses, Waterbodies, Road and Rail alignments, Protected areas of NSW © Spatial Services 2021. | Niche uses GDA2020 as standard for all project-related data. In order to ensure that data from numerous sources and coordinate systems is aligned, on-the-fly transformation to GDA2020 MGA Zone 56 is used in the map above. For ease of reference, the grid tick marks and labels shown around the border of the map are presented in GDA2020 MGA Zone 56. | Print Date: 11/05/2026

Annex 2
Likelihood of occurrence assessment

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Annex Table 1: Likelihood of occurance table for Central Cluster

Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact					
					Mount Piper Substation (South)	Likelihood and further assessment	STR 356 + access	Likelihood and further assessment	STR 432 + access	Likelihood and further assessment
Flora										
Acacia bynoeana	Bynoe's Wattle	E	V	Endemic to central eastern NSW, known a limited number of locations, often comprising populations of few plants. Grows mainly in heath/ dry sclerophyll forest on sandy soils, prefers open, sometimes slightly disturbed sites such as trail margins, road edges, and in recently burnt open patches. Flowers September to March, and fruit matures in November.	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area. Restricted distribution. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area. Restricted distribution. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area. Restricted distribution. Nil further assessment required.
Banksia penicillata	-	Not listed	E	*Banksia penicillata* is endemic to New South Wales (NSW) and is found on sandstone-derived soils along ridges, among rocks or near cliffs, and occasionally on lower slopes and in plateau valleys, in the northern Blue Mountains, including Wollemi, Blue Mountains and Gardens of Stone National Parks, Mugii Murum-ban State Conservation Area and Gardens of Stone State Conservation Area. *Banksia penicillata* occurs in sclerophyll forest or woodland (occasionally heaths) on sandstone soils.	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area. Restricted distribution. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area. Restricted distribution. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area. Restricted distribution. Nil further assessment required.
Boronia deanei subsp. deanei	Deane's Boronia	V	V	*Boronia deanei* is an erect, slightly spreading shrub that occurs naturally in swamps between Clarence and Wolgan in the Blue Mountains of New South Wales and also above the Fitzroy Falls near Moss Vale, New South Wales.	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area. Restricted distribution. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area. Restricted distribution. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area. Restricted distribution. Nil further assessment required.
Caladenia attenuata	Duramana Fingers	CE	CE	*Caladenia attenuata* is endemic to NSW. It has a highly restricted distribution, having been recorded from 2 localities within	Nil records within 10km	Low likelihood of occurring on the site.	Nil records within 10km	Low likelihood of occurring on the site.	Nil records within 10km	Low likelihood of occurring on the site.

Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact					
					Mount Piper Substation (South)	Likelihood and further assessment	STR 356 + access	Likelihood and further assessment	STR 432 + access	Likelihood and further assessment
				the Bathurst Ilford region with an area of occupancy estimated to be 8 square kilometres. Recent surveys have only found an unconfirmed specimen from the Ilford site.		Very restricted known distribution (near Bathurst and Ilford, NSW. Only 2 known records from these locations. Data deficient for habitat requirements, however unlikely to be correct habitat for this species. Nil further assessment required.		Very restricted known distribution (near Bathurst and Ilford, NSW. Only 2 known records from these locations. Data deficient for habitat requirements, however unlikely to be correct habitat for this species. Nil further assessment required.		Very restricted known distribution (near Bathurst and Ilford, NSW. Only 2 known records from these locations. Data deficient for habitat requirements, however unlikely to be correct habitat for this species. Nil further assessment required.
Cryptostylis hunteriana	Leafless Tongue Orchid	V	V	The Leafless Tongue Orchid has been recorded from as far north as Gibraltar Range National Park south into Victoria around the coast as far as Orbost. It is known historically from a number of localities on the NSW south coast and has been observed in recent years at many sites between Batemans Bay and Nowra (although it is uncommon at all sites). Also recorded at Munmorah State Conservation Area, Nelson Bay, Wyee, Washpool National Park, Nowendoc State Forest, Ku-Ring-Gai Chase National Park and Ben Boyd National Park. Does not appear to have well defined habitat preferences and is known from a range of communities, including swamp-heath and woodland. The larger populations typically occur in woodland dominated by Scribbly Gum (*Eucalyptus sclerophylla*), Silvertop Ash (*E. sieberi)*, Red Bloodwood *(Corymbia gummifera*) and Black Sheoak *(Allocasuarina littoralis);* appears to prefer open areas in the understorey of this community and is often found in association with the Large Tongue Orchid (*C. subulata*) and the Tartan Tongue Orchid (*C. erecta*). Little is known about the ecology of the species; being leafless it is expected to have limited	Nil records within 10km	Unlikely to occur on the site Cryptic and data deficient species. Little is known about its habitat requirements, however given general coastal distribution unlikely to be correct habitat for this species. N further assessment required.	Nil records within 10km	Unlikely to occur on the site Cryptic and data deficient species. Little is known about its habitat requirements, however given general coastal distribution unlikely to be correct habitat for this species. Nil further assessment required. .	Nil records within 10km	Unlikely to occur on the site Cryptic and data deficient species. Little is known about its habitat requirements, however given general coastal distribution unlikely to be correct habitat for this species. Nil further assessment required. .

Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact					
					Mount Piper Substation (South)	Likelihood and further assessment	STR 356 + access	Likelihood and further assessment	STR 432 + access	Likelihood and further assessment
				photosynthetic capability and probably depends upon a fungal associate to meet its nutritional requirements from either living or dead organic material.						
Dichanthium setosum	Bluegrass	V	V	Occurs on the New England Tablelands, North-west Slopes and Plains and the Central-west Slopes. Associated with heavy basaltic black soils and red-brown loams with clay subsoil. Often found in moderately disturbed areas such as cleared woodland, grassy roadside remnants and highly disturbed pasture. Appears to have wide environmental tolerances.	Nil records within 10km	Unlikely to occur on the site. Associated with heavy basaltic black soils and red-brown loams with clay subsoil, which was not found on site. Nil further assessment required.	Nil records within 10km	Unlikely to occur on the site. Associated with heavy basaltic black soils and red-brown loams with clay subsoil, which was not found on site. Nil further assessment required.	Nil records within 10km	Unlikely to occur on the site Associated with heavy basaltic black soils and red-brown loams with clay subsoil, which was not found on site. Nil further assessment required.
Eucalyptus aggregata	Black Gum	V	V	Occurs on the central and southern tablelands of NSW, and in a small disjunct population in Victoria. In NSW it occurs in the South Eastern Highlands Bioregion and on the western fringe of the Sydney Basin Bioregion. Black Gum grows in the lowest parts of the landscape, on grassy woodlands on alluvial soils in moist sites along creeks on broad, cold and poorly-drained flats and hollows. Commonly occurs with Candlebark, Ribbon Gum, and White Sally with a grassy understorey of Tussock. Also occurs as isolated paddock trees in modified native, exotic pastures or travelling stock reserves.	1078 records within 10km, last recorded 2024 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. 1078 records noted within 10km and 2 records within 1.5km of site in 2017. However, most of the area surveyed was highly disturbed, with minimal tree canopy or regrowth remaining. While it is possible some of the regrowth could be *E. aggregata,* removal of this regrowth is unlikely to cause a significant impact. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area despite the widespread possible distribution. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area despite the widespread possible distribution. Nil further assessment required.
Eucalyptus alligatrix subsp. miscella	-	V	V	*Eucalyptus alligatrix subsp. miscella* is known only from one locality south-west of Rylstone, New South Wales, where it is confined to an area of partly cleared grazing land on private property. Much of the known	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there

Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact					
					Mount Piper Substation (South)	Likelihood and further assessment	STR 356 + access	Likelihood and further assessment	STR 432 + access	Likelihood and further assessment
				population consists of moderately dense regenerating stands following previous clearing, but there are also larger scattered paddock trees, probably pre-dating European settlement		are no recent records of occurrence in the area. Very restricted distribution. Nil further assessment required.		are no recent records of occurrence in the area. Very restricted distribution. Nil further assessment required.		are no recent records of occurrence in the area. Very restricted distribution. Nil further assessment required.
Eucalyptus cannonii	Capertee Stringybark	V	Not listed	Mostly restricted to the central tablelands and slopes from Bathurst and Wallerawang to Mudgee, with isolated occurrences between Dunedoo and Merriwa. Broad altitudinal range (approximately 450 - 1050m asl) and appears to tolerate most situations except valley floors. Occurs in dry sclerophyll forests and woodlands with grassy/shrubby understoreys, associated with a diverse suite of eucalypts. Flowers between January to April.	545 records within 10km, last recorded 2024 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Large population of the species known 3.5km south of site. However, most of the area surveyed was highly disturbed, with minimal tree canopy remaining. While it is possible some of the regrowth could be *E. cannoni, removal* of this regrowth is unlikely to cause a significant impact. Nil further assessment required.	2168 records within 10km, last recorded 2024 (NSW DCCEEW, 2026a)	Low likelihood of occurring on site. Multiple close records and associated habitat. However, during initial site survey, not noted. Nil further assessment required.	73 records within 10km, last recorded 2025 (NSW DCCEEW, 2026a)	Known. 3 individuals recorded during site assessment. 73 records within 10km and 2 records within 250m in 2019. Assessment of significance required.
Eucalyptus pulverulenta	Silver-leafed Gum	V	V	The Silver-leafed Gum is a distinctively wattle-like, straggly mallee or small tree to about 10 m tall. This species grows in shallow soils as an understorey plant in open forest, typically dominated by Brittle Gum, Red Stringybark, Broad-leafed Peppermint, Silvertop Ash and Apple Box. The Silver-leafed Gum is found in two quite separate areas, the Lithgow to Bathurst area and the Monaro (Bredbo, Bombala areas).	15 records within 10km, last recorded 2024 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Large population of the species known 3.5km south of site. However, most of the area surveyed was highly disturbed, with minimal tree canopy remaining. While it is possible some of the regrowth could be *E.pulverenta,* removal of this regrowth is unlikely to cause a significant impact. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area. Site located outside of restricted distribution. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area. Site located outside of restricted distribution. Nil further assessment required.

Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact					
					Mount Piper Substation (South)	Likelihood and further assessment	STR 356 + access	Likelihood and further assessment	STR 432 + access	Likelihood and further assessment
Eucalyptus robertsonii subsp. hemisphaerica	Robertson's Peppermint	V	V	Known only from the central tablelands of NSW, at small disjunct localities from north of Orange to Burraga. Locally frequent in grassy or dry sclerophyll woodland or forest, on lighter soils and often on granite. Usually found in closed grassy woodlands in locally sheltered sites. Habitats include quartzite ridges, upper slopes and a slight rise of shallow clay over volcanics. Flowers from February to March.	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area. Very restricted distribution, suitable habitat not found on site. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area. Very restricted distribution, suitable habitat not found on site. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area. Very restricted distribution, suitable habitat not found on site. Nil further assessment required.
Euphrasia arguta		CE	CE	Recently rediscovered near Nundle on the north-western slopes and tablelands, once known from scattered locations between Sydney, Bathurst and Walcha. Known populations occur in eucalypt forest with a mixed grass/shrub understorey, while previous records are described as occurring in open forest, grassy country and river meadows. Dense stands observed in cleared firebreak areas, suggesting it may respond well to disturbance.	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site. While suitable habitat is found on site, there are no recent records of occurrence in the area despite the widespread possible distribution. Nil further assessment required.	1 record within 10km, last recorded 1982 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. The species is considered unlikely to occur on site. While suitable habitat is found on site, there are no recent records of occurrence in the area despite the widespread possible distribution. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site. While suitable habitat is found on site, there are no recent records of occurrence in the area despite the widespread possible distribution. Nil further assessment required.
Genoplesium superbum	Superb Midge Orchid	E	Not listed	The Superb Midge Orchid is restricted to the Central and Southern Tablelands of NSW where it has been recorded from 2 locations near Nerriga, c. 20 km apart, and north of Wallerawang. The Superb Midge Orchid occurs predominantly in wet heathland on shallow soils above a sandstone cap but has also been found in open woodland interspersed with heath and dry open shrubby woodland.	13 records within 10km, last recorded 2020 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Wet heathland habitat underlain by sandstone bedrock is common across the site. However, significant disturbance to the ground layer – including the importation of gravels for road construction – has likely rendered the substrate too modified to provide suitable habitat for this species. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site. While suitable habitat is found on site, there are no recent records of occurrence in the area despite the widespread possible distribution. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site. While suitable habitat is found on site, there are no recent records of occurrence in the area despite the widespread possible distribution. Nil further assessment required.

Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact					
					Mount Piper Substation (South)	Likelihood and further assessment	STR 356 + access	Likelihood and further assessment	STR 432 + access	Likelihood and further assessment
Grevillea obtusiflora		E	E	Subspecies obtusiflora is restricted to Clandulla State Forest near Kandos. Subspecies obtusiflora occurs as scattered groups in the understorey of low open eucalypt forest at altitudes of around 730 metres above sea level. Subspecies fecunda occurs in the Capertee Valley, north-west of Lithgow, and south into Gardens of Stone National Park. Subspecies fecunda occurs in clusters within low, open scrub beneath open, dry sclerophyll forest, on orange, sandy loam soils with sandstone boulders, at altitudes of above around 550 metres.	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area. Very restricted distribution. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area. Very restricted distribution. Nil further assessment required.	100 records within 10km, last recorded 2013 (NSW DCCEEW, 2026a);	Low likelihood of occurring on the site. While there locally abundant populations within the district, the closest record was noted in 2001. This site was severely burnt during the 2019/2020 fires. The fire response to such fire intensity on this species is unknown. This species flowers through winter into spring and was not noted on site during survey. Nil further assessment required.
Hibbertia acaulothrix	-	E	E	*Hibbertia acaulothrix* occurs on rocky outcrops within *E. sieberi* woodland or in association with black she-oak, red bloodwood and flaky-barked tea-tree. It is known from several widely separated localities in NSW, from Wadbilliga National Park in the Southern Tablelands, through the Nattai Wollondilly area in the Southern Central Tablelands, to the Mt Baker and Mt Coricudgy (Wollemi) area in northern part of the Central Coast and Tablelands. The only estimate for subpopulation numbers is for the Nattai-Wollondilly area–south, with 40 plants observed in 2001.	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area. Very restricted distribution. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area. Very restricted distribution. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area. Very restricted distribution. Nil further assessment required.
Hibbertia cistiflora subsp. quadristaminea	-	E	E	Hibbertia cistiflora subsp. quadristaminea has been recorded from two subpopulations in New South Wales (NSW), from the Blue Mountains National Park and on the Newnes Plateau in the Gardens of Stone State Conservation Area (formerly	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area.	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area.	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area.

Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact					
					Mount Piper Substation (South)	Likelihood and further assessment	STR 356 + access	Likelihood and further assessment	STR 432 + access	Likelihood and further assessment
				Newnes State Forest). The subpopulation discovered in the Blue Mountains National Park grows in the vicinity of Butterbox Point within the Mount Hay area (AVH 2021). The subpopulation at Newnes Plateau grows near Old Bells Line of Rd and Bald Trig Point (AVH 2021).		Very restricted distribution. Nil further assessment required.		Very restricted distribution. Nil further assessment required.		Very restricted distribution. Nil further assessment required.
Homoranthus darwinioides	-	V	V	Rare in the central tablelands and western slopes, occurring from Putty to the Dubbo area. Grows in various woodland habitats with shrubby understoreys, usually in gravelly sandy soils. Landforms the species has been recorded growing on include flat sunny ridge tops with scrubby woodland, sloping ridges, gentle south-facing slopes, and a slight depression on a roadside with loamy sand.	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area. Suitable habitat is not present on site. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area. Suitable habitat is not present on site. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area. Suitable habitat is not present on site. Nil further assessment required.
Isotoma fluviatilis subsp. fluviatilis	-	Not Listed	Extinct	Currently known from only two adjacent sites on a single private property at Erskine Park in the Penrith LGA. Previous sightings are all from western Sydney, at Homebush and at Agnes Banks. Known to grow in damp places, on the Cumberland Plain, including freshwater wetland, grassland/alluvial woodland and an alluvial woodland/shale plains woodland (Cumberland Plain Woodland) ecotone. May be an early successional species that benefits from some disturbance. Possibly out competed when overgrown by some species such as *Cyndon dactylon*.	1 record within 10km, last recorded 1995 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area. Very restricted distribution, suitable habitat is not present on site. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area. Very restricted distribution, suitable habitat is not present on site. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area. Very restricted distribution, suitable habitat is not present on site. Nil further assessment required.
Haloragodendron lucasii	-	E	E	The known locations of this species are confined to a very narrow distribution on the north shore of Sydney. Associated with dry sclerophyll forest. Reported to grow in moist sandy loam soils in sheltered aspects, and on gentle slopes below cliff-lines near creeks in low open woodland. Associated with high	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area. Very restricted distribution, suitable	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area. Very restricted distribution, suitable	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area. Very restricted distribution, suitable

Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact					
					Mount Piper Substation (South)	Likelihood and further assessment	STR 356 + access	Likelihood and further assessment	STR 432 + access	Likelihood and further assessment
				soil moisture and relatively high soil-phosphorus levels.		habitat is not present on site. Nil further assessment required.		habitat is not present on site. Nil further assessment required.		habitat is not present on site. Nil further assessment required.
Kunzea cambagei	Cambage Kunzea	V	V	Mainly occurs in the Yerranderie/Mt Werong area with other populations also along the Wingecarribee River, Loombah Plateau east of Mount Werong, Kanangra-Boyd NP and the Nattai NP. Cambage Kunzea is restricted to damp, sandy soils in wet heath or mallee open scrub at higher altitudes on sandstone outcrops or Silurian group sediments.	867 records within 10km, last recorded 2021 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Wet heathland habitat underlain by sandstone bedrock is common across the site. However, significant disturbance to the ground layer – including the importation of gravels for road construction – has likely rendered the substrate too modified to provide suitable habitat for this species. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area. Very restricted distribution, suitable habitat is not present on site. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area. Very restricted distribution, suitable habitat is not present on site. Nil further assessment required.
Lepidium aschersonii	Spiny Peppercress	V	V	The species is not widespread, occurring in the marginal central-western slopes and north-western plains regions of NSW. Found on ridges of gilgai clays dominated by *Acacia harpophyll, Casuarina cristata, Allocasuarina luehmanii* and *Eucalyptus microcarpa*. The species grows as a component of the ground flora, in grey loamy clays. Vegetation structure varies from open to dense, with sparse grassy understorey with introduced plants and occasional heavy litter.	Nil records within 10km	Unlikely to occur on site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area This site is located outside the known distribution for this species, and no suitable occurs on the site. Nil further assessment required.	Nil records within 10km	Unlikely to occur on site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area This site is located outside the known distribution for this species, and no suitable occurs on the site. Nil further assessment required.	Nil records within 10km	Unlikely to occur on site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area This site is located outside the known distribution for this species, and no suitable occurs on the site. Nil further assessment required.
Lepidium hyssopifolium	Aromatic Peppercress	E	E	In NSW, there is a small population near Bathurst, one population at Bungendore, and one near Crookwell. The species was also recorded near Armidale in 1945 and 1958; however, it is not known whether it remains in this area. A specimen collected in the Cooma area about 100 years ago may also be Aromatic	Nil records within 10km	Unlikely to occur on site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area This site is located outside the known distribution for this	Nil records within 10km	Unlikely to occur on site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area This site is located outside the known distribution for this	Nil records within 10km	Unlikely to occur on site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area This site is located outside the known distribution for this

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					Mount Piper Substation (South)	Likelihood and further assessment	STR 356 + access	Likelihood and further assessment	STR 432 + access	Likelihood and further assessment
				Peppercress. A new population was established in McLeods Creek Nature Reserve but with limited success to date. In NSW the species was known to have occurred in both woodland with a grassy understorey and in grassland. The species may be a disturbance opportunist, as it was discovered at the most recently discovered site (near Bungendore) following soil disturbance. The cryptic and non-descript nature (appearing like several weed species) of the species makes it hard to detect.		species, and no suitable occurs on the site. Nil further assessment required.		species, and no suitable occurs on the site. Nil further assessment required.		species, and no suitable occurs on the site. Nil further assessment required.
Leptospermum petraeum	-	CE	CE	*Leptospermum petraeum* occurs near Kanangra Walls in Kanangra-Boyd National Park, in the Central Tablelands of New South Wales (NSW). *Leptospermum petraeum* is known to grow in rock crevices of granite outcrops	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area. Very restricted distribution, suitable habitat is not present on site. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area. Very restricted distribution, suitable habitat is not present on site. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area. Very restricted distribution, suitable habitat is not present on site. Nil further assessment required.
Leucochrysum albicans subsp. tricolor	Hoary Sunray	E	E	In NSW it currently occurs on the Southern Tablelands adjacent areas in an area roughly bounded by Albury, Bega and Goulburn, with a few scattered localities know from beyond this region. Occurs in a wide variety of grassland, woodland and forest habitats, generally on relatively heavy soils. The species is highly dependent on the presence of bare ground for germination and can occur in modified habitats such as semi-urban areas and roadsides.	Nil records within 10km	Low likelihood of occurring on the site. Heavily modified substrate on site and very sandy soils are unlikely to be suitable habitat. Nil recent records in close vicinity. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. Very sandy soils are unlikely to be suitable habitat. Nil recent records in close vicinity. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. Possible habitat within easement, however not noted during initial survey. Nil recent records in close vicinity. Nil further assessment required.
Ozothamnus tesselatus	-	V	V	Restricted to a few locations in an east-west zone south of Bunnan and between west	Nil records within 10km	Low likelihood of occurring on the site.	Nil records within 10km	Low likelihood of occurring on the site.	Nil records within 10km	Low likelihood of occurring on the site.

Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact					
					Mount Piper Substation (South)	Likelihood and further assessment	STR 356 + access	Likelihood and further assessment	STR 432 + access	Likelihood and further assessment
				Bylong and east Ravensworth. Grows in eucalypt woodland.		The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area. This site is located outside the known distribution for this species. Nil further assessment required.		The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area. This site is located outside the known distribution for this species. Nil further assessment required.		The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area. This site is located outside the known distribution for this species. Nil further assessment required.
Persoonia acerosa	Needle Geebung	V	V	The Needle Geebung has been recorded only on the central coast and in the Blue Mountains, from Mt Tomah in the north to as far south as Hill Top where it is now believed to be extinct. Mainly in the Katoomba/ Wentworth Falls/ Springwood area. The Needle Geebung occurs in dry sclerophyll forest, scrubby low-woodland and heath on low fertility soils. Plants are likely to be killed by fire and recruitment is solely from seed. This species seems to benefit from the reduced competition and increased light available on disturbance margins including roadsides.	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area. This site is located outside the known distribution for this species. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area. This site is located outside the known distribution for this species. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area. This site is located outside the known distribution for this species. Nil further assessment required.
Persoonia hindii	-	E	Not listed	The species is restricted to above 900 m a.s.l on the Newnes Plateau, north of Lithgow. It was only discovered in 1989 and found entirely within the Gardens of Stone State Conservation Area (formerly Newnes State Forest). It has a clumped distribution pattern and any given site for the species may be comprised of a combination of ramets (emergent stems joined underground) and genets (separate genetically distinct plants). Occurs in dry sclerophyll forests and woodlands on sandy soils.	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area. Very restricted distribution, suitable habitat is not present on site. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area. Very restricted distribution, suitable habitat is not present on site. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area. Very restricted distribution, suitable habitat is not present on site. Nil further assessment required.

Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact					
					Mount Piper Substation (South)	Likelihood and further assessment	STR 356 + access	Likelihood and further assessment	STR 432 + access	Likelihood and further assessment
Persoonia hirsuta	Hairy Geebung, Hairy Persoonia	E	E	Occurs within the Blue Mountains, Southern Highlands and Sydney coastal regions from Hilltop to Glen Davis and Royal NP to Gosford. Population within the Hills Shire particularly important due to high density of plants. Grows on sandy soils in dry sclerophyll open forest, woodland and heath on sandstone up to 600 m above sea level.	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area. This site is located outside the known distribution for this species. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area. This site is located outside the known distribution for this species. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area. This site is located outside the known distribution for this species. Nil further assessment required.
Persoonia marginata	Clandulla Geebung	V	V	The Clandulla Geebung occurs between Kandos and Clarence in the western Blue Mountains. It grows in dry sclerophyll forest and woodland communities on sandstone.	345 records within 10km, last recorded 2024 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Wet heathland habitat underlain by sandstone bedrock is common across the site. However, significant disturbance to the ground layer – including the importation of gravels for road construction – has likely rendered the substrate too modified to provide suitable habitat for this species. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. While there locally abundant populations within the general district, no records are found within 10km. This site was severely burnt during the 2019/2020 fires. The fire response to such fire intensity on this species is variable, with some fires encouraging resprouting while some This species flowers through winter into spring and was not noted on site during survey. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. While there locally abundant populations within the general district, no records are found within 10km. This site was severely burnt during the 2019/2020 fires. The fire response to such fire intensity on this species is variable, with some fires encouraging resprouting while some This species flowers through winter into spring and was not noted on site during survey. Nil further assessment required.
Pomaderris brunnea	Brown Pomaderris	E	V	Brown Pomaderris is found in a very limited area around the Colo, Nepean and Hawkesbury Rivers, including the Bargo area and near Camden. Brown Pomaderris grows in moist woodland or forest on clay and alluvial soils of flood plains and creek lines.	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area. This site is located outside the known	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area. This site is located outside the known	Nil records within 10km	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area. This site is located outside the known

Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact					
					Mount Piper Substation (South)	Likelihood and further assessment	STR 356 + access	Likelihood and further assessment	STR 432 + access	Likelihood and further assessment
						distribution for this species. Nil further assessment required.		distribution for this species. Nil further assessment required.		distribution for this species. Nil further assessment required.
Pomaderris cotoneaster	Cotoneaster Pomaderris	E	E	Disjunct distribution including the Nungatta area, Tumut, the Tantawangalo area, near Tallong, the Yerranderie area, the Canyonleigh area and Ettrema Gorge. Found in wide range of habitats, including forest with deep, friable soil, amongst rock beside a creek, on rocky forested slopes and in steep gullies between sandstone cliffs.	Nil records within 10km	Low likelihood of occurring on the site. Possible habitat but no recent records and not known from area. Not noted during survey. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. Possible habitat but no recent records and not known from area. Not noted during survey. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. Possible habitat but no recent records and not known from area. Not noted during survey. Nil further assessment required.
Prasophyllum petilum	Tarengo Leek Orchid	E	E	Occurs at 4 sites in NSW (Captains Flat Cemetery, Ilford Cemetery, Steves TSR at Delegate and Tarengo TSR near Boorowa). Also at Hall in ACT. Grows on relatively fertile soils in grassy woodland or natural grassland. Occurs in relatively moist, poorly drained areas.	Nil records within 10km	Low likelihood of occurring on site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area This site is located outside the known distribution for this species, and no suitable habitat occurs on the site. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area This site is located outside the known distribution for this species, and no suitable habitat occurs on the site. Nil further assessment required.	1 record within 10km, last recorded 2020(NSW DCCEEW, 2026a)	Low likelihood of occurring on site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area This site is located outside the known distribution for this species, and no suitable habitat occurs on the site. Nil further assessment required.
Prasophyllum sp. Wybong (C.Phelps ORG 5269)	a leek-orchid	Not listed	CE	Endemic to NSW, it is known from near Ilford, Premer, Muswellbrook, Wybong, Yeoval, Inverell, Tenterfield, Currabubula and the Pilliga area. Most populations are small, although the Wybong population contains by far the largest number of individuals. A perennial orchid, appearing as a single leaf over winter and spring. Flowers in spring and dies back to a dormant tuber over summer and autumn. Known to occur in open eucalypt woodland and grassland.	Nil records within 10km	Low likelihood of occuring on site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area This site is located outside the known distribution for this species, and no suitable habitat occurs on the site.	Nil records within 10km	Low likelihood of occuring on site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area This site is located outside the known distribution for this species, and no suitable habitat occurs on the site.	Nil records within 10km	Low likelihood of occuring on site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area This site is located outside the known distribution for this species, and no suitable habitat occurs on the site.

Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact					
					Mount Piper Substation (South)	Likelihood and further assessment	STR 356 + access	Likelihood and further assessment	STR 432 + access	Likelihood and further assessment
						Nil further assessment required.		Nil further assessment required.		Nil further assessment required.
Prostanthera stricta	Mount Vincent Mint-bush	V	V	*Prostanthera stricta* occurs from Mt Vincent to Genowlan Mountain in the Capertee Valley. *Prostanthera aff. stricta* is found at Dingo Creek and the Widden and Baerami Valleys in the Upper Hunter. *Prostanthera stricta* is often a locally dominant undershrub in heath or scrub communities along cliff edges, or as an understorey species within a range of open forest or tall open forest types, or in adjacent transitional communities. Associated vegetation includes *Eucalyptus blaxlandii, Eucalyptus cannonii and Eucalyptus viminalis* with *Acacia implexa* and *Goodenia ovata*. Other associated species recorded at sites include *Angophora floribunda, Eucalyptus punctata, Brachychiton populneus, Acacia parvipinnula, Beyeria viscosa, Microlaena stipoides* and *Cheilanthes species*. Vegetation associated with Prostanthera aff. stricta includes *Eucalyptus caleyi, Eucalyptus punctata, Eucalyptus sideroxylon, Eucalyptus tereticornis, Eucalyptus fibrosa, Angophora floribunda, Backhousia myrtifolia, Cryptandra buxifolia, Isopogon dawsonii, Leucopogon muticus, Allocasuarina torulosa, Macrozamia communis, Acacia caesiella* and *Callistemon salignus*.	Nil records within 10km	Low likelihood of occurring on site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area This site is located outside the known distribution for this species, and no suitable habitat occurs on the site. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area This site is located outside the known distribution for this species, and no suitable habitat occurs on the site. Nil further assessment required.	317 records within 10km, last recorded 2012 (NSW DCCEEW, 2026a)	Low likelihood of occurring on site. Nearest record 1km away, however no records earlier than 2012. Apart from *Eucalyptus cannoni*, very few associated species found on site. Site severely burnt in 2019/2020 fires, fire response to such high intensity fire unknown. Shrub layer very disturbed with a lot of species not commonly found in the PCT. Not noted during survey. Nil further assessment required.
Rhizanthella slateri	Eastern Underground Orchid	V	E	Currently known only from 10 locations, including near Bulahdelah, the Watagan Mountains, the Blue Mountains, Wiseman's Ferry area, Agnes Banks and near Nowra. The species grows in eucalypt forest but no informative assessment of the likely preferred habitat for	Nil records within 10km	Low likelihood of occurring on the site. Very cryptic species with very little information about preferred habitat. Possible habitat on site but no close records. Not noted during survey.	Nil records within 10km	Low likelihood of occurring on the site. Very cryptic species with very little information about preferred habitat. Possible habitat on site but no close records. Not noted during survey.	Nil records within 10km	Low likelihood of occurring on the site. Very cryptic species with very little information about preferred habitat. Possible habitat on site but no close records. Not noted during survey.

Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact					
					Mount Piper Substation (South)	Likelihood and further assessment	STR 356 + access	Likelihood and further assessment	STR 432 + access	Likelihood and further assessment
				the species is available. Flowers September and November.		Nil further assessment required.		Nil further assessment required.		Nil further assessment required.
Swainsona recta	Small Purple-pea	E	E	Current populations exist in the Queanbeyan and Wellington-Mudgee areas, previous populations thought extinct include Carcoar, Culcairn and Wagga Wagga. Also known from ACT and Victoria. Inhabits grassy woodlands and open-forests dominated by Blakely's Red Gum, Yellow Bloodwood, Candlebark and Long-leaved Box and in association with understorey dominants that include *Themeda australis, Poa spp.* and *Austrostipa spp*. Flowers throughout spring, with a peak in October.	Nil records within 10km	Low likelihood of occurring on site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area This site is located outside the known distribution for this species, and no suitable habitat occurs on the site. Nil further assessment required.	159 records within 10km, last recorded 2020 (NSW DCCEEW, 2026a)	Low likelihood of occurring on site. Moderate number of recent records within 10km of site, however no suitable habitat occurs on the site. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area This site is located outside the known distribution for this species, and no suitable habitat occurs on the site. Nil further assessment required.
Swainsona sericea	Silky Swainson-pea	V	Not Listed	Silky Swainson-pea has been recorded from the Northern Tablelands to the Southern Tablelands and further inland on the slopes and plains. There is one isolated record from the far north-west of NSW. Its stronghold is on the Monaro. Also found in South Australia, Victoria and Queensland. Found in Natural Temperate Grassland and Snow Gum Eucalyptus pauciflora Woodland on the Monaro. Found in Box-Gum Woodland in the Southern Tablelands and South West Slopes. Sometimes found in association with cypress-pines (*Callitris spp*.) Habitat on plains unknown.	Nil records within 10km	Low likelihood of occurring on site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area This site is located outside the known distribution for this species, and no suitable habitat occurs on the site. Nil further assessment required.	1 record within 10km, last recorded 2024 (NSW DCCEEW, 2026a)	Low likelihood of occurring on site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area This site is located outside the known distribution for this species, and no suitable habitat occurs on the site. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area This site is located outside the known distribution for this species, and no suitable habitat occurs on the site. Nil further assessment required.
Thesium australe	Austral Toadflax	V	V	Found in small, scattered populations along the east coast, northern and southern tablelands. Occurs in grassland or grassy woodland and is often found in association with Kangaroo Grass.	4 records within 10km, last recorded 2013 (NSW DCCEEW, 2026a)	Low likelihood of occurring on site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area This site is located outside the known distribution for this	Nil records within 10km	Low likelihood of occurring on site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area This site is located outside the known distribution for this	Nil records within 10km	Low likelihood of occurring on site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area This site is located outside the known distribution for this

Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact					
					Mount Piper Substation (South)	Likelihood and further assessment	STR 356 + access	Likelihood and further assessment	STR 432 + access	Likelihood and further assessment
						species, and no suitable habitat occurs on the site. Nil further assessment required.		species, and no suitable habitat occurs on the site. Nil further assessment required.		species, and no suitable habitat occurs on the site. Nil further assessment required.
Veronica blakelyi	-	E	Not listed	Restricted to the western Blue Mountains, near Clarence, near Mt Horrible, on Nullo Mountain and in the Coricudgy Range. Occurs in eucalypt forest, often in moist and sheltered areas. Associated canopy species include *Eucalyptus dives, E. dalrympleana, E. rossii* and *E. pauciflora*. Flowering occurs in late spring to early summer.	1007 records within 10km, last recorded 2025 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Wet heathland habitat underlain by sandstone bedrock is common across the site. However, significant disturbance to the ground layer – including the importation of gravels for road construction – has likely rendered the substrate too modified to provide suitable habitat for this species. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area This site is located outside the known distribution for this species, and no suitable habitat occurs on the site. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on site. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area This site is located outside the known distribution for this species, and no suitable habitat occurs on the site. Nil further assessment required.
Xerochrysum palustre	Swamp Everlasting	Not Listed	V	Found in Kosciuszko National Park and the eastern escarpment south of Badja. Also found in eastern Victoria. Grows in swamps and bogs which are often dominated by heaths. Also grows at the edges of bog margins on peaty soils with a cover of shrubs or grasses. Sometimes grows in bogs with *Sphagnum*.	Nil records within 10km	Low likelihood of occurring on the site. Suitable habitat is not present on site. Not noted during survey. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. Suitable habitat is not present on site. Not noted during survey. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. Suitable habitat is not present on site. Not noted during survey. Nil further assessment required.
Fauna										
Anthochaera phrygia	Regent Honeyeater	CE	CE	The Regent Honeyeater mainly inhabits temperate woodlands and open forests of the inland slopes of south-east Australia. Birds are also found in drier coastal woodlands and forests in some years. Once recorded between Adelaide and the central coast of Queensland, its range has contracted dramatically in the last 30 years to between north-eastern	1 record within 10km, last recorded 2005 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Low number of recent records and unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site	4 records within 10km, last recorded 2015 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Low number of recent records. Some mistletoes noted on site however unlikely to depend on the resources on site as large areas of similar or better-quality habitat available	7 records within 10km, last recorded 2011 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Low number of recent records and unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site

Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact					
					Mount Piper Substation (South)	Likelihood and further assessment	STR 356 + access	Likelihood and further assessment	STR 432 + access	Likelihood and further assessment
				Victoria and south-eastern Queensland. There are only three known key breeding regions remaining: north-east Victoria (Chiltern-Albury), and in NSW at Capertee Valley and the Bundarra-Barraba region. In NSW the distribution is very patchy and mainly confined to the two main breeding areas and surrounding fragmented woodlands. In some years flocks converge on flowering coastal woodlands and forests. The species inhabits dry open forest and woodland, particularly Box-Ironbark woodland, and riparian forests of River Sheoak. Regent Honeyeaters inhabit woodlands that support a significantly high abundance and species richness of bird species. These woodlands have significantly large numbers of mature trees, high canopy cover and abundance of mistletoes.		which will not be impacted. Nil further assessment required.		adjacent to the site which will not be impacted. Nil further assessment required.		which will not be impacted. Site within 1km of important habitat mapping, however, does not intersect. Minimal mistletoes noted on site, mostly dead and previously burnt. Nil further assessment required.
Aphelocephala leucopsis	Southern Whiteface	V	V	Inhabits a wide range of woodlands and shrublands where there is an understorey of grasses or shrubs, or both. These areas are usually in habitats dominated by acacias or eucalypts on ranges, foothills and lowlands, and plains.	Nil records within 10km	Low likelihood of occurring on the site. No recent records and unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. No recent records and unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.	1 record within 10km, last recorded 2009 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Low number of recent records and unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.
Aprasia parapulchella	Pink-tailed Worm-lizard, Pink-tailed Legless Lizard	V	V	The Pink-tailed Legless Lizard is only known from the Central and Southern Tablelands, and the Southwestern Slopes. There is a concentration of populations in the Canberra/Queanbeyan Region. Other populations have been recorded near Cooma, Yass, Bathurst, Albury and West Wyalong. This species is also found in the Australian Capital	Nil records within 10km	Low likelihood of occurring on the site. No records within 10km of site and unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site	Nil records within 10km	Low likelihood of occurring on the site. No records within 10km of site and unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site	Nil records within 10km	Low likelihood of occurring on the site. No records within 10km of site and unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site

Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact					
					Mount Piper Substation (South)	Likelihood and further assessment	STR 356 + access	Likelihood and further assessment	STR 432 + access	Likelihood and further assessment
				Territory. It's found to inhabit sloping, open woodland areas with predominantly native grassy groundlayers, particularly those dominated by Kangaroo Grass (*Themeda australis*), The sites are typically well-drained, with rocky outcrops or scattered, partially-buried rocks. They are commonly found beneath small, partially-embedded rocks and appear to spend considerable time in burrows below these rocks; the burrows have been constructed by and are often still inhabited by small black ants and termites.		which will not be impacted. Nil further assessment required.		which will not be impacted. Nil further assessment required.		which will not be impacted. Nil further assessment required.
Artamus cyanopterus cyanopterus	Dusky Woodswallow	V	Not listed	The Dusky Woodswallow is widespread from the coast to inland, including the western slopes of the Great Dividing Range and farther west. It is often recorded in woodlands and dry open sclerophyll forests, and has also been recorded in shrublands, heathlands regenerating forests and very occasionally in moist forests or rainforests. The understorey is typically open with sparse eucalypt saplings, acacias and other shrubs, often with coarse woody debris. It is also recorded in farmland, usually at the edges of forest or woodland or in roadside remnants or wind breaks with dead timber. The nest is an open shallow untidy cup frequently built in an open hollow, crevice or stump. Although Dusky Woodswallows have large home ranges, individuals may spend most of their time in about a 2 ha range and defend an area about 50 m around the nest. Dusky Woodswallows prefer larger remnants over smaller remnants. Competitive exclusion by Noisy Miners (*Manorina melanocephala*) is a significant threat to this species.	53 records within 10km, last recorded 2024 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Moderate number of recent records within 10km of site. However, the entire site is very degraded with minimal tree canopy. Unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.	3 records within 10km, last recorded 2013 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Low number of recent records and unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.	3 records within 10km, last recorded 2007(NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Low number of recent records and unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.

Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact					
					Mount Piper Substation (South)	Likelihood and further assessment	STR 356 + access	Likelihood and further assessment	STR 432 + access	Likelihood and further assessment
Botaurus poiciloptilus	Australasian Bittern	E	E	Australasian Bitterns are widespread but uncommon over south-eastern Australia. In NSW they may be found over most of the state except for the far north-west. The Species favours permanent freshwater wetlands with tall, dense vegetation, particularly bullrushes (*Typha spp.*) and spikerushes (*Eleocharis spp.*), it hides during the day amongst dense reeds or rushes and feed mainly at night on frogs, fish, yabbies, spiders, insects and snails. The species may construct feeding platforms over deeper water from reeds trampled by the bird; platforms are often littered with prey remains.	Nil records within 10km	Low likelihood of occurring on the site. No recent records and the area of impact does not contain habitat required by this species. Unlikely to be impact by clearing. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. No recent records and the area of impact does not contain habitat required by this species. Unlikely to be impact by clearing. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. No recent records and the area of impact does not contain habitat required by this species. Unlikely to be impacted by clearing. Nil further assessment required.
Callocephalon fimbriatum	Gang-gang Cockatoo	E	E	In New South Wales, the Gang-gang Cockatoo is distributed from the south-east coast to the Hunter region, and inland to the Central Tablelands and south-west slopes. It occurs regularly in the Australian Capital Territory. It is rare at the extremities of its range, with isolated records known from as far north as Coffs Harbour and as far west as Mudgee. In spring and summer, the species is generally found in tall mountain forests and woodlands, particularly in heavily timbered and mature wet sclerophyll forests. In autumn and winter, the species often moves to lower altitudes in drier more open eucalypt forests and woodlands, particularly box-gum and box-ironbark assemblages, or in dry forest in coastal areas and often found in urban areas.	210 records within 10km, last recorded 2024 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. High number of recent records within 10km. However, no hollows noted on site. Low likelihood of occurring on the site. Unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.	1 record within 10km, last recorded 2005 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Suitable hollows located on site. However, low number of recent records and unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.	3 records within 10km, last recorded 2022 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Suitable hollows located on site. However, low number of recent records and unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.
Calyptorhynchus lathami lathami	South-eastern Glossy Black-Cockatoo	V	V	Inhabits open forest and woodlands of the coast and the Great Dividing Range where stands of sheoak occur. Black Sheoak (*Allocasuarina littoralis*) and Forest Sheoak (A. torulosa) are important foods. Inland populations feed on a wide	55 records within 10km, last recorded 2025 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Moderate number of nearby records, and feed trees (casuarinas) noted on site, however no hollows noted within	1 record within 10km, last recorded 2005 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Low number of nearby records and no feed trees (*Casuarinas/ Allocasuarinas*) noted on site. Suitable hollows	1 record within 10km, last recorded 2008 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Low number of nearby records and minimal feed trees (*Casuarinas/ Allocasuarinas*) noted on site. Suitable hollows

Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact					
					Mount Piper Substation (South)	Likelihood and further assessment	STR 356 + access	Likelihood and further assessment	STR 432 + access	Likelihood and further assessment
				range of sheoaks, including Drooping Sheoak, *Allocasuaraina diminuta*, and *A. gymnathera*. Belah is also utilised and may be a critical food source for some populations. In the Riverina, birds are associated with hills and rocky rises supporting Drooping Sheoak, but also recorded in open woodlands dominated by Belah (*Casuarina cristata*). Feeds almost exclusively on the seeds of several species of she-oak (Casuarina and *Allocasuarina* species), shredding the cones with the massive bill. Dependent on large hollow-bearing eucalypts for nest sites. A single egg is laid between March and May.		assessment area. Unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.		noted within assessment area, however unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.		noted within assessment area, however unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.
Cercartetus nanus	Eastern Pygmy-possum	V	Not listed	The Eastern Pygmy-possum is found in south-eastern Australia, from southern Queensland to eastern South Australia and in Tasmania. In NSW it extents from the coast inland as far as the Pilliga, Dubbo, Parkes and Wagga Wagga on the western slopes. The species is found in a broad range of habitats from rainforest through sclerophyll (including Box-Ironbark) forest and woodland to heath, but in most areas woodlands and heath appear to be preferred, except in north-eastern NSW where they are most frequently encountered in rainforest. It feeds largely on nectar and pollen collected from banksias, eucalypts and bottlebrushes and is an important pollinator of heathland plants such as banksias; soft fruits are eaten when flowers are unavailable.	7 records within 10km, last recorded 2023 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Moderate number of recent records, however no feed plants noted on site. Unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. No recent records and unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. No recent records and unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.
Chalinolobus dwyeri	Large-eared Pied Bat	E	E	The Large-eared Pied Bat is found mainly in areas with extensive cliffs and caves, from Rockhampton in Queensland south to Bungonia in the NSW Southern Highlands. It is generally rare with a very patchy	29 records within 10km, last recorded 2023 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Moderate number of recent records, however no rocky habitat or	Nil records within 10km	Low likelihood of occurring on the site. No recent records and no rocky habitat or caves within study area.	Nil records within 10km	Low likelihood of occurring on the site. No recent records and no rocky habitat or caves within study area.

Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact					
					Mount Piper Substation (South)	Likelihood and further assessment	STR 356 + access	Likelihood and further assessment	STR 432 + access	Likelihood and further assessment
				distribution in NSW. There are scattered records from the New England Tablelands and North West Slopes. The species roosts in caves (near their entrances), crevices in cliffs, old mine workings and in the disused, bottle-shaped mud nests of the Fairy Martin (*Petrochelidon ariel*), frequenting low to mid-elevation dry open forest and woodland close to these features. Females have been recorded raising young in maternity roosts (c. 20-40 females) from November through to January in roof domes in sandstone caves and overhangs. It is found in well-timbered areas containing gullies.		overhangs on site that would be impacted. Unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.		Unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.		Unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.
Climacteris picumnus victoriae	Brown Treecreeper (eastern subspecies)	V	V	The western boundary of the range of the Brown Treecreeper runs approximately through Corowa, Wagga Wagga, Temora, Forbes, Dubbo and Inverell and along this line the subspecies intergrades with the arid zone subspecies of Brown Treecreeper which then occupies the remaining parts of the state. The species is often found in eucalypt woodlands (including Box-Gum Woodland) and dry open forest of the inland slopes and plains inland of the Great Dividing Range; mainly inhabits woodlands dominated by stringybarks or other rough-barked eucalypts, usually with an open grassy understorey, sometimes with one or more shrub species; also found in mallee and River Red Gum (*Eucalyptus camaldulensis*) Forest bordering wetlands with an open understorey of acacias, saltbush, lignum, cumbungi and grasses; usually not found in woodlands with a dense shrub layer; fallen timber is an important habitat component for foraging; also recorded, though less commonly, in similar	6 records within 10km, last recorded 2016 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Low number of recent records and unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.	4 records within 10km, last recorded 2011 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Low number of recent records and unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.	1 record within 10km, last recorded 2008 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Low number of recent records and unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.

Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact					
					Mount Piper Substation (South)	Likelihood and further assessment	STR 356 + access	Likelihood and further assessment	STR 432 + access	Likelihood and further assessment
				woodland habitats on the coastal ranges and plains.						
Daphoenositta chrysoptera	Varied Sittella	V	Not listed	The Varied Sittella is sedentary and inhabits most of mainland Australia except the treeless deserts and open grasslands. Distribution in NSW is nearly continuous from the coast to the far west. The species inhabits eucalypt forests and woodlands, especially those containing rough-barked species and mature smooth-barked gums with dead branches, mallee and Acacia woodland.	45 records within 10km, last recorded 2020 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Moderate number of recent records within 10km of site. However, the entire site is very degraded with minimal tree canopy. Unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. No records within 10km of site and unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.	1 record within 10km, last recorded 2009 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Low number of records within 10km of site and unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.
Dasyurus maculatus; Dasyurus maculatus maculatus (SE mainland population)	Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population)	V	E	The range of the Spotted-tailed Quoll has contracted considerably since European settlement. It is now found in eastern NSW, eastern Victoria, south-east and north-eastern Queensland, and Tasmania. Only in Tasmania is it still considered relatively common. The species has been recorded across a range of habitat types, including rainforest, open forest, woodland, coastal heath and inland riparian forest, from the sub-alpine zone to the coastline. Individual animals use hollow-bearing trees, fallen logs, small caves, rock outcrops and rocky-cliff faces as den sites. Females occupy home ranges of 200-500 hectares, while males occupy very large home ranges from 500 to over 4000 hectares. Are known to traverse their home ranges along densely vegetated creeklines.	2 records within 10km, last recorded 2002 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Low number of recent records and unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. No breeding habitat and minimal canopy cover on site. Nil further assessment required.	1 record within 10km, last recorded 2001 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Low number of recent records and unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.	4 records within 10km, last recorded 2024 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. While area of the access track contains multiple hollow bearing trees and woody habitat present across site, the proposed impact area is unlikely to impact habitat critical to the survival of this species. Unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.
Euastacus armatus	Murray Crayfish	Not listed	V	The Murray Crayfish is endemic to the southern tributaries of the Murray-Darling Basin. It historically occurred in New	Nil records within 10km	Low likelihood of occurring on the site.	Nil records within 10km	Low likelihood of occurring on the site.	Nil records within 10km	Low likelihood of occurring on the site.

Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact					
					Mount Piper Substation (South)	Likelihood and further assessment	STR 356 + access	Likelihood and further assessment	STR 432 + access	Likelihood and further assessment
				South Wales, Victoria, South Australia and Victoria but has seen significant declines throughout its range. Murray Crayfish prefer cool, flowing water that is well oxygenated. The species is tolerant of water temperatures up to 27°C and moderate salinities, but are intolerant to low dissolved oxygen concentrations. They create burrows that vary in complexity, from deep burrows with multiple entrances to simple burrows under a rock or log		No recent records, no permanent waterways on site and the site lies outside the known distribution. Nil further assessment required.		No recent records, no permanent waterways on site and the site lies outside the known distribution. Nil further assessment required.		Permanent waterway on site, however no recent records, and the site lies outside the known distribution. Nil further assessment required.
Eulamprus leuraensis	Blue Mountains Water Skink	E	E	Restricted to the middle and upper (between 560 m and 1140 m) Blue Mountains west of Sydney, the Blue Mountains Water Skink is known from approximately 70 threatened highland peat swamps extending from the Newnes Plateau in the north-west to just south of Hazelbrook in the south-east. It is restricted to an isolated and naturally fragmented habitat of sedge and shrub swamps that have boggy soils and appear to be permanently wet. The vegetation in these swamps typically takes the form of a sedgeland interspersed with shrubs but may occur as a dense shrub thicket.	14 records within 10km, last recorded 2022 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Wet heathland habitat underlain by sandstone bedrock is common across the site. However, significant disturbance to the ground layer – including the importation of gravels for road construction – has likely rendered the substrate too modified to provide suitable habitat for this species. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. No recent records, and the site lies outside the known very restricted distribution. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. No recent records, and the site lies outside the known very restricted distribution. Nil further assessment required.
Falco hypoleucos	Grey Falcon	E	V	The Grey Falcon is sparsely distributed in NSW, chiefly throughout the Murray-Darling Basin, with the occasional vagrant east of the Great Dividing Range. The species is usually restricted to shrubland, grassland and wooded watercourses of arid and semi-arid regions, although it is occasionally found in open woodlands near the coast. It also occurs near wetlands where surface water attracts prey.	Nil records within 10km	Low likelihood of occurring on the site. No recent records, and the site lies outside the known distribution. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. No recent records, and the site lies outside the known distribution. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. No recent records, and the site lies outside the known distribution. Nil further assessment required.

Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact					
					Mount Piper Substation (South)	Likelihood and further assessment	STR 356 + access	Likelihood and further assessment	STR 432 + access	Likelihood and further assessment
Falco subniger	Black Falcon	V	Not listed	The Black Falcon is widely, but sparsely, distributed in New South Wales, mostly occurring in inland regions. Some reports of 'Black Falcons' on the tablelands and coast of New South Wales are likely to be referable to the Brown Falcon. Occurs in plains, grasslands, foothills, timbered watercourses, wetland environs, crops, and occasionally over towns and cities. Breeding occurs along timbered waterways in in land areas.	Nil records within 10km	Low likelihood of occurring on the site. No recent records and unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.	1 record within 10km, last recorded 1991 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Low number of recent records and unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.	2 records within 10km, last recorded 1987 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Low number of recent records and unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.
Falsistrellus tasmaniensis	Eastern False Pipistrelle	V	Not listed	The Eastern False Pipistrelle is found on the south-east coast and ranges of Australia, from southern Queensland to Victoria and Tasmania. The species prefer moist habitats, with trees taller than 20 m.	36 records within 10km, last recorded 2023 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Moderate number of recent records within 10km of site. However, the entire site is very degraded with minimal tree canopy. Unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. No recent records and unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. No recent records and unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.
Galaxias rostratus	Flathead Galaxias, Beaked Minnow, Flat-headed Galaxias, Flat-headed Jollytail, Flat-headed Minnow	CE	CE	Flathead Galaxias, also known as Murray jollytail are a small native fish that are known from the southern part of the Murray Darling Basin. They have been recorded in the Macquarie, Lachlan, Murrumbidgee and Murray Rivers in NSW. Flathead Galaxias are found in still or slow moving water bodies such as wetlands and lowland streams. The species has been recorded forming shoals. They have been associated with a range of habitats including rock and sandy bottoms and aquatic vegetation.	Nil records within 10km	Nil likelihood of occurring on the site. No significant waterbodies associated with the Macquarie, Lachlan, Murrumbidgee or Murray Rivers are located on site or will be impacted. Nil further assessment required.	Nil records within 10km	Nil likelihood of occurring on the site. No significant waterbodies associated with the Macquarie, Lachlan, Murrumbidgee or Murray Rivers are located on site or will be impacted. Nil further assessment required.	Nil records within 10km	Nil likelihood of occurring on the site. No significant waterbodies associated with the Macquarie, Lachlan, Murrumbidgee or Murray Rivers are located on site or will be impacted. Nil further assessment required.

Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact					
					Mount Piper Substation (South)	Likelihood and further assessment	STR 356 + access	Likelihood and further assessment	STR 432 + access	Likelihood and further assessment
Grantiella picta	Painted Honeyeater	V	V	The Painted Honeyeater is nomadic and occurs at low densities throughout its range. The greatest concentrations of the bird and almost all breeding occurs on the inland slopes of the Great Dividing Range in NSW, Victoria and southern Queensland. During the winter it is more likely to be found in the north of its distribution. The species inhabits Boree/ Weeping Myall (*Acacia pendula*), Brigalow (*A. harpophylla*) and Box-Gum Woodlands and Box-Ironbark Forests. It is a specialist feeder on the fruits of mistletoes growing on woodland eucalypts and acacias. Prefers mistletoes of the genus *Amyema*.	1 record within 10km, last recorded 2005 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Low number of recent records and unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. No recent records and unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. No recent records and unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.
Haliaeetus leucogaster	White-bellied Sea-Eagle	V	Not listed	The White-bellied Sea-eagle is widespread along the New South Wales coast, and along all major inland rivers and waterways. The species habitats are characterised by the presence of large areas of open water including larger rivers, swamps, lakes, and the sea. It occurs at sites near the sea or sea-shore, such as around bays and inlets, beaches, reefs, lagoons, estuaries and mangroves; and at, or in the vicinity of freshwater swamps, lakes, reservoirs, billabongs and saltmarsh. The terrestrial habitats the species has been recorded in, include coastal dunes, tidal flats, grassland, heathland, woodland, and forest (including rainforest).	6 records within 10km, last recorded 2021 (NSW DCCEEW, 2026a)	Low likelihood of occurring on site. Moderate number of recent records, however no significant breeding or foraging habitat present on site, including no significant water bodies. Unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. No recent records and unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. No recent records and unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.
Heleioporus australiacus australiacus	Giant Burrowing Frog	V	E	The Giant Burrowing Frog is distributed in south eastern NSW and Victoria, and appears to exist as two distinct populations: a northern population largely confined to the sandstone geology of the Sydney Basin and extending as far south as Ulladulla, and a southern population occurring from north	Nil records within 10km	Low likelihood of occurring on the site. Wet heathland habitat underlain by sandstone bedrock is common across the site. However, significant disturbance to the ground layer – including the	Nil records within 10km	Low likelihood of occurring on the site. No recent records, and no suitable habitat or significant water bodies on site.	13 records within 10km, last recorded 2024 (NSW DCCEEW, 2026a)	Moderate likelihood of occurring on the site. Moderate number of recent records and some suitable breeding habitat (associated with 1st and 2nd order streams).

Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact					
					Mount Piper Substation (South)	Likelihood and further assessment	STR 356 + access	Likelihood and further assessment	STR 432 + access	Likelihood and further assessment
				of Narooma through to Walhalla, Victoria. It is found in heath, woodland and open dry sclerophyll forest on a variety of soil types except those that are clay based.		importation of gravels for road construction – has likely rendered the substrate too modified to provide suitable habitat for this species. Nil further assessment required.		Nil further assessment required.		Assessment of significance required.
Hieraaetus morphnoides	Little Eagle	V	Not listed	The Little Eagle is found throughout the Australian mainland excepting the most densely forested parts of the Dividing Range escarpment. It occurs as a single population throughout NSW. The species occupies open eucalypt forest, woodland or open woodland. Sheoak or Acacia woodlands and riparian woodlands of interior NSW are also used. It nests in tall living trees within a remnant patch, where pairs build a large stick nest in winter.	5 records within 10km, last recorded 2018 (NSW DCCEEW, 2026a)	Low likelihood of occurring on site. Low number of recent records, and no significant breeding or foraging habitat present on site, including minimal tree canopy. No stick nests noted on site. Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. No recent records and unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. No stick nests noted on site. Nil further assessment required.	1 record within 10km, last recorded 2000 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Low number of recent records and unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. No stick nests noted on site. Nil further assessment required.
Hoplocephalus bungaroides	Broad-headed Snake	E	E	The Broad-headed Snake is largely confined to Triassic and Permian sandstones, including the Hawkesbury, Narrabeen and Shoalhaven groups, within the coast and ranges in an area within approximately 250 km of Sydney. The species shelters in rock crevices and under flat sandstone rocks on exposed cliff edges during autumn, winter and spring. It is an ambush predator, with lizards, frogs and small mammals forming a large part of it's diet.	1 record within 10km, last recorded 2010 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Site highly degraded, with little to no rocky habitat on site. No cliff edges or crevices noted. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. Little to no rocky habitat on site. No cliff edges or crevices noted. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. Little to no rocky habitat on site. No cliff edges or crevices noted. Nil further assessment required.
Lathamus discolor	Swift Parrot	E	CE	The Swift Parrot breeds in Tasmania during spring and summer, migrating in the	Nil records within 10km	Low likelihood of occurring on the site.	Nil records within 10km	Low likelihood of occurring on the site.	Nil records within 10km	Low likelihood of occurring on the site.

Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact					
					Mount Piper Substation (South)	Likelihood and further assessment	STR 356 + access	Likelihood and further assessment	STR 432 + access	Likelihood and further assessment
				autumn and winter months to south-eastern Australia from Victoria and the eastern parts of South Australia to south-east Queensland. In NSW mostly occurs on the coast and south west slopes. On the mainland the species occur in areas where eucalypts are flowering profusely or where there are abundant lerp (from sap-sucking bugs) infestations. Their favoured feed trees include winter flowering species such as Swamp Mahogany *Eucalyptus robusta*, Spotted Gum *Corymbia maculata*, Red Bloodwood *C. gummifera*, Forest Red Gum *E. tereticornis,* Mugga Ironbark *E. sideroxylon*, and White Box *E. albens.*		No recent records within 10km of site, and the entire site is very degraded with minimal tree canopy and no hollow bearing trees. Unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.		No recent records within 10km of site, however multiple suitable hollow bearing trees within site. Unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.		No recent records within 10km of site, however multiple suitable hollow bearing trees within site. Unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.
Leipoa ocellata	Malleefowl	E	V	The stronghold for the Mallefowl in NSW is the mallee in the south west centred on Mallee Cliffs NP and extending east to near Balranald and scattered records as far north as Mungo NP. West of the Darling River a population also occurs in the Scotia mallee including Tarawi NR and Scotia Sanctuary and is part of a larger population north of the Murray River in South Australia.	Nil records within 10km	Unlikely to occur on site. This site is located outside the known distribution for this species, and no suitable occurs on the site. Nil further assessment required.	Nil records within 10km	Unlikely to occur on site. This site is located outside the known distribution for this species, and no suitable occurs on the site. Nil further assessment required.	Nil records within 10km	Unlikely to occur on site. This site is located outside the known distribution for this species, and no suitable occurs on the site. Nil further assessment required.
Litoria booroolongensis	Booroolong Frog	E	E	The Booroolong Frog is restricted to NSW and north-eastern Victoria, predominantly along the western-flowing streams of the Great Dividing Range. It has disappeared from much of the Northern Tablelands, however several populations have recently been recorded in the Namoi catchment. The species is rare throughout most of the remainder of its range. The species lives along permanent streams with some fringing vegetation cover such as ferns, sedges or grasses, and shelter under rocks or amongst vegetation near the ground on the stream edge. The adults	Nil records within 10km	Low likelihood of occurring on the site. No permanent waterways noted on site. Site highly modified, no suitable habitat on site. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. No permanent waterways noted on site, no suitable habitat on site. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. Multiple records 20km southeast of site along the Turon River, however no records along the smaller streams adjacent to site. May be found in unnamed Strahler 2 stream running adjacent to access track but no appropriate breeding habitat within the proposed impact area.

Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact					
					Mount Piper Substation (South)	Likelihood and further assessment	STR 356 + access	Likelihood and further assessment	STR 432 + access	Likelihood and further assessment
				have been recorded on or near cobble banks and other rock structures within stream margins.						Nil further assessment required.
Litoria littlejohni	Littlejohn's Tree Frog	E	E	Littlejohn's Tree Frog has a distribution that includes the plateaus and eastern slopes of the Great Dividing Range from Watagan State Forest (90 km north of Sydney) south to the end of the Woronora Plateau. The majority of records are from within the Sydney Basin Bioregion. Records are isolated and tend to be at high altitude. This species breeds in the upper reaches of permanent streams and in perched swamps. Non-breeding habitat is heath based forests and woodlands where it shelters under leaf litter and low vegetation, and hunts for invertebrate prey either in shrubs or on the ground. Males call from low vegetation close to slow flowing pools. Eggs are laid in loose gelatinous masses attached to small, submerged twigs.;5|Eggs and tadpoles are mostly found in still or slow flowing pools that receive extended exposure to sunlight but will also use temporary isolated pools.	Nil records within 10km	Low likelihood of occurring on the site. No permanent waterways noted on site. Site highly modified, no suitable habitat on site. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. No permanent waterways noted on site, no suitable habitat on site. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. Aquatic habitat within the proposed impact area is unlikely to be suitable breeding habitat. Nil further assessment required.
Lophoictinia isura	Square-tailed Kite	V	Not listed	The Square-tailed Kite ranges along coastal and subcoastal areas from south-western to northern Australia, Queensland, NSW and Victoria. In NSW, scattered records of the species throughout the state indicate that the species is a regular resident in the north, north-east and along the major west-flowing river systems. It is a summer breeding migrant to the south-east, including the NSW south coast, arriving in September and leaving by March. Found in a variety of timbered habitats including dry woodlands and open forests. Shows a particular preference for timbered watercourses. In arid	Nil records within 10km	Low likelihood of occurring on site. Low number of recent records, and no significant breeding or foraging habitat present on site, including minimal tree canopy. No stick nests noted on site. Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted.	Nil records within 10km	Low likelihood of occurring on site. Low number of recent records, and no stick nests noted on site. Minimal breeding habitat likely to be affected. Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted.	1 record within 10km, last recorded 2000 (NSW DCCEEW, 2026a)	Low likelihood of occurring on site. Low number of recent records, and no stick nests noted on site. Minimal breeding habitat likely to be affected. Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted.

Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact					
					Mount Piper Substation (South)	Likelihood and further assessment	STR 356 + access	Likelihood and further assessment	STR 432 + access	Likelihood and further assessment
				north-western NSW, has been observed in stony country with a ground cover of chenopods and grasses, open acacia scrub and patches of low open eucalypt woodland. Appears to occupy large hunting ranges of more than 100 square km. Breeding is from July to February, with nest sites generally located along or near watercourses, in a fork or on large horizontal limbs.		Nil further assessment required.		Nil further assessment required.		Nil further assessment required.
Maccullochella macquariensis	Trout Cod	Not listed	E	The Trout Cod is endemic to the Murray-Darling Basin (MDB). Once widespread in the southern tributaries of the MDB, Trout Cod have declined dramatically in both abundance and distribution and are now known only from scattered localities. The last remaining natural populations in the wild are in the Murray River between Yarrawonga, Barmah and Seven Creeks. The species occurs in a range of habitats, but is strongly associated with the presence of woody debris and snags.	Nil records within 10km	Nil likelihood of occurring on the site. No significant waterbodies associated with the Murray Rivers are located on site or will be impacted. Nil further assessment required.	Nil records within 10km	Nil likelihood of occurring on the site. No significant waterbodies associated with the Murray Rivers are located on site or will be impacted. Nil further assessment required.	Nil records within 10km	Nil likelihood of occurring on the site. No significant waterbodies associated with the Murray Rivers are located on site or will be impacted. Nil further assessment required.
Maccullochella peelii	Murray Cod	Not listed	V	The Murray Cod is endemic to river systems of the Murray–Darling Basin in south-eastern Australia, including South Australia, Victoria, New South Wales, the Australian Capital Territory and Queensland. Once widespread throughout the Murray-Darling system, the Murray Cod is now uncommon in much of its range and is more restricted to the lower Murray-Darling. Murray Cod live in a variety of habitats ranging from clear, rocky streams to slow flowing turbid rivers, lakes and billabongs and are more common in waterways with large rocks, snags and undercut banks with overhanging vegetation.	Nil records within 10km	Nil likelihood of occurring on the site. No significant waterbodies associated with the Murray River are located on site or will be impacted. Nil further assessment required.	Nil records within 10km	Nil likelihood of occurring on the site. No significant waterbodies associated with the Murray River are located on site or will be impacted. Nil further assessment required.	Nil records within 10km	Nil likelihood of occurring on the site. No significant waterbodies associated with the Murray Rivers are located on site or will be impacted. Nil further assessment required.
Macquaria australasica	Macquarie Perch	Not listed	E	The Macquarie Perch is known only from scattered localities in the cool upper reaches of the	Species or species habitat known to occur within area	Nil likelihood of occurring on the site.	Nil records within 10km	Nil likelihood of occurring on the site.	Nil records within 10km	Nil likelihood of occurring on the site.

Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact					
					Mount Piper Substation (South)	Likelihood and further assessment	STR 356 + access	Likelihood and further assessment	STR 432 + access	Likelihood and further assessment
				Murray-Darling system of New South Wales, including the Hawkesbury-Nepean and Shoalhaven catchments, Victoria and the Australian Capital Territory. Also found in man-made lakes on the NSW coast. The species inhabits cool, clear freshwaters of rivers with deep holes and shallow riffles. They are also found in lakes and reservoirs, where adults aggregate in small shoals during the spawning season.	(Cth DCCEEW, 2026a)	No significant waterbodies associated with the Murray River are located on site or will be impacted. Nil further assessment required.		No significant waterbodies associated with the Murray River are located on site or will be impacted. Nil further assessment required.		No significant waterbodies associated with the Murray River are located on site or will be impacted. Nil further assessment required..
Melanodryas cucullata cucullata	South-eastern Hooded Robin	E	E	The Hooded Robin is widespread, found across Australia, except for the driest deserts and the wetter coastal areas - northern and eastern coastal Queensland and Tasmania. However, it is common in few places, and rarely found on the coast. It is considered a sedentary species, but local seasonal movements are possible. The south-eastern form (subspecies cucullata) is found from Brisbane to Adelaide and throughout much of inland NSW, with the exception of the extreme north-west, where it is replaced by subspecies picata. The species prefers lightly wooded country, usually open eucalypt woodland, acacia scrub and mallee, often in or near clearings or open areas. It also requires structurally diverse habitats featuring mature eucalypts, saplings, some small shrubs and a ground layer of moderately tall native grasses.	1 record within 10km, last recorded 2016 (NSW DCCEEW, 2026a)	Low likelihood of occurring on site. Low number of recent records, and no significant breeding or foraging habitat present on site, including minimal tree canopy. Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.	4 records within 10km, last recorded 2023 (NSW DCCEEW, 2026a)	Moderate likelihood of occurrence. Recent records in adjacent dry sclerophyll woodland. Potential breeding and foraging habitat on site, in both woody and non woody areas of site. Assessment of significance required.	1 record within 10km, last recorded 1999 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. No recent records adjacent to site.
Melithreptus gularis gularis	Black-chinned Honeyeater (eastern subspecies)	V	Not Listed	The eastern subspecies extends south from central Queensland, through NSW, Victoria into south eastern South Australia, though it is very rare in the last state. In NSW it is widespread, with records from the tablelands and western slopes of the Great Dividing Range to the north-west and central-west plains and the Riverina. It is rarely recorded east	Nil records within 10km	Low likelihood of occurring on site. No recent records, and no significant breeding or foraging habitat present on site, including minimal tree canopy. Unlikely to depend on the resources	Nil records within 10km	Low likelihood of occurring on the site. No recent records adjacent to site. Its primary nesting habitat of box gums and ironbark is found on site; however, the site is dominated by tall	1 record within 10km, last recorded 2000 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. No recent records adjacent to site. Its primary nesting habitat of box gums and ironbark is not found on site, with secondary habitat of sheoaks found

Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact					
					Mount Piper Substation (South)	Likelihood and further assessment	STR 356 + access	Likelihood and further assessment	STR 432 + access	Likelihood and further assessment
				of the Great Dividing Range, although regularly observed from the Richmond and Clarence River areas. It has also been recorded at a few scattered sites in the Hunter, Central Coast and Illawarra regions, though it is very rare in the latter. Occupies mostly upper levels of drier open forests or woodlands dominated by box and ironbark eucalypts, especially Mugga Ironbark (*Eucalyptus sideroxylon*), White Box (*E. albens*), Inland Grey Box (*E. microcarpa*), Yellow Box (*E. melliodora*), Blakely's Red Gum (*E. blakelyi*) and Forest Red Gum (*E. tereticornis*). Also inhabits open forests of smooth-barked gums, stringybarks, ironbarks, river sheoaks (nesting habitat) and tea-trees.		on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.		stringybarks. No nests noted while on site. A nomadic widespread species, it is unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted.		adjacent to site which will not be impacted, Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.
Micronomus norfolkensis	Eastern Coastal Free-tailed Bat	V	Not listed	The Eastern Freetail-bat is found along the east coast from south Queensland to southern NSW. The species typically inhabit dry sclerophyll forest, woodland, swamp forests and mangrove forests east of the Great Dividing Range. It roosts mainly in tree hollows but will also roost under bark or in man-made structures.	1 record within 10km, last recorded 2015 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Low number of recent records, and minimal canopy and no hollow bearing trees on site. Unlikely to depend on the foraging resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. No recent records. While there is suitable breeding habitat and multiple hollow bearing trees along the site the impact on this area is minimal, and unlikely to cause a significant impact to the species survival. Unlikely to depend on the foraging resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. No recent records. While there is suitable breeding habitat and multiple hollow bearing trees along the access track, the impact on this area is minimal, and unlikely to cause a significant impact to the species survival. Unlikely to depend on the foraging resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.
Miniopterus orianae oceanensis	Large Bent-winged Bat	V	Not listed	Large Bentwing-bats occur along the east and north-west coasts of Australia. The species use caves as the primary roosting habitat, but also use derelict mines,	59 records within 10km, last recorded 2023 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Moderate number of recent records, however	Nil records within 10km	Low likelihood of occurring on the site. No recent records, and no rocky habitat or	1 record within 10km, last recorded 2008 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. No recent records, and no rocky habitat or

Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact					
					Mount Piper Substation (South)	Likelihood and further assessment	STR 356 + access	Likelihood and further assessment	STR 432 + access	Likelihood and further assessment
				storm-water tunnels, buildings and other man-made structures.		no rocky habitat or overhangs on site that would be impacted. Unlikely to depend on the foraging resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.		overhangs on site that would be impacted. Unlikely to depend on the foraging resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.		overhangs on site that would be impacted. Unlikely to depend on the foraging resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.
Mixophyes balbus	Stuttering Frog	E	V	Stuttering Frogs occur along the east coast of Australia from southern Queensland to north-eastern Victoria. Considered to have disappeared from Victoria and to have undergone considerable range contraction in NSW, particularly in south-east NSW. The Dorrigo region, in north-east NSW, appears to be a stronghold for this species. It is found in rainforest and wet, tall open forest in the foothills and escarpment on the eastern side of the Great Dividing Range. Outside the breeding season adults live in deep leaf litter and thick understorey vegetation on the forest floor.	Nil records within 10km	Low likelihood of occurring on the site. No permanent waterways noted on site. Site highly modified, no suitable habitat on site. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. No permanent waterways noted on site, no suitable habitat on site. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. Aquatic habitat and surrounding vegetation within proposed impact footprint unlikely to support breeding or be critical for foraging for this species. Nil further assessment required.
Myotis macropus	Southern Myotis	V	Not listed	The Southern Myotis is mainly coastal but may occur inland along large river systems. Usually associated with permanent waterways at low elevations in flat/undulating country, usually in vegetated areas. Forages over streams and watercourses feeding on fish and insects from the water surface. Roosts in a variety of habitats including caves, mine shafts, hollow-bearing trees, stormwater channels, buildings, under bridges and in dense foliage, typically in close proximity to water.	4 records within 10km, last recorded 2021 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Moderate number of recent records, however no suitable roosting or breeding habitat on site. No aquatic foraging habitat on site. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. No recent records adjacent to the site. While there is some breeding habitat in the form of hollow bearing trees, the lack of aquatic foraging habitat on site makes this site unlikely to be used by this species. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. While there is some breeding habitat in the form of hollow bearing trees adjacent to the 2nd order Strahler stream adjacent to the footprint, the majority of these trees are outside the proposed impact area. Aquatic foraging habitat within the proposed impact area is unlikely to be critical to the survival of the species and unlikely to be affected to

Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact					
					Mount Piper Substation (South)	Likelihood and further assessment	STR 356 + access	Likelihood and further assessment	STR 432 + access	Likelihood and further assessment
										a degree that would impact foraging if it was utilised by the species. Nil further assessment required.
Neophema chrysostoma	Blue-winged Parrot	V	V	The main populations of Blue-winged Parrots are in Tasmania and Victoria, particularly in southern Victoria and the midlands and eastern areas of Tasmania. The species is occasionally found in New South Wales. The species inhabits a range of habitats from coastal, sub-coastal and inland areas, right through to semi-arid zones. Throughout their range they favour grasslands and grassy woodlands. They are often found near wetlands both near the coast and in semi-arid zones. Blue-winged Parrots can also be seen in altered environments such as airfields, golf-courses and paddocks.	Nil records within 10km	Low likelihood of occurring on site. No recent records, and no significant breeding or foraging habitat present on site, including minimal tree canopy. Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. No recent records within 10kms. While there is some suitable breeding habitat in the form of hollow bearing trees, this site is outside the known distribution for this species. If it was found on site, this would likely be a transient sighting. Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. No recent records within 10kms. While there is some suitable breeding habitat in the form of hollow bearing trees, this site is outside the known distribution for this species. If it was found on site, this would likely be a transient sighting. Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.
Ninox connivens	Barking Owl	V	Not listed	The Barking Owl is found throughout continental Australia except for the central arid regions. The owls sometimes extend their home range into urban areas, hunting birds in garden trees and insects attracted to streetlights. Extensive wildfires in 2019-20 reduced habitat quality further, burnt many old, hollow-bearing trees needed as refuge by prey species and reduced the viability of some regional owl populations. The species inhabit woodland and open forest, including fragmented remnants and partly cleared farmland. It is flexible in its habitat use, and hunting can extend in to closed	3 records within 10km, last recorded 2007 (NSW DCCEEW, 2026a)	Low likelihood of occurring on site. Low number of recent records, and no significant breeding or foraging habitat present on site, including minimal tree canopy and no hollow bearing trees. Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted.	1 record within 10km, last recorded 2011 (NSW DCCEEW, 2026a)	Low likelihood of occurring on site. Low number of recent records, however 2011 record found within 1 km site. Breeding habitats present on site in the form of appropriately sized hollow bearing trees Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site	Nil records within 10km	Low likelihood of occurring on site. Low number of recent records, however breeding habitat present on site in the form of appropriately sized hollow bearing trees. However all appropriately sized hollows are currently outside of the proposed impact area. Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available

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					Mount Piper Substation (South)	Likelihood and further assessment	STR 356 + access	Likelihood and further assessment	STR 432 + access	Likelihood and further assessment
				forest and more open areas. Sometimes able to successfully breed along timbered watercourses in heavily cleared habitats (e.g. western NSW) due to the higher density of prey found on these fertile riparian soils. The species typically roost in shaded portions of tree canopies, including tall midstorey trees with dense foliage such as *Acacia* and *Casuarina* species.		Nil further assessment required.		which will not be impacted. Nil further assessment required, particularly if impact to large hollows can be avoided.		adjacent to the site which will not be impacted. Assessment of significance will depend on if hollows can be avoided.
Ninox strenua	Powerful Owl	V	Not listed	The Powerful Owl is endemic to eastern and south-eastern Australia, mainly on the coastal side of the Great Dividing Range from Mackay to south-western Victoria. In NSW, it is widely distributed throughout the eastern forests from the coast inland to tablelands, with scattered records on the western slopes and plains suggesting occupancy prior to land clearing. Now at low densities throughout most of its eastern range, rare along the Murray River and former inland populations may never recover. The Powerful Owl inhabits a range of vegetation types, from woodland and open sclerophyll forest to tall open wet forest and rainforest. The Powerful Owl requires large tracts of forest or woodland habitat but can occur in fragmented landscapes as well. The species breeds and hunts in open or closed sclerophyll forest or woodlands and occasionally hunts in open habitats. It roosts by day in dense vegetation comprising species such as Turpentine *Syncarpia glomulifera*, Black She-oak *Allocasuarina littoralis*, Blackwood *Acacia melanoxylon*, Rough-barked Apple *Angophora floribunda*, Cherry Ballart *Exocarpus cupressiformis* and a number of eucalypt species.	17 records within 10km, last recorded 2024 (NSW DCCEEW, 2026a)	Low likelihood of occurring on site. Low number of recent records, and no significant breeding or foraging habitat present on site, including minimal tree canopy and no hollow bearing trees. Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.	Nil records within 10km	Moderate likelihood of occurring on site. No recent records within 10km, however 2023 record within 15km. Breeding habitat present on site in the form of a dense cluster of appropriately sized hollow bearing trees. This is a highly mobile species and this site is connected to vegetation with recent species sightings. The cleared areas across the current easement would be likely to provide optimal foraging habitat. Assessment of significance required.	3 records within 10km, last recorded 2016 (NSW DCCEEW, 2026a)	Low likelihood of occurring on site. Low number of recent records, however breeding habitat present on site in the form of appropriately sized hollow bearing trees. However all appropriately sized hollows are currently outside of the proposed impact area. Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.

Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact					
					Mount Piper Substation (South)	Likelihood and further assessment	STR 356 + access	Likelihood and further assessment	STR 432 + access	Likelihood and further assessment
Nyctophilus corbeni	Corben's Long-eared Bat, South-eastern Long-eared Bat	V	V	This Corben's Long-eared Bat is found throughout the Murray-Darling Basin and the Pilliga Scrub region being the distinct stronghold for this species. The species inhabits a variety of vegetation types, including mallee, bulloke *Allocasuarina leuhmanni* and box eucalypt dominated communities, but it is distinctly more common in box/ironbark/cypress-pine vegetation that occurs in a north-south belt along the western slopes and plains of NSW and southern Queensland. It roosts in tree hollows, crevices, and under loose bark.	Nil records within 10km	Low likelihood of occurring on the site. No recent records, and minimal tree canopy on site likely to support breeding or roosting habitat. Unlikely to depend on the foraging resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. No recent records within 10km of site. Suitable roosting hollows on site, however paucity of records and location of site outside of known distribution makes it unlikely that the species will rely on these resources, Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. No recent records within 10km of site. While there is some breeding habitat in the form of hollow bearing trees along the access track, the majority of these trees are outside the proposed impact area. Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted Nil further assessment required.
Oxyura australis	Blue-billed Duck	V	Not listed	The Blue-billed Duck is endemic to south-eastern and south-western Australia. It is widespread in NSW, but most common in the southern Murray-Darling Basin area. The species disperses during the breeding season to deep swamps up to 300 km away and is generally only during summer or in drier years that they are seen in coastal areas. The Blue-billed Duck prefers deep water in large permanent wetlands and swamps with dense aquatic vegetation. The species is completely aquatic, swimming low in the water along the edge of dense cover. It will fly if disturbed, but prefers to dive if approached.	77 records within 10km, last recorded 2022 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Moderate number of recent records within 10km, however no suitable habitat, including no permanent waterways noted on site. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. No recent records within 10kms. No suitable habitat, including no permanent waterways noted on site. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. No recent records within 10kms. No suitable, deep aquatic habitat within the proposed impact footprint. Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.
Paralucia spinifera	Purple Copper Butterfly, Bathurst Copper Butterfly	E	V	The Bathurst Copper Butterfly occurs on the Central Tablelands of NSW in an area approximately bounded by Oberon, Hartley and Bathurst. The butterfly is	3233 records within 10km, last recorded 2025 (NSW DCCEEW, 2026a)	Low likelihood of occurring on site. High number of recent records 2km north of	Nil records within 10km	Low likelihood of occurring on site. No recent records within 10km of site, and no	Nil records within 10km	Low likelihood of occurring on site. No recent records within 10km of site, and no

Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact					
					Mount Piper Substation (South)	Likelihood and further assessment	STR 356 + access	Likelihood and further assessment	STR 432 + access	Likelihood and further assessment
				found at 35 locations, all within the Greater Lithgow, Bathurst Regional and Oberon local government areas. The species occurs above 850 m elevation, at sites with a south-west to north-west aspect, usually where direct sunlight reaches the habitat, and with extremes of cold such as regular winter snowfalls or heavy frosts. The species is commonly found in open woodland or open forest with a sparse understorey that is dominated by the shrub, Blackthorn *Bursaria spinosa subsp. lasiophylla.*		site, however the species has a high site fidelity and not likely to travel to areas with no suitable habitat. Site highly degraded, and no suitable habitat, including no presence of *Bursaria spinosa subsp. lasiophylla* on site. No further assessment required.		suitable habitat present on site, including no presence of *Bursaria spinosa subsp. lasiophylla* on site. No further assessment required.		suitable habitat present on site, including no presence of *Bursaria spinosa subsp. lasiophylla* on site. No further assessment required.
Parvipsitta pusilla	Little Lorikeet	V	Not listed	"The Little Lorikeet is distributed widely across the coastal and Great Divide regions of eastern Australia from Cape York to South Australia. NSW provides a large portion of the species' core habitat, with lorikeets found westward as far as Dubbo and Albury. Forages primarily in the canopy of open *Eucalyptus* forest and woodland, yet also finds food in *Angophora*, *Melaleuca* and other tree species. Riparian habitats are particularly used, due to higher soil fertility and hence greater productivity. Isolated flowering trees in open country, e.g. paddocks, roadside remnants and urban trees also help sustain viable populations of the species. Nests in proximity to feeding areas if possible, most typically selecting hollows in the limb or trunk of smooth-barked Eucalypts. Entrance is small (3 cm) and usually high above the ground (2–15 m). These nest sites are often used repeatedly for decades, suggesting that preferred sites are limited. Riparian trees often chosen, including species like *Allocasuarina*."	7 records within 10km, last recorded 2017 (NSW DCCEEW, 2026a)	Low likelihood of occurring on site. Low number of recent records, and no significant breeding or foraging habitat present on site, including minimal tree canopy. Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. No recent records within 10km of site. While there is some potential breeding habitat in the form of hollow bearing trees, there is no riparian habitat within the site, making it unlikely that this site would be chosen for breeding by this species. Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.	1 record within 10km, last recorded 2000 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. No recent records within 10km of site. While there is some breeding habitat in the form of hollow bearing trees along the access track adjacent to the 2nd order riparian corridor, the majority of these hollows are outside the proposed impact area. Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.
Petalura gigantea	Giant Dragonfly	E	Not listed	The Giant Dragonfly is found along the east coast of NSW from the Victorian border to northern NSW. It is not found	30 records within 10km, last recorded	Low likelihood of occurring on the site.	Nil records within 10km	Low likelihood of occurring on the site.	Nil records within 10km	Low likelihood of occurring on the site.

Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact					
					Mount Piper Substation (South)	Likelihood and further assessment	STR 356 + access	Likelihood and further assessment	STR 432 + access	Likelihood and further assessment
				west of the Great Dividing Range. There are known occurrences in the Blue Mountains and Southern Highlands, in the Clarence River catchment, and on a few coastal swamps from north of Coffs Harbour to Nadgee in the south. The species live in permanent swamps and bogs with some free water and open vegetation.	2022 (NSW DCCEEW, 2026a)	Moderate number of recent records within 10km, however no permanent waterways noted on site. Site highly modified, no suitable habitat on site. Nil further assessment required.		No recent records within 10km and no permanent waterways noted on site. No suitable habitat on site. Nil further assessment required.		The aquatic habitat located within the proposed impact area does not contain the structural and vegetative components required for breeding. Nil further assessment required.
Petauroides volans	Southern Greater Glider	E	E	The greater glider is restricted to eastern Australia, occurring from the Windsor Tableland in north Queensland through to central Victoria (Wombat State Forest), with an elevational range from sea level to 1200 m above sea level. It prefers taller montane, moist eucalypt forest with relatively old trees and abundant hollows.	260 records within 10km, last recorded 2024 (NSW DCCEEW, 2026a)	Low likelihood of occurring on site. Low number of recent records, and no significant breeding or foraging habitat present on site, including minimal tree canopy and no hollow bearing trees. Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. No recent records. While there are suitable hollows within the study area, vegetation likely too dry with not enough resources to support breeding or foraging for this species. Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.	17 records within 10km, last recorded 2008 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Moderate number of older records within 10km of site. While there is some breeding habitat in the form of hollow bearing trees along the access track, most of these trees are outside the proposed impact area. Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted Nil further assessment required.
Petaurus australis australis	Yellow-bellied Glider	V	V	The Yellow-bellied Glider is found along the eastern coast to the western slopes of the Great Dividing Range, from southern Queensland to Victoria. The species occur in tall mature eucalypt forest generally in areas with high rainfall and nutrient rich soils. Vegetation preferences vary with latitude and elevation; mixed coastal forests to dry escarpment forests in the north; moist coastal gullies and creek flats to tall montane forests in the south.	Nil records within 10km	Low likelihood of occurring on site. Low number of recent records, and no significant breeding or foraging habitat present on site, including minimal tree canopy and no hollow bearing trees. Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available	Nil records within 10km	Low likelihood of occurring on the site. No recent records. While there are suitable hollows within the study area, vegetation likely too dry with not enough resources to support breeding or foraging for this species. Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-	Nil records within 10km	Low likelihood of occurring on the site. Moderate number of older records within 10km of site. While there is some breeding habitat in the form of hollow bearing trees along the access track, most of these trees are outside the proposed impact area. Unlikely to depend on the resources on site for

Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact					
					Mount Piper Substation (South)	Likelihood and further assessment	STR 356 + access	Likelihood and further assessment	STR 432 + access	Likelihood and further assessment
						adjacent to the site which will not be impacted. Nil further assessment required.		quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.		foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted Nil further assessment required.
Petaurus norfolcensis	Squirrel Glider	V	Not listed	The Squirrel Glider is widely though sparsely distributed in eastern Australia, from northern Queensland to western Victoria. The species inhabits mature or old growth Box, Box-Ironbark woodlands and River Red Gum forest west of the Great Dividing Range and Blackbutt-Bloodwood forest with heath understorey in coastal areas.	8 records within 10km, last recorded 2024(NSW DCCEEW, 2026a)	Low likelihood of occurring on site. Low number of recent records, and no significant breeding or foraging habitat present on site, including minimal tree canopy and no hollow bearing trees. Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. No recent records. While there are suitable hollows within the study area, vegetation likely too dry with not enough resources to support breeding or foraging for this species. Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. Moderate number of older records within 10km of site. While there is some breeding habitat in the form of hollow bearing trees along the access track, most of these trees are outside the proposed impact area. Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted Nil further assessment required.
Petrogale penicillata	Brush-tailed Rock-wallaby	E	V	In NSW the Brush-tailed Rock-wallaby occurs from the Queensland border in the north to the Shoalhaven in the south, with the population in the Warrumbungle Ranges being the western limit. The species occupy rocky escarpments, outcrops and cliffs with a preference for complex structures with fissures, caves and ledges, often facing north. It typically shelters or basks during the day in rock crevices, caves and overhangs and are most active at night when foraging.	Nil records within 10km	Low likelihood of occurring on the site.	Nil records within 10km	Low likelihood of occurring on the site. No recent records and no rocky habitat or ledges within study area. Unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. No recent records and no rocky habitat or ledges within study area. Unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.

Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact					
					Mount Piper Substation (South)	Likelihood and further assessment	STR 356 + access	Likelihood and further assessment	STR 432 + access	Likelihood and further assessment
Petroica boodang	Scarlet Robin	V	Not listed	In NSW, the Scarlet Robin from the coast to the inland slopes. After breeding, some Scarlet Robins disperse to the lower valleys and plains of the tablelands and slopes. Some birds may appear as far west as the eastern edges of the inland plains in autumn and winter. The Scarlet Robin lives in dry eucalypt forests and woodlands. The understorey is usually open and grassy with few scattered shrubs. This species lives in both mature and regrowth vegetation. It occasionally occurs in mallee or wet forest communities, or in wetlands and tea-tree swamps. The species habitat usually contains abundant logs and fallen timber: these are important components of its habitat.	108 records within 10km, last recorded 2024 (NSW DCCEEW, 2026a)	Low likelihood of occurring on site. High number of recent records, however no significant breeding habitat present on site, including minimal tree canopy. No woody habitat noted on site. Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.	4 records within 10km, last recorded 2011 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Low number of records within 10km, however all records tend to be in adjoining woodlands. Understory likely too shrubby for this species. Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.	2 records within 10km, last recorded 2023 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Low number of records within 10km, however all records tend to be in adjoining woodlands. Understory likely too shrubby for this species. Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.
Petroica phoenicea	Flame Robin	V	Not listed	In NSW, the Flame Robin breeds in upland areas and in winter, many birds move to the inland slopes and plains. It is likely that there are two separate populations in NSW, one in the Northern Tablelands, and another ranging from the Central to Southern Tablelands. The species breeds in upland tall moist eucalypt forests and woodlands, often on ridges and slopes, it prefers clearings or areas with open understoreys.	70 records within 10km, last recorded 2024 (NSW DCCEEW, 2026a)	Low likelihood of occurring on site. Moderate number of recent records, however no significant breeding habitat present on site, including minimal tree canopy. Weedy, dense regrowth in understory. Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.	1 record within 10km, last recorded 2010 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Low number of records within 10km, however all records tend to be in adjoining woodlands. Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.	1 record within 10km, last recorded 2020 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Low number of records within 10km, however all records tend to be in adjoining woodlands. Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.
Phascolarctos cinereus; Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)	Koala; Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory)	E	E	The Koala has a fragmented distribution throughout eastern Australia from north-east Queensland to the Eyre Peninsula in South Australia. In New South Wales, koala populations are found on the central and north coasts,	8 records within 10km, last recorded 2020 (NSW DCCEEW, 2026a)	Low likelihood of occurring on site. Low number of recent records, however no significant foraging habitat on site including no koala feeds trees.	110 records within 10km, last recorded 2025 (NSW DCCEEW, 2026a)	Moderate likelihood of occurring on site. There are a moderate number of recent records within the surrounding landscape (1.5km away), although	2 records within 10km, last recorded 2022 (NSW DCCEEW, 2026a)	Moderate likelihood of occurring on site. There is a low number of recent records within the surrounding landscape, however this may be influenced by a lack of

Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact					
					Mount Piper Substation (South)	Likelihood and further assessment	STR 356 + access	Likelihood and further assessment	STR 432 + access	Likelihood and further assessment
				southern highlands, southern and northern tablelands, Blue Mountains, southern coastal forests, with some smaller populations on the plains west of the Great Dividing Range. The species inhabit eucalypt woodlands and forests, and feed on the foliage of more than 70 eucalypt species and 30 non-eucalypt species, but in any one area will select preferred browse species.		Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.		no records are located immediately adjacent to the site. The apparent absence of records nearby may be influenced by a lack of targeted survey effort rather than true absence. The site contains connected habitat linking to areas where Koala records have been recently confirmed. *Eucalyptus polyanthemos* (a known secondary feed tree species) is common throughout the site, providing suitable foraging habitat. Assessment of significance required.		targeted survey effort rather than true absence. The site contains connected habitat linking to areas where Koala records have been recently confirmed. *Eucalyptus mannifera (*a known secondary feed tree species) is common throughout the site, providing suitable foraging habitat. Assessment of significance required.
Polytelis swainsonii	Superb Parrot	V	V	The Superb Parrot is found throughout eastern inland NSW. On the South-western Slopes their core breeding area is roughly bounded by Cowra and Yass in the east, and Grenfell, Cootamundra and Coolac in the west. Birds breeding in this region are mainly absent during winter, when they migrate north to the region of the upper Namoi and Gwydir Rivers. The other main breeding sites are in the Riverina along the corridors of the Murray, Edward and Murrumbidgee Rivers where birds are present all year round. The species inhabit Box-Gum, Box-Cypress-pine and Boree Woodlands and River Red Gum Forest.	Nil records within 10km	Low likelihood of occurring on the site. No recent records, and minimal tree canopy with no hollows. The species is considered unlikely to occur on site, and there are no recent records of occurrence in the area. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. Suitable breeding and foraging habitat on site, however the lack of recent records suggests that this species is unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. Suitable breeding and foraging habitat on site, however the lack of recent records suggests that this species is unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.
Pomatostomus temporalis temporalis	Grey-crowned Babbler (eastern subspecies)	V	Not listed	In NSW, the Grey-crowned Babbler occurs on the western slopes of the Great Dividing Range, and on the western plains reaching as far as Louth and	Nil records within 10km	Low likelihood of occurring on site. Low number of recent records, and no	45 records within 10km, last recorded 2014 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Low number of records within 10km, however all	1 record within 10km, last recorded 2010 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Low number of records within 10km, however all

Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact					
					Mount Piper Substation (South)	Likelihood and further assessment	STR 356 + access	Likelihood and further assessment	STR 432 + access	Likelihood and further assessment
				Balranald. It also occurs in woodlands in the Hunter Valley and in several locations on the north coast of NSW. It may be extinct in the southern, central and New England tablelands. The species inhabits open Box-Gum Woodlands on the slopes, and Box-Cypress-pine and open Box Woodlands on alluvial plains. Woodlands on fertile soils in coastal regions.		significant breeding or foraging habitat present on site, including minimal tree canopy. Suitable habitat does not present on site. Nil further assessment required.		records tend to be in adjoining woodlands. Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.		records tend to be in adjoining woodlands. Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.
Prototroctes maraena	Australian Grayling	E	V	The Australian Grayling occurs in streams and rivers on the eastern and southern flanks of the Great Dividing Range, from Sydney, southwards to the Otway Ranges of Victoria and in Tasmania. The species is found in fresh and brackish waters of coastal lagoons, from Shoalhaven River in NSW to Ewan Ponds in South Australia	Nil records within 10km	Nil likelihood of occurring on the site. No significant waterbodies associated with the Murray Rivers are located on site or will be impacted. Nil further assessment required.	Nil records within 10km	Nil likelihood of occurring on the site. No significant waterbodies associated with the Murray Rivers are located on site or will be impacted. Nil further assessment required.	Nil records within 10km	Nil likelihood of occurring on the site. No significant waterbodies associated with the Murray Rivers are located on site or will be impacted. Nil further assessment required.
Pseudomys novaehollandiae	New Holland Mouse	V	V	The New Holland Mouse has a fragmented distribution across Tasmania, Victoria, New South Wales and Queensland. The species is known to inhabit open heathlands, woodlands and forests with a heathland understorey and vegetated sand dunes	Nil records within 10km	Low likelihood of occurring on site. No recent records, and a highly disturbed understory with no suitable breeding or nesting habitat on site. Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. No records within 10kms. Old records across Wollemi National Park, however site is geographically isolated from this area of vegetation. Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. No records within 10kms. Old records across Wollemi National Park, however site is geographically isolated from this area of vegetation. Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.
Pteropus poliocephalus	Grey-headed Flying-fox	V	V	Grey-headed Flying-foxes are generally found within 200 km of the eastern coast of Australia,	1 record within 10km, last recorded	Low likelihood of occurring on site.	Nil records within 10km	Low likelihood of occurring on the site.	Nil records within 10km	Low likelihood of occurring on the site.

Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact					
					Mount Piper Substation (South)	Likelihood and further assessment	STR 356 + access	Likelihood and further assessment	STR 432 + access	Likelihood and further assessment
				from Rockhampton in Queensland to Adelaide in South Australia. In times of natural resource shortages, they may be found in unusual locations. The species occur in subtropical and temperate rainforests, tall sclerophyll forests and woodlands, heaths and swamps as well as urban gardens and cultivated fruit crops. Roosting camps are generally located within 20 km of a regular food source and are commonly found in gullies, close to water, in vegetation with a dense canopy.	2023 (NSW DCCEEW, 2026a)	Low number of recent records, and significant breeding, foraging or roosting habitat present on site, including minimal tree canopy. Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.		Any occurrences of this species on site are likely to be transient foraging, as there are no known roosting camps in proximity. Paucity of recent close records suggests that the species is unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required		Any occurrences of this species on site are likely to be transient foraging, as there are no known roosting camps in proximity. Paucity of recent close records suggests that the species is unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required
Pycnoptilus floccosus	Pilotbird	V	V	Pilotbirds are strictly terrestrial, living on the ground in dense forests with heavy undergrowth. They are typically seen in pairs or occasionally in family parties, occupying small territories all year round. Birds forage mostly in pairs for insects, and occasionally eat seeds and fruits. Breeding takes places between August and January. Adults build a domed nest on or near the ground in which they usually lay two eggs.	1 record within 10km, last recorded 2009 (NSW DCCEEW, 2026a)	Low likelihood of occurring on site. Low number of recent records, and no suitable breeding or foraging habitat including minimal tree canopy and a highly disturbed undergrowth. Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. No records within 10km. Likely to be unsuitable habitat, as the midstory is dominated by dense shrubs across most of the site. Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. No records within 10km. Likely to be unsuitable habitat, as the midstory is dominated by dry dense, post fire regrowth across most of the site. Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.
Pyrrholaemus sagittatus	Speckled Warbler	V	Not listed	The Speckled Warbler has a patchy distribution throughout south-eastern Queensland, the eastern half of NSW and into Victoria, as far west as the Grampians. The species is most frequently reported from the hills and tablelands of the Great Dividing Range, and rarely from the coast. There has been a	3 records within 10km, last recorded 2020 (NSW DCCEEW, 2026a)	Low likelihood of occurring on site. Low number of recent records, and no suitable breeding or foraging habitat including minimal tree canopy and	9 records within 10km, last recorded 2011 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Low umber of recent records within 10km. Likely to be unsuitable habitat, as the midstory is dominated by dense shrubs across most of the site. Unlikely to	5 records within 10km, last recorded 2010 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Low number of records within 10km. This site tends to a dense shrubby understory with minimal grassy tussocks, in part likely due to regrowth post

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					Mount Piper Substation (South)	Likelihood and further assessment	STR 356 + access	Likelihood and further assessment	STR 432 + access	Likelihood and further assessment
				decline in population density throughout its range, with the decline exceeding 40% where no vegetation remnants larger than 100ha survive. The Speckled Warbler lives in a wide range of Eucalyptus dominated communities that have a grassy understorey, often on rocky ridges or in gullies. Typical habitat would include scattered native tussock grasses, a sparse shrub layer, some eucalypt regrowth and an open canopy. Large, relatively undisturbed remnants are required for the species to persist in an area.		a highly disturbed undergrowth. Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.		depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.		2019/2020 fire. This site is unlikely to be preferred habitat for breeding for this species. Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.
Rostratula australis	Australian Painted Snipe	E	E	In NSW many records of the Australian Painted Snipe are from the Murray-Darling Basin including the Paroo wetlands, Lake Cowal, Macquarie Marshes, Fivebough Swamp and more recently, swamps near Balldale and Wanganella. Other important locations with recent records include wetlands on the Hawkesbury River and the Clarence and lower Hunter Valleys. The species prefers fringes of swamps, dams and nearby marshy areas where there is a cover of grasses, lignum, low scrub or open timber.	1 record within 10km, last recorded 2012 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. No recent records within 10km. No permanent aquatic habitat or associated vegetation on site, no suitable habitat. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. No recent records within 10km. No permanent aquatic habitat or associated vegetation on site, no suitable habitat. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. No recent records within 10km. Permanent aquatic habitat occurs in the east of the site, however given the paucity of records and the generally disconnected nature of the waterway, species is unlikely to depend on the foraging resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.
Saccolaimus flaviventris	Yellow-bellied Sheathtail-bat	V	Not listed	The Yellow-bellied Sheathtail-bat is a wide-ranging species found across northern and eastern Australia. In the most southerly part of its range - most of Victoria, south-western NSW and adjacent South Australia - it is a rare visitor in late summer and autumn. There are scattered records of this species across the New England Tablelands and	11 records within 10km, last recorded 2023 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Moderate number of recent records, and no hollow bearing trees on site. Unlikely to depend on the foraging resources on site as large areas of similar or better-quality habitat	Nil records within 10km	Low likelihood of occurring on the site. No recent records within 10km. Suitable habitat present on site, including mature hollow bearing trees, however unlikely to depend on the foraging resources on site as large areas of	Nil records within 10km	Low likelihood of occurring on the site. No recent records within 10km. Suitable habitat present on site, including mature hollow bearing trees, however unlikely to depend on the foraging resources on site as large areas of

Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact					
					Mount Piper Substation (South)	Likelihood and further assessment	STR 356 + access	Likelihood and further assessment	STR 432 + access	Likelihood and further assessment
				North West Slopes. It forages in most habitats across its very wide range, with and without trees; appears to defend an aerial territory.		available adjacent to the site which will not be impacted. Nil further assessment required.		similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.		similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.
Scoteanax rueppellii	Greater Broad-nosed Bat	V	Not listed	The Greater Broad-nosed Bat is found mainly in the gullies and river systems that drain the Great Dividing Range, from north-eastern Victoria to the Atherton Tableland. It extends to the coast over much of its range. In NSW it is widespread on the New England Tablelands, however does not occur at altitudes above 500 m. The species utilises a variety of habitats from woodland through to moist and dry eucalypt forest and rainforest, though it is most commonly found in tall wet forest.	1 record within 10km, last recorded 2021 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Low number of recent records, and no hollow bearing trees on site. Unlikely to depend on the foraging resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. No recent records within 10km. Suitable habitat present on site, including mature hollow bearing trees, however unlikely to depend on the foraging resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. No recent records within 10km. Suitable habitat present on site, including mature hollow bearing trees, however majority of hollows are outside proposed impact area. however unlikely to depend on the foraging resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.
Stagonopleura guttata	Diamond Firetail	V	V	The Diamond Firetail is endemic to south-eastern Australia, extending from central Queensland to the Eyre Peninsula in South Australia. It is widely distributed in NSW, with a concentration of records from the Northern, Central and Southern Tablelands, the Northern, Central and South Western Slopes and the North West Plains and Riverina. Not commonly found in coastal districts, though there are records from near Sydney, the Hunter Valley and the Bega Valley. This species has a scattered distribution over the rest of NSW, though is very rare west of the Darling River. The species is found in grassy	1 record within 10km, last recorded 2007 (NSW DCCEEW, 2026a)	Low likelihood of occurring on site. Low number of recent records, and no suitable breeding or foraging habitat including minimal tree canopy and no associated species. Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted.	27 records within 10km, last recorded 2018 (NSW DCCEEW, 2026a)	Moderate likelihood of occurring on site. Older recent records, however many located close to site and in similar dry sclerophyll habitat. Potential breeding and foraging habitat on site, in both woody and non woody areas of site. Assessment of significance required.	1 record within 10km, last recorded 2016 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Low number of records within 10km. This site tends to a dense shrubby understory with minimal grassy tussocks, in part likely due to regrowth post 2019/2020 fire. This site is unlikely to be preferred habitat for breeding for this species. Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site

Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact					
					Mount Piper Substation (South)	Likelihood and further assessment	STR 356 + access	Likelihood and further assessment	STR 432 + access	Likelihood and further assessment
				eucalypt woodlands, including Box-Gum Woodlands and Snow Gum Eucalyptus pauciflora Woodlands. It also occurs in open forest, mallee, Natural Temperate Grassland, and in secondary grassland derived from other communities, and often found in riparian areas (rivers and creeks), and sometimes in lightly wooded farmland.		Nil further assessment required.				which will not be impacted. Nil further assessment required
Stictonetta naevosa	Freckled Duck	V	Not listed	The Freckled Duck is found primarily in south-eastern and south-western Australia, occurring as a vagrant elsewhere. It breeds in large temporary swamps created by floods in the Bulloo and Lake Eyre basins and the Murray-Darling system, particularly along the Paroo and Lachlan Rivers, and other rivers within the Riverina. The duck is forced to disperse during extensive inland droughts when wetlands in the Murray River basin provide important habitat. The species may also occur as far as coastal NSW and Victoria during such times. The species prefer permanent freshwater swamps and creeks with heavy growth of Cumbungi, Lignum or Tea-tree. During drier times they move from ephemeral breeding swamps to more permanent waters such as lakes, reservoirs, farm dams and sewage ponds.	16 records within 10km, last recorded 2020 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Moderate number of recent records however no permanent waterbodies on site. Significant disturbance to the ground layer – including the importation of gravels for road construction – has likely rendered the substrate too modified to provide suitable habitat for this species. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. No recent records and no permanent waterbodies on site. No suitable habitat on site for this species. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. No recent records within 10kms. No suitable, deep aquatic habitat within the proposed impact footprint. Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.
Tympanocryptis mccartneyi	Bathurst Grassland Earless Dragon	CE	CE	*Tympanocryptis mccartneyi* is endemic to New South Wales (NSW), Australia where it is restricted to the grasslands and open country on the alluvial plains around Bathurst in the Central Tablelands of NSW. *Tympanocryptis mccartneyi* is a grassland specialist, inhabiting treeless plains, open grasslands and fringes of open woodlands. The species has been found along railway tracks, with weedy Paspalum grass thickets, and in	Nil records within 10km	Low likelihood of occurring on the site. Heavily modified substrate on site and very sandy soils are unlikely to be suitable habitat. Nil recent records in close vicinity. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. Some areas of grassland, however mostly shrubby with no noticeable wolf spider burrows when survey conducted. Nil further assessment required	Nil records within 10km	Low likelihood of occurring on the site. No significant areas of grassland or suitable habitat present on site. Mostly shrubby with no noticeable wolf spider burrows when survey conducted.

Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact					
					Mount Piper Substation (South)	Likelihood and further assessment	STR 356 + access	Likelihood and further assessment	STR 432 + access	Likelihood and further assessment
				vacant paddocks with tall pasture grass. The grasslands occur at altitudes up to approximately 1200 m and are naturally treeless or sparsely treed, with native tussock grasses being the dominant vegetation.						Nil further assessment required
Tyto novaehollandiae	Masked Owl	V	Not listed	The Masked Owl occurs from the coast where it is most abundant to the western plains. Overall records for this species fall within approximately 90% of NSW, excluding the most arid north-western corner. There is no seasonal variation in its distribution. This species lives in dry eucalypt forests and woodlands from sea level to 1100 m an often hunts along the edges of forests, including roadsides. Roosts and breeds in moist eucalypt forested gullies, using large tree hollows or sometimes caves for nesting.	1 record within 10km, last recorded 2010 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Low number of recent records, and no hollow bearing trees on site. Unlikely to depend on the foraging resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on site. Low number of recent records, however breeding habitat present on site in the form of appropriately sized hollow bearing trees. Unlikely to be found in dry sclerophyll woodland as prefers moist forest or rainforest. Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on site. Low number of recent records, however breeding habitat present on site in the form of appropriately sized hollow bearing trees. However all appropriately sized hollows are currently outside of the proposed impact area. Unlikely to be found in dry sclerophyll woodland as prefers moist forest or rainforest. Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.
Tyto tenebricosa	Sooty Owl	V	Not listed	The Sooty Owl occupies the easternmost one-eighth of NSW, occurring on the coast, coastal escarpment and eastern tablelands. This species occurs in rainforest, including dry rainforest, subtropical and warm temperate rainforest, as well as moist eucalypt forests. Sooty Owls roost by day in the hollow of a tall forest tree or in heavy vegetation and nest in very large tree hollows. This species hunts by night for small ground mammals or tree-dwelling	2 records within 10km, last recorded 2021 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Low number of recent records, and no hollow bearing trees on site. Unlikely to depend on the foraging resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted.	Nil records within 10km	Low likelihood of occurring on site. Low number of recent records, however breeding habitat present on site in the form of appropriately sized hollow bearing trees. Unlikely to be found in dry sclerophyll woodland as prefers moist forest or rainforest.	Nil records within 10km	Low likelihood of occurring on site. Low number of recent records. Breeding habitats present on site in the form of appropriately sized hollow bearing trees. However all appropriately sized hollows are currently outside of the proposed impact area. Unlikely to be found in dry

Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact					
					Mount Piper Substation (South)	Likelihood and further assessment	STR 356 + access	Likelihood and further assessment	STR 432 + access	Likelihood and further assessment
				mammals such as the Common Ringtail Possum (*Pseudocheirus peregrinus*) or Sugar Glider (*Petaurus breviceps*).		Nil further assessment required.		If the species is found on site, unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.		sclerophyll woodland as prefers moist forest or rainforest. Unlikely to depend on the resources on site for foraging habitat as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Assessment of significance will depend on if hollows can be avoided.
Vespadelus troughtoni	Eastern Cave Bat	V	Not listed	The Eastern Cave Bat is found in a broad band on both sides of the Great Dividing Range from Cape York to Kempsey, with records from the New England Tablelands and the upper north coast of NSW. The western limit appears to be the Warrumbungle Range, and there is a single record from southern NSW, east of the ACT. The Eastern Cave Bat is a cave-roosting species that is usually found in dry open forest and woodland, near cliffs or rocky overhangs; has been recorded roosting in disused mine workings, occasionally in colonies of up to 500 individuals. This species is occasionally found along cliff-lines in wet eucalypt forest and rainforest. They forage over a small area, but are capable of flying 500 m over clear paddocks.	9 records within 10km, last recorded 2015 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Low number of recent records, and no hollow bearing trees on site. Unlikely to depend on the foraging resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. No recent records and no rocky habitat or caves within study area. Unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. No recent records and no rocky habitat or caves within study area. Unlikely to depend on the resources on site as large areas of similar or better-quality habitat available adjacent to the site which will not be impacted. Nil further assessment required.

CE = Critically Endangered, E= Endangered, EP= Endangered Population, V = Vulnerable

Annex 3
Hollow Bearing Trees

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Table 1: Hollow-bearing tree data

Site name	Tree ID	Tree species	Within Subject Site?	Longitude (GDA2020)	Latitude (GDA2020)	Number of Hollows	Height from ground (m)	Fissures	Hollows (0-5cm)	Hollows (6-10cm)	Hollows (11-15cm)	Hollows (16-20cm)	Hollows (20-39cm)	Hollows (>40cm)
STR 432	8	Dead	No	149.905765	-33.028286	1	6				1			
STR 432	9	Dead	No	149.90661	-33.027859	2	7			1				
							9				1			
STR 432	10	*Eucalyptus dives* (Broad-leaved Peppermint)	No	149.904659	-33.028559	1	8			1				
STR 432	11	*Eucalyptus dives* (Broad-leaved Peppermint)	No	149.904441	-33.028424	1	5			1				
STR 432	12	*Eucalyptus rossii* (Inland Scribbly Gum)	No	149.906316	-33.027989	1	6					1		
STR 432	13	Dead	No	149.903983	-33.028491	1	4							1
STR 432	14	Dead	No	149.905687	-33.028424	1	10						1	
STR 432	15	Dead	No	149.909328	-33.027752	1	1	1						
STR 432	16	Dead	No	149.904437	-33.028427	1	6						1	
STR 432	17	*Eucalyptus rossii* (Inland Scribbly Gum)	No	149.905795	-33.028243	1	7			1				
STR 432	18	Dead	No	149.906908	-33.027821	2	7			1				
							8			1				
STR 432	19	Dead	No	149.903378	-33.028244	1	6							1
STR 432	20	*Eucalyptus rossii* (Inland Scribbly Gum)	No	149.905776	-33.028288	2	6				1			
							1	1						
STR 432	21	*Eucalyptus rossii* (Inland Scribbly Gum)	No	149.906391	-33.027919	2	5				1			
							6			1				
STR 356	44	*Eucalyptus rossii* (Inland Scribbly Gum)	Yes	149.887083	-32.733913	1	6					1		
STR 356	45	*Eucalyptus rossii* (Inland Scribbly Gum)	No	149.887117	-32.733209	1	7						1	
STR 356	46	*Eucalyptus rossii* (Inland Scribbly Gum)	Yes	149.886224	-32.733682	3	6			1				
							7				1			
							8			1				
STR 356	47	*Eucalyptus rossii* (Inland Scribbly Gum)	Yes	149.88612	-32.733667	2	7		1					
							9				1			
STR 356	48	*Eucalyptus macrorhyncha* (Red Stringybark)	Yes	149.88601	-32.73451	1	8						1	
STR 356	49	*Eucalyptus rossii* (Inland Scribbly Gum)	Yes	149.886959	-32.733594	1	6				1			
STR 356	50	*Eucalyptus mannifera* (Brittle Gum)	Yes	149.887236	-32.733984	1	6				1			
STR 356	51	*Eucalyptus rossii* (Inland Scribbly Gum)	Yes	149.887108	-32.73342	3	5							1
							7				1			

							9			1				
STR 356	52	*Eucalyptus crebra* (Narrow-leaved Ironbark)	Yes	149.887245	-32.734218	1	6				1			
STR 356	53	*Eucalyptus mannifera* (Brittle Gum)	Yes	149.887039	-32.734748	2	6			1	1			
STR 356	54	*Eucalyptus rossii* (Inland Scribbly Gum)	Yes	149.886106	-32.734096	1	1	1						
STR 356	55	*Eucalyptus rossii* (Inland Scribbly Gum)	No	149.886845	-32.733252	1	7					1		
STR 356	56	*Eucalyptus rossii* (Inland Scribbly Gum)	Yes	149.88608	-32.734265	3	6					1		
							7				1			
							10					1		
STR 356	57	*Eucalyptus rossii* (Inland Scribbly Gum)	Yes	149.886124	-32.73437	1	8				1			
STR 356	58	*Eucalyptus rossii* (Inland Scribbly Gum)	Yes	149.886151	-32.734017	1	2				1			
STR 356	59	*Eucalyptus rossii* (Inland Scribbly Gum)	Yes	149.885597	-32.733523	1	7				1			
Total						**42**	**-**	**3**	**1**	**11**	**15**	**5**	**4**	**3**

Annex 4
BC Act Tests of Significance

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Annex 4: BC Act Five-part Test of Significance

Prepared for ARUP on behalf of Transgrid | 1 June 2026

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Assessments of significance have been completed in accordance with the 'Five-part Test' in Section 7.3 of the BC Act and the Threatened Species Test of Significance Guidelines (OEH 2018). Conclusions have been made with reference to Sections 7.2 and 7.8 of the BC Act (i.e. whether significant impact to threatened species, ecological community or their habitat is likely).

A Five Part Test has been conducted below for the following items of threatened biodiversity under the BC Act:

- STR 432:
  - Capertee Stringybark (*Eucalyptus cannonii*)
  - Giant Burrowing Frog (*Helioporus australiacus australiacus*)
  - Koala (*Phasolarctos cinereus*)

STR 356:

- Woodland birds:
  - South-eastern Hooded Robin (*Melanodryas cucullata*)
  - Diamond Firetail (*Stagonopleura guttata*)
- Koala
- Barking Owl (*Ninox connivens*)
- Powerful Owl (*Ninox strenua*)

Unless otherwise stated, the habitat and general ecological information contained in these assessments of significance has been taken from the NSW DCCEEW Threatened biodiversity profile search and/or the Commonwealth DCCEEW Species Profile and Threats Database

STR 432 - Capertee Stringybark – Vulnerable

Regional context: Capertee Stringybark have been recorded within the locality (26 records within 10 km radius) (NSW DCCEEW, 2025a). Three (3) records occur within the Subject Site (the area of impact), with 1 record outside of the area of impact. There are multiple records within 1.5 km of the site. The species is restricted to the central tablelands and slopes of NSW between the Golden Highway in the north and the Mitchell Highway in the south. Within this area the species is locally frequent.

Impact summary: The proposal would directly impact total of 3 individuals of Capertee Stringybark within the subject land.

Assessment of significance: An action is likely to have a significant impact on a vulnerable or critically endangered species if there is a real chance or possibility that it will:

Criteria	Address of Criteria
a) In the case of a threatened species, whether the proposed development or activity is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction	The Capertee Stringybark has a broad altitudinal range, from around 450 m to 1050 m. Within this range, the species appears to tolerate most situations, except the valley floor. Furthermore, the species abundance is considered regionally frequent. The proposed activities would impact known suitable habitat for the Capertee Stringybark in the form of clearing up to 2.65 ha of open forest/woodland vegetation. Two juvenile individuals (approximately 2 m tall) were recorded within the Subject Site, with one additional individual identified outside the Subject Site. While it is not known whether other individuals occur immediately adjacent to these records as part of a discrete local population, the species is locally frequent to the northeast of the site, with 545 records within a 10 km radius. The area in which the individuals were recorded has been historically cleared, and the plants identified on site are likely to represent regrowth originating from nearby populations of Capertee Stringybark. On this basis, it is considered highly likely that additional individuals occur within surrounding areas of higher-quality habitat beyond the surveyed Subject Site. However, the broader area was subject to severe burning during the 2019–2020 bushfire season, and the current condition and extent of the local population remain uncertain. While the area of clearing of woody vegetation on site is minimal, given the uncertainty around adjacent populations of Capertee Stringybark, all efforts to avoid these individuals on site should be taken to avoid a significant impact. This includes re design of the footprint to avoid direct impacts to the two individuals within the Subject Site and establishment of a tree protection zone (TPZ) around the dripline. Given the relatively small clearing footprint and provided that mitigation measures are implemented as much as is reasonably possible, it is unlikely that the proposed activities would result in adverse effects on the life cycles of these species such that a local population is placed at risk of extinction.
b) In the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity: – Is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or – Is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction,	Not applicable.
c) In relation to the habitat of a threatened species or ecological community:	Extent of Impact

– The extent to which habitat is likely to be removed or modified as a result of the proposed development or activity, and – Whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed development or activity, and – The importance of the habitat to be removed, modified, fragmented, or isolated to the long-term survival of the species or ecological community in the locality,	A total of 2.65 ha (grassland and woodland habitat) of known suitable habitat would be removed as a result of the proposed activities. The habitat proposed for removal or modification comprises marginally intact open woodland vegetation with low to moderate native floristic diversity and reduced structural integrity. This includes approximately 1.96 ha of vegetation assessed as being in low condition, which is highly degraded and has undergone extensive historical disturbance associated with previous powerline installation. An additional 0.68 ha is classified as being in moderate condition, including the area where individuals were recorded; however, this vegetation is also subject to ongoing edge effects associated with prior linear infrastructure development. Habitat Fragmentation While much of the Subject Site has been subject to historical clearing, it is adjacent to areas of intact native vegetation located to the north and south of the existing access track, and to the north and east of the current transmission tower. Vegetation to the south of the transmission tower has been previously cleared to accommodate a high-voltage transmission easement. Given the presence of pre-existing fragmentation barriers and the relatively small scale and marginal nature of the proposed clearing, the proposed activities are unlikely to result in a substantial increase in habitat fragmentation or to significantly affect the connectivity or viability of local Capertee Stringybark populations occurring adjacent to the site. Importance of Habitat to be Impacted The habitat to be modified is considered marginal in quality and is subject to ongoing anthropogenic disturbance, including routine vegetation trimming and access-related impacts, due to its location adjacent to an existing access track and beneath operational high-voltage transmission infrastructure. The habitat to be removed and modified within the Subject Site is not significant or important to the long-term survival of Capertee Stringybark in the locality. Whilst the Subject Site is known suitable habitat and the species occurs within the Subject Site, the current level of disturbance on site and frequent regional records suggest proposed activities will not decrease the long-term survival of this species in the locality.
d) Whether the proposed development or activity is likely to have an adverse effect on any declared area of outstanding biodiversity value (either directly or indirectly),	No Areas of Outstanding Biodiversity Value fall within the areas to be cleared or potentially impacted by the Project.
e) Whether the proposed development or activity is or is part of a key threatening process or is likely to increase the impact of a key threatening process (KTPs).	Relevant KTPs listed under the BC Act applicable to this species at the Subject Site include: – Clearing of native vegetation
Conclusion Based on the above assessment, provided mitigation measures are implemented where possible, it is concluded that the proposed activities are **unlikely** to result in a significant impact to Capertee Stringybark.	

STR 432 - Giant Burrowing Frog – Vulnerable

Regional context: Giant Burrowing Frog have been recorded within the locality (13 records within 10 km radius) (NSW DCCEEW, 2025a). The most recent records (2024) occur just under 10 km to the east of the Subject Site, within Capertee National Park. The records were observed in a first order stream and large tadpoles were positively ID as Giant Burrowing Frog. The species is distributed in southeast NSW and Victoria and appears to exist as two distinct populations. Breeding habitat of this species generally soaks or pools within first or second order streams. They are also commonly recorded from 'hanging swamp' seepage lines and where small pools form from the collected water, favouring standing pools and seepage lines in the Blue Mountains, and spends more than 95% of its time in non-breeding habitat in areas up to 300 m from breeding sites. Whilst in non-breeding habitat it burrows below the soil surface or in the leaf litter. Individual frogs occupy a series of burrow sites, some of which are used repeatedly. The home ranges of both sexes appear to be non-overlapping suggesting exclusivity of non-breeding habitat. Home ranges are approximately 0.04 ha in size.

Although the Subject Site occurs outside of the Sydney Basin where the northern population is largely confined to, the geology of the Subject Site is characteristic to that of the Sydney Basin.

Impact summary: A total of 2.65 ha of native vegetation and 0.31 ha of non-native vegetation (road) (total 2.95 ha) was recorded within the Subject Site. There are also two 1st order streams within the Subject Site, which are a preferred stream order for breeding for this species. Therefore, the proposed activities would impact the Giant Burrowing Frog through the removal of potential foraging and breeding habitat within the Subject Site.

Assessment of significance: An action is likely to have a significant impact on a vulnerable or critically endangered species if there is a real chance or possibility that it will:

Criteria	Address of Criteria
a) In the case of a threatened species, whether the proposed development or activity is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction	The proposed activities would impact potentially suitable habitat for the Giant Burrowing Frog in the form of clearing up to 2.65 ha of open forest/woodland vegetation and two 1st order streams. Due to the small size of the site, the area of possible habitat (namely the Strahler one and two streams and 300m adjacent to these aquatic features) potentially covers the entire Subject Site (Subject Site). However suitable breeding habitat is limited to the Strahler two stream, as neither of the Strahler 1 streams provides the necessary soaks or pools to facilitate breeding. The current access track that services the current high voltage transmission line runs adjacent to the unnamed second order stream (Annex 7 in BAR), and is expected to only have minor upgrades, including vegetation trimming and minor earthworks. No direct impacts to the Strahler two stream will occur. This is not expected to cause significant impacts to burrowing frog breeding or non-breeding habitat. Only the northern Strahler 1 stream was observed to have any water in it at time of survey, with the southern Strahler 1 stream occurring as a dry ephemeral drainage line. The northern Strahler one stream occurred as boggy, clay-loam area dominated by *Poa sieberiana,* with some surface water visible in areas but no significant soaks or pools. This area was heavily disturbed by pig digging (Annex 7 in BAR) While some impacts are expected to the northern Strahler one stream, it unlikely that these will put any possible local population at risk of extinction. Additionally, the Subject Site is at the western edge of this species distribution, and it is outside of the known range. This is supported by the closest record occurring just under 10 km to the east of the Subject Site (within the known range). Overall, it is unlikely that the proposed activities would result in adverse effects on the life cycles of these species such that a local population is placed at risk of extinction.
b) In the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity: – Is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or	Not applicable.

– Is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction,	
c) In relation to the habitat of a threatened species or ecological community: – The extent to which habitat is likely to be removed or modified as a result of the proposed development or activity, and – Whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed development or activity, and – The importance of the habitat to be removed, modified, fragmented, or isolated to the long-term survival of the species or ecological community in the locality,	Extent of Impact A total of 2.65 ha of potentially suitable habitat and two first order streams would be removed as a result of the proposed activities. The habitat to be removed/modified includes marginally intact open woodland vegetation that comprises of low to moderate native vegetation. This species is not known to occur within the Subject Site, and it is outside the known range for the Giant Burrowing Frog. Habitat Fragmentation Potentially suitable habitat to be removed occurs as partially intact open woodland vegetation and two 1st order streams. The Subject Site is adjacent to intact vegetation to the south. However, further south this section also becomes fragmented by a road and historical clearing. To the north, east and west of the Subject Site fragmentation barriers also currently exist. These are barriers such as roads and a transmission line. Given these preexisting fragmentation barriers within and adjacent to the Subject Site the proposed activities are **unlikely** to contribute to any fragmentation that currently exists. Importance of Habitat to be Impacted The habitat to be removed and modified within the Subject Site is not significant or important to the long-term survival of Giant Burrowing Frog. Whilst the Subject Site is adjacent to a 2ndorder stream that is potentially suitable for breeding, it is outside of the known range for the species Therefore, the proposed activities are **unlikely** to decrease the long-term survival of this species.
d) Whether the proposed development or activity is likely to have an adverse effect on any declared area of outstanding biodiversity value (either directly or indirectly),	No Areas of Outstanding Biodiversity Value fall within the areas to be cleared or potentially impacted by the Project.
e) Whether the proposed development or activity is or is part of a key threatening process or is likely to increase the impact of a key threatening process.	Relevant KTPs listed under the BC Act relevant for this species include: – Clearing of native vegetation – Alteration to the natural flow regimes of rivers, streams, floodplains & wetlands
Conclusion: Based on the above assessment, it is concluded that the proposed activities are **unlikely** to result in a significant impact to Giant Burrowing Frog.	

STR 432 and STR 356- Koala – Endangered

Regional context:

STR 432:

Koala have been recorded within the locality (2 records within 10 km radius), occurring to the north of the Subject Site (NSW DCCEEW, 2025a). The nearest record occurs within 8 km of the Subject Site and was recorded in December 2022. There is marginal connectivity between this record and the Subject Site and would require the species to cross open spaces up to 100 m wide. The PCTs 3735 & 3369 associated with the Subject Site, contains preferred Koala use tree species such as *Eucalyptus mannifera* and stringybark/supplementary species such as *E. macrohyncha*. A total of 2.65 ha of potential Koala habitat is present within the STR 432 Subject Site.

STR 356:

Koalas are present throughout the locality, with the nearest Koala record located 1.3km southwest of the Subject Site (NSW DCCEEW, 2025a). The habitat within the local area is fragmented, a result of previous vegetation clearing for the existing transmission lines, with a gap in available habitat of approximately 70m. Although this area of minimal habitat and no canopy cover is likely to deter Koalas from crossing, it is possible that Koalas are still able to move throughout this patch of habitat. The presence of PCT 477 within the Subject Site contains multiple species of preferred Koala use trees, including *E. macrorhyncha, E. fibrosa, E. dalrympleana* and *E. polyanthemos*. A total of 2.28 ha of potential Koala habitat is present within the STR 356 Subject Site.

Impact summary: A total 4.93 ha of native vegetation was recorded within the STR 432 and STR 356 Subject Sites. The proposed activities would impact the Koala through removal of potential foraging and breeding habitat within the Subject Site.

Assessment of significance: An action is likely to have a significant impact on a vulnerable or critically endangered species if there is a real chance or possibility that it will:

Criteria	Address of Criteria
a) In the case of a threatened species, whether the proposed development or activity is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction	The proposed activities would impact potential foraging and/or breeding habitat for the koala in the form of clearing up to ~~0.68~~4.93 ha of open forest/woodland vegetation. Much of this vegetation contains ~~secondary~~ preferred Koala use ~~food~~ trees and mature eucalypts suitable for breeding. However, there are no ~~primary~~ listed Koala food trees ~~associated with the PCTs (3735 and 3369) found~~present within the Subject Site. Furthermore, given the widespread distribution of this species, coupled with the small number of records within 10 km of the Subject Site, larger areas of more intact vegetation adjacent to the Subject Site and relatively small area to be cleared, it is unlikely that the proposed activities would result in adverse effects on the life cycles of these species such that a local population is placed at risk of extinction.
b) In the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity: – Is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or – Is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction,	Not applicable.
c) In relation to the habitat of a threatened species or ecological community: – The extent to which habitat is likely to be removed or modified as a result of the proposed development or activity, and	Extent of Impact A total of ~~0.68~~4.93 ha of potentially suitable habitat would be removed as a result of the proposed activities. The habitat to be removed/modified includes partially intact open woodland vegetation, with the Subject Site containing suitable habitat features for this species as mentioned above.

– Whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed development or activity, and – The importance of the habitat to be removed, modified, fragmented, or isolated to the long-term survival of the species or ecological community in the locality,	Habitat Fragmentation The proposed activities will not further contribute to the fragmentation of habitat for this species. This is because the proposed activities will only marginally extend an already partially cleared area and it will not further disrupt the possibility for this species to move between suitable habitats within this area. Furthermore, the vegetation to be removed is relatively small given the availability of habitat that is available adjacent to the Subject Site. Therefore, given the relatively small area of vegetation to be removed, lack of primary food trees in high condition vegetation and the small number of records within the locality of the Subject Site, the proposed activities would not isolate this species from accessing other areas of habitat. Importance of Habitat to be Impacted The habitat to be removed and modified within the Subject Site is not significant or important to the long-term survival of these woodland bird species. It will not further fragment or isolate the Koala species from accessing more intact and continuous vegetation that occurs adjacent to the Subject Site.
d) Whether the proposed development or activity is likely to have an adverse effect on any declared area of outstanding biodiversity value (either directly or indirectly),	No Areas of Outstanding Biodiversity Value fall within the areas to be cleared or potentially impacted by the Project.
e) Whether the proposed development or activity is or is part of a key threatening process or is likely to increase the impact of a key threatening process.	KTPs listed under the BC Act relevant for this species include: – Clearing of native vegetation
Conclusion: Based on the above assessment, it is concluded that the proposed activities are unlikely to result in a significant impact to Koala.	

STR 356 - Woodland birds South-eastern Hooded Robin (Endangered) and Diamon Firetail (Vulnerable)

Regional context: South-eastern Hooded Robin and Diamond Firetail have been recorded within the locality (10 km radius around the Subject Site) (NSW DCCEEW, 2025a). South-eastern Hooded Robin has 4 records and Diamond Firetail has 27 records. The South-eastern Hooded Robin is found from Brisbane to Adeliade, throughout much of inland New South Wales. Whilst it is considered a sedentary species, local seasonal movements are possible. The Diamond Firetail is endemic to south-eastern Australia and is widely distributed in NSW. Both species are associated with the PCT 477 found within the Subject Site.

Impact summary: A total of 2.28 ha of native vegetation that provides potential habitat was recorded within the Subject Site. The proposed activities would impact these threatened woodland bird species through removal of potential foraging and breeding habitat within the Subject Site.

Assessment of significance: An action is likely to have a significant impact on a vulnerable or critically endangered species if there is a real chance or possibility that it will:

Criteria	Address of Criteria
a) In the case of a threatened species, whether the proposed development or activity is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction	The proposed activities would impact potential foraging and/or breeding habitat for these threatened woodland birds in the form of clearing up to 2.28 ha of open forest/woodland vegetation. Much of this vegetation is high condition and contains good structural diversity with the presence of mature eucalypts, fallen timber and open grassy areas. However, given the widespread distribution of these species, coupled with the large areas of intact vegetation adjacent to the Subject Site and relatively small area to be cleared, it is unlikely that the proposed activities would result in adverse effects on the life cycles of these species such that a local population is placed at risk of extinction.
b) In the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity: – Is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or – Is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction,	Not applicable.
c) In relation to the habitat of a threatened species or ecological community: – The extent to which habitat is likely to be removed or modified as a result of the proposed development or activity, and – Whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed development or activity, and – The importance of the habitat to be removed, modified, fragmented, or isolated to the long-term survival of the species or ecological community in the locality,	Extent of Impact A total of 2.28 ha of potentially suitable habitat would be removed as a result of the proposed activities. The habitat to be removed/modified includes partially intact open woodland vegetation, with the Subject Site containing a range of suitable habitat features for these woodland bird species as mentioned above. Overall, the Subject Site comprises of a single PCT 477, with 1.21 ha of high condition vegetation, 0.01 ha of moderate condition and 1.06 ha of low condition. Habitat Fragmentation The Subject Site has an existing transmission line running roughly north to south through the middle. Outside of this, there is strong connectivity and intact vegetation surrounding the Subject Site. The proposed activities will not further contribute to the fragmentation of habitat for these species. This is because the proposed activities will only marginally extend an already partially cleared area and it will not disrupt the possibility for these species to move between suitable habitats within this area. Furthermore, the vegetation to be removed is relatively small given the availability of habitat that is available adjacent to the Subject Site. Therefore, given the relatively small area of vegetation to be removed, as well as the mobile nature of these

	woodland birds, the proposed activities would not isolate these species from accessing other areas of habitat. Importance of Habitat to be Impacted Impacts to woody vegetation that likely provides foraging habitat for these woodland birds should be minimised, and any habitat that needs to be removed should be placed in adjacent vegetation to the impact site. However, it is unlikely that the habitat the Subject Site is significant or important to the long-term survival of these woodland bird species. It will not fragment or isolate these species from accessing more intact and continuous vegetation that occurs adjacent to the Subject Site.
d) Whether the proposed development or activity is likely to have an adverse effect on any declared area of outstanding biodiversity value (either directly or indirectly),	No Areas of Outstanding Biodiversity Value fall within the areas to be cleared or potentially impacted by the Project.
e) Whether the proposed development or activity is or is part of a key threatening process or is likely to increase the impact of a key threatening process.	KTPs listed under the BC Act relevant for this species include: – Clearing of native vegetation: Clearing of woodlands, resulting in loss and fragmentation of habitat: up to 2.28 ha of potentially suitable foraging and/or nesting habitat will be removed as a result of the proposed activities. – Removal of dead wood and dead trees: Some woody habitat and dead trees will be impacted by the proposed activities. Mitigation measures, such as ensuring removed habitat is relocated to adjacent non impacted vegetation, are detailed in Section 5 of the Central Cluster BAR.
Conclusion: On the basis of the above considerations, it is unlikely that the proposed works would result in significant impacts to these woodland bird species.	

STR 356 – Barking Owl and Powerful Owl – Vulnerable

Regional context: Barking Owl and Powerful Owl have been recorded within the locality with 1 record of Barking Owl within 10 km radius (2011 record, 1km from site) and 1record within 15km for Powerful Owl (1 record in 2023), occurring adjacent to the Subject Site and greater area (NSW DCCEEW, 2025a). While these records are older and, in the case of the Powerful Owl some distance from the site, there is likely a data deficiency in survey around the site in question that may not reflect the correct species distribution. When not breeding, both species will forage across very large territories, often greater than 1000 ha, decreasing the chance of being observed in a sparsely surveyed area. The PCT 477 is associated with the Barking Owl but not the Powerful Owl.

Impact summary: A total of 2.28 ha of native vegetation and 0.13 ha of non-native vegetation (road) (2.41 ha total) was recorded within the Subject Site. The proposed activities would impact both owls through removal of potential breeding habitat within the Subject Site.

Assessment of significance: An action is likely to have a significant impact on a vulnerable or critically endangered species if there is a real chance or possibility that it will:

Criteria	Address of Criteria
a) In the case of a threatened species, whether the proposed development or activity is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction	The proposed activities would impact potential foraging and/or breeding habitat for the owls in the form of clearing up to 2.28 ha of open forest/woodland vegetation and two suitably sized hollow bearing trees. While there is a paucity of records within the locality, the suitable habitat (suitable sized hollows within gully habitat) and noted whitewash beneath the hollow bearing trees suggest that at least one owl species may be using these hollows to roost and/or breed. Without survey of these sites, breeding must be assumed. While the Powerful Owl will use multiple hollows to breed within its territory, the Barking Owl shows high nest fidelity, returning to breed in either the same hollow or closely adjacent hollows for multiple years. Clearing all vegetation around the hollow bearing tree may destabilise the tree and/or cause disturbance that may cause the owls to abandon the nest. There is a large distribution of hollows adjacent to the Subject Site that may form part of the owls home range/ breeding habitat, such as that without confirmed breeding at the hollows it is unlikely that removal of these hollows will cause a local population to be placed at risk of extinction. However, as loss of hollow bearing trees is a key threatening process for owls, including loss of breeding habitat and loss of habitat for the owls prey species, without impact mitigation measures, the removal of these hollows may lead to a decline of the local population. To avoid a significant impact to the life cycle of the species caused by the proposed activities, mitigation measures detailed in Section 5 of the BAR must be implemented, where possible.
b) In the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity: – Is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or – Is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction,	Not applicable.
c) In relation to the habitat of a threatened species or ecological community: – The extent to which habitat is likely to be removed or modified as a result of the proposed development or activity, and	Extent of Impact A total of 2.28 ha of potentially suitable habitat would be removed as a result of the proposed activities. This includes 1.21 ha of moderate and high condition woody vegetation and 1.06 ha of low, grassland vegetation. The habitat to be removed/modified includes partially intact open woodland

– Whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed development or activity, and – The importance of the habitat to be removed, modified, fragmented, or isolated to the long-term survival of the species or ecological community in the locality.	vegetation, with the Subject Site containing suitable habitat features for this species as mentioned above. Habitat Fragmentation The Subject Site has an existing transmission line running roughly north to south through the middle. Outside of this, there is strong connectivity and intact vegetation surrounding the Subject Site. The proposed activities will not further contribute to the fragmentation of habitat for this species. This is because the proposed activities will only marginally extend an already partially cleared area and it will not disrupt the possibility for this species to move between suitable habitats within this area. Therefore, given the relatively small area of vegetation to be removed, as well as the mobile nature of these birds, the proposed activities would **not isolate** either of these species from accessing other areas of habitat. Importance of Habitat to be Impacted While the hollows within the Subject Site are suitable breeding habitat for the owls, with no records of breeding in the area and overall high density of hollows in adjacent vegetation, removal of these hollows within the Subject Site is **unlikely** to be important habitat to either owl. However, as loss of hollow bearing trees is a key threatening process for owls, including loss of breeding habitat and loss of habitat for the owl's prey species, without impact mitigation measures, the removal of these hollows may lead to a decline of the local population. To avoid a significant impact to the life cycle of the species caused by the proposed activities, mitigation measures detailed in Section 5 of the BAR must be implemented, where possible.
d) Whether the proposed development or activity is likely to have an adverse effect on any declared area of outstanding biodiversity value (either directly or indirectly),	No Areas of Outstanding Biodiversity Value fall within the areas to be cleared or potentially impacted by the Project.
e) Whether the proposed development or activity is or is part of a key threatening process or is likely to increase the impact of a key threatening process.	KTPs listed under the BC Act relevant for this species include: – Clearing of native vegetation: up to 2.28 ha of potentially suitable foraging and/or breeding habitat will be removed as a result of the proposed activities. – Loss of hollow bearing trees: two hollow bearing trees of suitable size for breeding for both species will be impacted by the proposed clearing.
Conclusion: Based on the above assessment, it is concluded that the proposed activities, provided all mitigation measures are adopted, is unlikely to result in a significant impact to Barking Owl and Powerful Owl.	

Annex 5
EPBC Tests of Significance

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Annex 5: EPBC Act Significant Impact Criteria assessment

Prepared for ARUP on behalf of Transgrid | 1 June 2026

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Significant impact criteria assessments been conducted in accordance with the Significant Impact Guidelines 1.1 (DoE 2013) for the following threatened/migratory biodiversity under the EPBC Act:

- STR432
  - Giant Burrowing Frog (*Heleioporus australiacus*)
  - Koala (*Phascolarctos cinereus*)
- STR 356
  - Diamond Firetail (*Stagonopleura guttata)*
  - South-eastern Hooded Robin (*Melanodryas cucullata cucullata*)
  - Koala

Unless otherwise stated, the habitat and general ecological information contained in these assessments of significance has been taken from the NSW DCCEEW Threatened Biodiversity Profile search and/or the Commonwealth DCCEEW Species Profile and Threats Database.

STR 432: Giant Burrowing Frog - Endangered

Distribution: The Giant Burrowing Frog is distributed in south eastern NSW and Victoria, and appears to exist as two distinct populations: a northern population largely confined to the sandstone geology of the Sydney Basin and extending as far south as Ulladulla, and a southern population occurring from north of Narooma through to Walhalla, Victoria.

Habitat in the Study Area of Site STR 432:

The Giant Burrowing Frog is associated with sandy soils, riparian zones, and aquatic habitats such as streams and wetlands. The Subject Site supports 2.65 ha of native vegetation comprising PCT 3735 and PCT 3369 in very low to moderate condition. An unnamed 2nd Strahler order stream runs parallel to the existing access track and will not be directly impacted by the proposed activity. This riparian zone is heavily vegetated with Eucalyptus spp., rushes, and aquatic features including plants, snags, and riffles. Additionally, two 1st Strahler order watercourses and a wetland area intersect the disturbance footprint, vegetated with *Poa siberiana*. These drainage lines provide potential suitable habitat for the Giant Burrowing Frog, consistent with its preference for riparian and aquatic environments. The species has 13 records within 10 km of the site, with the most recent record in 2024 (NSW DCCEEW, 2026a), indicating its presence in the locality.

Assessment of significance	Response
An action is likely to have a significant impact on a vulnerable species if there is a real chance or possibility that it will:	
Lead to a long-term decrease in the size of population	The Project will clear approximately 2.65 ha of native vegetation comprising PCT 3735 and PCT 3369 in low to moderate condition. Two 1st order watercourses and a wetland intersect the disturbance footprint, while an adjacent 2nd order watercourse with riparian vegetation and aquatic features will remain intact. These drainage lines provide potential habitat for the Giant Burrowing Frog, which favours riparian zones, sandy soils, and aquatic habitats such as streams and wetlands. The species has 13 records within 10 km, most recently in 2024 (NSW DCCEEW, 2026a), confirming its presence in the locality. However, the extent of clearing is small relative to the surrounding landscape, and no evidence suggests the impacted areas support critical breeding sites or permanent refuges. Retention of the 2nd Strahler order stream and riparian zone further reduces risk. Accordingly, the Project is **unlikely** to lead to a long-term decrease in the size of an important population at a local or regional scale.
Reduce the area of occupancy of the species	The Project will clear approximately 2.65 ha of native vegetation comprising PCT 3735 and PCT 3369 in very low to moderate condition. Two 1st Strahler order watercourses and a wetland intersect the disturbance footprint, while an adjacent 2nd Strahler order stream with riparian vegetation and aquatic features will remain intact. These drainage lines provide potential habitat for the Giant Burrowing Frog, which is associated with riparian zones, sandy soils, and aquatic habitats such as streams and wetlands. The species has 13 records within 10 km, most recently in 2024 (NSW DCCEEW, 2026a), confirming its presence in the locality. However, the extent of clearing is small relative to the surrounding landscape, and the retention of the 2nd Strahler order stream and riparian zone ensures that core aquatic habitat remains available. No evidence suggests that the impacted areas support critical breeding sites or permanent refuges. Consequently, the Project is **unlikely** to reduce the area of occupancy of the species at a local or regional scale.
Fragment an existing population into two or more populations	The Project will directly impact two 1st Strahler order watercourses and an associated wetland, which provide potential habitat for the Giant Burrowing Frog. These features occur within the disturbance footprint and will be subject to clearing. However, the key 2nd Strahler order stream, which runs parallel to the existing access track, will remain intact and unaffected by the proposed works. This riparian corridor is heavily vegetated and contains aquatic features such as plants, snags, and riffles, maintaining connectivity and refuge for the species. Although some potential habitat within the 1st order streams will be removed, the retention of the 2nd Strahler order stream ensures that the primary riparian corridor remains functional. This connectivity reduces the risk of isolating individuals or creating barriers to movement. Accordingly, the Project is **unlikely** to fragment an existing population into two or more populations, as core riparian connectivity will be preserved.

Adversely affect habitat critical to the survival of a species	The Giant Burrowing Frog depends on riparian zones, sandy soils, and aquatic habitats such as streams and wetlands for breeding and refuge. Although the Project will clear two 1st Strahler order watercourses and a wetland intersecting the disturbance footprint that provides potential habitat for the species. The adjacent 2nd Strahler order stream, which contains high-quality riparian vegetation and aquatic features (plants, snags, riffles), will remain intact and unaffected, maintaining connectivity and core habitat within the landscape. The species has 13 records within 10 km of the site, with the most recent in 2024 (NSW DCCEEW, 2026a), confirming its presence in the locality. While the impacted areas provide potential habitat, there is no evidence that they constitute habitat critical to the survival of the species, such as key breeding sites or permanent refuges. Extensive suitable habitat remains in the surrounding landscape, and the retention of the 2nd Strahler order stream further reduces risk. Accordingly, the Project is **unlikely** to adversely affect habitat critical to the survival of the species.
Disrupt the breeding cycle of a population	Breeding for the Giant Burrowing Frog occurs in riparian zones and aquatic habitats such as streams and wetlands. The Project will impact two 1st Strahler order watercourses and a wetland within the disturbance footprint, which provide potential breeding habitat. However, although presence is assumed, these features are not confirmed breeding sites, whilst the adjacent 2nd Strahler order stream, which offers higher-quality riparian and aquatic habitat, will remain intact. Given the species' reliance on suitable aquatic conditions for breeding and the retention of the primary riparian corridor, the Project is unlikely to remove or alter habitat critical for reproduction. No evidence suggests that the impacted areas support essential breeding activity, and extensive suitable habitat remains in the surrounding landscape. Therefore, the Project is **unlikely** to disrupt the breeding cycle of a population.
Modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline	Given the relatively small scale of the disturbance associated with the Project, the availability of alternative habitat present within unnamed 2nd Strahler order stream, it is unlikely that the Project would affect habitat for this species to the extent that it is likely to decline.
Result in invasive species that are harmful to a critically endangered or endangered species becoming established in the endangered or critically endangered species' habitat	No harmful invasive species are expected to become established in areas of potential habitat for this species as a result of the Project. Weed, sediment and erosion controls would be in place during the Project to mitigate the potential spread and/or introduction of invasive species.
Introduce disease that may cause the species to decline	The Project is unlikely to result in the introduction of disease that may cause this species to decline.
Interfere with the recovery of the species.	The Project does not interfere with any of the key recovery actions listed on the Saving Our Species (SoS) strategy for the Giant Burrowing Frog.
Conclusion: On the basis of the above considerations, it is not likely that the proposed works would result in a significant impact on the Giant Burrowing Frog. A referral to the Commonwealth under the EPBC Act therefore is not required.	

STR 432 and STR 356 Koala - Endangered

Distribution: Koalas in New South Wales occur from the northern border with Queensland through the eastern coastline bioregions of the NSW North Coast, Sydney Basin and South East Corner at the border with Victoria. Their western distribution extends into the South-Eastern Highlands, NSW South Western Slopes, Cobar Peneplain, Riverina, and Murray Darling Depression bioregions. Koalas occupy a wide range of habitats.

Habitat in the Study Area of Site STR 356

The habitat at STR 356 comprises 2.28 ha of native vegetation dominated by PCT 477 – Inland Scribbly Gum (*Eucalyptus rossii*), Red Stringybark (*Eucalyptus macrorhyncha*), Black Cypress Pine (*Callitris endlicheri*), and Red Ironbark (*Eucalyptus sideroxylon*) open forest on sandstone hills. This vegetation occurs in high (1.21 ha), low (1.06 ha), and moderate (0.01 ha) condition. The community represents a dry sclerophyll open forest typical of the southern Brigalow Belt South Bioregion and northern NSW South Western Slopes Bioregion.

The site provides potential habitat for a range of woodland fauna species, including Koala (*Phascolarctos cinereus*), supported by the presence of *Eucalyptus polyanthemos*, a recognised secondary feed tree species.

Habitat in the Study Area of Site STR 432

The habitat at STR 432 comprises 2.65 ha of native vegetation across two Plant Community Types:

- PCT 3369 – Central Tableland Ranges Peppermint-Gum Grassy Forest, occurring in low (0.70 ha) and moderate (0.27 ha) condition.
- PCT 3735 – Central Tableland Peppermint Shrub-Grass Forest, occurring in low (1.26 ha) and moderate (0.41 ha) condition.

These communities represent grassy and shrub-grass forests typical of the Central Tablelands, dominated by *Eucalyptus mannifera*, a recognised secondary Koala feed tree species. The habitat is fragmented but retains connectivity to adjacent vegetation, providing potential foraging habitat and movement pathways for Koalas.

Assessment of significance	Response
An action is likely to have a significant impact on a vulnerable species if there is a real chance or possibility that it will:	
Lead to a long-term decrease in the size of population	The Project will clear a total of 4.93 ha, comprised of 2.28 ha of native woody vegetation at STR 356 and 2.65 ha at STR 432, and including vegetation in both moderate and high condition. These vegetation communities include *Eucalyptus polyanthemos* and *Eucalyptus mannifera*, both recognised as secondary Koala feed tree species, providing suitable foraging habitat. At STR 356, Koala presence in the locality is supported by 34 records within 10 km, most recently in 2026 (NSW DCCEEW, 2026a), and the site contains connected habitat linking to areas with confirmed records. At STR 432, there are 2 records within 10 km, last recorded in 2022, and the site also provides connected habitat. While the Project will remove some potential habitat, the extent of clearing is small relative to the surrounding landscape, and no evidence suggests the impacted areas are critical to population viability. Extensive suitable habitat still remains nearby and surrounding vegetation. Accordingly, the Project is unlikely to lead to a long-term decrease in the size of a koala population.
Reduce the area of occupancy of the species	The Project will clear a total of 4.93 ha, comprised of 2.28 ha of native woody vegetation at STR 356 and 2.65 ha at STR 432, and including vegetation in both moderate and high condition. These vegetation communities include *Eucalyptus polyanthemos* and *Eucalyptus mannifera*, both recognised as secondary Koala feed tree species, providing suitable foraging habitat. At STR 356, Koala presence is supported by 34 records within 10 km, most recently in 2025 (NSW DCCEEW, 2026a), and the site contains connected habitat linking to areas with confirmed records. At STR 432, there are 2 records within 10 km, last recorded in 2022, and the site also provides connectivity to suitable habitat. Although the Project will remove some potential habitat, the extent of clearing is small relative to the surrounding landscape, and no evidence suggests the impacted areas are critical to the species' occupancy. Extensive suitable habitat remains nearby, and connectivity either across the cleared easement or between other patched of intact vegetation will not be severed.

	Accordingly, the Project is **unlikely** to reduce the area of occupancy of the Koala at a local or regional scale.
Fragment an existing population into two or more populations	The Project will clear a total of 4.93 ha, comprised of 2.28 ha of native woody vegetation at STR 356 and 2.65 ha at STR 432, which provide potential Koala habitat through the presence of secondary feed tree species (*Eucalyptus polyanthemos* and *Eucalyptus mannifera*) and connectivity to surrounding habitat. Although some vegetation will be removed, the sites retain strong habitat links to the broader landscape, and the Project does not sever any major corridors or isolate habitat patches. The adjacent areas contain extensive suitable vegetation, and connectivity between habitat areas will remain intact following the proposed works. Given the small scale of clearing and the retention of landscape connectivity, the Project is **unlikely** to fragment an existing Koala population into two or more populations.
Adversely affect habitat critical to the survival of a species	Koalas rely on eucalypt-dominated forests and woodlands that provide suitable feed trees and connectivity for movement. The Project will clear a total of 4.93 ha of habitat, comprised of 2.28 ha of native woody vegetation at STR 356 and 2.65 ha at STR 432, which include secondary feed tree species (*Eucalyptus polyanthemos* and *Eucalyptus mannifera*) and provide potential foraging habitat. However, the areas to be cleared are small, occur in low to moderate condition, and are part of a landscape that retains extensive suitable habitat and connectivity. No evidence suggests these sites support essential breeding habitat or are key to population viability. Accordingly, the Project is **unlikely** to adversely affect habitat critical to the survival of the Koala.
Disrupt the breeding cycle of a population	Koala breeding is thought to be triggered by seasonality and optimal habitat conditions, including high abundances of preferred feed trees. The Project will clear 2.28 ha of native woody vegetation at STR 356 and 2.65 ha at STR 432, which include secondary feed tree species (*Eucalyptus polyanthemos* and *Eucalyptus mannifera)* and provide potential foraging habitat. However, these areas are not identified as core breeding habitat and occur in low to moderate condition. Importantly, the Project is not creating a barrier for mature Koalas to move throughout the landscape to find mates within core habitat. Connectivity to surrounding areas of suitable vegetation will remain intact, and extensive habitat persists in the broader landscape. Given the small scale of clearing and retention of movement pathways, the Project is unlikely to disrupt the breeding cycle of a Koala population.
Modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline	Given the relatively small scale of the disturbance associated with the sites STR 356 and STR 432, the availability of alternative habitat outside of the Study Area, it is unlikely that the Project would affect habitat for this species to the extent that it is likely to decline.
Result in invasive species that are harmful to a critically endangered or endangered species becoming established in the endangered or critically endangered species' habitat	No harmful invasive species are expected to become established in areas of potential habitat for this species as a result of the Project. Weed, sediment and erosion controls would be in place during the Project to mitigate the potential spread and/or introduction of invasive species.
Introduce disease that may cause the species to decline	The Project is unlikely to result in the introduction of disease that may cause this species to decline.
Interfere with the recovery of the species.	The Project does not interfere with any of the key recovery actions listed on the Saving Our Species (SoS) strategy for the Koala (*Phascolarctos cinereus*).
Conclusion: On the basis of the above considerations, it is not likely that the proposed works would result in a significant impact on the Koala. A referral to the Commonwealth under the EPBC Act therefore is not required.	

STR 356: Diamond Firetail - Vulnerable

Distribution: The Diamond Firetail is endemic to south-eastern Australia, extending from central Queensland to the Eyre Peninsula in South Australia. It is widely distributed in NSW, with a concentration of records from the Northern, Central and Southern Tablelands, the Northern, Central and South Western Slopes and the North West Plains and Riverina. Not commonly found in coastal districts, though there are records from near Sydney, the Hunter Valley and the Bega Valley. This species has a scattered distribution over the rest of NSW, though is very rare west of the Darling River. (NSW Environment, Energy and Science, 2025).

Habitat

Approximately 2.28 ha of potential habitat is present within the STR 356 Subject Site in the form of forest and woodland vegetation. This vegetation is comprised of PCT 477, occurring in high, moderate, and low condition, and represents a dry sclerophyll open forest on sandstone hills within the southern Brigalow Belt South Bioregion and the northern NSW South Western Slopes Bioregion.

Assessment of significance	Response
An action is likely to have a significant impact on a vulnerable species if there is a real chance or possibility that it will:	
lead to a long-term decrease in the size of an important population of a species	The Project is unlikely to result in a long-term decrease in the size of an important population of the species. The species has been recorded 27 within a 10 km radius of the site, with the most recent record in 2018 (NSW DCCEEW, 2026a). These records confirm the species occurs broadly within the locality and is not reliant on the Subject Site as a core population area. Approximately 2.28 ha of potential habitat for this species will be cleared as a result of the proposed works. While this represents a localised reduction in habitat, the area to be removed is minor in the context of the surrounding landscape, which supports extensive areas of similar habitat capable of sustaining the species. Accordingly, the Project is unlikely to lead to a long-term decrease in the size of an important population of a species.
Reduce the area of occupancy of an important population	The Project will result in the removal of approximately 2.28 ha of native vegetation that provides potential habitat for this species. This represents a localised reduction in habitat availability; however, the species is broadly distributed within the locality, with 27 records within 10 km of the site (most recent in 2018) (NSW DCCEEW, 2026a). The surrounding landscape contains extensive areas of similar habitat capable of supporting the species, and the subject site is not considered a core population area. No evidence indicates that the impacted habitat supports an important population or functions such as breeding or permanent shelter. The proposed clearing is unlikely to reduce the area of occupancy of an important population at a local or regional scale.
Fragment an existing important population into two or more populations	Suitable habitat to be removed occurs within a small area of adjoining intact vegetation connecting to the adjacent State Forest and woody / non woody vegetation and would result in minor further fragmentation. Given the relatively small scale of disturbance associated with the Project, and the location of impact at the edge of intact vegetation, it is unlikely that an existing important population would be split into two or more populations.
Adversely affect habitat critical to the survival of a species	The forest/woodland areas within the sites are not likely to constitute critical foraging or breeding habitat for this species. Given the relatively small scale of disturbance associated with the Project, the availability of alternative habitat outside of the Study Area and the existing disturbance, it is unlikely that the Project would adversely impact upon the survival of this species.
Disrupt the breeding cycle of an important population	The Project would lead to the clearing of approximately up to 2.28 ha of potential foraging and/or breeding habitat. This includes the removal of PCT 477, a dry sclerophyll open forest established on sandstone hills forest co-dominated by Inland Scribbly Gum, Red Stringybark and Black Cypress Pine. However, no evidence indicates that the Subject Site supports critical life-cycle functions such as breeding or permanent residence. The species is recorded broadly within the locality (27 records within 10 km, most recent in 2018), and the surrounding landscape contains extensive areas of similar habitat capable of supporting the species.

Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline	Given the relatively small scale of the disturbance associated with the Project, the availability of alternative habitat outside of the Study Area, it is **unlikely** that the Project would affect habitat for this species to the extent that it is likely to decline.
Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat	No harmful invasive species are expected to become established in areas of potential habitat for this species as a result of the Project. Weed, sediment and erosion controls would be in place during the Project to mitigate the potential spread and/or introduction of invasive species.
Introduce disease that may cause the species to decline, or	The Project is **unlikely** to result in the introduction of disease that may cause this species to decline.
Interfere substantially with the recovery of the species.	There are currently no recovery strategies listed under Saving Our Species (SOS) program.
Conclusion: On the basis of the above considerations, it is not likely that the proposed works would result in a significant impact on the Diamond Firetail. A referral to the Commonwealth under the EPBC Act therefore is not required.	

STR 356: South-eastern Hooded Robin (*Melanodryas cucullata cucullata*); listed as E in EPBC Act

Distribution: The Hooded Robin is widespread, found across Australia, except for the driest deserts and the wetter coastal areas - northern and eastern coastal Queensland and Tasmania. However, it is common in few places and rarely found on the coast. It is considered a sedentary species, but local seasonal movements are possible. The south-eastern form (subspecies *cucullata*) is found from Brisbane to Adelaide and throughout much of inland NSW, with the exception of the extreme north-west, where it is replaced by subspecies *picata*. Two other subspecies occur outside NSW. (NSW DCCEEW, 2026a).

Habitat

Approximately 2.41 ha of potential habitat is present within the STR 356 Subject Site in the form of 2.28 ha of native forest and woodland vegetation, as well as 0.13 ha of non-native vegetation. The native vegetation is comprised of PCT 477, occurring in high, moderate, and low condition, and represents a dry sclerophyll open forest on sandstone hills within the southern Brigalow Belt South Bioregion and the northern NSW South Western Slopes Bioregion.

Vegetation condition within the impact area varies, with 1.21 ha of high-quality habitat, 1.06 ha of low-quality habitat, and 0.01 ha of moderate-quality habitat. This community provides structural complexity, including mature eucalypts, scattered shrubs, and ground cover, which are important for the South-eastern Hooded Robin's foraging and nesting requirements. Fallen timber and open ground areas present within the site further enhance habitat suitability.

Recent records of the species occur in adjacent dry sclerophyll woodland, and four records have been documented within 10 km of the site (last recorded in 2023). The site therefore offers potential breeding and foraging habitat, particularly within the high-quality vegetation patches, contributing to local habitat availability for the species.

Assessment of significance	**Response**
An action is likely to have a significant impact on a vulnerable species if there is a real chance or possibility that it will:	
Lead to a long-term decrease in the size of population	The proposed action will impact approximately 2.41 ha, including 2.28 ha of native vegetation within the development footprint. This area contains potential breeding and foraging habitat for the South-eastern Hooded Robin within PCT 477 (Inland Scribbly Gum – Red Stringybark – Black Cypress Pine – Red Ironbark open forest). Habitat quality within the impact area ranges from high (1.21 ha) to low (1.06 ha), with recent records of the species in adjacent dry sclerophyll woodland and four records within 10 km, last observed in 2023. The species has a moderate likelihood of occurrence on site. While the proposed clearing will remove suitable habitat, the affected area is relatively small compared to the broader landscape and there is no evidence that the site supports an important population. The action is therefore **unlikely** to result in a long-term decrease in population size.
Reduce the area of occupancy of the species	The proposed action will result in the clearing of approximately 2.41 ha, including 2.28 ha of native vegetation within the development footprint. This area contains potential breeding and foraging habitat for the South-eastern Hooded Robin within PCT 477 (Inland Scribbly Gum – Red Stringybark – Black Cypress Pine – Red Ironbark open forest). Habitat quality within the impact area includes 1.21 ha of high-quality vegetation, 1.06 ha of low-quality vegetation, and 0.01 ha of moderate-quality vegetation. Recent records of the species occur in adjacent dry sclerophyll woodland, with four records within 10 km, last observed in 2023, indicating a moderate likelihood of occurrence on site. The removal of this habitat will marginally reduce the available area of occupancy for the species at a local scale. However, given the relatively small size of the impact area compared to the broader landscape and the absence of evidence that the site supports an important population, the reduction is **unlikely** to be significant under EPBC criteria.
Fragment an existing population into two or more populations	The proposed clearing is relatively small and does not bisect large, contiguous habitat areas. The surrounding landscape retains extensive woodland, and the impact area does not appear to form a critical corridor or linkage essential for population connectivity. Therefore, the action is **unlikely** to fragment an existing population into two or more isolated populations.
Adversely affect habitat critical to the survival of a species	Habitat critical to survival is that which is essential for the species' persistence, including areas supporting breeding, feeding, and dispersal. While the impacted vegetation is suitable habitat, there is no evidence that it constitutes habitat critical to survival at a regional or national scale. The clearing represents a small proportion of available habitat in the locality and does not appear to remove key breeding sites or corridors. Therefore, the proposed action is **unlikely** to adversely affect habitat critical to the species' survival.

Disrupt the breeding cycle of a population	The proposed action will clear approximately 2.41 ha, including 2.28 ha of native vegetation within the development footprint. This vegetation comprises PCT 477 (Inland Scribbly Gum – Red Stringybark – Black Cypress Pine – Red Ironbark open forest), which provides potential breeding and foraging habitat for the South-eastern Hooded Robin. Habitat quality within the impact area includes 1.21 ha of high-quality vegetation, 1.06 hectares of low-quality vegetation, and 0.01 ha of moderate-quality vegetation. Recent records of the species occur in adjacent dry sclerophyll woodland, with four records within 10 km, last observed in 2023, indicating a moderate likelihood of occurrence. The Hooded Robin breeds in structurally complex woodland, often requiring fallen timber and shrub layers for nesting. While the site contains suitable habitat, there is no confirmed evidence of breeding activity within the impact area. The proposed clearing is relatively small and **unlikely** to remove critical breeding sites or disrupt the breeding cycle of a population at a regional scale. However, if breeding individuals are present, the action could cause localised disturbance.
Modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline	Given the relatively small scale of the disturbance associated with the Project, the availability of alternative habitat outside of the Study Area, it is unlikely that the Project would affect habitat for this species to the extent that it is likely to decline.
Result in invasive species that are harmful to a critically endangered or endangered species becoming established in the endangered or critically endangered species' habitat	No harmful invasive species are expected to become established in areas of potential habitat for this species as a result of the Project. Weed, sediment and erosion controls would be in place during the Project to mitigate the potential spread and/or introduction of invasive species.
Introduce disease that may cause the species to decline	The Project is **unlikely** to result in the introduction of disease that may cause this species to decline.
Interfere with the recovery of the species.	The Project does not interfere with any of the key recovery actions listed on the Saving Our Species (SoS) strategy for the South-eastern Hooded Robin.
Conclusion: On the basis of the above considerations, it is **not likely** that the proposed works would result in a significant impact on the South-eastern Hooded Robin. A referral to the Commonwealth under the EPBC Act therefore is not required.	

Annex 6
Site Descriptions

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1. Site descriptions

1.1 STR 356

Table 2. STR 356 site and PCT description

PCT 477 – Inland Scribbly Gum – Red Stringybark – Black Cypress Pine – Red Ironbark open forest on sandstone hills in the southern Brigalow Belt South Bioregion and northern NSW South Western Slopes Bioregion	
Vegetation formation	Dry Sclerophyll Forests (Shrubby sub-formation)
Vegetation class	Western Slopes Dry Sclerophyll Forests
Soils and Landscape Position	The Study Area occurred on sandy rocky clay derived from sandstone on hillcrests and hillslopes in hill landform patterns in the Dunedoo-Merriwa region
Conservation status	No associated TEC
Photo	 RDP (PCT 477_High)

	 RDP (PCT 477_Moderate)  RDP (PCT 477_Low)
Canopy	**High condition:** The canopy is dominated by *Eucalyptus macrorhyncha* and *Eucalyptus rossii,* with scattered occurrences of *Eucalyptus fibrosa, Eucalyptus dalrympleana*, and *Eucalyptus polyanthemos.*

	Moderate condition: The canopy comprises the same *Eucalyptus* species as observed in high condition areas, though with a greater proportion of regeneration. **Low condition:** No canopy species are present.
Midstorey	In high, moderate condition classes, the midstorey is dominated by *Lissanthe strigosa and Monotoca scoparia* with some *Acacia dealbata* In the low areas being characterised by a higher proportion of dead/decayed *Cassinia sifton*, with scattered *Lissanthe strigosa, Monotoca scoparia, Acacia dealbata* and *Dodonea viscosa*.
Groundcover	In high and moderate conditions, groundcover dominated by cryptogams, mostly rocky lichen, with high litter cover. Where groundcover species were present, *Poa sieberiana* was common, with orchids such as *Diuris sulphurea* and *Thelymitra peniculata* also common throughout. In low condition, *Poa sieberiana* was commonly found, with some Drosera spp, and seasonal orchids and lilies, including *Diuris sulphurea, Thelymitra peniculata* and *Wurmbea diocia*.
Fauna habitat	Litter cover was moderate to high in the moderate condition classes (50-70%), and lower in the low condition class. — Substrate gravelly, however no distinct surface rock — Large amounts of woody debris on site

1.2 STR 432

Table 3. STR 432 site and PCT description

PCT 3369 – Central Tableland Ranges Peppermint-Gum Grassy Forest	
Vegetation formation	Grassy Woodlands
Vegetation class	Southern Tableland Grassy Woodlands
Soils and Landscape Position	The Study Area occurred on light brown/red silty loam clay soils, on low undulating slopes.
Conservation status	No associated TEC
Photo	 RDP (PCT 3369_Moderate)

	 RDP (PCT 3369_Low)
Overall site notes	This site was noted to be severely burnt during the 2019/2020 fires. Evidence of this on site includes entirely consumed hollows within mature trees, charcoal on ground, and patchy but dense regeneration of the midstory, in line with post fire regrowth and succession.
Canopy	In moderate condition, canopy dominated by *Eucalyptus dives* and *Eucalyptus dalrympleana,* with some *Eucalyptus mannifera.* At the eastern edge of the site, *Eucalyptus macrorhyncha* and a few individuals of the threatened species *Eucalyptus cannoni* were noted. In low condition, no canopy species are present.
Midstorey	In moderate condition, the midstory was sparse to dense in line with post fire regrowth. This area tended to be wetter than the adjacent PCT 3735, dominated by *Gahnia sieberiana*, *Hardenbergia violacea.*, with some *Davesia latifolia.* and the occasional *Leucopogon spp.* In low condition, no midstorey species are present.
Groundcover	In moderate condition, the groundcover was mid-dense to dense and ≥ 50% native perennial groundcover. It was comprised of grasses, ferns and forbs. It was dominated by bracken ferns (*Pteridium esculentum*), *with some Davesia latifolia, Poa sieberiana, Aristida spp.*, *Dianella spp.* and *Lomandra filiformis.* In low condition, the groundcover was boggy with dense growth of *Poa sieberiana* and *Juncus usitatus.*
Fauna habitat	Fauna habitat values were observed in the Study Area. This includes three hollow bearing trees, large woody debris, and several mistletoes. • One large burrow, likely Wombat burrow, under tree along access track • HBTs • Substrate gravelly, however no distinct surface rock • Large amounts of woody debris across start of access/large cluster

	• Creek to north part of site provides aquatic habitat

PCT 3735 – Central Tableland Peppermint Shrub-Grass Forest	
Vegetation formation	Dry Sclerophyll Forests (Shrubby sub-formation)
Vegetation class	Southern Tableland Dry Sclerophyll Forests
Soils and Landscape Position	The Study Area occurred on red sandy clay, sedimentary substrates and some granites, on dry slopes and broad crests in rolling hilly country.
Conservation status	No associated TEC
Photo	



RDP (PCT 3735_Moderate)

	 RDP (PCT 3735_Low)
Overall site notes	This site was noted to be severely burnt during the 2019/2020 fires. Evidence of this on site includes entirely consumed hollows within mature trees, charcoal on ground, and patchy but dense regeneration of the midstory, in line with post fire regrowth and succession.
Canopy	In moderate condition, canopy co dominated by *Eucalyptus dives*, *Eucalyptus dalyrympleana,* and *Eucalyptus mannifera.* In low condition, regrowth and seedlings of *Eucalyptus* spp. were noted, in a disturbed condition in line with managed vegetation under the existing high voltage transmission line.
Midstorey	In moderate condition, the midstorey was dense, reflective of the previously severely burnt state of the vegetation zone. Patchy but dense, the midstory was dominated by groves of *Davesia latifolia, with Xanthorrhea glauca,* In the areas fringing the ephemeral waterway, *Leptospermum polygalifolium* formed dense groves. In low condition, midstorey dominated by two types of *Leptospermum spp.*, *Cassinia spp.* and *Acacia spp.*
Groundcover	In moderate condition, the groundcover was mid-dense to dense and ≥ 50% native perennial groundcover. Litter cover was moderate and patchy, associated with the trees that were consumed in the fire. The groundcover comprised of grasses, ferns and forbs, with *Poa sieberiana, Lomandra filiformis, Cheilanthes sieberi, Gahnia sieberiana, Themeda triandra,* and *Hardenbergia violaecea* In low condition, the groundcover is dense, and dominated grass and grasslike species, such as *Lomandra longifolia, Lomandra filiformis, Poa* sieberiana, and *Gahnia sieberi.*
Fauna habitat	Fauna values across the site includes hollow bearing trees adjacent to the site access track (outside of the subject site), large woody debris, a large burrow and a termite mound.

1.3 Mount Piper substation West

Table 4. Mount Piper substation West site and PCT description

PCT 3747 – Southern Tableland Western Hills Scribbly Gum Forest	
Vegetation formation	Dry Sclerophyll Forests (Shrubby sub-formation)
Vegetation class	Southern Tableland Dry Sclerophyll Forests
Soils and Landscape Position	The Study Area occurred on red sandy loam, sedimentary substrates and some granites/gravel, on dry slopes and broad crests in rolling hilly country. On site soils were heavily modified, with most of the ground containing granitic fill consistent with previous construction and clearing on site.
Conservation status	No associated TEC
Photo	

	 PCT 3747_Low
Canopy	Overall, the flora on site is in heavily disturbed condition, in line with previous full clearing noted on aerials. In low condition, scattered regrowth of trees including *Eucalyptus polyanthemos* and *Casuarina cunninghamiana* are found at the edge of the vegetation zone, along the modified drainage line.
Midstorey	In low condition, the midstory is dense and consists of almost entirely Acacia spp. regrowth, dominated by *Acacia rubida*, with *Acacia buxifolia* and *Acacia dealbata*, in line with the heavily disturbed nature of the site. Some *Leptospermum polygafolium* is present along the modified drainage line.
Groundcover	In wetter areas around the drainage line, the groundcover is dominated by cryptogams, with some scattered *Bothriochloa* spp, *Aristida* spp and *Themeda triandra*.
Fauna habitat	— Substrate gravelly, likely imported to site, however no distinct surface rock — Minimal woody debris across site — Artificial drainage lines and basins across site provide some aquatic habitat, however these are heavily impacted with gravelly substrate and exotic grasses.

Annex 7
Aquatic Habitat Photos

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Table 1 Aquatic habitat within Central Cluster

Structure 356 aquatic habitat	
	
Strahler 2 stream within subject site (impact area). Damp area at base of slope, no visible running water	

Structure 432 aquatic habitat



Strahler 2 unnamed creek, running adjacent to the current STR 432. Intact riparian vegetation along creek, multiple snags and riparian vegetation within watercourse.



Strahler 2 unnamed creek, running adjacent to the current STR 432. Intact riparian vegetation along creek, multiple snags and riparian vegetation within watercourse.

Structure 432 aquatic habitat



Strahler 1 stream south of current transmission tower. Damp soil, very disturbed with pig digging. Within current transmission tower easement.



Strahler 1 stream north of current transmission tower. Wet soil, very disturbed with pig digging. Tussock grasses dominant. Running water in areas. Within current high voltage powerline easement.

Structure 432 aquatic habitat	
	
Strahler 1 stream north of current transmission tower. Wet soil, very disturbed with pig digging. Tussock grasses dominant. Running water in areas. Within current high voltage powerline easement.	Strahler 1 stream north of current transmission tower. Wet soil, very disturbed with pig digging. Tussock grasses dominant. Running water in areas. Within current high voltage powerline easement.

Mount Piper West aquatic habitat



Concreted drainage line west of current substation, within heavily degraded and modified vegetation.



Old drainage line directly west of current substation. Acacia spp. regrowth within area.

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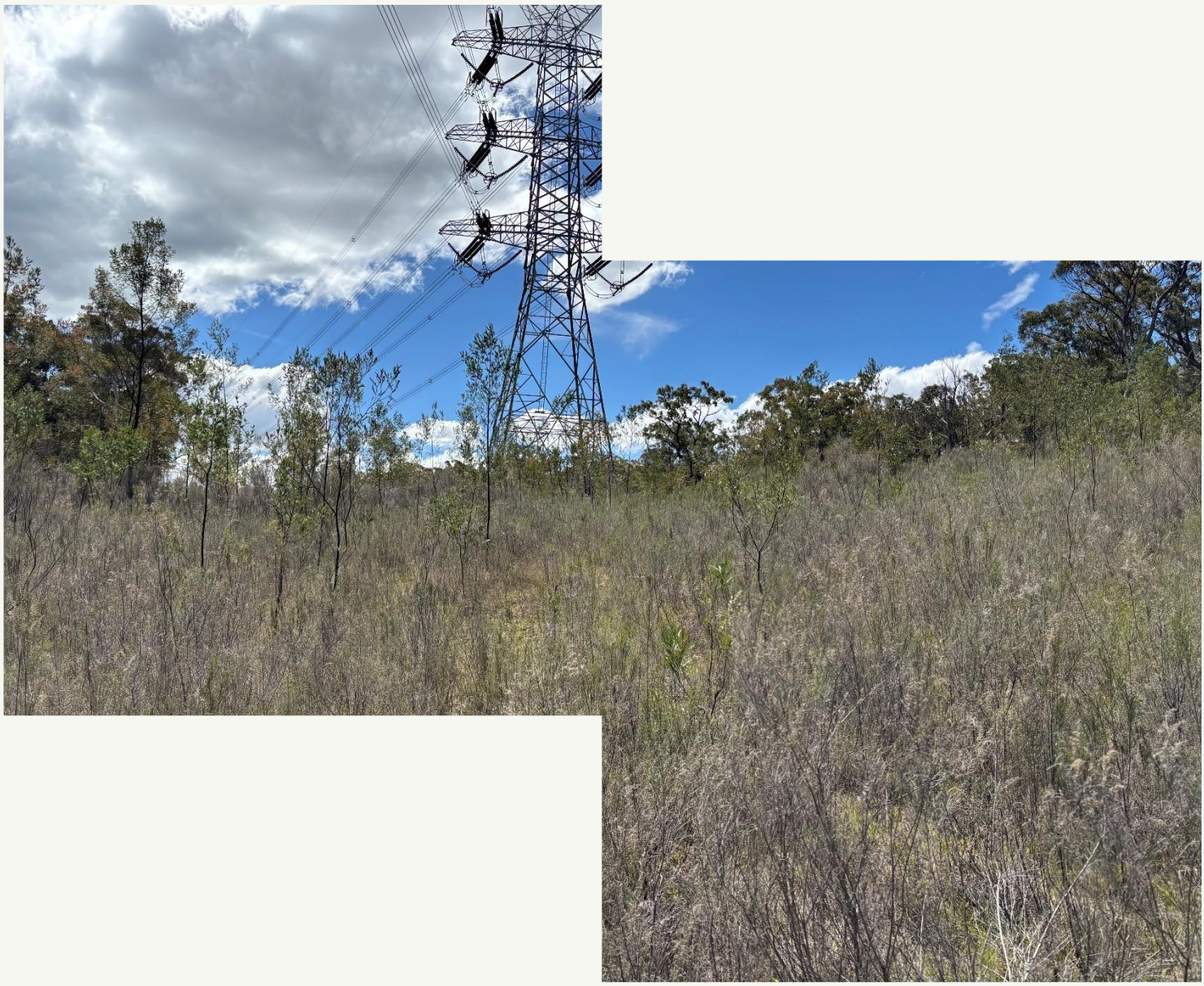
Our expertise

- Natural capital and offsetting
- Ecology
- Heritage management
- Spatial Services

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Appendix E Aboriginal Objects Due Diligence Assessment



Towers – Central Cluster

Aboriginal Objects Due Diligence Assessment

Prepared for Arup on behalf of Transgrid | 26 June 2026

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Document control

Project number	Client	Project manager	LGAs
9211	Arup on behalf of Transgrid	Ben Slack	Mid-Western Regional and Lithgow City Council

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Executive Summary

Project Outlines

Niche Environment and Heritage Pty Ltd (Niche) was commissioned by Arup on behalf of Transgrid (hereafter referred to as 'the Proponent') to undertake an Aboriginal Objects Due Diligence Assessment (AODD), at three sites across mid-western NSW (hereafter referred to as the 'Subject Areas'). These sites form part of the Central West Orana Renewable Energy Zone (CWOREZ) Transposition Project: Central Cluster. The AODD is required to assess Aboriginal Cultural Heritage of the Subject Areas for proposed transposition and vegetation clearing works.

Summary of potential impacts and safeguards

Based on background research, register searches and a site inspection of each Subject Area, it has been determined that no known Aboriginal sites will be impacted from the proposed works. The Subject Areas have low potential to contain surface or subsurface Aboriginal heritage.

No further investigation or assessment regarding Aboriginal heritage is required prior to the proposed works occurring.

The works may proceed with caution in accordance with the recommendations provided in this AODD.

Glossary and list of abbreviations

Term or abbreviation	Definition
Aboriginal cultural heritage	The tangible (objects) and intangible (dreaming stories, legends and places) cultural practices and traditions associated with past and present-day Aboriginal communities.
ACHA	Aboriginal Cultural Heritage Assessment.
AHIMS	Aboriginal Heritage Information Management System.
AHIP	Aboriginal Heritage Impact Permit.
AODD	Aboriginal Object Due Diligence Assessment
Archaeology	The scientific study of material traces of human history, particularly the relics and cultural remains of past human activities.
Archaeological deposit	A layer of soil material containing archaeological objects and/or human remains.
Archaeological site	An area that contains surface or sub-surface material evidence of past human activity in which material evidence (artefacts) of past activity is preserved.
Artefact	An object made by human agency (e.g. stone artefacts).
Assemblage	A group of artefacts found in close association with one another. Any group of items designated for analysis that exist in spatial and/or vertical context – without any assumptions of chronological or spatial relatedness.
Avoidance	A management strategy which protects Aboriginal sites within an impact area by avoiding them totally in development.
Code of Practice	*Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales 2010.*
Cumulative impacts	Combination of individual effects of the same kind due to multiple actions from various sources over time.
DCCEEW	Department of Climate Change, Energy, the Environment and Water. Formerly Department of Conservation, Climate Change and Water (DECCW), Biodiversity and Conservation Division (BCD) of the Department of Planning, Industry and Environment (DPIE) and now NSW Environment and Heritage of the NSW Department of Climate Change, Energy, the Environment and Water.
Harm	With regard to Aboriginal objects this has the same meaning as the definition given in NSW National Parks and Wildlife Act 1974.
Impact	Influence or effect exerted by a project or other activity on the natural, built and community environment.
In situ	Latin term meaning 'on the spot, undisturbed'.
Isolated artefact / find	A single artefact found in an isolated context.
Landform	Any one of the various features that make up the surface of the earth.
LALC	Local Aboriginal Land Council.
LEP	Local Environmental Plan.
LGA	Local Government Area.
NPW Act	*National Parks and Wildlife Act 1974.*
NPW Regulation	*National Parks and Wildlife Regulation 2019.*

NSW Environment and Heritage	Aboriginal cultural heritage regulator for the management of Aboriginal Cultural Heritage (ACH) regulation functions under the *National Parks and Wildlife Act 1974*. Formerly Heritage NSW.
OEH	Office of Environment and Heritage, replaced by the Biodiversity and Conservation Division (BCD) of the Department of Planning, Industry and Environment (DPIE) and now NSW Environment and Heritage of the NSW Department of Climate Change, Energy, the Environment and Water.
Open artefact site	An archaeological site situated within an open space (e.g. archaeological material located on a creek bank, in a forest, on a hill, etc.).
PAD	Potential Archaeological Deposit. A location considered to have a potential for subsurface archaeological material.
Site	A place where past human activity is identifiable.

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1. Introduction

1.1 Background and need for the project

The Transposition Project involves installation of transposition structures at several Transgrid transmission structures across mid-western NSW. This project is required to support the development of the Central West Orana Renewable Energy Zone (CWOREZ). CWOREZ, once operational, will enable more electricity to be generated and delivered using the existing Transgrid transmission network. This integration of the CWOREZ will exacerbate voltage imbalance on 500 kV circuits, which can result in reduced power quality, higher line losses, and system stability risks. To address these impacts, Transgrid is proposing to carry out transposition works, which will involve the systematic rearrangement of the conductors at select locations (referred to as transposition sites).

To facilitate a staggered delivery program for transposition and phase rollover works on each transmission line, the works have been packaged into three clusters as follows:

- 'Northern Cluster' involves works along 500 kV transmission line 5A3/5A4 (Bayswater to Wollar).
- 'Central Cluster' involves works along 500 kV transmission line 5A3/5A5 (Wollar to Mount Piper).
- 'Southern Cluster' involves works along 500 kV transmission line 5A6/5A7 (Mount Piper to Bannaby).

Niche Environment and Heritage Pty Ltd (Niche) was commissioned by Arup on behalf of Transgrid (hereafter referred to as 'the Proponent') to undertake an Aboriginal Objects Due Diligence Assessment (AODD), at three sites (hereafter referred to as the 'Subject Areas') which are part of the Central Cluster.

The AODD is required to assess Aboriginal Cultural Heritage of the Subject Areas for proposed transposition and vegetation clearing works to inform the Review of Environmental Factors (REF) for Transposition Project: Central Cluster.

1.2 The Subject Areas

The Subject Areas are located at three different sites across New South Wales:

— Line 5A3/5A5, Structure 356 at Lot 1 DP 561075 and Lot 1262 DP 1103548 within the Mid-Western Regional LGA (Structure 356)
— Line 5A3/5A5, Structure 432 at Lot 2 DP 558443 within the Mid-Western Regional LGA (Structure 432)
— The western side of Mt Piper 330 kV Substation (termed Mt Piper Substation – West herein) at Lot 103 DP 1164619 and Lot 1 DP 1092737 within the Lithgow City LGA

The Subject Areas are shown in Figure 1 and Figure 2.

1.3 The proposed activities

The proposed activities at each Subject Area will include:

— Installation of four new steel pole transmission structures at each transposition site (Structures 356 and 432)
— Conductor reconfiguration works at the phase rollover site (Mt Piper Substation – West)

- Establishment of level construction benches at each Subject Area to support the safe operation of elevated working platforms and cranes as part of structure assembly and conductor reconfiguration
- Vegetation clearing to facilitate construction and to allow the existing transmission line easement at Structures 356 and 432 to be widened from 70 metres to 120 metres.
- Construction and upgrade of access tracks to the Subject Area locations.

The area anticipated to be disturbed due to the proposed activities is termed 'the proposed impact area'. These are shown in Figure 2.

1.4 Statutory and other approvals

The *National Park and Wildlife Act 1974* (NPW Act), administered by Heritage NSW, is the primary legislation for the protection of some aspects of Aboriginal cultural heritage in NSW. Part 6 of the NPW Act provides specific protection for Aboriginal objects and declared Aboriginal places by establishing offences of harm.

The NPW Act provides that a person who exercises due diligence in determining that their actions will not harm Aboriginal objects has a defence against prosecution if they later unknowingly harm an object without an Aboriginal Heritage Impact Permit (AHIP).

The Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW (DECCW, 2010) (the Due Diligence Code) sets out a process for individuals and organisations to follow to determine whether an Aboriginal object will be harmed by an activity, whether further investigation is needed, and whether that harm requires an AHIP.

1.5 Objectives

The aim of the assessment is to assess whether Aboriginal objects and/or places are present, or are likely to occur within, or near the Subject Areas, if those Aboriginal objects and/or places may be harmed by the proposed works, and if further investigation is required.

1.6 Assessment methodology

This AODD follows the process in the Due Diligence Code which is outlined in Plate 1 below.

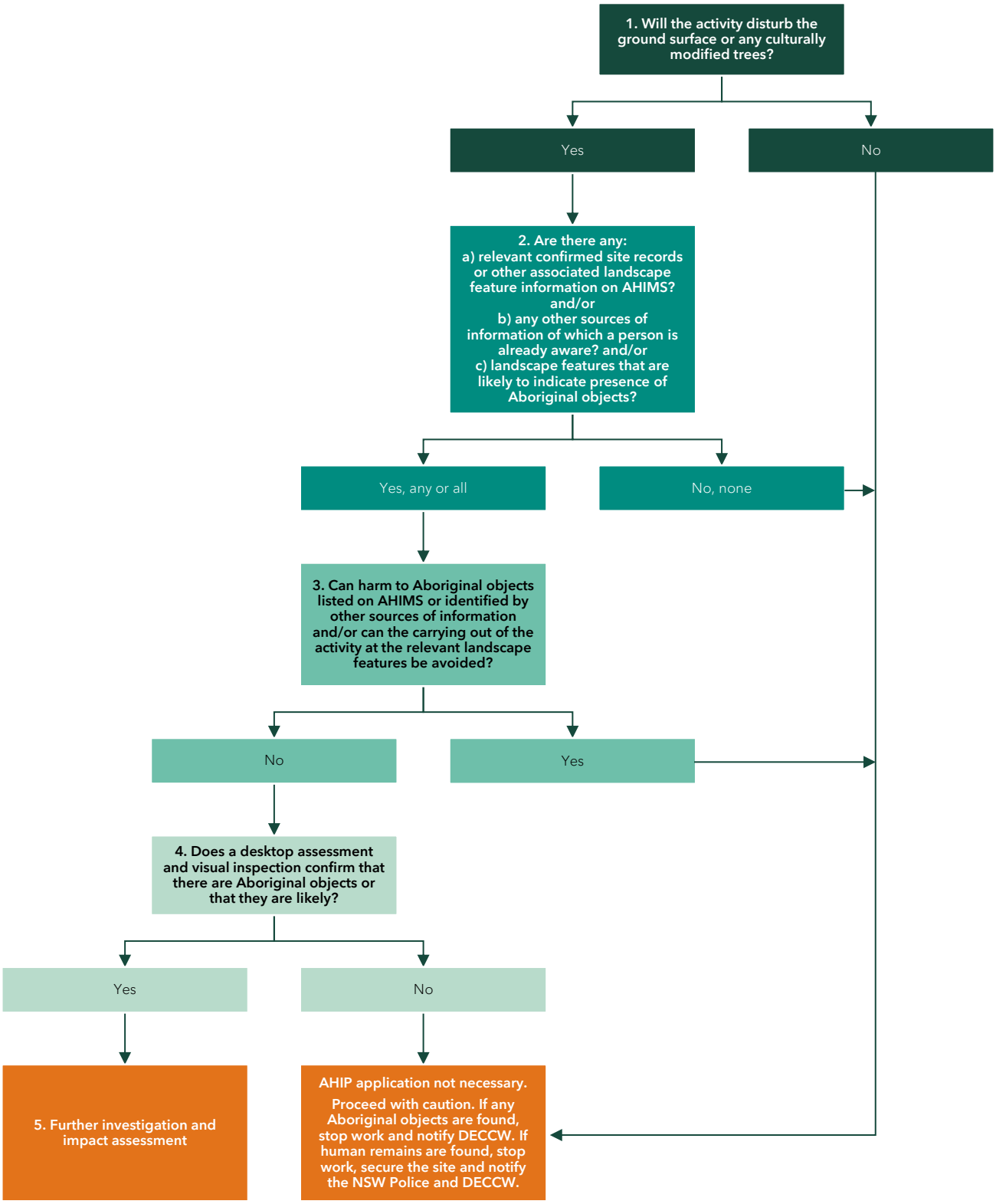
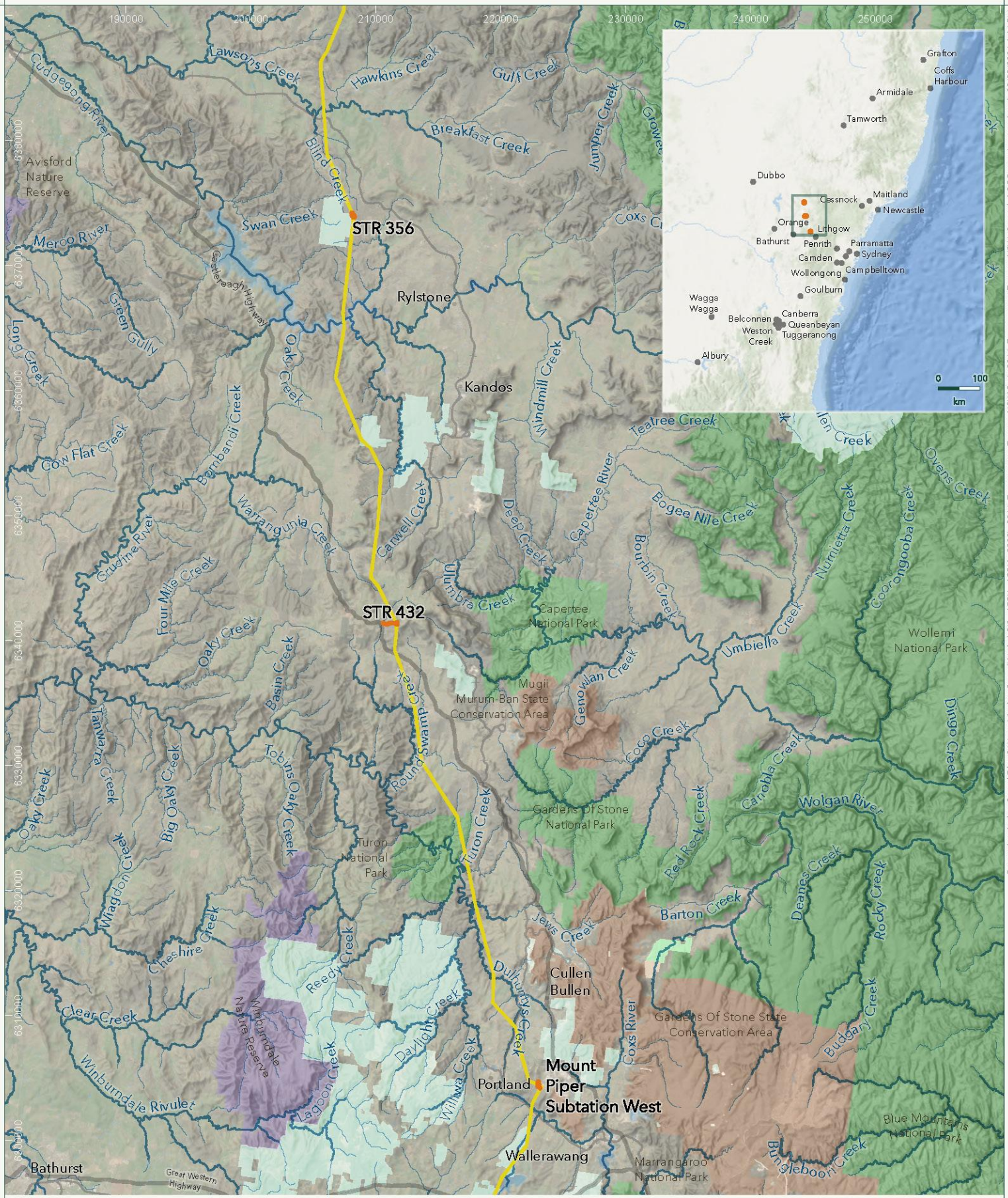


Plate 1: The Due Diligence Assessment process (DECCW 2010)



Subject area
Line 5A3/5A5 Transmission Line

Transport
Major road
Rail

Hydrography
Perennial Stream
Non Perennial Stream
Waterbody

Protected Areas of NSW
National Park
Nature Reserve
State Conservation Area
State Forest

0 10
km
GDA2020 MGA Zone 56

Niche

Figure 1

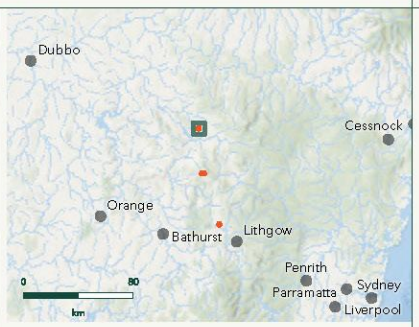
Location Map

Arup Transgrid Transposition Towers Heritage - Central Cluster AODD

Niche PM: Ben Slack
Niche Proj. #: 9211
Client: Arup

Subject area: / CWOREZ Transposition Transmission Lines: Niche/ PlacePoint: / Road: / Rail: / Watercourse: / Waterbody: / NPWS Reserve: / State Forest: / Hillshade: Esri, CGIAR/ Transparency Mask: / World Imagery: Earthstar Geographics/ Hillshade: Esri, USGS/ World_Ocean_Base: Esri, GEBCO, Garmin, NaturalVue | Watercourses, Waterbodies, Road and Rail alignments, Protected areas of NSW © Spatial Services 2021. | Niche uses GDA2020 as standard for all project-related data. In order to ensure that data from numerous sources and coordinate systems is aligned, on-the-fly transformation to GDA2020 MGA Zone 56 is used in the map above. For ease of reference, the grid tick marks and labels shown around the border of the map are presented in GDA2020 MGA Zone 56. | Print Date: 30/03/2026





Subject area

Proposed impact area

Transport

Minor road

Hydrography

Strahler stream order

1

2

Administrative and Property Boundaries

Lot

Local Government Area

Figure 2.1

Subject Area - STR 356

Arup Transgrid Transposition Towers Heritage - Central Cluster AODD

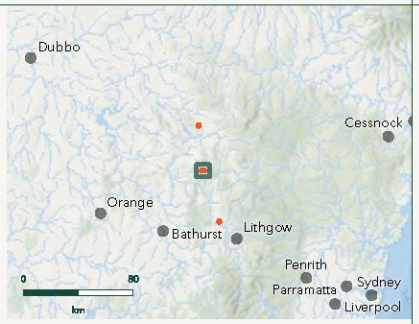
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Niche Proj. #: 9211
Client: Arup

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GDA2020 MGA Zone 56

Subject area: / PlacePoint: / Hillshade: Esri, USGS/ World_Ocean_Base: NIWA, GeosciencesAustralia, Esri, GEBCO, Garmin, NaturalVue/ Proposed impact area: / Road: / Rail: / Waterbody: / Lot: / Local Government Area: / Hillshade: Sources: Esri, Vantor, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap, and the GIS user community/ Transparency Mask: / World Imagery: Vantor | Watercourses, Waterbodies, Road and Rail alignments, Protected areas of NSW © Spatial Services 2021. | Niche uses GDA2020 as standard for all project-related data. In order to ensure that data from numerous sources and coordinate systems is aligned, on-the-fly transformation to GDA2020 MGA Zone 56 is used in the map above. For ease of reference, the grid tick marks and labels shown around the border of the map are presented in GDA2020 MGA Zone 56. | Print Date: 11/03/2026

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Subject area

Proposed impact area

Transport

Major road

Minor road

Hydrography

Strahler stream order

1

2

3

4

Administrative and Property Boundaries

Lot

Local Government Area

Figure 2.2

Subject Area - STR 432

Arup Transgrid Transposition Towers Heritage - Central Cluster AODD

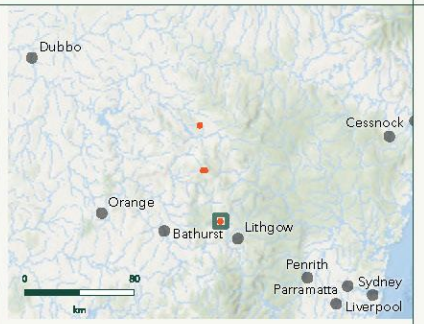
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Subject area: / PlacePoint: / Hillshade: Esri, USGS/ World_Ocean_Base: NIWA, GeosciencesAustralia, Esri, GEBCO, Garmin, NaturalVue/ Proposed impact area: / Road: / Rail: / Waterbody: / Lot: / Local Government Area: / Hillshade: Sources: Esri, Vantor, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap, and the GIS user community/ Transparency Mask: / World Imagery: Vantor | Watercourses, Waterbodies, Road and Rail alignments, Protected areas of NSW © Spatial Services 2021. | Niche uses GDA2020 as standard for all project-related data. In order to ensure that data from numerous sources and coordinate systems is aligned, on-the-fly transformation to GDA2020 MGA Zone 56 is used in the map above. For ease of reference, the grid tick marks and labels shown around the border of the map are presented in GDA2020 MGA Zone 56. | Print Date: 11/03/2026

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Subject area

Proposed impact area

Transport

Minor road

Hydrography

Strahler stream order

1

2

3

Waterbody

Administrative and Property Boundaries

Lot

Local Government Area

Figure 2.3

Subject Area - Mt Piper Substation West

Arup Transgrid Transposition Towers Heritage - Central Cluster AODD

Niche PM: Ben Slack
Niche Proj. #: 9211
Client: Arup

0 100
m
GDA2020 MGA Zone 56

Subject area: / PlacePoint: / Hillshade: Esri, USGS/ World_Ocean_Base: NIWA, GeosciencesAustralia, Esri, GEBCO, Garmin, NaturalVue/ Proposed impact area: / Road: / Rail: / Waterbody: / Lot: / Local Government Area: / Hillshade: Esri, Geoscience Australia, NASA, NGA, USGS/ Transparency Mask: / World Imagery: Vantor. | Watercourses, Waterbodies, Road and Rail alignments, Protected areas of NSW © Spatial Services 2021. | Niche uses GDA2020 as standard for all project-related data. In order to ensure that data from numerous sources and coordinate systems is aligned, on-the-fly transformation to GDA2020 MGA Zone 56 is used in the map above. For ease of reference, the grid tick marks and labels shown around the border of the map are presented in GDA2020 MGA Zone 56. | Print Date: 13/05/2026

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2. Environmental context

Understanding the past and present environmental contexts of a Subject Area is requisite in any Aboriginal archaeological and cultural heritage investigation (DECCW 2010). The following section provides details of the environmental characteristics of the Subject Areas.

2.1 Topography, landforms, and hydrology

2.1.1 Structure 356

The Structure 356 Subject Area is wholly situated within the Capertee soil landscape.

The Capertee soil landscape generally consists of undulating low hills, with slope gradients between 3-8% and low local relief between 40 and 80 m (DPIE 2020). Slope lengths are up to 3,000 m long (DPIE 2020). Drainage line spacing is between 400-1,000 m (DPIE 2020). Minor sheet erosion occurs on sideslopes (DPIE 2020). There are some rock outcrops on crests (DPIE 2020).

2.1.2 Structure 432

The Structure 432 Subject Area is wholly situated within the Turonfels soil landscape which generally consists of undulating to rolling low hills with elevations from 960-1250m, except for areas near Four Mile Creek, which are much lower (DPIE 2020). Slopes range from 6-20%, with slope lengths from 600-1000 m (DPIE 2020). Local relief is from 50-90 m. Drainage lines are few and variably spaced (DPIE 2020).

2.1.3 Mt Piper Substation – West

The Mt Piper Substation West Subject Area is wholly situated within the Disturbed Terrain soil landscape. The land surfaces within this area are varied, with most areas of landfill and rehabilitation being level whilst many quarries have irregular steep sides (DPIE 2020).

2.2 Geology and soils

2.2.1 Structure 356

The underlying geology associated with the Capertee soil landscape consists of the Permian Shoalhaven Group and Illawarra Coal Measures (DPIE 2020). Rocks include shale, siltstone, sandstone, conglomerate, some coal, chert and torbanite (DPIE 2020). Shale, conglomerate and chert are suitable raw materials for stone tool manufacture.

Within the Capertee soil landscape, Yellow Podzolic Soils exist on mid-slopes, with Red and Brown Podzolic Soils and Red Earths on upper slopes and crests (DPIE 2020). Yellow Podzolic-Solodic Soils and Grey Podzolic Soils on lower slopes and in drainage depressions (DPIE 2020). The topsoil of the Yellow Podzolic Soils comprises of dark brown to brown loam, with the subsoil comprises a clear change to yellowish-brown to yellowish-orange medium to heavy clay (DPIE 2020). The topsoil of the Red and Brown Podzolic Soils comprises of dark brown fine sandy loam with the subsoil comprising a clear boundary to Brown or reddish-brown light medium clay (DPIE 2020).

The topsoil of the Yellow Podzolic-Solodic Soils comprises a hardsetting dark brown sandy clay loam with the subsoil comprising a clear change to yellowish-brown sandy clay (DPIE 2020).

2.2.2 Structure 432

The underlying geology of the Structure 432 Subject Area is comprised of the Narrabeen Group, Lambie Group and Wallace Shale (DPIE 2020). These geological units include sandstone, conglomerate, red, green and grey shale (DPIE 2020). Silcrete conglomerates are suitable raw materials for stone tool manufacture.

The dominant soils of the Turonfels soil landscape consist of Red Earths on mid to upper slopes, with Yellow Podzolic Soils and Yellow Earths on lower slopes (DPIE 2020). Chocolate Soils and skeletal sands and loams also occur on upper slopes (DPIE 2020).

The topsoil of the Red Earths comprises of dark reddish brown fine sandy loam, and the subsoil comprises a gradual to clear change to reddish brown sandy clay loam to silty clay loam (DPIE 2020). The topsoil of the Yellow Earths comprises of dull yellowish brown loam and the subsoil comprises a sharp change to dull yellow-orange fine sandy clay loam (DPIE 2020). The topsoil of the Yellow Podzolic Soils comprises of brown loam to silty loam and the subsoil comprises a clear change to yellowish brown medium to heavy clay (DPIE 2020). The topsoil of the Chocolate Soils comprises of dark reddish brown sandy clay loam and the subsoil comprises a dark reddish brown light clay (DPIE 2020).

2.2.3 Mt Piper Substation – West

The underlying geology of the Mt Piper Substation West Subject Area occurs mostly on Triassic and Permian sediments (DPIE 2020).

Most of the soils of the Disturbed Terrain soil landscape have either been removed, buried or greatly disturbed (DPIE 2020). In gravel pits and quarries bedrock is often exposed, whilst in landfill areas transported earths, sediments and industrial, building and household wastes are found (DPIE 2020). These areas may be artificially topsoiled or covered by concrete and bitumen (DPIE 2020).

2.3 Vegetation

2.3.1 Structure 356

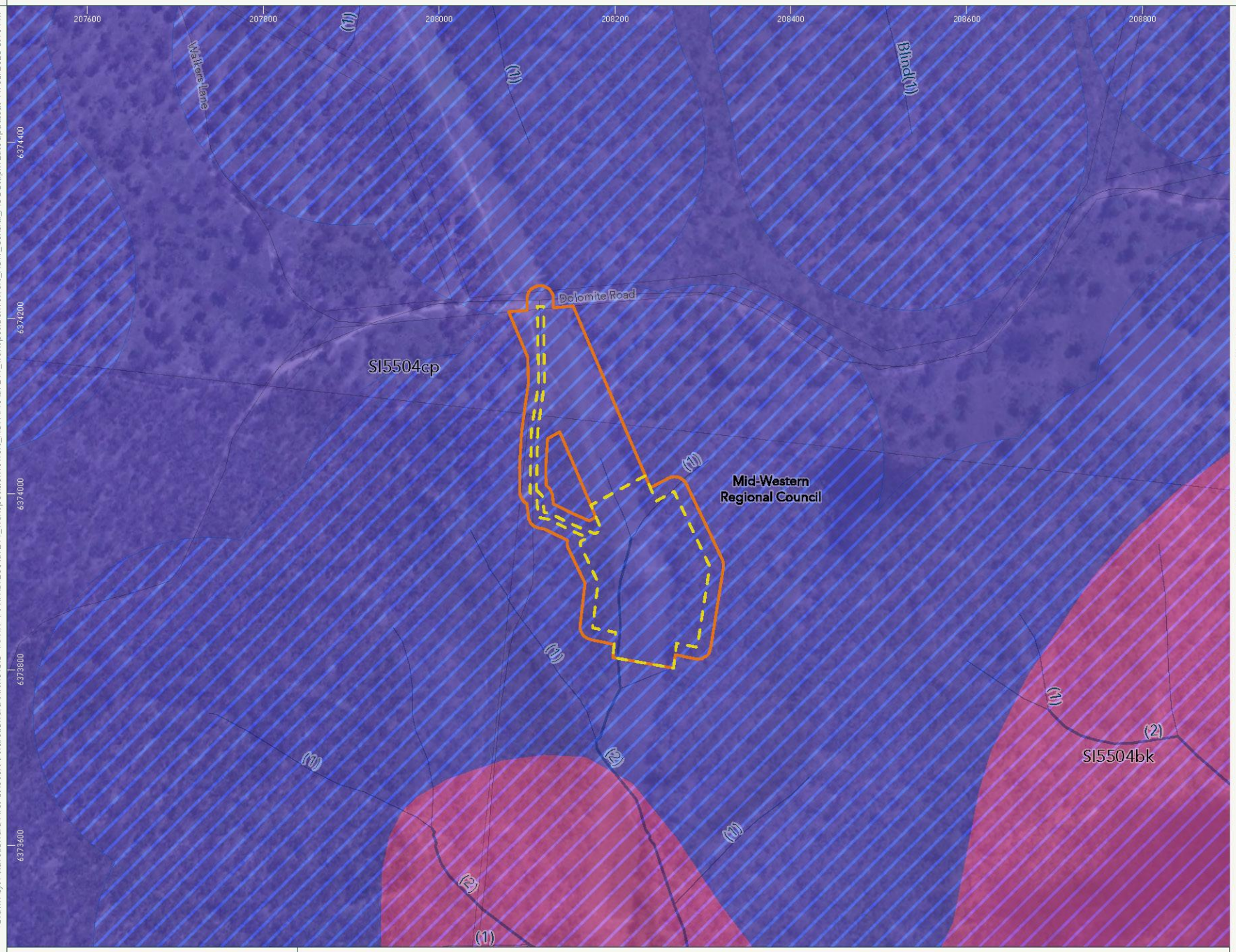
Within the Capertee soil landscape, the vegetation predominantly consists of extensively cleared dry sclerophyll, tall open-woodland with grass understorey (DPIE 2020). Eucalyptus species include narrow-leaved ironbark (*Eucalyptus crebra*), yellow box (*Eucalyptus melliodora*), apple box (*Eucalyptus bridgesiana*), Blakely's red gum (*Eucalyptus blakelyi*) and red stringybark (*Eucalyptus macrorhyncha*) (DPIE 2020).

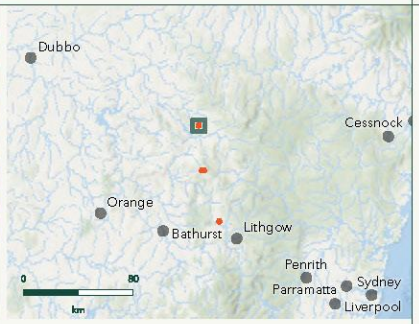
2.3.2 Structure 432

Around Running Stream and Four Mile Creek, a yellow box community covers the entire Turonfels soil landscape (DPIE 2020). Yellow box (*Eucalyptus melliodora*), apple box (*Eucalyptus bridgesiana*) and Blakely's red gum (*Eucalyptus blakelyi*) are major components of this community (DPIE 2020). Near Yetholme, a broad-leaved peppermint-brittlegum-candlebark community dominates the soil landscape (DPIE 2020). Snow gum (*Eucalyptus pauciflora*) and apple box are found on hill tops, and mountain gum (*Eucalyptus dalrympleana*) grows on slopes (DPIE 2020).

2.3.3 Mt Piper Substation – West

Vegetation within the Disturbed Terrain soil landscape has been extensively cleared due to disturbance (DPIE 2020). Often are the sites of prolific exotic weed invasion (DPIE 2020).





Subject area

Proposed impact area

Transport

Minor road

Hydrography

Strahler stream order

1

2

Watercourse buffer (200m)

Administrative and Property Boundaries

Lot

Local Government Area

Soil Landscapes of Central and Eastern NSW

SI5504bk, Buckeroo

SI5504cp, Capertee

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Niche

Figure 3.1

Soil landscapes and hydrology in the local area - STR 356

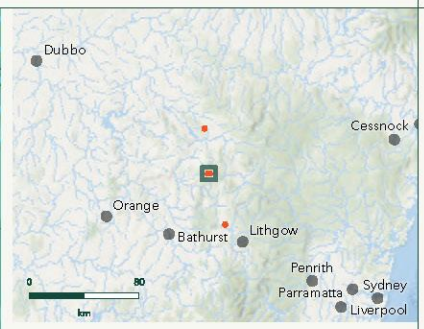
Arup Transgrid Transposition Towers Heritage - Central Cluster AODD

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Niche Proj. #: 9211
Client: Arup

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Subject area: / PlacePoint: / Hillshade: Esri, USGS/ World_Ocean_Base: Esri, GEBCO, Garmin, NaturalVue/ Proposed impact area: / Road: / Rail: / Waterbody: / Watercourse buffer (200m): / Lot: / Local Government Area: / Hillshade: Esri, Geoscience Australia, NASA, NGA, USGS/ Soil Landscapes of Central and Eastern NSW: Department of Planning, Industry and Environment, 2020, Soil Landscapes of Central and Eastern NSW - v2.1, NSW Office of Environment and Heritage, Sydney / Transparency Mask: / World Imagery: Vantor | Watercourses, Waterbodies, Road and Rail alignments, Protected areas of NSW © Spatial Services 2021. | Niche uses GDA2020 as standard for all project-related data. In order to ensure that data from numerous sources and coordinate systems is aligned, on-the-fly transformation to GDA2020 MGA Zone 56 is used in the map above. For ease of reference, the grid tick marks and labels shown around the border of the map are presented in GDA2020 MGA Zone 56. | Print Date: 11/03/2026





Subject area

Proposed impact area

Transport

Major road

Minor road

Hydrography

Strahler stream order

1

2

3

4

Waterbody

Watercourse buffer (200m)

Administrative and Property Boundaries

Lot

Local Government Area

Soil Landscapes of Central and Eastern NSW

SI5508cp, Capertee

SI5508ct, Cherry Tree

SI5508ts, Three Sisters

SI5508tu, Turonfels

Niche

Figure 3.2

Soil landscapes and hydrology in the local area - STR 432

Arup Transgrid Transposition Towers Heritage - Central Cluster AODD

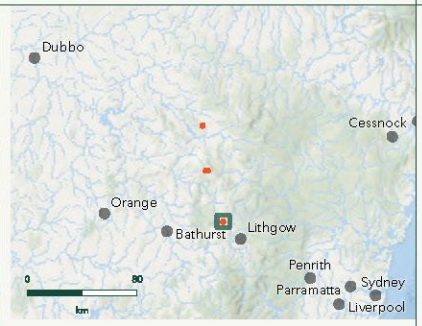
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Niche Proj. #: 9211
Client: Arup

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Subject area: / PlacePoint: / Hillshade: Esri, USGS/ World_Ocean_Base: Esri, GEBCO, Garmin, NaturalVue/ Proposed impact area: / Road: / Rail: / Waterbody: / Watercourse buffer (200m): / Lot: / Local Government Area: / Hillshade: Esri, Geoscience Australia, NASA, NGA, USGS/ Soil Landscapes of Central and Eastern NSW: Department of Planning, Industry and Environment, 2020, Soil Landscapes of Central and Eastern NSW - v2.1, NSW Office of Environment and Heritage, Sydney./ Transparency Mask: / World Imagery: Vantor | Watercourses, Waterbodies, Road and Rail alignments, Protected areas of NSW © Spatial Services 2021. | Niche uses GDA2020 as standard for all project-related data. In order to ensure that data from numerous sources and coordinate systems is aligned, on-the-fly transformation to GDA2020 MGA Zone 56 is used in the map above. For ease of reference, the grid tick marks and labels shown around the border of the map are presented in GDA2020 MGA Zone 56. | Print Date: 11/03/2026

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Subject area

Proposed impact area

Transport

Minor road

Hydrography

Strahler stream order

1

2

3

Waterbody

Watercourse buffer (200m)

Administrative and Property Boundaries

Lot

Local Government Area

Soil Landscapes of Central and Eastern NSW

8931cb, Cullen Bullen

8931hw, Hassans Walls

8931xx, Disturbed Terrain

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Niche

Figure 3.3

Soil landscapes and hydrology in the local area - Mt Piper Substation West

Arup Transgrid Transposition Towers Heritage - Central Cluster AODD

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Niche Proj. #: 9211
Client: Arup

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GDA2020 MGA Zone 56

Subject area: / PlacePoint: / Hillshade: Esri, USGS/ World_Ocean_Base: Esri, GEBCO, Garmin, NaturalVue/ Proposed impact area: / Road: / Rail: / Waterbody: / Watercourse buffer (200m): / Lot: / Local Government Area: / Hillshade: Sources: Esri, Vantor, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap, and the GIS user community/ Soil Landscapes of Central and Eastern NSW: Department of Planning, Industry and Environment, 2020, Soil Landscapes of Central and Eastern NSW - v2.1, NSW Office of Environment and Heritage, Sydney./ Transparency Mask: / World Imagery: Vantor |Watercourses, Waterbodies, Road and Rail alignments, Protected areas of NSW © Spatial Services 2021. | Niche uses GDA2020 as standard for all project-related data. In order to ensure that data from numerous sources and coordinate systems is aligned, on-the-fly transformation to GDA2020 MGA Zone 56 is used in the map above. For ease of reference, the grid tick marks and labels shown around the border of the map are presented in GDA2020 MGA Zone 56. | Print Date: 13/05/2026

2.4 Past land use and disturbance

2.4.1 Structure 356

Historical aerials from 1971 and 1990 demonstrate the disturbance that has taken place across the Subject Area. In 1971, the transmission line has not been constructed yet, with Dolomite Road only being partially visible and the Subject Area not cleared and no access track present. By 1990, the transmission line and access track have been constructed, and the access track has been subject to further vegetation clearance.



Plate 2: 1971 historical aerial



Plate 3: 1990 historical aerial

2.4.2 Structure 432

Historical aerials from 1982 and 1993 demonstrate the disturbance that has taken place across the Subject Area. In 1982, the transmission has not been constructed yet, with the access track only being partially visible and the Subject Area not totally cleared. By 1993, the transmission line and access track have been constructed, and the access track has been entirely cleared all the way up to Structure 432.



Plate 4: 1982 historical aerial



Plate 5: 1993 historical aerial

2.4.3 Mt Piper Substation – West

Historical aerials from 1975 and 1991 demonstrate the considerable disturbance which has taken place in and around the Subject Area over the past decades. In 1975, the power station and substation have not been constructed, with only a few isolated tracks being present. By 1991, the area has been subject to heavy development to construct the power station, and construction of the Transgrid substation to the south appears to

have commenced but not been completed. There has also been a considerable amount of vegetation cleared to allow for construction of the power station and transmission lines.



Plate 6: 1975 historical aerial



Plate 7: 1991 historical aerial

3. Aboriginal Objects Due Diligence Assessment

3.1 Is the proposed activity a low impact activity as defined by the Regulation?

No.

The activity is not a low impact activity as defined under Part 5 Division 2 section 58 of the National Parks and Wildlife Regulation 2019 ('the Regulation') because:

— It involves construction and clearing works that will impact the ground surface.

As the activity is not listed in the above legislation, an AODD is required.

3.2 Step 1 - Will the activity disturb the ground surface or any culturally modified trees?

Yes.

The proposed activity includes vegetation clearing and construction works which will disturb the ground surface, though no culturally modified trees are located within the Subject Areas.

3.3 Step 2a - Are there any relevant confirmed site records or other associated landscape feature information on AHIMS (or other heritage registers)?

Yes.

3.3.1 Heritage registers

3.3.1.1 AHIMS

A basic search of the Aboriginal Heritage Information Management System (AHIMS) was conducted initially on 23 May 2025, with an updated search on 13 May 2026 for each of the Subject Areas. Each search was conducted with a radius extending approximately 400 m beyond each Subject Area. The results of each search are listed below:

— Structure 356: The Basic Search (Client Service ID: 1126905) identified zero Aboriginal sites in proximity to the Subject Area.
— Structure 432: The Basic Search (Client Service ID: 1126910) identified zero Aboriginal sites in proximity to the Subject Area.
— Mt Piper Substation West: The Basic Search (Client Service ID: 1126898) identified two Aboriginal sites within 400 m of the Subject Area.

A further extensive search of AHIMS was conducted for the Mt Piper Substation - West Subject Area. The results of the Extensive search are presented below in Table 1. Review of the site cards for both sites confirmed their location as being outside the Subject Area. The details of both the Basic and Extensive AHIMS searches are presented in Appendix 1.

Table 1: Summary of AHIMS sites within the search area for Mt Piper Substation - West

Site name	AHIMS ID	Site context	Site status	Approximate distance from current Subject Area (m)	Site features
Mount Piper Substation IF1	[redacted]	Open site	Valid	[redacted]	Artefact
Pipers Flat Ivanhoe Country	[redacted]	Open site	Valid	[redacted]	Artefact

It must be noted that care should be taken when using the AHIMS database to reach conclusions about site prevalence or distribution. The distribution of registered sites does not reflect patterns of occupation, but rather is often indicative of survey coverage and conditions.

3.3.1.2 AHIP register

A search was conducted of the Aboriginal Heritage Impact Permit (AHIP) public register maintained by NSW Department of Climate Change, Energy, the Environment and Water (NSW DCCEEW) on 5 August 2025. It was determined that no AHIPs have been registered in proximity to the current Subject Areas.

3.3.1.3 Native Title

A Native Title search was undertaken on the Register of Native Title Claims (RNTC) on 4 August 2025, with the results for each Subject Area listed below:

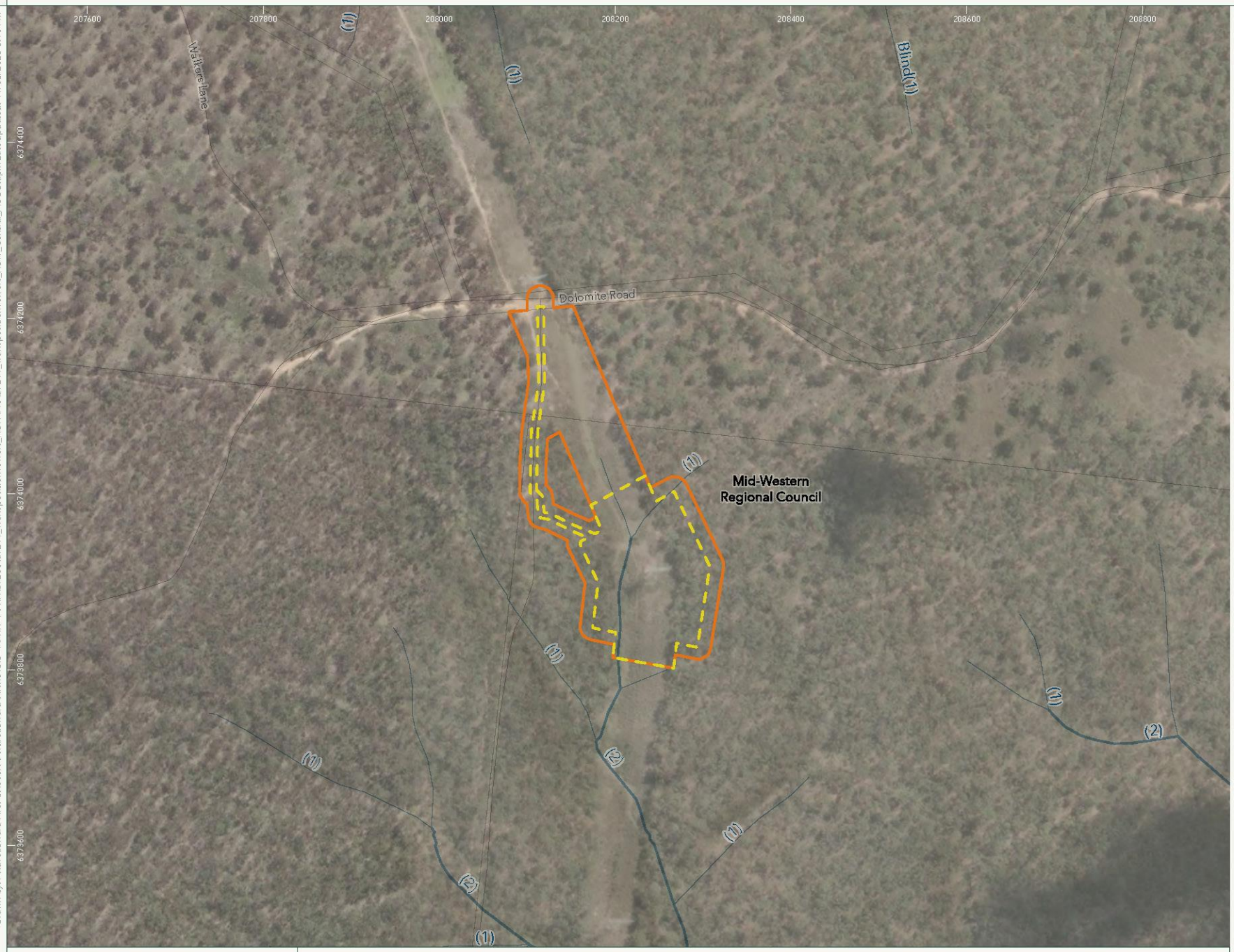
- Structure 356: NC2018/002 by the Warrabinga-Wiradjuri #7 which was accepted for registration on 22 November 2018
- Structure 432: Covered by claim NC2018/002 by the Warrabinga-Wiradjuri #7 which was accepted for registration on 22 November 2018
- Mt Piper Substation - West: Covered by claim NC2018/002 by the Warrabinga-Wiradjuri #7 which was accepted for registration on 22 November 2018

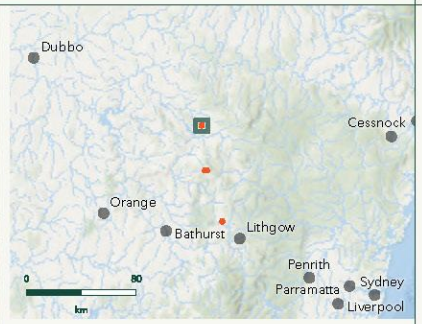
3.3.1.4 Other heritage registers

Searches of the Australian World Heritage Database, the Commonwealth Heritage List, National Heritage List, State Heritage Register, State Heritage Inventory, the Mid-Western Regional LEP (2012) and the Lithgow City LEP (2014) were conducted on 5 August 2025.

The searches identified no Aboriginal heritage items listed on any of these heritage registers located within proximity to any of the Subject Areas.

Assessment of historical heritage constraints associated with the Subject Areas is beyond the scope of this AODD.





Subject area

Proposed impact area

Transport

Minor road

Hydrography

Strahler stream order

1

2

Administrative and Property Boundaries

Lot

Local Government Area

0 150

m

GDA2020 MGA Zone 56

Figure 4.1

AHIMS Sites and Heritage Items - STR 356

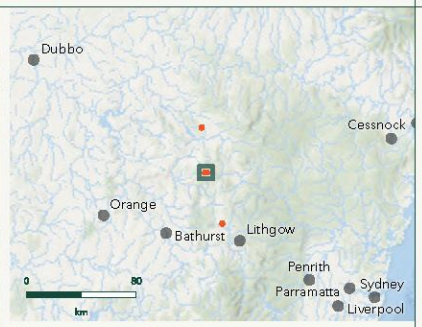
Arup Transgrid Transposition Towers Heritage - Central Cluster AODD

Niche PM: Ben Slack
Niche Proj. #: 9211
Client: Arup

Drawn by: AndreaSward File: C:\Users\AndreaSward\Niche\GIS - APRX - APRX\a9200\a9211_TranspositionTowers_NSWProj\a9211_TranspositionTowers_NSW_Central_AODD.aprx Last updated: 11/03/2026 3:10 PM

Subject area: / PlacePoint: / Hillshade: Esri, USGS/ World_Ocean_Base: NIWA, GeosciencesAustralia, Esri, GEBCO, Garmin, NaturalVue/ AHIMS: / Proposed impact area: / Road: / Rail: / Waterbody: / Lot: / Local Government Area: / Hillshade: Esri, Geoscience Australia, NASA, NGA, USGS/ State Heritage Register Curtilage: / Local Heritage Place: / Transparency Mask: / World Imagery: Vantor | Watercourses, Waterbodies, Road and Rail alignments, Protected areas of NSW © Spatial Services 2021. | Niche uses GDA2020 as standard for all project-related data. In order to ensure that data from numerous sources and coordinate systems is aligned, on-the-fly transformation to GDA2020 MGA Zone 56 is used in the map above. For ease of reference, the grid tick marks and labels shown around the border of the map are presented in GDA2020 MGA Zone 56. | Print Date: 11/03/2026





Subject area

Proposed impact area

Transport

Major road

Minor road

Hydrography

Strahler stream order

1

2

3

4

Waterbody

Administrative and Property Boundaries

Lot

Local Government Area

Niche

Figure 4.2

AHIMS Sites and Heritage Items - STR 432

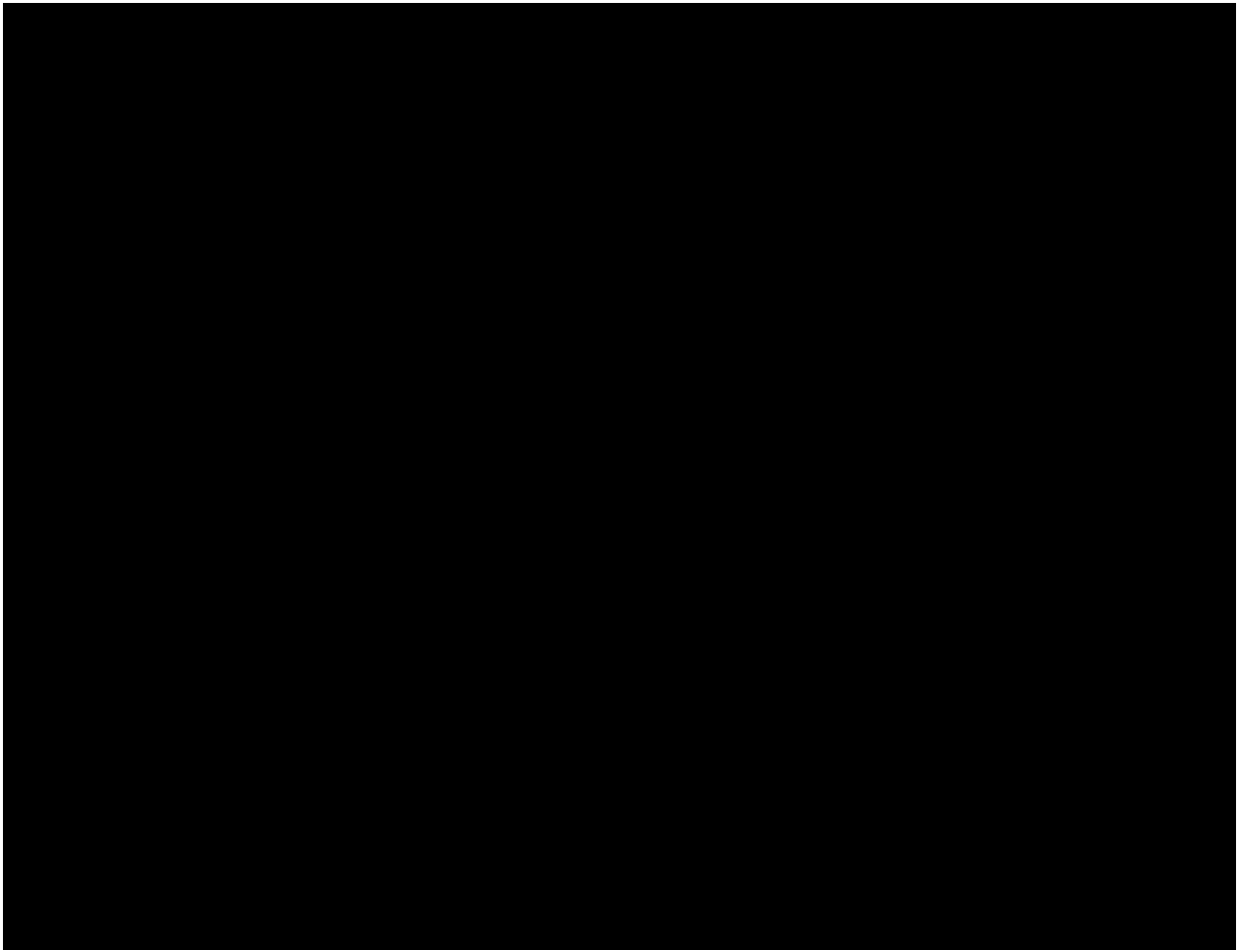
Arup Transgrid Transposition Towers Heritage - Central Cluster AODD

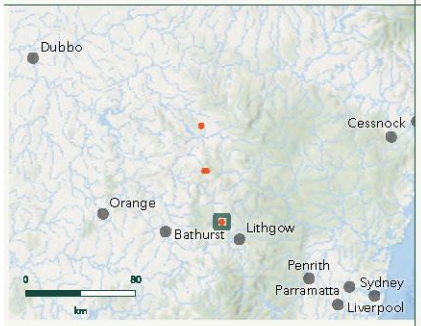
Niche PM: Ben Slack
Niche Proj. #: 9211
Client: Arup

0 220
m
GDA2020 MGA Zone 56

Subject area: / PlacePoint: / Hillshade: Esri, USGS/ World_Ocean_Base: Esri, GEBCO, Garmin, NaturalVue/ AHIMS: / Proposed impact area: / Road: / Rail: / Waterbody: / Lot: / Local Government Area: / Hillshade: Esri, Geoscience Australia, NASA, NGA, USGS/ State Heritage Register Curtilage: / Local Heritage Place: / Transparency Mask: / World Imagery: Vantor | Watercourses, Waterbodies, Road and Rail alignments, Protected areas of NSW © Spatial Services 2021. | Niche uses GDA2020 as standard for all project-related data. In order to ensure that data from numerous sources and coordinate systems is aligned, on-the-fly transformation to GDA2020 MGA Zone 56 is used in the map above. For ease of reference, the grid tick marks and labels shown around the border of the map are presented in GDA2020 MGA Zone 56. | Print Date: 11/03/2026

Drawn by: AndreaSward File: C:\Users\AndreaSward\Niche\GIS - APRX - APRX\a9200\a9211_TranspositionTowers_NSW\Proj\a9211_TranspositionTowers_NSW_Central_AODD.aprx Last updated: 11/03/2026 3:10 PM





Subject area
Proposed impact area

Transport

Minor road

Hydrography

Strahler stream order

1
2
3
Waterbody

Administrative and Property Boundaries

Lot
Local Government Area

AHIMS

Artefact

Figure 4.3

AHIMS Sites and Heritage Items - Mt Piper Substation West

Arup Transgrid Transposition Towers Heritage - Central Cluster AODD

Niche PM: Ben Slack
Niche Proj. #: 9211
Client: Arup

0 150
m
GDA2020 MGA Zone 56

Subject area: / PlacePoint: / Hillshade: Esri, USGS/ World_Ocean_Base: NIWA, GeosciencesAustralia, Esri, GEBCO, Garmin, NaturalVue/ AHIMS: / Proposed impact area: / Road: / Rail: / Waterbody: / Lot: / Local Government Area: / Hillshade: Esri, Geoscience Australia, NASA, NGA, USGS/ State Heritage Register Curtilage: / Local Heritage Place: / Transparency Mask: / World Imagery: Vantor | Watercourses, Waterbodies, Road and Rail alignments, Protected areas of NSW © Spatial Services 2021. | Niche uses GDA2020 as standard for all project-related data. In order to ensure that data from numerous sources and coordinate systems is aligned, on-the-fly transformation to GDA2020 MGA Zone 56 is used in the map above. For ease of reference, the grid tick marks and labels shown around the border of the map are presented in GDA2020 MGA Zone 56. | Print Date: 13/05/2026

Drawn by: AndreaSward File: C:\Users\AndreaSward\Niche\GIS - APRX - APRX\a9200\a9211_TranspositionTowers_NSW\Proj\a9211_TranspositionTowers_NSW_Central_AODD.aprx Last updated: 13/05/2026 10:46 AM

3.4 Step 2b - Are there any other sources of information of which a person is already aware?

Yes.

3.4.1 Previous heritage assessments within or relevant to the Subject Areas

The heritage assessments presented in Table 2 below have occurred nearby to the Subject Areas.

Table 2: Previous heritage assessments within proximity of the Subject Areas

Report details	Proximity to Subject Area	Details
OzArk Environment & Heritage (2010), Aboriginal & Non-Indigenous Heritage Assessment: Mt Piper Power Station Ash Placement Project	Included Mt Piper Substation Subject Area in assessment	The project involved two proposed ash placement areas (Lamberts North & South) adjacent to Mt Piper. Several Aboriginal sites (open artefact scatters) had been recorded in these areas by earlier surveys, but due to extensive open-cut mining over the previous 20 years, all but two sites were destroyed. The two remaining sites – [redacted] – were protected on-site under a heritage management plan. The 2010 field survey found no new Aboriginal objects within the heavily disturbed ash placement zones and judged it unlikely that intact sites remain there. It recommended continuing to safeguard the two extant sites [redacted] and updating the Cultural Heritage Management Plan to ensure they remain undisturbed. [redacted]
Navin Officer Heritage Consultants (2007) Cultural Heritage Assessment – Western Rail Coal Unloader, Pipers Flat	Approx 2 km south of Mt Piper Substation.	The project involved a rail loop and conveyor corridor to supply coal to Mt Piper. Two previously recorded Aboriginal sites [redacted] were known in the Pipers Flat area. The 2007 survey recorded 1 new isolated stone artifact [redacted] and 7 Aboriginal potential archaeological deposits (PADs) along the proposed rail alignment. No complex or stratified sites were evident on the surface, but several locations (generally on creek flats or lower slopes) had subsurface archaeological potential. The assessment recommended avoiding or testing these PAD areas before construction.

		None of the previously recorded Aboriginal heritage items identified in this project would be impacted by the proposed activity.
OzArk Environment & Heritage (2025), Aboriginal Cultural Heritage Assessment Report – Mount Piper to Wallerawang Transmission Line Upgrade Project	Includes part of the current Mt Piper Substation - West Subject Area	Assessment for a proposed transmission line between Mt Piper and Wallerawang Substations. As a result of the assessment, two newly identified sites (an isolated find and a PAD) were recorded, and four previously identified sites (two PADs, an isolated find and an artefact scatter with PAD) were deemed to be within the project footprint. Test excavations for the project identified a total of 139 artefacts from 17 test pits. It was determined that two of the six identified sites would be subject to harm as a result of the proposed works. None of the previously recorded Aboriginal heritage items identified in this project would be impacted by the proposed activity.

There have been limited archaeological assessments in the areas surrounding the Subject Areas. Assessments near the Subject Areas have been mostly undertaken in association with mining and infrastructure works.

Previous archaeological assessments undertaken within the vicinity of the Subject Areas demonstrate that isolated finds and artefact scatters are the most common site types in the local region.

Predictive modelling involves reviewing existing literature to determine basic patterns of site distribution. A number of predictive models of Aboriginal occupation and settlement in the areas surrounding the Subject Areas have been made, as presented above (OzArk 2005; OzArk 2010; Navin Officer 2007; South East Archaeology 2013, OzArk 2025).

Certain topographical features are likely to contain sites based on the assumption that they provide distinctive sets of constraints that influenced Aboriginal land use patterns. Overall, the following predictive statements developed for the region can also be applied to the current Subject Areas:

- Artefact scatters and isolated artefacts are the most likely site types to be encountered within the Subject Areas.
- Archaeological cultural heritage sites are more likely to be found along watercourses, drainage lines, gentle slopes, hilltops, and ridges.
- Artefact density is likely to be greater within 50 m distance from a watercourse while lower density sites are expected within 100 m from watercourses.
- The dominant raw material for artefacts will likely be mudstone or silcrete, with small amounts of quartz, chert, petrified woods, and other raw materials. The manufacture of backed artefacts is likely to be present.
- Archaeological evidence is more likely to occur in undisturbed areas.

3.5 Step 2c - Are there landscape features that are likely to indicate the presence of Aboriginal Objects?

Yes.

Based on the findings of the desktop assessment above (Section 2, Steps 2a and 2b) the Subject Areas contain the following landscape features that are likely to indicate the presence of Aboriginal objects, as identified by the Due Diligence Code of Practice:

— Structure 356: Within 200 m of waters
— Structure 432: Within 200 m of waters
— Mt Piper Substation - West: Within 200 m of waters

3.6 Step 3 - Can the harm or the activity be avoided?

No.

Based on the proposed development within the Subject Areas, harm cannot be avoided as the conductors need to be rearranged along the length of the transmission line along its length.

3.7 Step 4 - Does a desktop assessment and visual inspection confirm that there are Aboriginal Objects or that they are likely?

The desktop assessment above (Section 2, Steps 2a and 2b) confirmed that there are no Aboriginal sites within proximity to two of the three Subject Areas. Two Aboriginal sites were identified in proximity to the Mt Piper Substation West Subject Area. No Aboriginal sites are located within any of the Subject Areas.

However, given there are landscape features that are likely to indicate presence of Aboriginal objects (Step 2c) and the activity cannot be avoided (Step 3), a site inspection of each Subject Area was conducted. The site inspections were carried out by the following personnel across three days on 2-3 September 2025 and 2 October 2025:

— Samuel Riley (Heritage Consultant, Niche) – all sites
— Dan Owens (Transgrid) –Structure 356
— Bridie Jackson (Transgrid) – Structure 432 and Mt Piper Substation West
— Lanisha Davis (Bathurst LALC) – Structure 432 and Mt Piper Substation West
— Matthew Sullivan (Bathurst LALC) – Structure 432, Structure 356 and Mt Piper Substation West
— John Brasher-Minsaan (Bathurst LALC) – Structure 356

3.7.1 Structure 356

This Subject Area was inspected on the afternoon of 2 October 2025.

Disturbances within the Subject Area consist predominantly of the access track and Structure 356 itself. The area around Structure 356 has been cleared as part of the easement area, with remnant vegetation present on the eastern and western fringes. No trees of sufficient age or size were identified that could hold indicators of cultural modification.

Ground cover predominantly consists of dense grasses, with the majority of exposures occurring along the access track and at the base of Structure 356. Exposure and visibility across the Subject Area generally varied between 0% and 50%.

No Aboriginal objects or PADs were identified. Due to the lack of significant landscape features and considerable disturbance present, Structure 356 has been assessed as having low potential to contain subsurface scatters of stone artefacts.



Plate 8: View south of easement towards Structure 356.



Plate 9: Typical remnant vegetation to the east and west of Structure 356.



Plate 10: Typical ground surface exposure within Subject Area.



Plate 11: View north from the base of Structure 356 along easement.

3.7.2 Structure 432

This Subject Area was inspected on the afternoon of 2 September 2025.

Disturbances consist predominantly of the access track and Structure 432 itself. The area around Structure 432 has been cleared as part of the easement area, and there is minimal remnant vegetation remaining, except in some isolated areas along the access track and to the east of Structure 432. The easement area appeared to have been recently disturbed, as vehicle and machinery tracks were prominent and had created exposures of the ground surface.

Ground cover predominantly consists of dense grasses, with the majority of exposures occurring along the access track and at the base of Structure 432. Exposure and visibility across the Subject Area generally varied between 0% and 50%.

No Aboriginal objects or PADs were identified. Due to the lack of significant landscape features and considerable disturbance present across the Subject Area, it has been assessed as having low potential to contain subsurface scatters of stone artefacts.



Plate 12: View west of access track back towards Mount Vincent Road



Plate 13: View east towards Structure 432, showing cleared easement area



Plate 14: Typical grass ground surface cover within Subject Area



Plate 15: View east from the base of Structure 432 towards the remnant vegetation in the Subject Area.

3.7.3 Mt Piper Substation – West

This Subject Area was inspected on the morning of 3 September 2025.

Much of the Subject Area is heavily vegetated, with minimal ground exposure visible beyond the tracks which run through each area. Much of the ground surface material present in exposures appears to be fill which has been imported to the Subject Area and is not in situ. Exposure and visibility across the Subject Area generally varied between 0% and 40%.

Disturbances are widespread, predominantly consisting of the track itself, fences and electrical towers. There is minimal remnant vegetation within the Subject Area, and no trees of sufficient age or size to contain cultural scarring were identified within the Subject Area.

No Aboriginal objects or PADs were identified. Due to the lack of significant landscape features and heavy disturbance present across the Subject Area, it has been assessed as having low potential to contain subsurface scatters of stone artefacts.



Plate 16: View east towards dense vegetation and substation complex



Plate 17: Typical ground surface cover at base of transmission tower within Subject Area



Plate 18: View north of access track on western boundary of the Subject Area



Plate 19: Close up of dense vegetation preventing ground surface visibility in eastern Subject Area.



Plate 20: View west of access track within Subject Area



Plate 21: Typical dense ground cover within Subject Area, preventing ground surface visibility.



Plate 22: View north towards Substation complex



Plate 23: Typical surface exposure within Subject Area, showing what appears to be imported material.

3.8 Step 5 - Further investigations and impact assessment

On the basis of this assessment, it is unlikely that any Aboriginal objects remain within the Subject Area due to ground disturbances within these areas.

One landscape feature which is associated with Aboriginal cultural heritage sites was identified within each Subject Area, being:

— Within 200 m of waters

Based on past disturbance, it was determined that while there are landscape features present within the Subject Areas which are usually associated with Aboriginal cultural heritage, there is low surface to subsurface archaeological potential owing to the extensive disturbance evident, and that for the proposed activity, no further investigation or impact assessment is required.

4. Conclusions and recommendations

A desktop assessment and site inspection undertaken in preparation for this AODD concluded that there are no Aboriginal sites located within any of the Subject Areas and the potential for the Subject Areas to contain intact surface or subsurface Aboriginal heritage is low. No further investigation or assessment regarding Aboriginal heritage is required prior to the proposed works occurring.

The works may proceed with caution if undertaken in accordance with the following recommendations:

Table 3: Recommendations

Recommendations		
1.	Proposed works	As the potential for the Subject Areas to contain intact surface or subsurface Aboriginal heritage has been assessed as low, the proposed works can proceed with caution, with no further assessment or investigation relating to Aboriginal heritage required.
2.	Works outside the assessed Subject Area	Should earthworks be undertaken outside the Subject Areas assessed in this document, further impact assessment should be undertaken prior to work in those areas.
3.	Site inductions	Prior to works commencing, all workers should be inducted into the Subject Area, so they are made aware of their obligations under the NPW Act, the location of known heritage sites near the Mt Piper Substation - West Subject Area and any conditions of unexpected finds procedures prior to and during and after construction activities.
Unexpected Finds Procedure		
4.	Unexpected Aboriginal object(s) and/or sites	If suspected Aboriginal objects are identified during construction the following procedures must be followed: — Immediately cease all activity at the location. — Ensure no further harm occurs and secure the area. — Contact a suitably qualified heritage specialist to inspect the find and confirm if it is an Aboriginal object, and to determine the need for further investigation or management. — If the find is confirmed to be an Aboriginal object, contact NSW Environment and Heritage to confirm the next steps for management. — No further action to be undertaken until NSW Environment and Heritage provides written advice.
5.	Human remains	In the unlikely event that suspected human remains are encountered during works, all work in the area that may cause further impact must cease immediately and: — The location, including a 20 m curtilage, should be secured using barrier fencing to avoid further harm. — The NSW Police must be contacted immediately. — No further action is to be undertaken until the NSW Police provide written advice. — If the skeletal remains are identified as Aboriginal, the proponent or their agent must:

Recommendations		
		— Contact a suitably qualified heritage specialist; and NSW Environment and Heritage to confirm the next steps for management. — No further action to be undertaken until NSW Environment and Heritage provides written advice.

5. References

Department of Environment Climate Change and Water (DECCW). 2010. *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW*.

Navin Officer Heritage Consultants (2007). *Cultural Heritage Assessment – Western Rail Coal Unloader, Pipers Flat*.

NSW State Government (1974). *National Parks and Wildlife Act* (NPW Act) 1974, NSW.

NSW State Government (1977). *NSW Heritage Act 1977* (Heritage Act) 1974, NSW.

NSW State Government (1979). *Environmental Planning and Assessment Act* (EP&A Act) 1979, NSW.

OzArk Environment and Heritage (2010. *Aboriginal & Non-Indigenous Heritage Assessment: Mt Piper Power Station Ash Placement Project*.

OzArk Environment & Heritage (2005). *Indigenous and Non-Indigenous Heritage Assessment: Wollar–Wellington 330 kV Transmission Line*.

OzArk Environment and Heritage (2025). *Aboriginal Cultural Heritage Assessment Report – Mount Piper to Wallerawang Transmission Line Upgrade Project*.

South East Archaeology (2013). *Aboriginal Cultural Heritage Assessment – Wilpinjong Coal Mine Modification*.

Appendix 1
AHIMS search results

Excellence in
your environment.

AHIMS Web Services (AWS)
Search Result

Your Ref/PO Number : Structure 356

Client Service ID : 1126905

Samuel Riley

3/17A Frederick Street
East Gosford New South Wales 2250

Attention: Samuel Riley

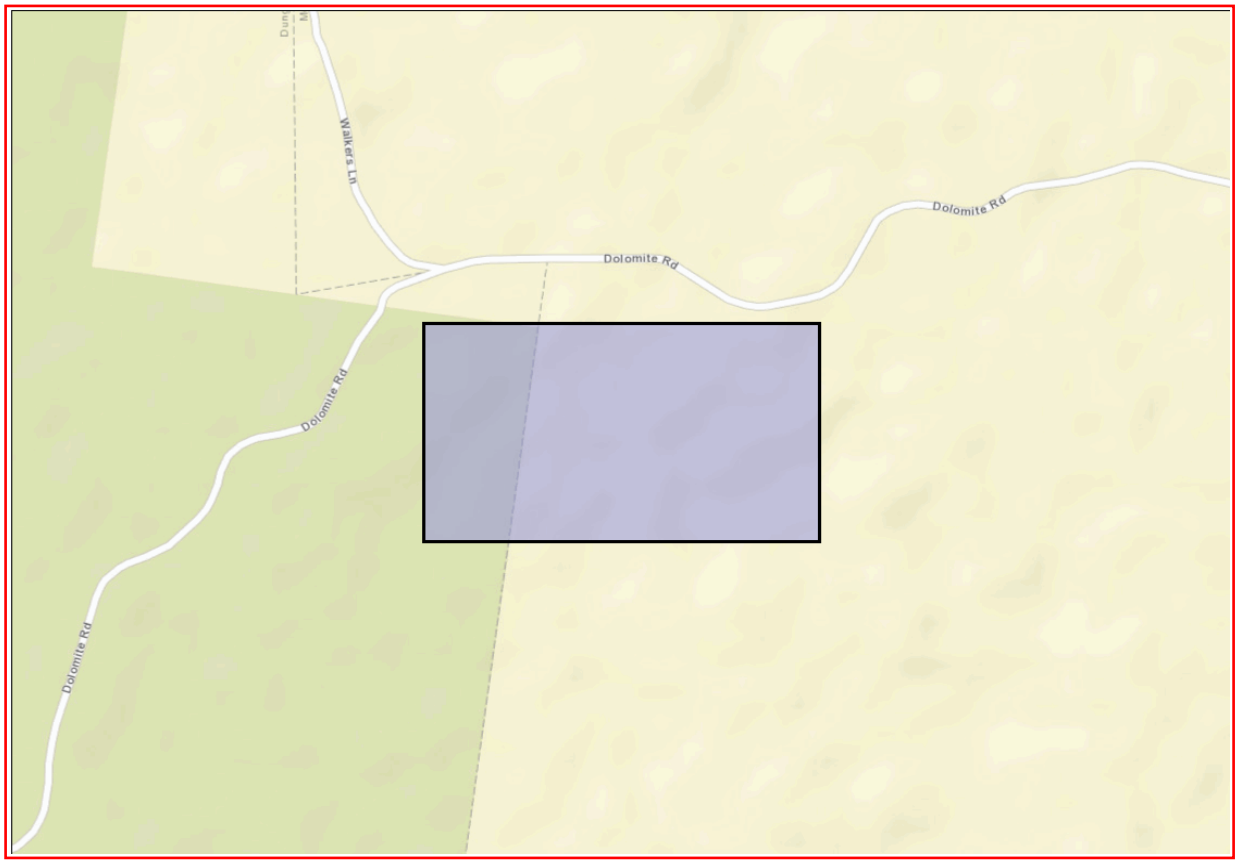
Email: sriley@niche-eh.com

Date: 13 May 2026

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lat, Long From : -32.736, 149.883 - Lat, Long To : -32.7323, 149.8908, conducted by Samuel Riley on 13 May 2026.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of Heritage NSW AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

0	**Aboriginal sites are recorded in or near the above location.**
0	**Aboriginal places have been declared in or near the above location. ***

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the NSW Government Gazette (https://www.legislation.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Heritage NSW upon request

Important information about your AHIMS search

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Heritage NSW and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date. Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

Level 6, 10 Valentine Ave, Parramatta 2150
Locked Bag 5020 Parramatta NSW 2124
Tel: (02) 9585 6345

ABN 34 945 244 274
Email: ahims@environment.nsw.gov.au
Web: www.heritage.nsw.gov.au

AHIMS Web Services (AWS)
Search Result

Your Ref/PO Number : Structure 432

Client Service ID : 1126910

Samuel Riley

3/17A Frederick Street
East Gosford New South Wales 2250

Attention: Samuel Riley

Email: sriley@niche-eh.com

Date: 13 May 2026

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lat, Long From : -33.029, 149.9114 - Lat, Long To : -33.0272, 149.9153, conducted by Samuel Riley on 13 May 2026.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of Heritage NSW AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

0	**Aboriginal sites are recorded in or near the above location.**
0	**Aboriginal places have been declared in or near the above location. ***

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the NSW Government Gazette (https://www.legislation.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Heritage NSW upon request

Important information about your AHIMS search

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- Information recorded on AHIMS may vary in its accuracy and may not be up to date. Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

Level 6, 10 Valentine Ave, Parramatta 2150
Locked Bag 5020 Parramatta NSW 2124
Tel: (02) 9585 6345

ABN 34 945 244 274
Email: ahims@environment.nsw.gov.au
Web: www.heritage.nsw.gov.au

AHIMS Web Services (AWS)
Search Result

Your Ref/PO Number : Mt Piper Switch Stn

Client Service ID : 1126898

Samuel Riley

3/17A Frederick Street
East Gosford New South Wales 2250

Attention: Samuel Riley

Email: sriley@niche-eh.com

Date: 13 May 2026

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lat, Long From : -33.368, 150.0184 - Lat, Long To : -33.3608, 150.0339, conducted by Samuel Riley on 13 May 2026.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of Heritage NSW AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

2	**Aboriginal sites are recorded in or near the above location.**
0	**Aboriginal places have been declared in or near the above location. ***

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the NSW Government Gazette (https://www.legislation.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Heritage NSW upon request

Important information about your AHIMS search

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Heritage NSW and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date. Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : Mt Piper Switch Stn

Client Service ID : 1030257

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
[redacted]	[redacted]	GDA	[redacted]			Open site	Valid	Artefact : -		
	Contact	**Recorders**	OzArk Environmental and Heritage Management - Dubbo,Mr.Harrison Rochford					**Permits**		
[redacted]	[redacted]	AGD	[redacted]			Open site	Valid	Artefact : -	Open Camp Site	387
	Contact	**Recorders**	ASRSYS					**Permits**		

**** Site Status**

Valid - The site has been recorded and accepted onto the system as valid

Destroyed - The site has been completely impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There is nothing left of the site on the ground but proponents should proceed with caution.

Partially Destroyed - The site has been only partially impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There might be parts or sections of the original site still present on the ground

Not a site - The site has been originally entered and accepted onto AHIMS as a valid site but after further investigations it was decided it is NOT an aboriginal site. Impact of this type of site does not require permit but Heritage NSW should be notified

Report generated by AHIMS Web Service on 05/08/2025 for Samuel Riley for the following area at Lat, Long From : -33.368, 150.0184 - Lat, Long To : -33.3608, 150.0339. Number of Aboriginal sites and Aboriginal objects found is 2

This information is not guaranteed to be free from error omission. Heritage NSW and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

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Our expertise

- Natural capital and offsetting
- Ecology
- Heritage management
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Appendix F Neutral or Beneficial Effect (NorBE) Assessment

NorBE assessment – is there likely to be a neutral or beneficial effect on water quality?	
1. Are there any identifiable potential impacts on water quality? What pollutants are likely? Major potential pollutants are sediments (fine & coarse), nitrogen, phosphorus, pathogens and hazardous chemicals and contaminants such as oil/fuel. At what stage do the impacts occur? *i.e. during construction and/or post construction?*	There are no identifiable potential impacts on water quality from the proposed activity. Pollutants may be released from construction plant and equipment, or mobilised from contaminant-bound soils during excavation or ground disturbance. Likely pollutants from construction activities include: • Petrochemicals/hydrocarbon-based fuels. • Petroleum-based lubricants and oils. • Fine and coarse sediments. • Pathogens and biological pollutants from imported materials. • Plastics associated with construction and packaging materials. Mitigation measures would be implemented to avoid pollution to the wider environment. Any polluting substances originating from construction plant or equipment would be contained onsite.
2. For each pollutant list the safeguards needed to prevent or mitigate potential impacts on water quality? *These may be WaterNSW endorsed current recommended practices (CRPs) and or equally effective other practices)*	The following safeguards would be implemented to prevent or mitigation potential impacts on water quality. **Petrochemicals/hydrocarbon-based fuels, petroleum-based lubricants and oils** • No refuelling or bulk herbicide preparation shall occur within 40 m of natural or constructed drainage lines or water bodies. **Fine and coarse sediments** • All erosion and sediment control measures shall be designed, implemented and maintained in accordance with relevant sections of *Managing Urban Stormwater: Soil and Construction Volume 1* (Landcom, 2004). • Use of diversion drains (or similar) to reduce water flow into excavations and off-site. • Separation of clean and dirty water, where possible • Methodology for intercepted/collected water (eg regular monitoring, treatment and discharge). • Installation of appropriate erosion control devices (sediment fence, coir logs, sandbags, etc), including monitoring and maintenance. • Spoil shall be stockpiled in a manner to avoid the possibility of sediments entering stormwater drains, waterways or migrating off-site.

NorBE assessment – is there likely to be a neutral or beneficial effect on water quality?	
	Pathogens and biological pollutants • Any imported fill shall be certified at source location (eg Quarrymaster or landholder) as pathogen and weed free Excavated Natural Material (ENM) or Virgin Excavated Natural Material (VENM) in accordance with the Protection of the *Environment Operations Act 1997* (POEO Act) and the Waste Regulation. **Plastics and packaging waste** • Waste mitigation and management strategies shall be documented in the CEMP and be in accordance with Transgrid's Waste Management Procedures and associated Work Instructions.
3. Will the safeguards be adequate for the time required? How will they need to be maintained?	Yes, the safeguards would be implemented for the full duration of the construction program. The CEMP for the proposed activity should include provision for monitoring and auditing the condition of and efficacy of mitigation measures being implemented.
4. Will all impacts on water quality be effectively contained on the site by the identified safeguards (above) and not reach any watercourse, waterbody or drainage depression? Or will impacts on water quality be transferred outside the site for treatment? How? Why?	With the implementation of the identified safeguards, offsite impacts to water quality are considered unlikely. Should monitoring during construction identify offsite water quality impacts, additional mitigation measures would be implemented to prevent further deterioration of any receiving waters.
5. Is it likely that a neutral or beneficial effect on water quality will occur? Justify.	Yes, it is likely that a neutral effect on water quality would occur as a result of the proposed activity. With the implementation of safeguards and appropriate mitigation measures, no offsite water quality impacts are expected.