

REF Decision Statement

Central West Orana Renewable Energy Zone Transposition Project: Southern Cluster

Transgrid is the proponent for the Central West Orana Renewable Energy Zone (CWOREZ) Transposition Project: Southern 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 117 and 229 on Line 5A6/5A7 and reconfiguration of conductors at Structure 1 on Line 5A6/5A7, situated immediately south 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.

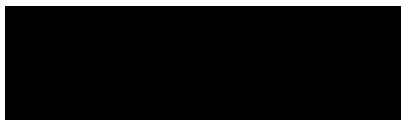
A Review of Environmental Factors (REF) was prepared in September 2026 by Arup to assess the potential impacts of the proposed activity.

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.

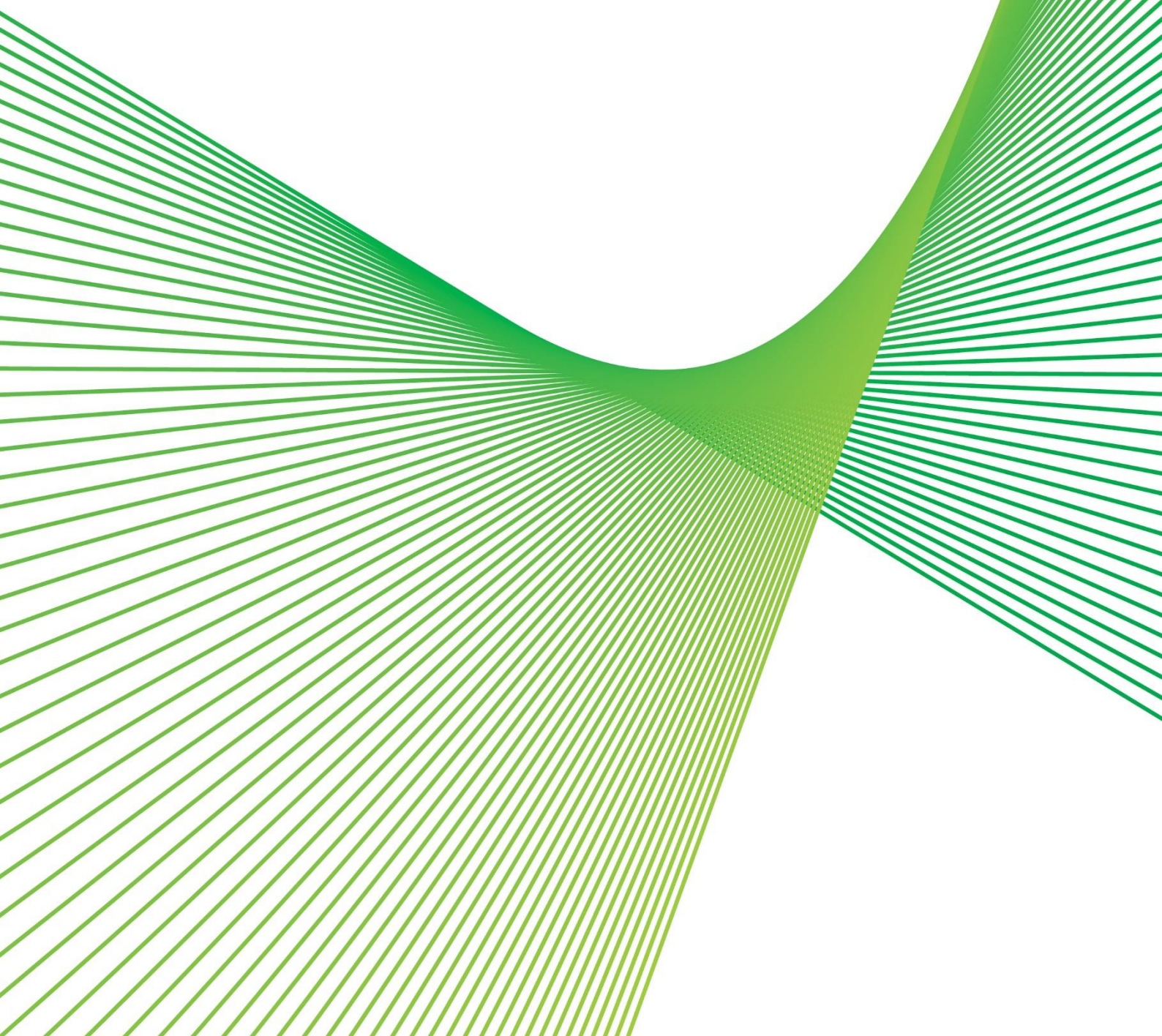


Monika Moutos
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Date: 22/09/2026

Review of Environmental Factors

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

September 2026



Document preparation history

Revision	Reviewed by	Date
01	Charlie Sammoun and Natalie Swannack	June 2026
Review		
02	Charlie Sammoun and Natalie Swannack	July 2026
Review		
03	Charlie Sammoun and Natalie Swannack	September 2026
Review		

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 clause 170 of the EP&A Regulation and the information it contains is neither false nor misleading.

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Signature	
Date	14 th September 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.

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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 500kV 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 'Southern Cluster'.

1.1. Proposed activity overview

The proposed activity comprises:

- Installation of transposition structures at Structures 117 and 229 on Line 5A6/5A7 between Transgrid's existing substations at Mount Piper and Bannaby.
- Reconfiguration of conductors (a phase rollover*) at Structure 1 on Line 5A6/5A7, situated immediately south of the 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 '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, construction of new access tracks, 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.

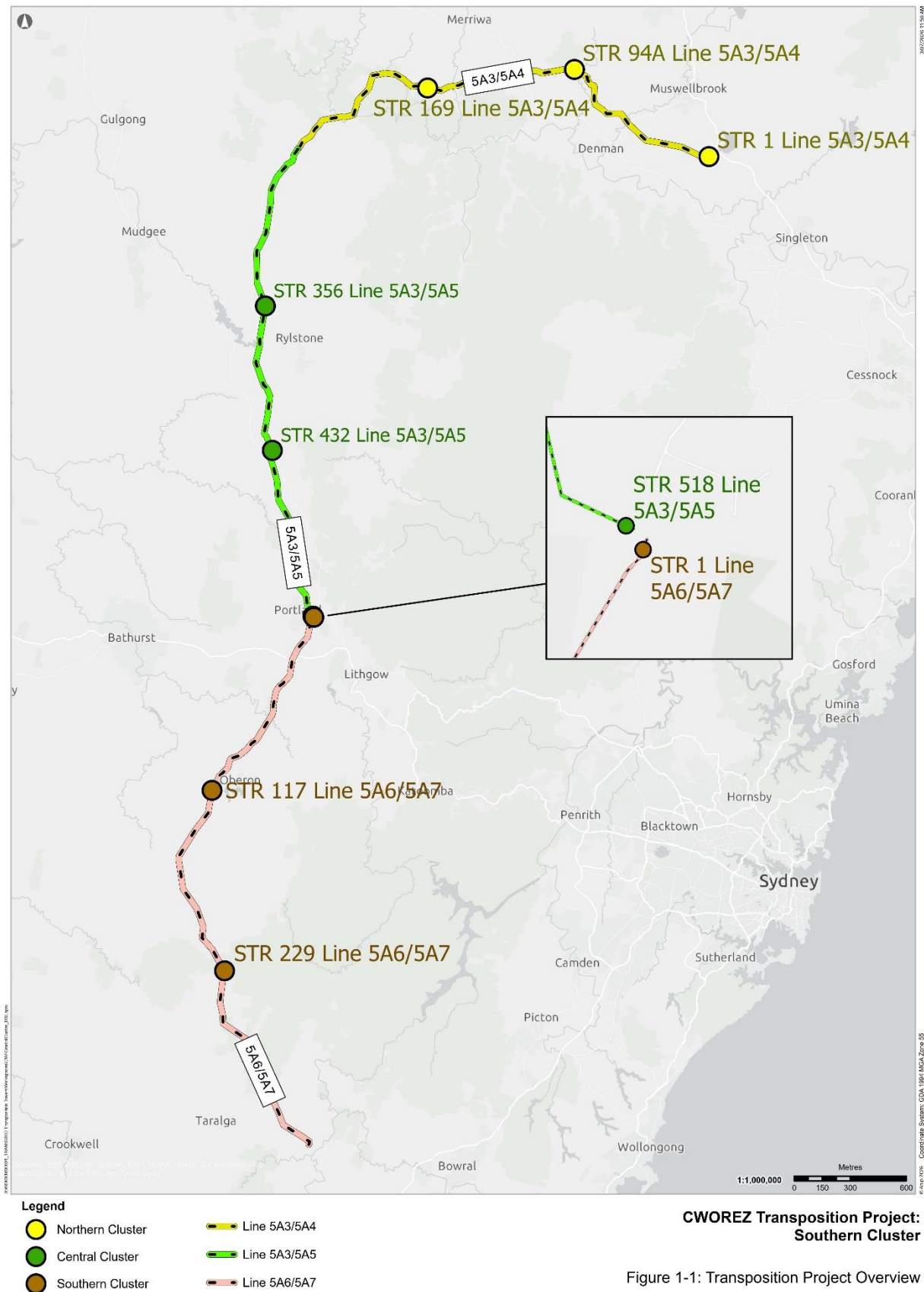


Figure 1-1 Transposition Project Overview

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	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
	connections 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 Pole	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 117 and Structure 229 on Line 5A6/5A7. Each transposition structure would consist of four steel poles approximately 55 m in height, 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 1 on Line 5A6/5A7 next to Mount Piper 330 kV substation (referred to as Mount Piper Substation – South 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 construction work site (which includes the main construction area, 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 m².
 - The phase rollover site construction bench would be about 80 x 80 m around the transmission structure, occupying an area of about 6,400 m².

- Repair, and upgrade of a total of approximately 1.32 km of existing formed access tracks and the construction of approximately 1.04 km of new access tracks to the construction works site for Structures 117 and 229 Access tracks to the construction impact area at Mount Piper Substation – South have been assessed in the CWOREZ Transposition project; Central Cluster REF (Transgrid, 2026).
- 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 new and upgraded access tracks 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.

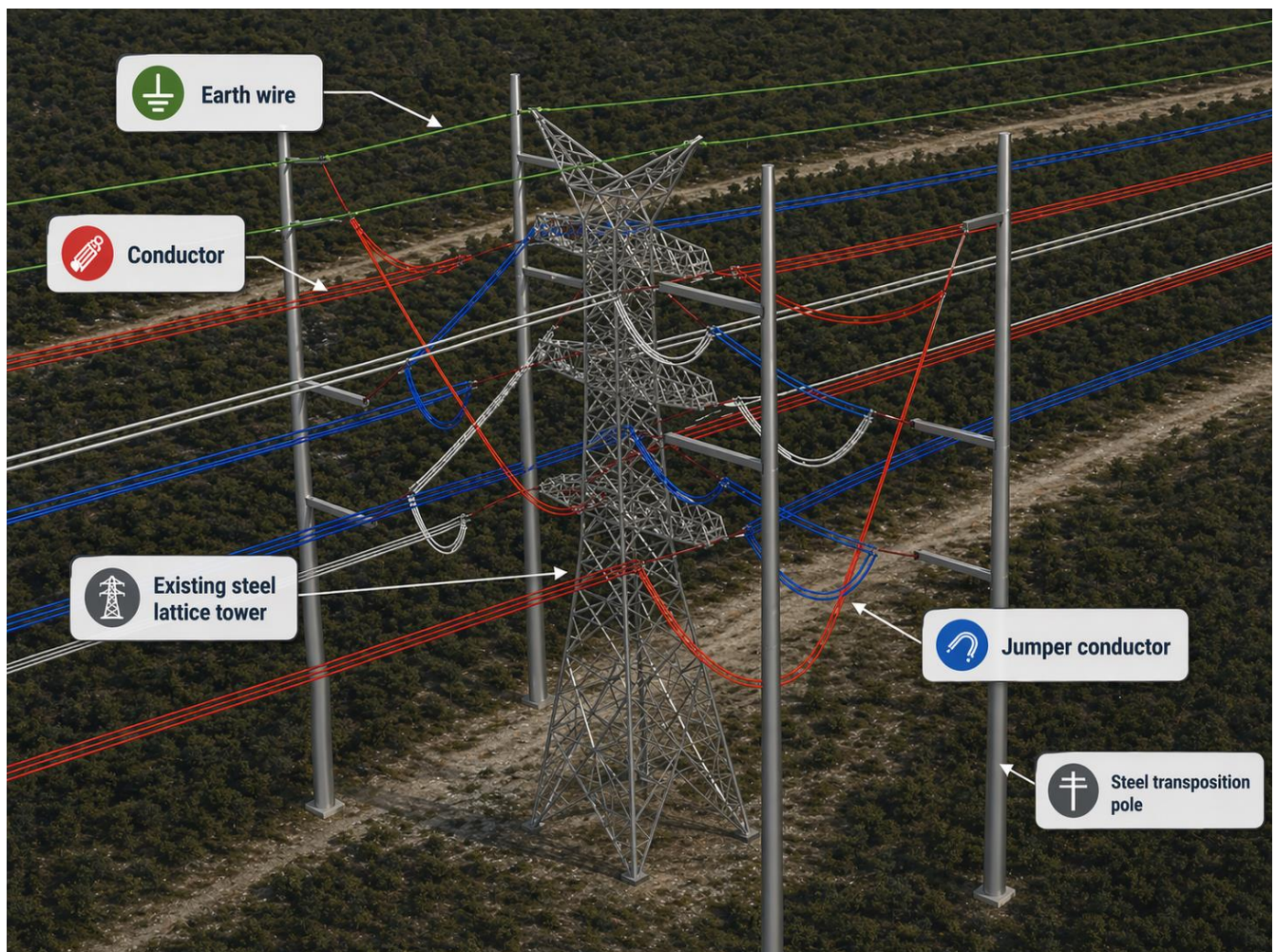


Figure 3-1 Schematic showing the four-pole transposition structure arrangement around the existing steel lattice structure

3.2. Proposed activity location

The proposed activity is located at three distinct locations along Line 5A6/5A7 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
<i>Line 5A6/5A7 Transposition sites</i>			
Structure 117	Oberon Council	Lot 30 DP757047 and Lot 1 DP1115512	Structure 117 is on privately owned land, with the surrounding area characterised by broadscale rural agricultural operations, scattered trees and remnant native forest.
Structure 229	Oberon Council	Lot 81 DP753064	Structure 229 is on privately owned land, with the surrounding area mainly characterised by rural agricultural land comprising cleared areas and densely vegetated remnant native forests. Gurnang State Forest is located approximately 25 m east of Structure 229.
<i>Phase Rollover sites</i>			
Structure 1 on Line 5A6/5A7 (Mount Piper Substation – South)	Lithgow City	Lot 162 DP751638 and Lot 103 DP1164619	The phase rollover site on Line 5A6/5A7 is located to the immediate south 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 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.

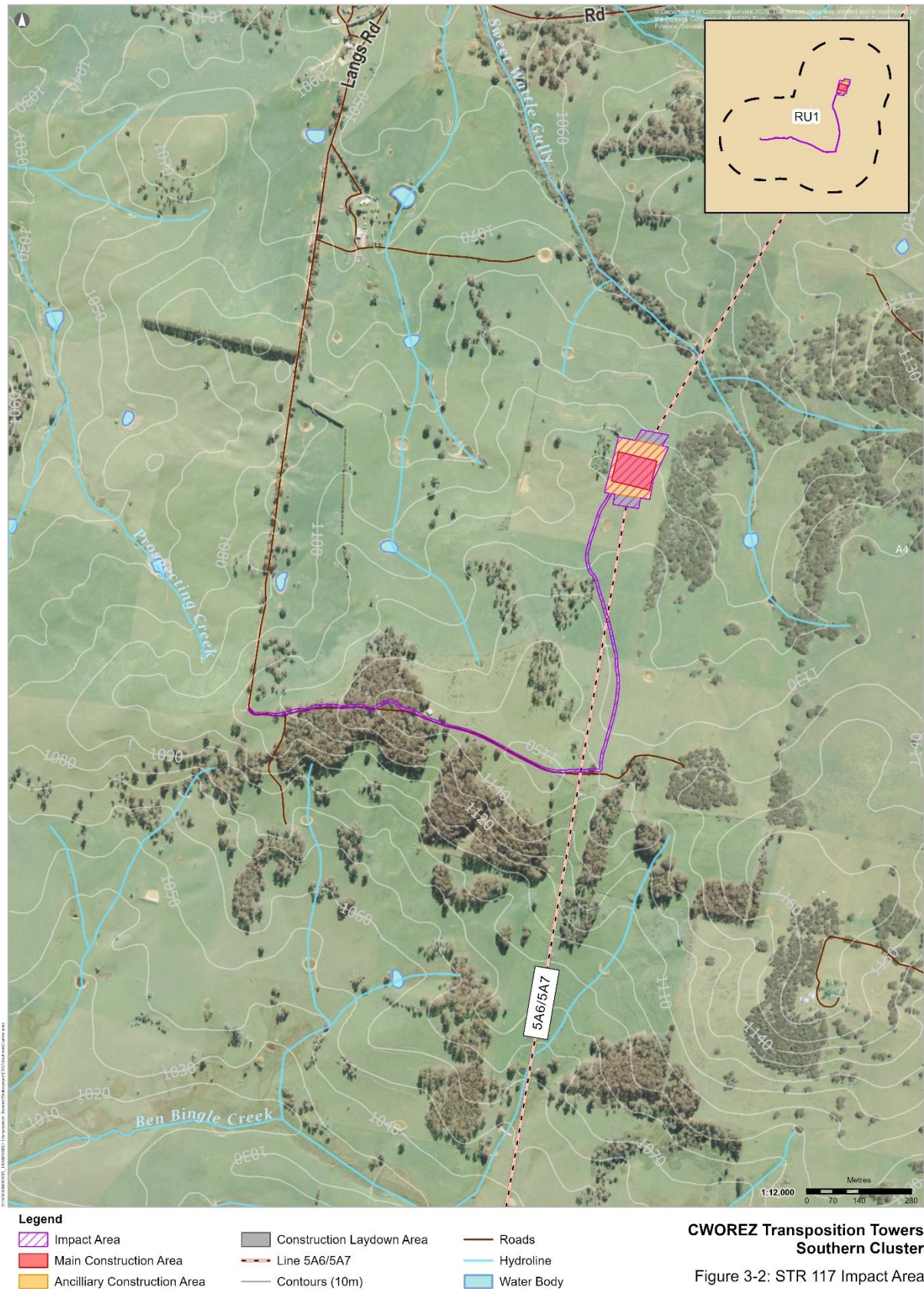


Figure 3-2 Structure 117 Impact Area

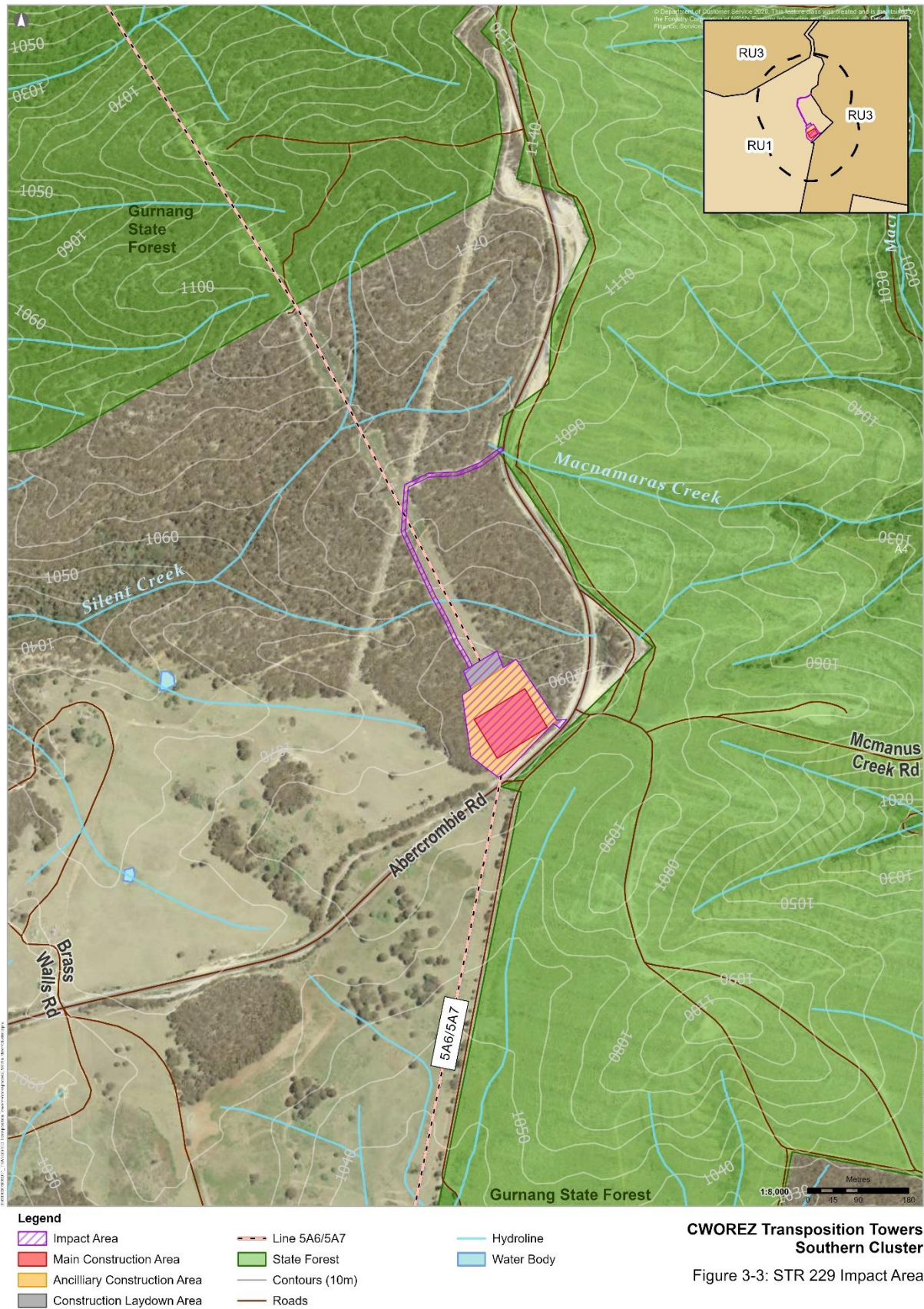


Figure 3-3 Structure 229 Impact Area

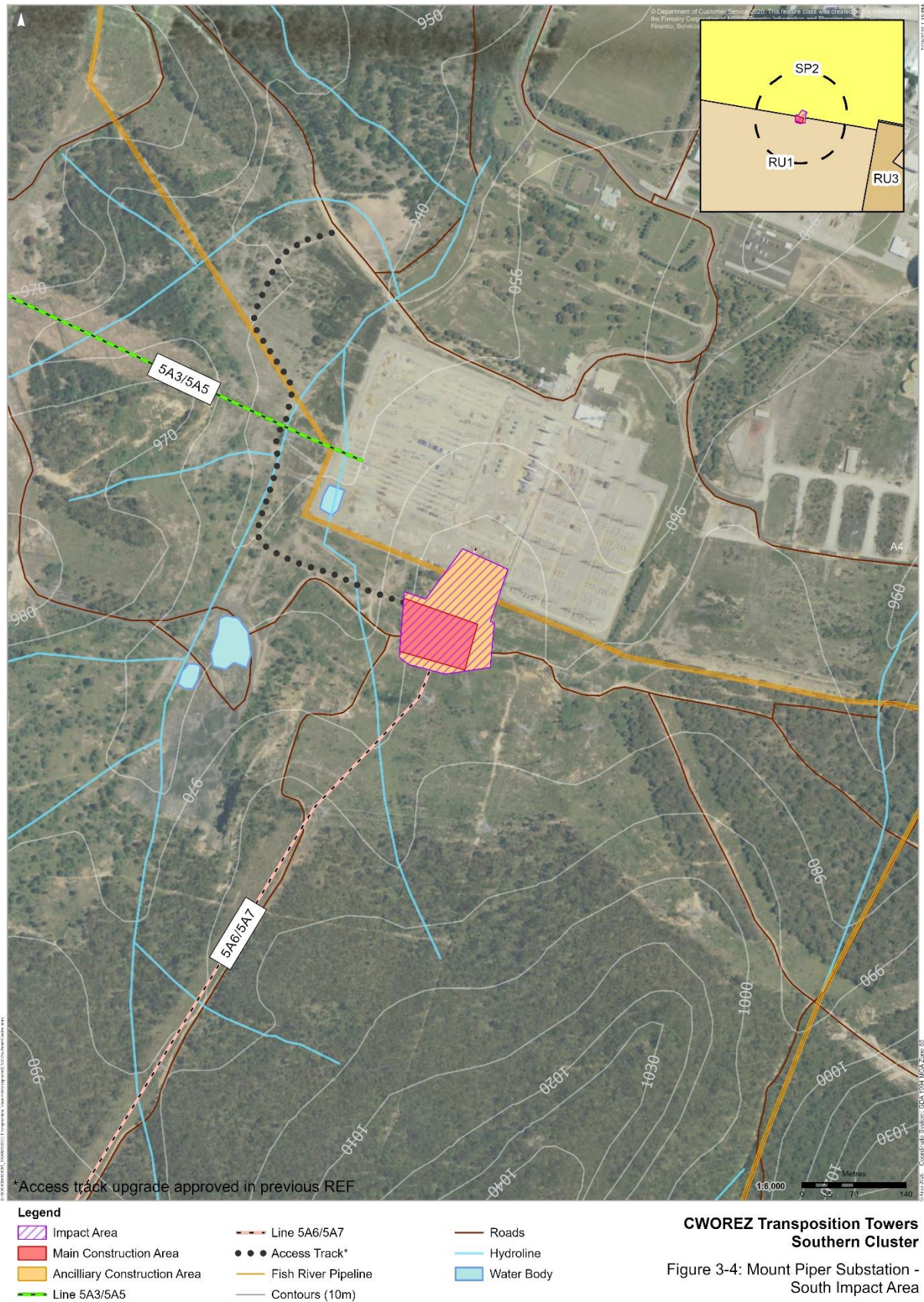


Figure 3-4 Structure 1 (Mount Piper Substation – South) 5A6/5A7 Impact Area

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	
Construction and upgrade of access tracks	Access to the work locations for all construction plant, equipment and vehicles would require upgrades to existing access tracks and construction of short sections of new track. Work to establish or upgrade access tracks would generally involve: • import of road base, 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. New access tracks and those that would require upgrades have been included in the proposed activity impact area shown in Figure 3-2 to Figure 3-4. Access tracks in the impact area are 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 one hollow bearing tree (HBT) within the Structure 117 impact area which supports a total of two hollows and 17 HBTs within the Structure 229 impact area, which supports a total of 31 hollows. 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

Activity	Overview
	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. 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 <i>in-situ</i> 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 removal of road base 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
- EWP's
- 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 4 2026 and is expected to take about 12 months over the course of two years. The proposed activity start and end 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.

Construction would require a maximum of 20-25 construction workers per day during peak construction of the proposed activity at each construction work site.

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 aim 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			
<i>Environment Protection and Biodiversity Conservation Act 1999</i> (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			
<i>Biodiversity Conservation Act 2016</i> (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	The proposed activity would not affect species listed as Vulnerable under the BC Act (refer section 6.4). While the proposed activity requires vegetation removal, none	Not required.

Legislation	Potential approval requirements	Relevance to the proposed activity	Permit/approval/licence requirement
	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. 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.	of the impacted vegetation communities are associated with a Threatened Ecological Community (TEC). It is unlikely that the proposed activity would have a significant impact on any threatened species, ecological communities or their habitats. The proposed activity would not be carried out on a declared area of outstanding biodiversity value.	
<i>Heritage Act 1977</i> (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.
<i>National Parks and Wildlife Act 1974</i> (NPW Act) and <i>National Parks and Wildlife Regulation 2019</i> (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 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.

Legislation	Potential approval requirements	Relevance to the proposed activity	Permit/approval/licence requirement
	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).		
<i>Fisheries Management Act 1994</i>	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.	The Fish River Supply Pipeline, which is managed by WaterNSW crosses beneath the Mount Piper substation site. However, the proposed works would not directly impact the pipeline. Under the <i>Fisheries Management Act 1994</i>, 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.	Not required.
<i>Water Management Act 2000</i> and <i>Water Management (General) Regulation 2025</i>	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	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	Not required.

Legislation	Potential approval requirements	Relevance to the proposed activity	Permit/approval/licence requirement
	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.	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 117, Structure 229 or Mount Piper Substation – South. The proposed activity is within two Water Sharing Plan areas: the Sydney's Greater Metropolitan Region Groundwater Source at Structures 117 and 229, and the NSW Murray-Darling Basin Porous Rock Groundwater Source at Mount Piper Substation – South. However, as the works are not expected to dewater more than 3 ML per year of groundwater, no WAL is 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 Oberon 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 117 and 229 are located in the Oberon LGA on land zoned RU1 Primary Production. The study area for Structure 229 extends into RU3 Forestry land overlapping with Gurnang State Forest which is about 50 metres to the southwest of the impact area separated by Abercrombie Road (refer to Figure 3-2 and Figure 3-3). Both the impact areas for Structures 117 and 229 are within gently undulating rural landscapes.

The Structure 117 impact area is predominantly within cleared and modified grazing grassland, with scattered trees and fragmented vegetation across the study area. The access track to the structure crosses grassland, broadly aligning with the existing transmission line easement, before connecting to an established track and Langs Road.

The Structure 229 impact area comprises native vegetation which surrounds the electricity transmission easement. The access track to the north follows the transmission easement and crosses areas of native vegetation before connecting to Abercrombie Road. Access from the south is also from Abercrombie Road via a gate, through mostly open areas and native trees.

The impact area for Mount Piper Substation – South is in the Lithgow City LGA on land zoned SP2 Infrastructure and RU1 Primary Production (refer to Figure 3-4). The existing land use is electricity and industrial infrastructure within the broader Mount Piper energy precinct, which includes Mount Piper Power Station and Springvale Coal. The underground WaterNSW Fish River Supply Pipeline crosses the Mount Piper Substation – South impact area. Whilst industrial land uses exist the landscape within the study area, especially to the south of Mount Piper Substation – South, is also gently undulating with grazing grassland and fragmented vegetation.

6.1.2. Impact assessment

Construction

Impacts to land use during construction would result from vehicle and plant movements, material laydown, access track construction and 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.

Within the Structure 117 and 229 impact areas, vegetation removal would be required to support construction activities and easement widening. The impact area for Structure 229 does not encroach on dedicated State Forest land, the Gurnang State Forest is separated from the proposed activity by Abercrombie Road. The proposed activity would result in minor localised changes to existing rural and vegetated land uses.

Access track construction or upgrades would have a minor, localised impact on the existing land use..

Within the Mount Piper Substation – South 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 within the Mount Piper Substation - South impact area would involve clearing, grading, and import of gravel to create a level and stable work area for the EWP, brake and winch equipment, and the phase roll work. Impacts to existing land use resulting from construction activities would be temporary and minor. Provided

the mitigation measures in Appendix C are implemented, impacts to the WaterNSW Fish River Supply Pipeline are not expected.

Easement acquisition or landowner agreements would be needed for widened easements within Structure 117 and 229 impact areas. No land acquisition for easement widening would be required for the Mount Piper Substation – South 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 within the Structure 117 and 229 impact areas would mainly relate to widened easements and from ongoing vegetation management to maintain minimum clearances, support bushfire management, and allow maintenance and emergency access. Impacts 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 study areas of each structure comprise gently undulating terrain with minor waterways. 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 117, the main soil type mapped in the Structure 117 impact area is Kurosols, with the northern tip of the impact area interacting with an area of soil type mapped as Kandosols
- At Structure 229, the soil types are mapped as Dermosols at the structure and southern access track, with the northern access track crossing into an area of soils mapped as Kurosols.
- At Mount Piper substation – South, the soil types are mapped as unclassified and have been subject to extensive disturbance, reflecting the presence of highly modified ground conditions associated with existing industrial infrastructure and historical land use.

The geological characteristics associated with the impact area include:

- Sedimentary (i.e. volcanoclastic breccia and conglomerate) and volcanic rocks (i.e. basalt, basaltic andesite and latite lavas) from the Ordovician period at Structure 117.
- Dominantly interbedded quartz-rich sandstone, siltstone and mudstone from the Ordovician period at Structure 229.
- Sandstone, siltstone, and mudstone from the Permian age at Mount Piper Substation – South.

Acid sulfate soils

NSW Department of Climate Change Environment Energy and Water’s (DCCEE) 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 the study area of the proposed activity.

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 and transmission network infrastructure land use.

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, 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) indicates that there is no visible evidence of salinity in the broader region. 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

While historical mining has occurred within the wider region (including Mount Piper Colliery, approximately 1.75 km northeast of the Mount Piper Substation – South impact area), no site-specific mine subsidence constraints have been identified within the study area. Available mine subsidence mapping shows that the impact areas for Structures 117, Structure 229 and Mount Piper Substation - South are not within active mine subsidence districts or areas subject to current mine subsidence management controls.

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 construction and upgrades. Potential impacts would occur from the exposure of disturbed soils. There is potential for exposure of contaminated soils, however because there are no known sources of contamination and ground disturbance will be restricted to the impact areas, where the impact is expected to be minor. As the impact areas are not mapped to have a risk of acid sulfate or saline soils or naturally occurring asbestos, impacts associated with disturbing these materials are not expected. Impacts associated with mine subsidence are not expected. Soils within the impact area may be susceptible to erosion where disturbed; however, erosion

impacts are considered unlikely given the limited extent and short duration of works within the impact areas. Areas of highly disturbed or unclassified soils, particularly within the impact area for Mount Piper Substation – South, mean that erosion impacts to intact soil profiles are expected to be minor. With the implementation of mitigation measures GS1 to GS5 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 characterised by gently undulating terrain, existing transmission easements, cleared areas and forested land, which influence local overland flow conditions.

Regional surface water mapping (NSW Government & DCS Spatial Services, 2026) shows no mapped watercourses intersect the Structure 117 impact area. The impact area is located on a rise, with surface water expected to drain north-east during rainfall events.

At Structure 229, two minor waterways intersect the northern access track impact area. The ecology field survey of the site undertaken as part of this REF observed no evidence of water and identified them as ephemeral watercourses, likely functioning as intermittent overland flow paths during rainfall.

The built form associated with the impact area at Mount Piper Substation - South 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.

Other watercourses identified in 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 117			
Sweet Wattle Gully and tributaries	400 m north	Sweet Wattle Gully, a 2 nd order stream, and five 1 st order tributaries cross the northern portion of the study area.	1 st and 2 nd
Prospecting Creek	180 m west	A 1 st order stream (Prospecting Stream) is in the eastern section of the study area.	1 st
Tributaries of Round Hill Creek and Ben Bingle Creek	150 m south	Three 1 st order tributaries of Round Hill Creek and Ben Bingle Creek cross the southern portion of the study area.	1 st
Structure 229			

Name	Distance from impact area	Description	Strahler Stream Order
Tributary of Silent Creek	Within the impact area	A 1 st order waterway intersects the access track, towards the centre of the study area.	1 st
Tributary of Macnamara's Creek	Within the impact area	A 1 st order waterway intersects the impact area, toward the northeastern end of the access track.	1 st
Mount Piper Substation – South			
Unnamed watercourse	40 m west	Several streams cross the western side of the study area, with no clearly identifiable mainstem. The drainage lines were identified as modified with concreted scour protection during the ecology field survey.	1 st , 2 nd and 3 rd

None of the impact areas are mapped within an area of groundwater vulnerability (DPHI, 2017). Surface water quality is expected to be influenced by runoff and surrounding land uses, with NSW DCCEE's River Condition Index (2023) indicating moderate water quality around each impact area.

The impact area for Mount Piper Substation - South is within an area mapped as the Sydney Drinking Water Catchment. The impact areas for Structures 117 and 229 are not within Sydney Water Drinking Catchment and none of the impact areas are 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 DCCEE'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 temporarily affect hydrology and water quality through ground disturbance, vegetation removal, operation of plant and vehicles, and the handling of fuels and chemicals. Potential impacts include localised erosion and sediment mobilisation during rainfall events, particularly where ground disturbance occurs.

Excavation, access track construction and upgrades, construction bench establishment and the temporary stockpiling of excavated material may increase the risk of erosion and sediment-laden runoff if not appropriately managed. No new permanent waterway crossings are proposed as part of the proposed activity. A mapped waterway associated with a tributary of Silent Creek intersects the transmission line and the proposed northern access track impact area at Structure 229 and may be subject to minor disturbance during access track works. Another mapped 1st order watercourse – a tributary of Mcnamara's Creek – intersects the northern access track impact area near Abercrombie Road. An existing culvert allows overland flow pass under the existing access track. No new permanent in-stream structures or permanent modifications to these waterways are proposed.

Potential impacts include localised erosion, sedimentation and minor disruption to surface flows during rainfall events. However, these waterways have been identified as ephemeral, with no evidence of standing or flowing water recorded during field surveys. Any disturbance would be temporary, localised and minor in nature. Subject to detailed design confirmation, a controlled activity approval under the Water Management Act 2000 is not an expected requirement.

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 also potential for water quality impacts from accidental spills or leaks of fuels, oils and from construction-related activities entering the environment through soils and surface runoff. For the proposed activity within the Mount Piper Substation – South impact area, a Neutral or Beneficial Effect on Water Quality assessment (Appendix F) concluded that the proposed activity would have a neutral effect on water quality in the Sydney Water Drinking Catchment.

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 proposed activity would not alter natural drainage patterns or substantially 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 NSW BioNet Vegetation Classification database, the NSW State Vegetation Type Map (SVTM), the Commonwealth EPBC Act Protected Matters Search Tool for Matters of National Environmental Significance, the NSW Threatened Biodiversity Data Collection (TBDC), the Biodiversity Values (BV) Map, the BAM Important Habitat Mapping (IHM), and the NSW DPIRD Fisheries Spatial Data Portal, 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 Areas of Outstanding Biodiversity Value (AOBV), and informed survey design.

Field assessments (surveys) were carried out by Niche on 25 – 26 August 2025 and 2 October 2025 across the three sites. The survey covered an impact area and a variable width buffer. These surveys consisted of Rapid Data Points to confirm vegetation communities and condition, identify habitat features (hollow-bearing trees, woody debris, burrows, rock overhangs, stick nests, aquatic features), record incidental flora and fauna, and assessed threatened-species habitat. Targeted surveys were subsequently completed at

Structure 229 for threatened flora (*Diuris aequalis* and *Trachymene scapigera*) on 25 November 2025, and for threatened fauna (Southern Greater Glider, Gang-gang Cockatoo, Yellow-bellied Glider and Eastern False Pipistrelle) on 27 – 31 January 2026. Fauna survey methods included spotlighting, thermal scope, call playback (Yellow-bellied Glider), diurnal bird surveys (Gang-gang Cockatoo) and ultrasonic recording (Eastern False Pipistrelle). Species with a moderate or higher likelihood of occurrence that could not reliably be excluded through targeted survey have been assumed present for the purposes of impact assessment.

6.4.2. Existing environment

The proposed activity is in the South Eastern Highlands bioregion (Capertee Uplands subregion at Mount Piper Substation South, Oberon subregion at Structure 117, and Oberon/Crookwell subregions at Structure 229), in a landscape with a long history of disturbance from the existing transmission infrastructure, access tracks, and surrounding agricultural and forestry land use. Across the three sites, no AOBV, no BAM Important Habitat, no Biodiversity Values mapped under the BV Map, and no AIS under the NPW Act were identified within or adjacent to the impact areas. Priority weeds and Weeds of National Significance (WoNS) were not recorded at Structure 117 or Structure 229; Blackberry (*Rubus fruticosus* spp. agg.), a WoNS, was recorded as weedy thickets adjacent to the existing transmission lines at Mount Piper Substation – South.

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, and the outcomes of targeted surveys where undertaken, 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 117					
3366	Central Tableland Clay Apple Box Grassy Forest	Low	2.41	No	No
3366	Central Tableland Clay Apple Box Grassy Forest	Moderate	0.15	No	No
3369	Central Tableland Ranges Peppermint-Gum Grassy Forest	Low	0.66	No	No
3369	Central Tableland Ranges Peppermint-Gum Grassy Forest	High	0.22	No	No
Structure 229					
3735	Central Tableland Peppermint Shrub-Grass Forest	Low	1.12	No	No
3735	Central Tableland Peppermint Shrub-Grass Forest	Moderate	0.02	No	No
3735	Central Tableland Peppermint Shrub-Grass Forest	High	0.67	No	No
3735	Central Tableland Peppermint Shrub-Grass Forest	Very High	0.84	No	No
Mount Piper Substation – South					

PCT no.	PCT name	Condition	Impact area (ha)	BC Act TEC	EPBC Act TEC
3735	Central Tableland Peppermint Shrub-Grass Forest	Low	1.48	No	No
3735	Central Tableland Peppermint Shrub-Grass Forest	Moderate	0.08	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 117						
No threatened flora or fauna species with a moderate or higher likelihood of occurrence were identified at this site.						
Structure 229 – flora						
Structure 229	<i>Diuris aequalis</i>	Buttercup Doubletail	Endangered	Vulnerable	Moderate – targeted survey 25 November 2025; not detected	No further assessment required
Structure 229	<i>Trachymene scapigera</i>	Mountain Trachymene	Endangered	Endangered	Moderate – targeted survey 25 November 2025; not detected	No further assessment required
Structure 229 – fauna						
Structure 229	<i>Daphoenositta chrysoptera</i>	Varied Sittella	Vulnerable	Not listed	Moderate – assumed present	Significant impact unlikely provided mitigation implemented
Structure 229	<i>Petroica boodang</i>	Scarlet Robin	Vulnerable	Not listed	Moderate – assumed present	Significant impact unlikely provided mitigation implemented
Structure 229	<i>Petroica phoenicea</i>	Flame Robin	Vulnerable	Not listed	Moderate – assumed present	Significant impact unlikely provided mitigation implemented
Structure 229	<i>Callocephalon fimbriatum</i>	Gang-gang Cockatoo	Vulnerable	Endangered	Recorded – 8 individuals	Significant impact

Site	Scientific name	Common name	BC Act status	EPBC Act status	Likelihood of occurrence	Assessment outcome
					foraging during targeted survey, January 2026	unlikely provided mitigation implemented
Structure 229	<i>Falsistrellus tasmaniensis</i>	Eastern False Pipistrelle	Vulnerable	Not listed	Recorded – species complex on ultrasonic recordings, January 2026	Significant impact unlikely provided mitigation implemented
Structure 229	<i>Petauroides volans</i>	Southern Greater Glider	Endangered	Endangered	Recorded – 4 individuals during targeted spotlighting, January 2026	Significant impact unlikely provided mitigation implemented
Structure 229	<i>Petaurus australis</i>	Yellow-bellied Glider	Vulnerable	Vulnerable	Moderate – targeted survey January 2026; not detected	No further assessment required
Mount Piper Substation – South						
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 117	3.44	0.13	3.57
Structure 229	2.65	0.09	2.74
Mount Piper Substation – South	1.56	0.10	1.66
Total (all sites)	7.65	0.32	7.97

Vegetation communities, weeds and habitat features

Structure 117

Native vegetation within the Structure 117 impact area comprises PCT 3366 (low and moderate condition) and PCT 3369 (low and high condition). Neither PCT is consistent with a TEC under the BC Act or EPBC

Act. Vegetation communities at this site include structurally diverse forest and grassland habitat with large amounts of woody debris across the start of the access track and tree cluster. One hollow bearing tree (HBT¹) supporting two hollows was recorded within the impact area, with a further three HBTs recorded in the survey area, but 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 229

Native vegetation within the Structure 229 impact area comprises PCT 3735 in low, moderate, high and very high condition. PCT 3735 is not consistent with a TEC under the BC Act or the EPBC Act. The impact area provides forest and grassland habitat with widespread surface rock and large amounts of woody debris. 17 HBTs supporting a total of 31 hollows of varying size (very small to very large) were recorded within the impact area, with a further 33 HBTs recorded in the survey area, but 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.

Mount Piper Substation – South

Native vegetation within the Mount Piper Substation – South impact area comprises PCT 3735 in low and moderate condition. PCT 3735 is not consistent with a TEC under the BC Act or the EPBC Act. The remainder of the impact area is non-native vegetation (PCT 9996 Non-Native (Road)). The site provides forest and grassland habitat with minimal woody debris. No HBTs, stick nests, burrows or rock overhangs were recorded within the impact area. Blackberry (*Rubus fruticosus* spp. agg.), a WoNS, was noted as weedy thickets adjacent to the existing transmission lines

Threatened flora and fauna

Structure 117

No threatened flora or fauna species were assessed as having a moderate or higher likelihood of occurrence at this site. Habitat comprises forest and grassland in low to high condition within the existing transmission corridor. No threatened flora was recorded in the impact area.

Structure 229

Two threatened flora species (*Diuris aequalis*, *Trachymene scapigera*) and six threatened fauna species were assessed as having a moderate or higher likelihood of occurrence (refer to Table 6-3). Targeted flora surveys in November 2025 did not detect either species. Targeted fauna surveys in January 2026 confirmed the presence of the Southern Greater Glider (four individuals during spotlighting), the Gang-gang Cockatoo (eight individuals foraging) and the Eastern False Pipistrelle (ultrasonic recordings); the Yellow-bellied Glider was not detected during field survey and was considered unlikely to occur. The Varied Sittella, Scarlet Robin and Flame Robin require intensive survey methods that were not warranted at this site and were assumed present for the purposes of impact assessment. No other threatened fauna was recorded in 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.

Mount Piper Substation – South

No threatened flora or fauna species were assessed as having a moderate or higher likelihood of occurrence. No threatened flora or fauna was recorded within the impact area.

Aquatic species and communities

Structure 117

No aquatic habitat is present within the impact area. No Key Fish Habitat is mapped, and no threatened freshwater fish habitat occurs.

Structure 229

Two mapped first order watercourses intersect the impact area. A tributary of Silent Creek crosses the existing transmission line easement and Macnamara's Creek is a culverted watercourse under a formed track at the intersection with Abercrombie Road. These features are likely to be ephemeral watercourses, and no water was present at the time of survey. No Key Fish Habitat is mapped within the impact area, and field survey confirmed that no threatened freshwater fish habitat occurs in the impact area.

Mount Piper Substation – South

No natural aquatic habitat is present within the impact area. A minor waterway is present in the form of a man-made concrete structure. This aquatic habitat is heavily modified and does not support important habitat for native aquatic species. Mapped Key Fish Habitat about 40 m to the west of the impact 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 has been assessed to result in clearing within the impact area, which equates to an area of 7.97 ha across the three sites, comprising 7.65 ha native vegetation and 0.32 ha non-native vegetation (refer to Table 6-4). The extent of clearing within the impact area will be minimised to the extent possible, impacts at each site are discussed in further detail below.

The proposed activity would also result in the removal of up to 18 HBTs supporting up to 33 hollows across the three sites (one HBT/two hollows at Structure 117; 17 HBTs/31 hollows at Structure 229).

Structure 117

Structure 117 would require widening of the existing transmission line easement from 70 m to 120 m. This would result in the removal of 3.44 ha native vegetation (PCT 3366 and PCT 3369, low to high condition) and one HBT supporting two hollows within the Structure 117 impact area. No threatened flora or fauna species were assessed as having a moderate or higher likelihood of occurrence and no tests of significance were required. Prior to clearing, artificial hollow replacements would be installed for each hollow removed, at a ratio of 1:1 for hollows with a diameter of ≥ 8 cm and 1:2 for hollows with a diameter of < 8 cm. Installation, ongoing occupancy monitoring and condition monitoring would be implemented in accordance with mitigation measure EC7 in Appendix C.

Structure 229

Structure 229 would require widening of the existing transmission line easement from 70 m to 120 m. This would result in the removal of 2.65 ha native vegetation (PCT 3735, low, moderate, high and very high condition), and the removal of 17 HBTs supporting 31 hollows within the Structure 229 impact area. Loss of HBTs is the principal residual ecological impact at this site and has potential to affect hollow-dependent fauna including the Southern Greater Glider, Gang-gang Cockatoo and Eastern False Pipistrelle, each of which was confirmed present during targeted surveys in January 2026. Three woodland bird species (Varied Sittella, Scarlet Robin, Flame Robin) are also assumed present.

Tests of significance under the BC Act for all six fauna species, and significant impact criteria assessments under the EPBC Act for the Southern Greater Glider and Gang-gang Cockatoo, concluded that, with the implementation of the proposed mitigation measures in Appendix C, significant impacts on these species are unlikely. Targeted flora surveys in November 2025 did not detect *Diuris aequalis* or *Trachymene scapigera*. As these species were considered unlikely to occur within the impact area, no tests of significance were required for threatened flora. The Yellow-bellied Glider was not detected during targeted surveys and was considered unlikely to occur; no test of significance was required.

Prior to clearing, artificial hollow replacements suitable for the target species, particularly the Southern Greater Glider, Gang-gang Cockatoo and Eastern False Pipistrelle, would be installed for each hollow removed. Replacement hollows would be provided at a ratio of 1:1 for hollows with a diameter of ≥ 8 cm and 1:2 for hollows with a diameter of < 8 cm. Installation, ongoing occupancy monitoring and condition monitoring would be implemented in accordance with mitigation measure EC7 in Appendix C.

HBT removal would be restricted to Greater Glider and Eastern False Pipistrelle non-breeding months and supervised by a suitably qualified ecologist.

The access track crossing the tributary of Silent Creek runs down an existing easement. Minor and localised removal of vegetation would be required along the proposed track. No aquatic habitat would be impacted. Macnamara's Creek is culverted under the northern access track at the intersection with Abercrombie Road. Only minor trimming of vegetation would be required.

The impact area intersects and is adjacent to some areas of non-native vegetation (Figure B-2) that were identified as access tracks during the field assessments. The impact assessment assumes the use of the cleared areas within the impact area to allow safe access during construction.

Mount Piper Substation – South

Construction at Mount Piper Substation - South would result in the removal of 1.56 ha native vegetation (PCT 3735, low and moderate 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 (field survey indicated a heavily modified drainage line and basins) occurs within the impact area; any potential effect on the modified drainage infrastructure or downstream Key Fish Habitat would be managed through standard erosion, sediment and spill control measures in Appendix C. Weed hygiene measures EC9 would manage the risk of Blackberry spread from thickets adjacent to the impact area.

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

Vehicle, plant and equipment movement has the potential to introduce or spread weed species, particularly given the presence of Blackberry (a WoNS) adjacent to the impact area at Mount Piper Substation - South. Vehicle and equipment wash-down procedures and other biosecurity and hygiene controls EC9 including hygiene protocols consistent with Saving our Species guidelines, would be implemented prior to and during construction at all three sites.

Operation

The completed transposition towers and conductor rearrangement for Structures 117 and 229 would require the existing 70 m easement to be widened to 120 m. Mount Piper Substation – South 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. Impacts comprise the permanent loss of small areas of native vegetation and the loss of up to 18 HBTs across Structure 117 and Structure 229 (offset by artificial hollows installation as described above).

Given the availability of equivalent or better-condition adjacent habitat (including connectivity to intact woodland north and west of Structure 229), 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.

6.5.1.1. 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).

6.5.1.2. Existing environment

All three impact areas lie within the traditional lands of the Wiradjuri People, on Country managed by the Bathurst LALC. The Mount Piper Substation – South impact area is covered by Native Title claim NC2018/002 [REDACTED], which was accepted for registration on 22 November 2018. Structure 117 and Structure 229 impact areas are not covered by any Native Title claim.

Aboriginal Heritage Information Management System (AHIMS) basic searches were undertaken on 23 May 2025, with updated searches completed on 13 May 2026 for each of the three impact areas. [REDACTED]

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

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) Code and Aboriginal Cultural Heritage Due Diligence Assessment Procedure (Transgrid, 2025) as having potential for Aboriginal objects. Site inspections were undertaken on 3 September 2025 for all three impact areas. Inspections were completed by Niche, with Transgrid and Bathurst LALC representatives present.

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.

6.5.2. 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

Operational activities would not result in ground disturbance. Routine operation and maintenance would be confined to disturbed areas within the widened easement 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. Searches of the following databases were conducted on 5 August 2025 with additional follow up searches of the Australian Heritage Database and State Heritage Inventory undertaken in May 2026:

- World Heritage Database
- Commonwealth Heritage List
- National Heritage List
- State Heritage Database
- State Heritage Inventory
- the Oberon LEP
- the Lithgow City LEP

These searches identified no historic items within the impact areas for Structures 117, 229 or Mount Piper Substation – South. The nearest heritage item is 2.8 km east of the impact area for Structure 229 and outside the study area.

6.6.2. Impact assessment

Construction

No historic heritage items are located within the impact area or the study area, so the proposed activity 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 in the Structure 117 and Structure 229 impact area is typical of a rural area with some densely vegetated areas and some agricultural land uses. Minor noise sources would include intermittent low volume vehicle noise from nearby minor roads, access tracks and from agricultural activities. Existing background noise in the Structure 229 impact area is likely to be influenced intermittent traffic noise on nearby Abercrombie Road. While forestry activities may also influence background noise at Structure 229, these sources are infrequent and irregular.

The existing noise environment in the Mount Piper Substation - South impact area is expected to be higher than at Structures 117 and 229 due to nearby industrial land uses including from the neighbouring Mount Piper substation and nearby Mount Piper Power Station.

A review of satellite imagery was completed in April 2026. The nearest potential noise-sensitive residential receivers are approximately 850 m northeast of the Structure 117 impact area, 900 m southwest of the Structure 229 impact areas and 1.9 km from the Mount Piper Substation – South impact area.

No operating schools, childcare centres, hospitals or nursing homes have been identified within the study areas. There are no sensitive historic heritage receivers recorded within the impact area or study areas.

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 vibration. As the nearest noise and vibration sensitive residential receivers are outside the study area construction phase noise and vibration impacts are not expected. 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 impact from operational vibration is expected.

Due to the distance of noise-sensitive receivers from the proposed activity, and minimal change to the existing noise environment, no operational noise impacts are expected.

6.8. Traffic and access

6.8.1. Existing environment

The impact area 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.

Table 6-5 Named roads within the study area

Name	Classification
Structure 117	
Langs Road	Local
Structure 229	
Abercrombie Road	Regional
McManus Creek Road	Local
Mount Piper Substation – South	
No named roads identified within the study area of Mount Piper Substation – South.	

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 across all three study areas are used for transmission infrastructure inspection and maintenance, and may also support fire trail, forestry or agricultural access.

There are no schools, businesses or other sensitive land uses that currently have direct access in or near the impact areas. Access to nearby residences and rural properties is provided by the existing local road network. Parking is not formalised for the proposed activity 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 minor 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 to the impact area would be via the local and regional road network. At Structure 117 approximately 1km of track would be upgraded and 750m of track would be constructed. At Structure 229 approximately 320 m of track would be upgraded and 295 m constructed. No new tracks are required at Mount Piper

Substation – South. Access track upgrades to the Mount Piper Substation – South impact area would be delivered under the Central Cluster Transposition project. These impacts have been assessed in the CWOREZ Transposition Project: Central Cluster REF.

Access to Mount Piper Substation – South 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.

Access to Structure 117 would be via Abercrombie Road, one of the main regional roads in the region, followed by Sewells Creek Road and Langs Road.

Access to Structure 229 would be via Abercrombie Road, which connects to the construction area via an L-shaped access track north of the structure or a shorter, more direct access track off Abercrombie Road from the south

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 existing operational traffic volumes.

No road 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 117 and 229 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 - South 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 potentially 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 May 2026 identified two registered facilities within 1 km of Mount Piper Substation – South 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 Structure 117 or Structure 229 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 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, unlike electric field, they are not easily shielded by most materials.

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 5A6/5A7 and Mount Piper Substation are existing sources of EMF.

Bushfire

A desktop review of NSW Rural Fire Service's bush fire prone land mapping on 13 May 2026 indicates the following (Figure B-7 to B-9 in Appendix B):

- 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.

The impact area for Mount Piper Substation – South 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 117 and Structure 229 are partly located outside the existing easement, on land not currently managed to reduce fuel loads and associated bushfire risk.

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 117 and 229 where there is surrounding vegetation (i.e. grassland and forest). 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 proposed activity 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 in the Structures 117 and 229 impact areas, 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 the Mount Piper Substation – South impact area.

The proposed activity is not expected to increase bushfire risk to surrounding land, both in and beyond the study area. Residual bushfire risk during operation is therefore considered to be low given sufficient separation distances to classified vegetation would be 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 117 and 229 are mainly within rural environments characterised by agricultural land uses, remnant native vegetation, and undulating terrain. The existing transmission line (Line 5A6/5A7), with distinct transmission 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 and Figure B-6 in Appendix B).

As noted in Section 6.7, the nearest residential receivers are located on Langs Road (approximately 850 m northwest of the Structure 117 impact area) and Abercrombie Road (approximately 850 m southwest of the Structure 229 impact area) and are outside the study areas. Given the presence of existing transmission infrastructure and limited nearby receivers, visual sensitivity is considered low.

The visual environment associated with Mount Piper Substation – South is dominated by large-scale energy infrastructure, including Mount Piper Power Station and associated transmission infrastructure. The nearest residential receiver is approximately 2 km from Mount Piper Substation - South 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 due to 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 117 and 229, 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 850 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 - South, 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 117, 229 and Mount Piper Substation – South would remain visually consistent with the substation and other transmission infrastructure. The appearance and height of Structures 117 and 229 would change, primarily due to the introduction of 55 m steel poles; however, as the locations of the nearest sensitive receivers are approximately 860m southwest of the Structure 229 impact area and approximately 950m northwest from the Structure 117 impact area, this 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 licensed 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 the 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 5A6/5A7.

6.13. Social and economic considerations

6.13.1. Existing environment

The proposed activity is within the Central West region of NSW, spanning the Oberon and Lithgow City LGAs.

According to census data (Australian Bureau of Statistics, 2024a), the Oberon LGA has a population of 4,834 people and a median age of 25 years old. However, the NSW Office of Local Government put the population figure at 5,604 (NSW Office of Local Government, 2024). Given the LGA is 3,625 km² in area, the population density sits close to 1.5/km² (using the higher population estimate). Across the region, manufacturing (16.7 per cent), agriculture, forestry and fishing (14.4 per cent), and construction (8.4 per cent) are the largest employment industries, with unemployment being 3.5 per cent (Australian Bureau of Statistics, 2024a).

Lithgow City LGA has an estimated population of 20,740 people. 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 (9 per cent) are the largest employment industries, with unemployment being 5.5 per cent (Australian Bureau of Statistics, 2024b).

Line 5A6 forms part of the existing electricity transmission network that supports the National Electricity Market.

6.13.2. Impact Assessment

Construction

Short-term community 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. 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. Impacts to availability of accommodation are expected to be minor as the construction duration would be limited to approximately 12 months of work across two years for Structures 117 and 229 and Mount Piper Substation – South. During peak construction of the proposed activity, it is expected that a maximum of 25 construction workers would be required at each site. 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 400 m east from Mount Piper Substation - South. 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. The wind farm would be about 18 km northwest from Mount Piper Substation – South.
- Oberon Quarries Extension Project - an SSD located at the existing Oberon Quarry, about 5.5 km east of Structure 117 in the Oberon LGA. The project involves expanding the quarry to gain access to an additional 12.6 million tonnes of basalt resource, and an Environmental Impact Statement is currently being prepared.

No other new SSD or SSI projects were identified on the Major Projects Portal near the proposed activity 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 - South 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 117 and 229 impact or study 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 <i>Wilderness Act 1987</i>) 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 distance 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 towers, these are viewed in the context of the existing infrastructure and not near any residential receivers. or public land with the exception of Structure 229 adjacent to Gurnang State Forest, 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.
(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 7.65 hectares of native vegetation and up to 18 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 <i>Biodiversity Conservation Act 2016</i>).	Impacts on flora and fauna have been assessed in Section 6.4, associated with the removal of 7.65 hectares of native vegetation. However, the proposed activity would not have a significant impact on the habitat of protected fauna (refer to Section 6.4 and Appendix D). Implementation of mitigation measures to avoid and minimise impacts to habitat of protected fauna are included in Appendix C.

Factor	Potential impact
(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 increased risk to the safety of the environment above existing levels. This includes risks from bushfire which would be managed through easement distances and EMF which would not increase 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).

Factor	Potential impact
(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 – South. Given the short-term and small-scale nature of the works at Mount Piper Substation - South, cumulative impacts are not expected to be significant. No cumulative impacts are likely to arise with works at Structure 117 and Structure 229.
(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 (these include Sydney Drinking Water Catchment, Sydney Harbour Catchment, Georges River Catchment and Hawkesbury-Nepean Catchment).

Mount Piper Substation - South impact area is the only site mapped within a regulated catchment, in this instance 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.

Matter	Comment
	The Mount Piper Substation – South impact area is 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.
(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 <i>Water Management Act 2000</i> , or (ii) a permit under the <i>Fisheries Management Act 1994</i> ,	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 - South.

Matter	Comment
(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 (ii) is consistent with the NorBE Guideline within the meaning of <i>State Environmental Planning Policy (Biodiversity and Conservation) 2021</i> , Part 6.5	NorBE assessment has been undertaken for the proposed activity for Mount Piper Substation - South (refer Appendix F). The proposed activity is expected to have a neutral 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 National Environmental Protection Agency. 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?	None. There are no World Heritage sites in the study area.

MNES/Commonwealth Land	Potential impact
Any impact on a National heritage place?	None. There are no National Heritage sites in the study area.
Any impact on any wetlands of international importance?	None. There are no wetlands of international importance in 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: Southern 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 impacts to biodiversity and threatened species as a result of vegetation clearance and construction works, with a total of up to 7.65 hectares of native vegetation. Biodiversity assessment (including field surveys and tests of significance for select 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 117	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 and one hollow-bearing tree within the impact area; however, no threatened flora or fauna species were assessed as having a moderate or higher likelihood of occurrence.	No	No	Moderately-to-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.
Structure 229	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. Targeted surveys and tests of significance were undertaken, which concluded that significant	No	No	Moderately-to-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.

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
							impacts are unlikely with implementation of the mitigation measures provided in Appendix C.							
Mount Piper Substation - South	Reconfiguration of conductors and winch 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 comprises low to moderate condition native vegetation within an already modified substation environment, with no hollow-bearing trees and no threatened flora or fauna species assessed as having a moderate or higher likelihood of occurrence.	No		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

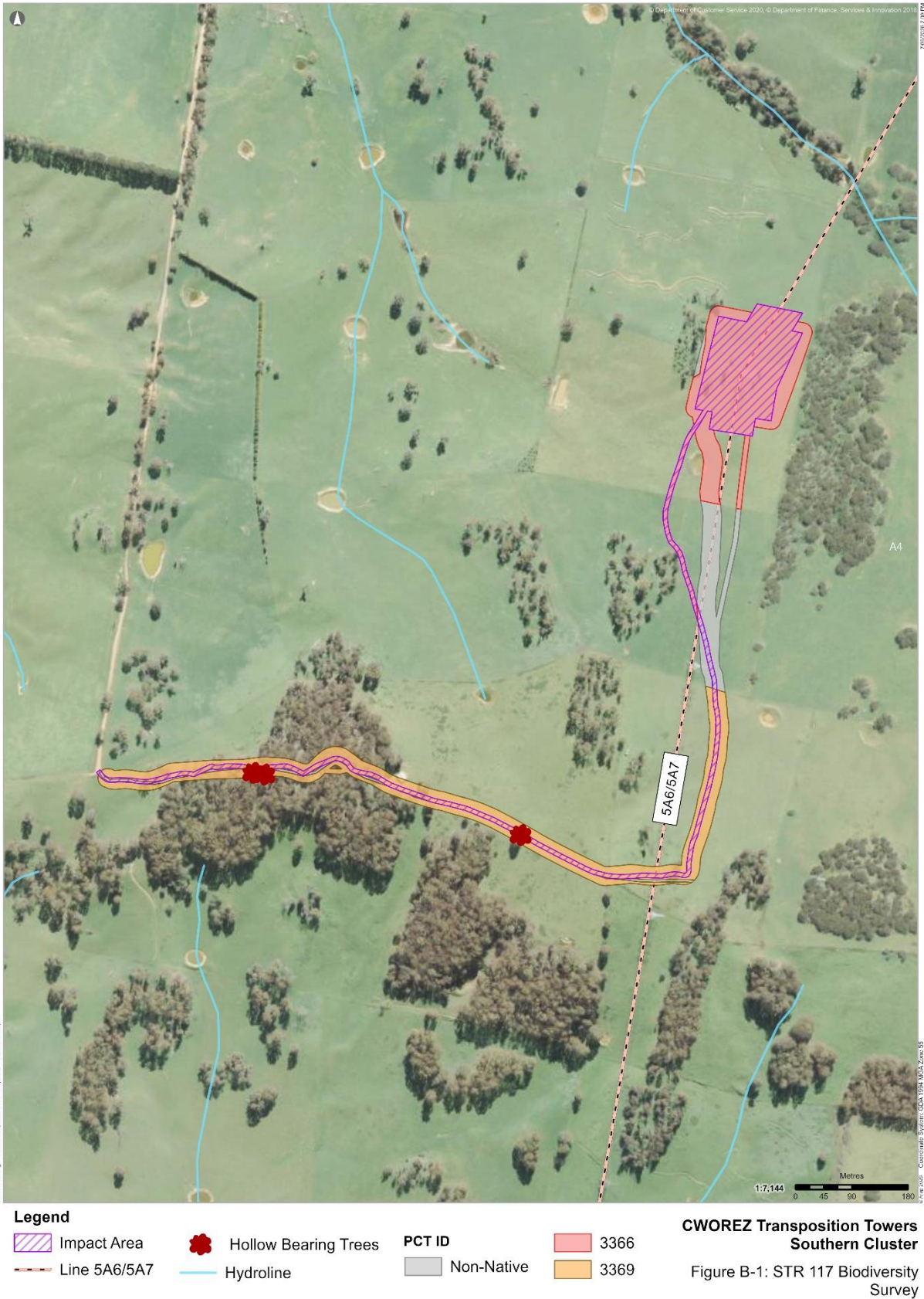


Figure B-1 Structure 117 Biodiversity Survey

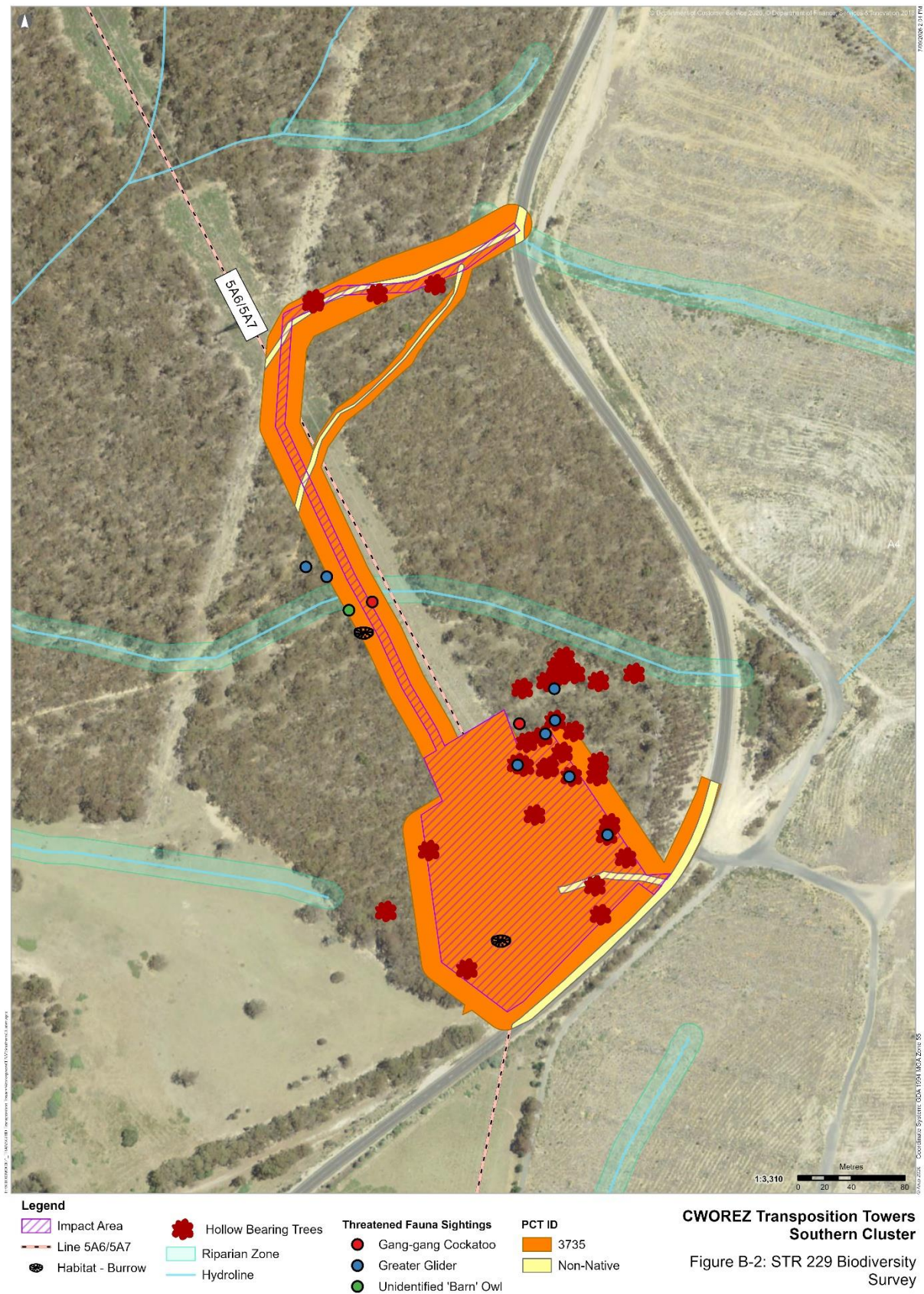


Figure B-2 Structure 229 Biodiversity Survey



Legend

 Impact Area	 Habitat - Aquatic (Modified)	PCT ID
 Line 5A3/5A5	 Riparian Zone	 3735
 Line 5A6/5A7	 Hydroline	 Non-Native

**CWOREZ Transposition Towers
Southern Cluster**

Figure B-3: Mt Piper Substation -
South Biodiversity Survey

Figure B-3 Mount Piper Substation - South Biodiversity Survey



Figure B-4 Mount Piper Substation - South AHIMS Sites

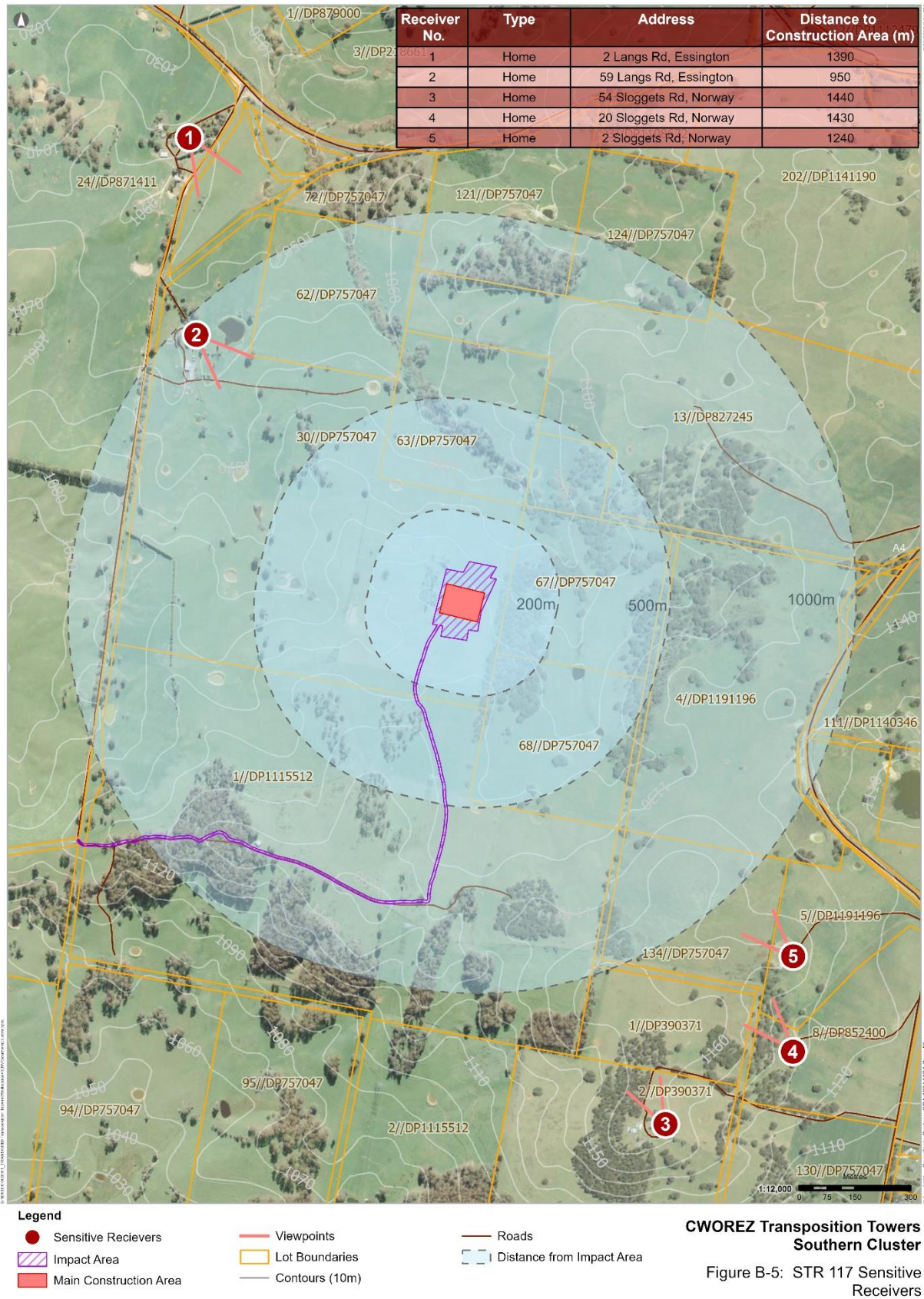


Figure B-5 Structure 117 Sensitive Receivers

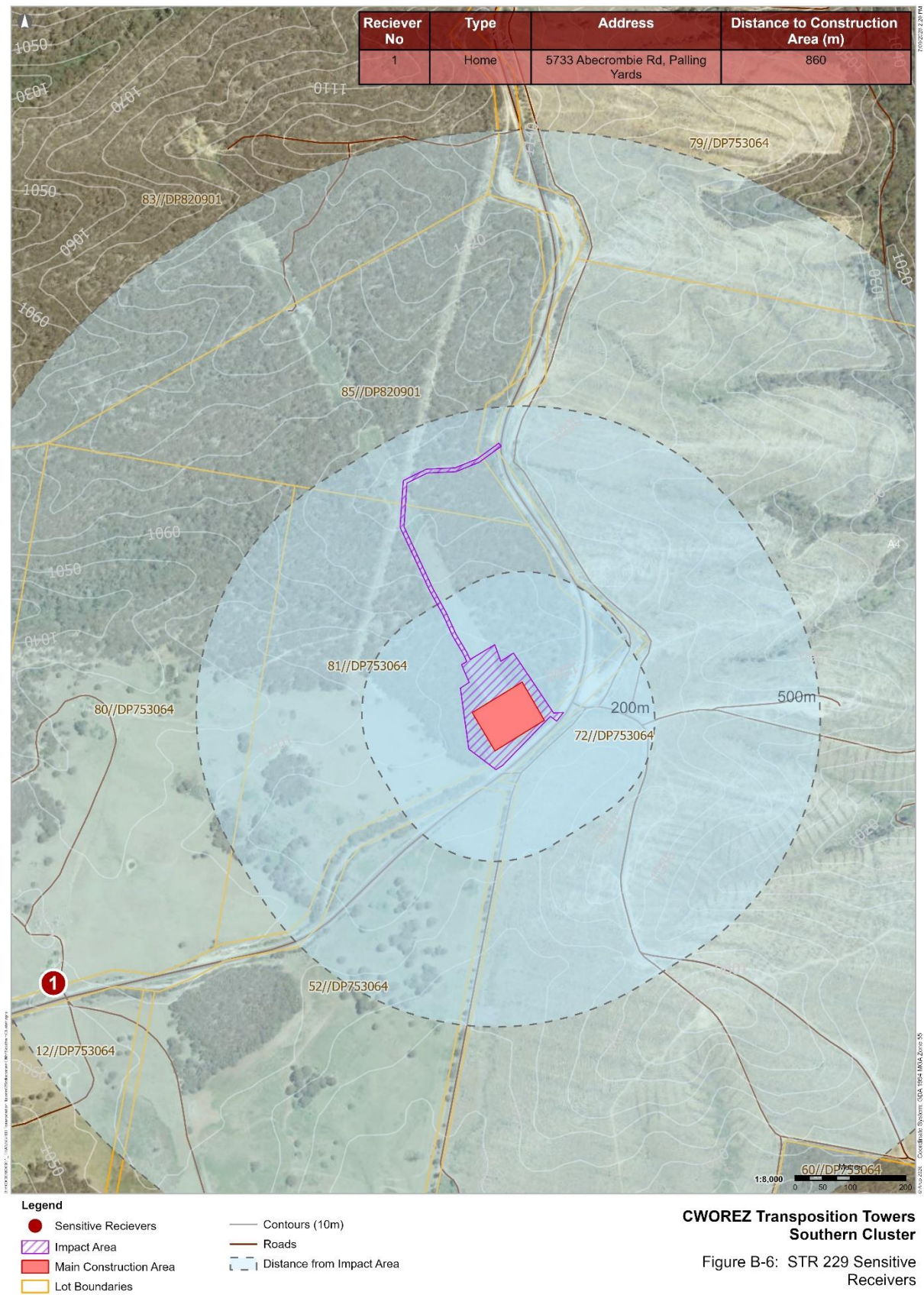


Figure B-6 Structure 229 Sensitive Receivers

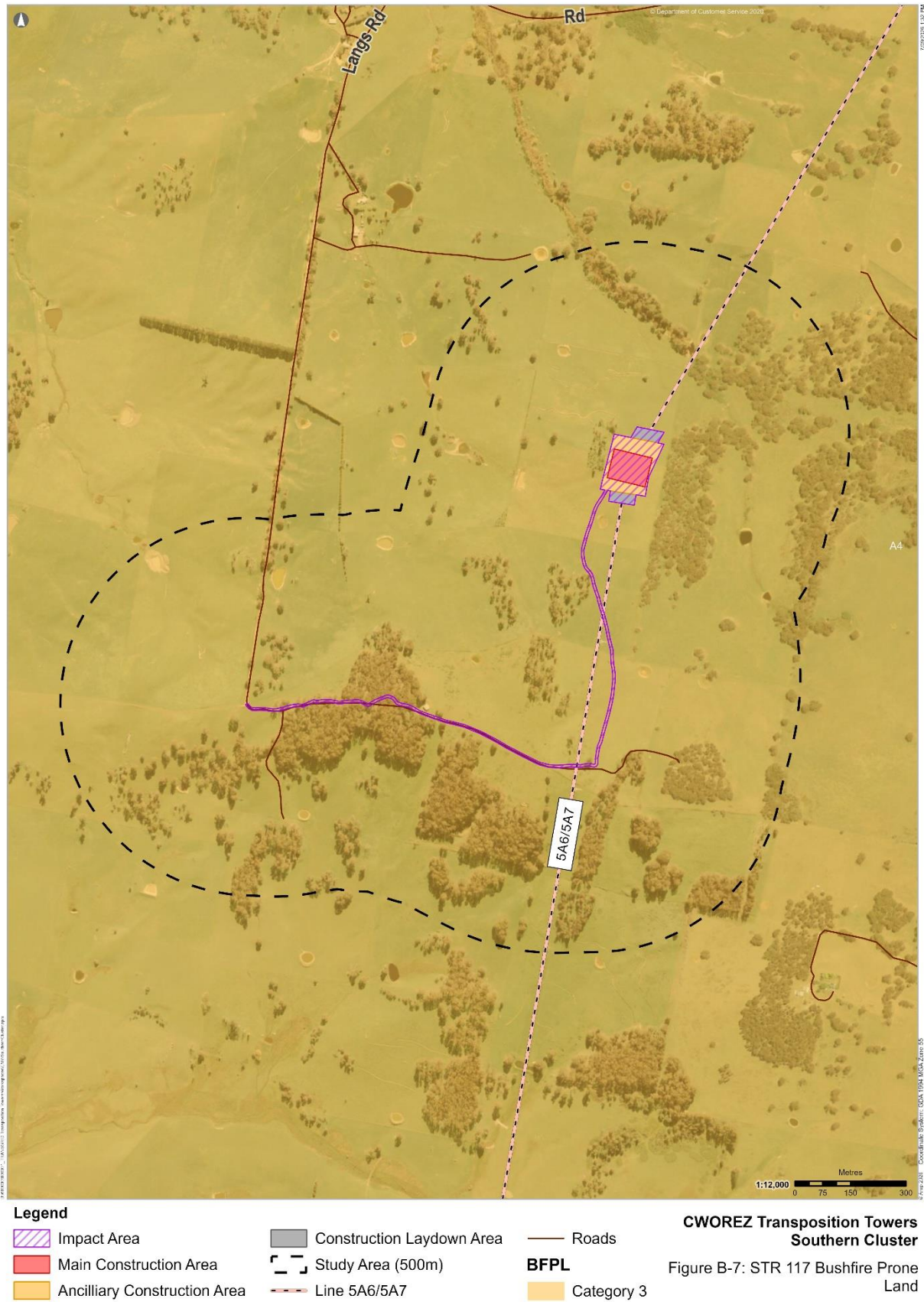


Figure B-7 Structure 117 Bushfire Prone Land

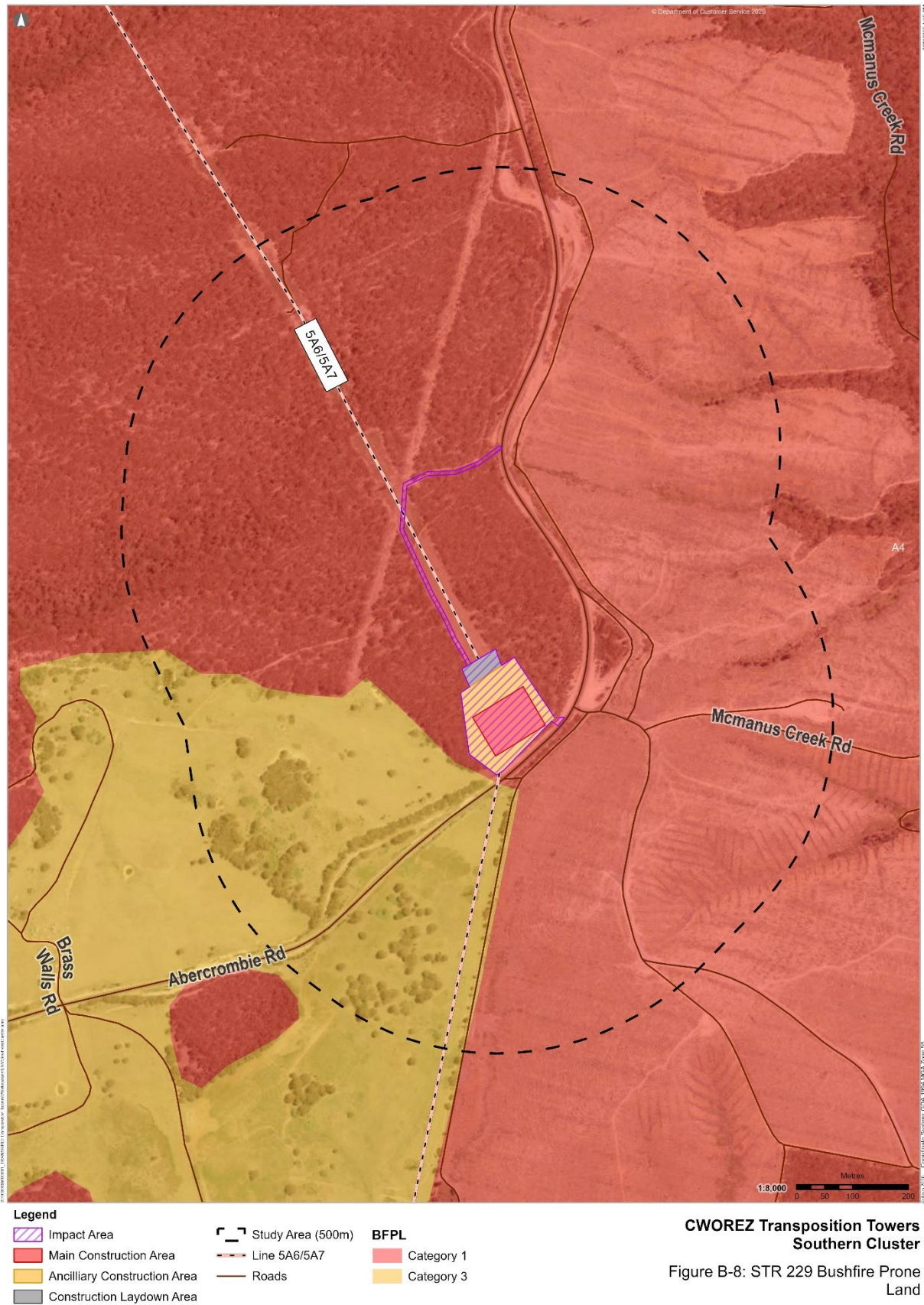


Figure B-8 Structure 229 Bushfire Prone Land

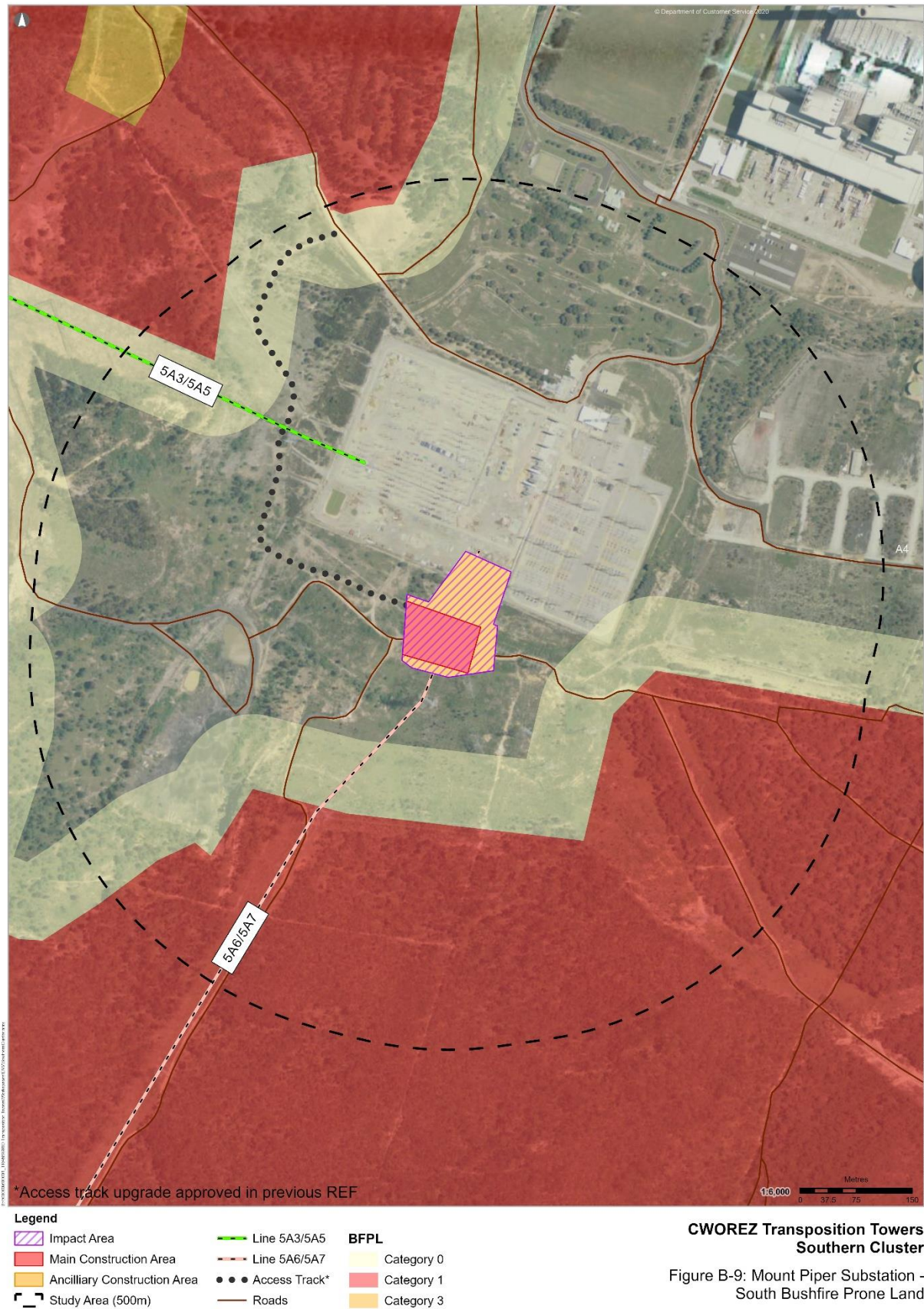


Figure B- 9 Mount Piper Substation – South Bushfire Prone Land

Appendix C Mitigation measures

Mitigation measures	
Environmental management and incident response	
EM1	A Construction Environmental Management Plan (CEMP) or other approved documents 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 <i>Preparation and Approval of Environmental Management Plans</i> 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	An Erosion and Sediment Control Plan (ESCP) shall be prepared by a suitably qualified and experienced person and implemented and maintained in accordance with relevant sections of <i>Managing Urban Stormwater: Soil and Construction Volume 1</i> (Landcom, 2004) ('the Blue Book') (particularly Section 2.2) and <i>Managing Urban</i>

Mitigation measures	
	<i>Stormwater: Soil and Construction Volume 2A – Installation of Services</i> (DECC, 2008a) and submitted to the Transgrid 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 <i>Environment Operations Act 1997</i> (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 <i>Waste Classification Guidelines</i> (EPA, 2014), the Guidelines on the Duty to Report Contamination (EPA, 2015) and the <i>Contaminated Land Management Act 1997</i> .
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 ESCP 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.

Mitigation measures	
EC3	Hollow bearing trees removal protocol shall be implemented: - Removal of hollow-bearing trees, where required, must be supervised by a suitably qualified ecologist with wildlife handling experience. - 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 work method 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 by the ecologist 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 are to be replaced with high-quality artificial hollows based on the following ratios:

Mitigation measures	
	- A ratio of 1:1 for every hollow $\geq 8\text{cm}$ diameter - A ratio of 1:2 for hollows $< 8\text{cm}$ diameter • 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 <i>National Parks and Wildlife Act 1974</i> or <i>Heritage Act 1977</i>) 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 <i>Interim Construction Noise Guideline</i> (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.

Mitigation measures	
	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.
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 <i>Soils and Construction Volume 2C Unsealed Roads</i> (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 <i>International Commission on Non-Ionizing Radiation Protection</i> (ICNIRP) Guidelines for limiting exposure to EMF (ARPANSA, 2010).
HR2	Transgrid's <i>Hot Works and Fire Risk Procedure</i> 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.

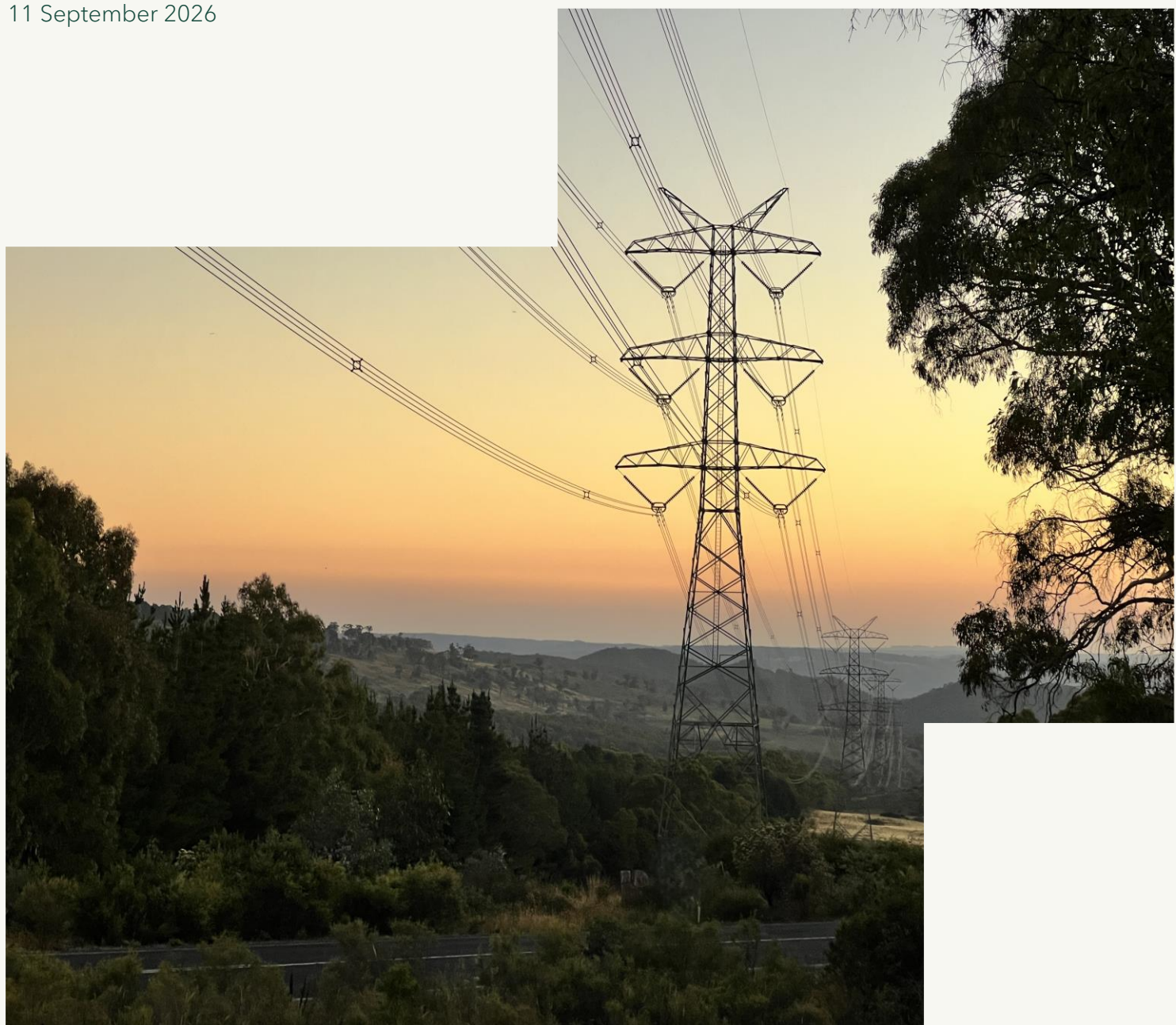
Mitigation measures	
Visual amenity	
VA1	All construction plant, equipment, waste and excess materials shall be contained within the designated boundaries of the work site and shall be removed from the site at the earliest opportunity.
Waste	
WA1	Waste mitigation and management strategies shall be documented 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 Assessment – Southern Cluster

Biodiversity Assessment Report

Prepared for Arup on behalf of Transgrid
11 September 2026





Document control

Project number	Client	Project manager	LGA
9216	Arup on behalf of Transgrid	Stephen Bloomfield	Lithgow City Oberon LGA

Version	Author	Review	Status	Comments	Date
R1	Rosemary Hulak Nixon Jowett Oscar Anderson	Rob Townsend	Draft	First Issue	5 th March 2026
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R5	Jesse Cass	Stephen Bloomfield	Final	Final comments and figure edit	11 th September 2026

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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 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 *Environmental Planning and Assessment Act 1979* (NSW). 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 *NSW 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 Site) 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 117 and 229; both associated with line 5A6/5A7)
- Conductor reconfiguration works at the phase rollover site (associated with line 5A6/5A7), located west of the Mount Piper 330 kV substation (Mount Piper Substation - South)
- 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 117 and 229 would be widened from 70 metres to 120 metres.

Methods

Relevant databases were reviewed prior to the site assessment to inform survey design. Database searches within the locality (a 10 km radius around each Subject Site) were initially 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 25th and 26th August 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 Threatened Ecological Communities (TECs) under the BC Act and the EPBC Act. Potential suitable threatened flora and fauna habitat and any incidental fauna and flora lists were also recorded within the Study Area.

Targeted threatened species surveys were undertaken in November 2025 and January 2026 for the following species:

- Southern Greater Glider (*Petauroides volans*)
- Yellow-bellied Glider (*Petaurus australis*)
- Gang-gang Cockatoo (*Callocephalon fimbriatum*)
- Eastern False Pipistrelle (*Falsistrellus tasmaniensis*)
- Buttercup Doubletail (*Diuris aequalis*)
- Mountain Trachymeme (*Trachymene scapigera*).

Key Results

The key outcomes of the desktop and site assessments are summarised as follows:

Mount Piper Substation – South

The site visit determined that PCT 3735 *Central Tableland Peppermint Shrub-Grass Forest* occurs in low and moderate condition within the Subject Site. PCT 3735 is not associated with any Threatened Ecological Community under the BC Act or the EPBC Act. This site provided forest and grassland habitat, with no hollow bearing trees (HBTs) within the Subject Site and small amounts of woody debris. No threatened species were considered to have a moderate or higher likelihood of occurring within the Mount Piper Substation – South Study Area.

STR 117

The site visit determined that PCT 3366 *Central Tableland Clay Apple Box Grassy Forest* occurs in low and moderate condition and PCT 3369 *Central Tableland Ranges Peppermint-Gum Grassy Forest* occurs in low and moderate condition within the Subject Site. PCT 3366 and PCT 3369 are not associated with any TEC under the BC Act or the EPBC Act. This site provides forest and grassland habitat, with two hollows from one HBT and large amounts of woody debris within the Subject Site. No threatened species were considered to have a moderate or higher likelihood of occurring within the STR 117 Study Area.

STR 229

The site visit determined that PCT 3735 *Central Tableland Peppermint Shrub-Grass Forest* occurs in low, moderate high and very high condition within the Subject Site. PCT 3735 is not associated with any TEC under the BC Act or the EPBC Act. This site provides forest and grassland habitat with 31 hollows from 17 HBTs within the Subject Site. Targeted threatened fauna surveys were undertaken from 27th to 31st January 2026 within the STR 229 Study Area and the following species were recorded:

- Southern Greater Glider
- Gang-gang Cockatoo
- Eastern False Pipistrelle.

The Yellow-bellied Glider was not recorded within the Study Area and is therefore considered absent. This species was not considered further.



Targeted threatened flora surveys were undertaken on 25th November 2025 within the STR 229 Study Area for Buttercup Doubletail and Mountain Trachymeme. These species were not recorded within the Study Area and are therefore considered absent. These species were not considered further.

The following threatened species were considered to have a moderate likelihood of occurring within the STR 229 Study Area:

- Varied Sittella (*Daphoenositta chrysoptera*)
- Scarlet Robin (*Petroica boodang*)
- Flame Robin (*Petroica phoenicea*).

These species were assumed present as they did not pose a constraint to development (i.e. they do not rely on habitat constraints present, such as hollow bearing trees) and are likely to move through the Subject Site; the impact of the proposed works was not considered a significant risk to these species. Therefore, they were assumed present and were subject to further impact assessment.

Threatened Species Assessment

Based on the habitat suitability within the Subject Site at STR 229, six threatened fauna species listed under the BC Act and/or EPBC Act are considered to have a moderate or higher likelihood of occurring within this Subject Site, or were detected during targeted surveys, and required further impact assessments. Species determined to require further impact assessment include:

- Varied Sittella
- Scarlet Robin
- Flame Robin
- Southern Greater Glider
- Gang-gang Cockatoo
- Eastern False Pipistrelle.

These species were assessed against the BC Act Five-part Test of Significance (ToS) and/or the EPBC Act Significant Impact Criteria (SIC).

Impact Assessment

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

Mount Piper Substation - South

- 1.56 ha of native vegetation (PCT 3735)

STR 117

- 2.56 ha of native vegetation (PCT 3366)
- 0.88 ha of native vegetation (PCT 3369)

STR 229

- 2.65 ha of native vegetation (PCT 3735)

The Project would also result in the removal of 33 hollows from 18 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 habitat requirements (e.g. woodland birds).



Outcomes of assessments of significance are as follows:

Biodiversity Conservation Act Five-part Tests of Significance

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

- Southern Greater Glider
- Gang-gang Cockatoo
- Eastern False Pipistrelle
- **Woodland Birds:** Varied Sittella, Scarlet Robin, Flame Robin.

EPBC Act Significant Impact Criteria Assessments

SIC assessments were undertaken for the following EPBC Act listed threatened species recorded within the STR 229 Study Area:

- Southern Greater Glider
- Gang-gang Cockatoo.

All assessments concluded that, provided mitigation measures were implemented, a significant impact under the EPBC Act would be **unlikely** to any of the above species:

Conclusion and recommendations

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

- 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 ≥ 8 cm diameter
 - A target ratio of 1:2 for hollows < 8 cm diameter.

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 <i>Biodiversity Conservation Act 2016</i>
BV	Biodiversity Values
Cm	Centimetre(s)
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 <i>Environment Protection and Biodiversity Conservation Act 1999</i>
EP&A Act	NSW <i>Environment Planning and Assessment Act 1979</i>
FM Act	NSW <i>Fisheries Management Act 1994</i>
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
M	Metre(s)
Niche	Niche Environment and Heritage
NSW	New South Wales
PCT	Plant Community Type
PMST	Protected Matters Search Tool
RDP	Rapid Data Point



Term or abbreviation	Definition
REF	Review of Environmental Factors
SEED	Sharing and Enabling Environmental Data in NSW
SVTM	State Vegetation Type Map
TBDC	Threatened Biodiversity Database Collection
TEC	Threatened Ecological Community
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.



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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 - South, STR 117 and STR 229, collectively referred to as the Southern 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 purpose of this report is to identify potential biodiversity constraints and further investigations required for the development of the Project. The primary objectives 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.

1.3 Project background

1.3.1 Assessment areas

Transgrid proposes to carry out transposition works at two locations (STR 117 and STR 229). Both are within the Oberon Council local government area (LGA). The phase three rollover site at Mount Piper 330 kV substation occurs within the City of Lithgow LGA.

The area of study for the two proposed transposition sites and the phase rollover site listed in Table 1: Site Locations were provided to Niche in August 2025 while the proposed works areas were provided to Niche in September 2025.

For the purposes of this study the following has been defined:

- **Subject Site:** Represents the maximum area required to complete the proposed works. For the purpose of this assessment, it is assumed all vegetation within the Subject Site will be cleared as part of the proposed works (Figure 2).
- **Study Area:** Consists of a buffer around the maximum extent of proposed works to account for potential indirect impacts associated with the proposal. This is the area of investigation for the purpose of this assessment (Figure 2).

The proposed works are described in section 1.3.2.



Table 1: Site Locations

Site	Address	Lot and DP	Size of Study Area (ha)	Land zone	Bioregion/ Subregion	Mitchell landscape	Local Government Area (LGA)	Land use	Waterways within the Study Area	Nearby conservation areas (distance)
Mount Piper Substation - South	350 Boulder Rd, Portland NSW 2847	Lot 103 DP1164619 , Lot 162 DP751638	5.09	RU1, SP2	South Eastern Highlands / Capertee Uplands	Capertee Plateau	Lithgow City	Primary production, Infrastructure	None identified	Gardens of Stone State Conservation Area (within ~5km)
Line 5A6/5A7 Structure 117 (STR 117)	Langs Rd, Essington NSW 2787	Lot 1 DP1115512 , Lot 30 DP757047	8.82	RU1	South Eastern Highlands / Oberon	Rockley Plains	Oberon	Primary Production	None identified	None identified
Line 5A6/5A7 Structure 229 (STR 229)	Abercrombie Rd, Paling Yards NSW 2787	Lot 81 DP753064, Lot 85 DP820901	5.09	RU1, RU3	South Eastern Highlands / Oberon and South Eastern Highlands / Crookwell	Rockley Plains	Oberon	Primary production, Forestry	Two Strahler 1 waterways.	Abercrombie River National Park, Blue Mountains National Park (within ~2km)



1.3.2 Proposed Activity

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 117 and 229)
- Conductor reconfiguration works at the phase rollover site located west of the Mount Piper 330kV substation (Mount Piper Substation - South)
- 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. It is noted that the tracks used to access the Mount Piper Substation - South were assessed as part of the Central Cluster BAR (Niche 2026b).

In addition, the existing transmission line easement in the area at Structure 117 and 229 would be widened from 70 metres to 120 metres (Figure 1 and Figure 2).

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*
- *NSW Fisheries Management Act 1994* (FM Act)
- *NSW Water Management Act 2000* (WM Act).

1.4.1 Commonwealth Environment Protection and Biodiversity Conservation Act 1999

The purpose of the EPBC Act is to ensure that actions likely to cause a significant impact on Matters of National 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, the Environment and Water (DCCEEW).

The EPBC Act identifies MNES as:

- World Heritage properties
- National Heritage places
- Wetlands of international importance
- Commonwealth listed threatened species and ecological communities
- Commonwealth listed Migratory species
- Commonwealth marine or land areas



- 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 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 project 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 following would be required:

- The preparation of a Species Impact Statement (SIS), or
- A Biodiversity Development Assessment Report (BDAR) (if the proponent elects to participate in the Biodiversity Offsets Scheme [BOS]).

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 guidance in relation to:

- Threatened species and Threatened Ecological Communities (TECs)
- AOBV
- Key Threatening Processes (KTPs)
- Private land conservation agreements
- The BOS
- Biodiversity assessment requirements
- Biodiversity certification of land.

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

1.4.4 NSW Biosecurity Act 2015

The *Biosecurity Act 2015* 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 Act.

Mitigation against the spread of weeds has been addressed in Section 5.



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 Key Fish Habitat (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.

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 (WM Act)

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 BioNet Vegetation Classification database
- NSW State Vegetation Type Map (SVTM)
- Commonwealth EPBC Act Protected Matters Search Tool (PMST) for MNES
- NSW Threatened Biodiversity Data Collection (TBDC)
- Biodiversity Values (BV) Map
- Biodiversity Assessment Method (BAM) Important Habitat Mapping (IHM)
- NSW DPIRD Fisheries NSW Spatial Data Portal.

2.1.1 Likelihood of occurrence assessment

Threatened flora and fauna listed 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 2 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. 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 a 'high' or 'low' likelihood of occurrence for the species within the Study area.	Potential habitat for a species occurs on the site and the species may occasionally utilise that habitat. Species unlikely to be wholly dependent on the	Additional survey and/ or BC Five-part Test of Significance / EPBC Significant Impact Criteria assessment required



Likelihood rating	Threatened flora criteria	Threatened and migratory fauna criteria	Implication of Likelihood rating
		habitat present within the Study area.	
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. The NSW DPIRD Fisheries data portal 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 Study Areas (Table 3) by Niche ecologist Rosemary Hulak 25-26th, August and 2nd October 2025. Targeted surveys were undertaken at STR 229 on the 25th November 2025 (targeted flora surveys) and 27-31st January 2026 (targeted fauna surveys). The species surveyed and methodology are discussed further in Section 2.3.

A variety of field survey methods were utilised during the initial assessment, including Rapid Data Points (RDPs), fauna habitat assessment, opportunistic observations and targeted flora and fauna surveys.



Table 3: Area of survey and Subject Site

Site	Study Area (Ha)	Subject Site (Ha)
Mount Piper Substation - South	5.09	1.66
STR 117	8.82	3.57
STR 229	5.09	2.74
Total	16.20	7.97

The Study Areas were traversed, noting the following:

- Plant Community Types (PCTs) and TECs, as well as their condition, present within the Study Area
- Non-native vegetation
- Fauna habitat assessment to record the presence/ absence of key habitat constraints (e.g. presence of tree hollows, aquatic habitat, large logs, exfoliating rock, flowering resources, aquatic features) for threatened fauna habitat predicted to occur within the Subject Site
- Rapid habitat assessment of any aquatic habitats present to support the desktop evaluation of potential impacts to the aquatic environment
- Incidental threatened flora and fauna sightings.

2.2.2 Rapid Data Points

RDPs are an efficient and reliable method of identifying and validating vegetation mapping, including PCTs and any associated TECs, within the Study Area. Data collection includes the most dominant vegetative species for each of the canopy, midstorey, understorey and groundcover strata, as well as landform characteristics (e.g., aspect, slope, soil type) and photographs.

A total of 35 RDPs were completed during the site assessment: eight at the Mt Piper Substation South site, 10 at the STR 117 and 17 at the STR 229. RDP data was used for PCT alignment, descriptions and justifications. The location of these RDPs is shown in Figure 2.

2.2.3 Fauna habitat assessment

The fauna habitat assessment focused on locating and recording the presence of a variety of potential fauna habitat features within the Study Area, such as hollow-bearing trees (HBTs), stick nests, rocky crevices or outcrops, waterbodies, and suitable anthropogenic structures. The location of any of these habitat features across the study area is shown in Figure 2.

2.2.4 Opportunistic observations

Targeted surveys were not originally part of the scope of the BAR. Opportunistic observations were utilised during initial 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. Targeted surveys for flora and fauna species were later included as part of the field survey scope as described below in Section 2.3. The location of these targeted surveys are shown in Figure 2.



2.3 Targeted surveys

2.3.1 Targeted flora surveys - STR 229

Targeted surveys were undertaken at STR 229 for Buttercup Doubletail (*Diuris aequalis*) and Mountain Trachymene (*Trachymene scapigera*) on 25 November 2025. 10m parallel transects were walked across the site to detect presence of either species.

During the targeted survey period (October - November) for the Buttercup Doubletail, several sources were consulted regarding flowering and survey time periods:

- An external source (personal comms, 10th November), confirmed that the species was currently flowering around Crookwell, 100kms from the site. This is in line with known flowering periods for the species across the Southern Tablelands.
- Additionally, confirmation was sought from the BOS Helpdesk, which confirmed that late November was peak flowering period for this species around the study area.

While the survey period for Mountain Trachymene is from December to March, documentation from NSW Saving our Species (NSW DPIE, 2020) stated that foliage of the species will commence regrowth from October. As such, the area of possible habitat for the Mountain Trachymene at STR 229 was surveyed in late November to ascertain if any vegetative regrowth matching the species, was visible above ground.

2.3.2 Targeted fauna surveys - STR 229

Targeted fauna surveys were undertaken at STR 229 on 27th to 31st January 2026 for the following threatened species:

- Gang-gang Cockatoo (*Callocephalon fimbriatum*)
- Southern Greater Glider (*Petauroides volans*)
- Yellow-bellied Glider (*Petaurus australis*)
- Eastern false Pipistrelle (*Falsistrellus tasmaniensis*).

Survey methods for the two glider species included spotlighting one hour after sunset, use of thermal scope and call playback (Yellow-bellied Glider only). Survey methods for the Gang-gang Cockatoo included diurnal bird surveys. Survey methods for the Eastern False Pipistrelle involved installation of 2 Anabat ultrasonic recorders for four nights along likely flyways and potential roosts.

Results of targeted surveys are available in Section 3.4.

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. As such, some species have been assumed present due to onerous survey requirements.



Indicative distribution mapping of threatened aquatic species and mapped KFH (DPI 2024b) was reviewed to identify any areas of indicative habitat for threatened species listed under the FM Act that include the assessment 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 (DPI 2024a) 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 Biodiversity Assessment Report 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 6). No threatened species were considered to have been misidentified due to this seasonal limitation.



3. Results

The biodiversity values recorded at each site are provided in the sections below.

3.1 Desktop assessment

3.1.1 Likelihood of occurrence assessment

The database review identified a total of 73 threatened and migratory species, comprised of 53 threatened fauna species and 20 threatened flora species, as occurring or with potential to occur within 10 km of each site. The likelihood of these species to occur within the Study Area is assessed in Annex 2.

For species assessed as having a low or unlikely likelihood of occurrence within the site, this determination is based on a low number of records within the locality, the absence of key habitat requirements (e.g. specific soil types, waterbodies, or tree hollows), geographical constraints, and/or the generally degraded condition of the Study Area, which would not support foraging and/or breeding habitat considered critical to these species.

A total of seven threatened fauna, and two threatened flora species have been identified as having a moderate or higher likelihood of occurring within the Subject Site, summarised in Table 4. No threatened migratory species were identified as being likely to occur on the Subject 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 of occurrence	Assessment required
Flora							
STR 229	<i>Diuris aequalis</i>	Buttercup Doubletail	V	V	High number of recent records adjacent to the Study Area and suitable habitat on site.	Moderate	Undertake targeted surveys to inform risk of Significant Impact. See section 3.4.1.
STR 229	<i>Trachymene scapigera</i>	Mountain Trachymene	E	E	Multiple records in Gurnang State Forest (2 km northeast of the Study), potentially suitable habitat on site	Moderate	Undertake targeted surveys to inform risk of Significant Impact. See section 3.4.1.
Fauna							
STR 229	<i>Callocephalon fimbriatum</i>	Gang-gang Cockatoo	V	E	Suitable hollows along access track and within Subject Site that may not be able to be avoided. Moderate number of recent records in area suggests that species may be using this site for foraging and/ or breeding.	Moderate	Undertake targeted surveys to inform risk of Significant Impact. See section 3.4.2.
STR 229	<i>Daphoenositta chrysoptera</i>	Varied Sittella	V	Not Listed	Moderate number of recent records suggests that suitable foraging and or breeding habitat may occur on site	Moderate	Intensive survey required, not recommended for this site. Assume presence, BC Five-



Site	Scientific name	Common name	BC Act	EPBC Act	Habitat on site	Likelihood of occurrence	Assessment required
							part Test of Significance.
STR 229	<i>Falsistrellus tasmaniensis</i>	Eastern False Pipistrelle	V	Not Listed	Moderate number of recent records suggests that suitable foraging and or breeding habitat may occur on site. Hollows within Subject Site.	Recorded	Undertake targeted surveys to inform risk of Significant Impact. See section 3.4.2.
STR 229	<i>Petauroides volans</i>	Greater Glider (southern and central)	E	E	High number of recent records suggests that suitable foraging and or breeding habitat may occur on site. Suitably sized hollows within Subject Site.	Recorded	Undertake targeted surveys to inform risk of Significant Impact. See section 3.4.2.
STR 229	<i>Petaurus australis</i>	Yellow-bellied Glider	V	V	Moderate number of recent records suggests that suitable foraging and or breeding habitat may occur on site. Suitably sized hollows within Subject Site.	Moderate	Undertake targeted surveys to inform risk of Significant Impact. See section 3.4.2.
STR 229	<i>Petroica boodang</i>	Scarlet Robin	V	Not Listed	Moderate number of recent records suggests that suitable foraging and or breeding habitat may occur on site	Moderate	Intensive survey required, not recommended for this site. Assume presence, BC Five-part Test of Significance.
STR 229	<i>Petroica phoenicea</i>	Flame Robin	V	Not Listed	Moderate number of recent records suggests that suitable foraging and or breeding habitat may occur on site	Moderate	Intensive survey required, not recommended for this site. Assume presence, BC Five-part Test of Significance.

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 Study Area.

3.1.3 BAM Important Habitat Map

The IHM 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 IHM occurs 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*. Under Part 5 assessments under the EP&A Act, presence of



biodiversity values and/or IHM alone, without an assessment of significant impact to a threatened species, does not require assessment under an alternative pathway.

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

3.2 Validated vegetation

3.2.1 Plant Community Types and Threatened Ecological Communities

A review of existing vegetation as mapped in the NSW State Vegetation Type Map (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 (provided in Table 5).

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

Site	Area of native vegetation within Subject Site (ha)	Area of non-native vegetation within Subject Site (ha)	Total area of clearing within Subject Site (ha)
Mount Piper Substation - South	1.56	0.10	1.66
STR 117	3.44	0.13	3.57
STR 229	2.65	0.09	2.74
Total	7.65	0.32	7.97

3.2.2 Validated vegetation mapping

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

Table 6: PCTs recorded at the proposed Subject 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 - South						
3735	Central Tableland Peppermint Shrub-Grass Forest	Low	1.48	No	No	The PCT is not consistent with a TEC
3735	Central Tableland Peppermint Shrub-Grass Forest	Moderate	0.08	No	No	The PCT is not consistent with a TEC
9996	Non-native (Road)		0.10	No	No	The PCT is not consistent with a TEC
STR 117						



PCT No.	PCT Name	Condition	Subject Site (ha)	Vegetation Zone aligns with BC TEC	Vegetation Zone aligns with EPBC TEC	Associated TEC
3366	Central Tableland Clay Apple Box Grassy Forest	Low	2.41	No	No	The PCT is not consistent with a TEC
3366	Central Tableland Clay Apple Box Grassy Forest	Moderate	0.15	No	No	The PCT is not consistent with a TEC
3369	Central Tableland Ranges Peppermint-Gum Grassy Forest	Low	0.66	No	No	The PCT is not consistent with a TEC
3369	Central Tableland Ranges Peppermint-Gum Grassy Forest	High	0.22	No	No	The PCT is not consistent with a TEC
9996	Non-Native (Road)		0.04	No	No	The PCT is not consistent with a TEC
0	Non-native (Exotic Vegetation)		0.09	No	No	The PCT is not consistent with a TEC
STR 229						
3735	Central Tableland Peppermint Shrub-Grass Forest	Low	1.12	No	No	The PCT is not consistent with a TEC
3735	Central Tableland Peppermint Shrub-Grass Forest	Moderate	0.02	No	No	The PCT is not consistent with a TEC
3735	Central Tableland Peppermint Shrub-Grass Forest	High	0.67	No	No	The PCT is not consistent with a TEC
3735	Central Tableland Peppermint Shrub-Grass Forest	Very High	0.84	No	No	The PCT is not consistent with a TEC
9996	Non-Native (Road)		0.09	No	No	The PCT is not consistent with a TEC

3.2.3 Threatened ecological communities

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

3.2.4 Priority weeds and Weeds of National Significance

Priority weeds of the Central Tablelands Local Land Service (LLS) (DPI, 2023) and Weeds of National Significance (WoNS [Weeds Australia, 2012]) were mapped through rapid data collection across all sites. Priority weeds and



WoNs were present across the Mount Piper Substation - South site, with weedy thickets of Blackberry (*Rubus fruticosus* spp. agg) noted adjacent to the current high voltage transmission lines.

No Priority or Weeds of National Significance were noted on STR 117 or STR 229.

3.3 Fauna habitat

A summary of terrestrial habitat features which may provide potential habitat for a range of fauna species including threatened species is provided in Table 7.

Table 7: Fauna habitat constraints recorded within the Study Area

Site	Hollow-bearing trees (HBT)	Burrows	Stick Nest	Surface rock	Rock overhang/ cliff	Woody debris
Mount Piper Substation - South	No	None recorded	None recorded	Substrate gravelly, however no distinct surface rock	None recorded	Minimal
STR 117	Yes, HBTs along the access track	None recorded	None recorded	Minimal	None recorded	Yes, large amounts across start of access/ tree cluster
STR 229	Yes, HBTs along the access track and outer edge of proposed Subject Site	None recorded	None recorded	Yes, widespread across site	None recorded	Yes, large amounts across site

3.3.1 Hollow bearing trees within study area

The number and size of hollows recorded at STR 229 and STR 117 are summarised in Table 8 and shown in Figure 2. A complete set of HBT data is provided in Annex 3.

A total of 36 HBTs with a total of 59 hollows/fissures were recorded within the Study Area. A total of 18 HBTs comprised of 33 hollows of varying sizes were recorded within the Subject Sites.



Table 8: Summary of hollow-bearing tree data

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 Substation - South	0	0	0	0
STR 117	3	4	1	2
STR 229	33	55	17	31
Total	36	59	18	33

3.3.1.1 Threatened fauna hollow requirements

Different species of hollow-dependent fauna require specific hollow sizes and height above the ground to be used as habitat. Three species of hollow-dependent fauna were recorded within the Study Area, Southern Greater Glider, Gang-gang Cockatoo, and Eastern False Pipistrelle. The hollow requirements and the number of suitable hollows present within the STR 229 Study Area for these species has been summarised in Table 9. Although there are hollows recorded within the STR 117 Subject Site, no hollow-dependant threatened fauna are considered likely to occur at this location. Therefore, these hollows have not been included in Table 9.

Table 9: Preferred hollow requirements and number of hollows for threatened hollow-dependent fauna recorded

Scientific name	Common Name	Required hollow sizes	Required hollow height above ground	Hollows within the STR 229 Study Area	Hollows within the STR 229 Subject Site
<i>Petauroides volans</i>	Southern Greater Glider	≥8cm	≥6m	44	24
<i>Callocephalon fimbriatum</i>	Gang-gang Cockatoo	≥9cm	≥2m	47	26
<i>Falsistrellus tasmaniensis</i>	Eastern False Pipistrelle	≥5cm	≥7m	38	18

3.4 Targeted surveys

Targeted surveys for threatened flora and fauna were undertaken at STR 229 September 2025 and January 2026 to confirm the presence or absence of species identified during the constraints assessment as having moderate or higher likelihood of occurrence. Surveys were undertaken in accordance with the relevant NSW BAM survey guidelines for threatened flora and fauna

3.4.1 Threatened Flora

Targeted surveys for Buttercup Doubletail and Mountain Trachymene were undertaken at STR 229 on 25th November 2025. No Individuals of any target species were detected at any site despite systematic traverses throughout the potential habitat.

These species were not detected during targeted surveys. Therefore, these species are considered to be absent from the STR 229 Study Area and are not considered further.

Details for the targeted flora survey can be found below in Table 10.



Table 10: Target threatened flora survey results

Site	Date survey undertaken	Target species	Survey outcome	Species consideration	Survey notes
STR 229	25/11/2025	Buttercup Doubletail (<i>Diuris aequalis</i>)	Target species not observed.	Species considered not to occur on site.	Suitable habitat on site, however species not found. Buttercup Doubletail highly unlikely to occur on site.
STR 229	25/11/2025	Mountain Trachymene (<i>Trachymene scapigera</i>)	The area of possible habitat for the Mountain Trachymene at STR229 was surveyed and no vegetative regrowth was found.	Species considered not to occur on site.	As no vegetative regrowth was found, it has been concluded that Mountain Trachymene is highly unlikely to occur on site. The micro habitat is also significantly drier than expected, making it highly unlikely that the species would be found in that area.

3.4.2 Threatened Fauna

Targeted surveys were completed at STR 229 in January 2026 to assess the presence of four threatened fauna species identified as having a moderate or higher likelihood of occurring:

- Southern Greater Glider
- Yellow-bellied Glider
- Gang-gang Cockatoo
- Eastern False Pipistrelle.

Survey results confirmed the presence of the Eastern False Pipistrelle (positive ID for calls on ultrasonic recorder), Gang-gang Cockatoo (noted foraging on site) and Southern Greater Glider within the Subject Site (four individuals recorded during spotlighting).

The Yellow-bellied Glider was not detected during targeted surveys. This species is therefore considered to be absent from the Study Area and is not considered further.

Details for the targeted fauna survey can be found below in Table 11 and the survey location is shown in Figure 2.



Table 11: Target threatened fauna survey results

Site	Date survey undertaken	Target species	Survey outcome	Species consideration	Survey notes
STR 229	27/01/2026 - 31/01/2026	Gang-gang Cockatoo	Target species not observed.	Species Known to occur on site	Suitable habitat on site, eight individuals seen foraging on site.
STR 229	27/01/2026 - 31/01/2026	Southern Greater Glider	Target species was recorded. Four individuals were recorded during targeted surveys.	Species Known to occur on site.	Suitable habitat on site, three individuals observed in one night using hollows on site.
STR 229	27/01/2026 - 31/01/2026	Eastern False Pipistrelle	Target species recorded during ultrasonic survey.	Species Known to occur on site.	Suitable habitat on site, species recorded, unable to ascertain if species is utilising hollows without harp trapping.
STR 229	27/01/2026 - 31/01/2026	Yellow-bellied Glider	Target species not observed.	Species considered highly unlikely to occur on site.	Suitable habitat on site, however species surveyed for and not found. Species highly unlikely to occur on site.

3.5 Aquatic habitat and biodiversity values

Aquatic constraints considered for the sites include the presence and condition of aquatic biodiversity values, such as mapped KFH and the potential occurrence of threatened aquatic species and endangered ecological communities. Legislative considerations include riparian buffer requirements under the FM Act and the WM Act, as well as the potential for indirect impacts to downstream aquatic environments.

A summary of aquatic habitat within the Subject Sites based on desktop assessment and site assessment and surrounding environment is summarised in Table 12, with figures showing the aquatic habitat on site available in Annex 8. No threatened aquatic species have been identified as having a moderate or higher likelihood of occurrence at any of the Subject Sites.



Table 12: Aquatic habitats assessed within Subject Site

Site	Aquatic habitat description	KFH considerations	Indicative mapping for threatened species and ecological communities.	FM act and WM act considerations regarding riparian buffer.	Further considerations
Mount Piper Substation - South	A drainage line is present within the Subject Site in the form of a man-made concrete structure. The aquatic habitat is heavily modified and does not support important habitat for native aquatic species.	The mapped KFH outside the project site 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 Permit Approval.	N/A
STR 117	No aquatic habitat at the site.	No KFH mapped at the site.	No threatened freshwater fish habitat occurs at the site	N/A	N/A



Site	Aquatic habitat description	KFH considerations	Indicative mapping for threatened species and ecological communities.	FM act and WM act considerations regarding riparian buffer.	Further considerations
STR 229	Two 1 st order waterways are mapped within site. No water was present at time of survey. These features are more likely ephemeral drainage lines.	No KFH mapped at the site.	No threatened freshwater fish habitat occurs at the site	The mapped watercourses and waterbodies would align with the definition of 'waterfront land' under the DPIRD Fisheries Guidelines and definitions of 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.	N/A



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 detailed on ground mapping and collection of data on biodiversity values within the Study Area using rapid data points.

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

***“Direct impacts** are those that directly affect the 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. When applying each factor, both long-term and short-term impacts are to be considered.*

***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. When applying each factor, both long-term and short-term impacts are to be considered.”*

The total proposed impacts to the Subject Sites (Mount Piper substation - South, STR 117 and STR 229) is approximately 7.97 ha. It is noted that this is the maximum area of clearance proposed and that the actual area of clearance and/or modification would be the minimum possible to allow operations.

4.2 Terrestrial ecological values

4.2.1 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 and loss of hollow-bearing trees. Each of these KTPs have been addressed within the direct or indirect impacts of the Project as discussed in Section 4.2.2.



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
Clearing of native vegetation/ Land Clearance	Yes	Yes	Yes	Yes
Invasion of native plant communities by exotic perennial grasses	Yes	No	Yes	No – provided biosecurity measures are implemented.
Novel biota and their impact on biodiversity	No	Yes	Yes	No
Loss of hollow-bearing trees	Yes	No	Yes	Yes
Removal of dead wood and dead trees	Yes	No	Yes	Yes
Alteration to the natural flow regimes of rivers, streams, floodplains & wetlands	No	No	Yes	No

4.2.2 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 14: 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 – South	STR 117	STR 229
Direct impacts			
Removal or modification of native vegetation	Known: The total maximum area of native PCTs to be removed is up to 1.56 ha. No TECs listed under the BC Act or EPBC Act were recorded within the Study Area and will therefore not be impacted by the proposed works. The vegetation to be removed likely provides foraging habitat for locally occurring threatened species.	Known: The total maximum area of native PCTs to be removed is up to 3.44 ha. No TECs listed under the BC Act or EPBC Act were recorded within the Study Area and will therefore not be impacted by the proposed works. The vegetation to be removed likely provides foraging habitat for locally occurring threatened species.	Known: The total maximum area of native PCTs to be removed is up to 2.65 ha. No TECs listed under the BC Act or EPBC Act were recorded within the Study Area and will therefore not be impacted by the proposed works. The vegetation to be removed likely provides foraging habitat for locally occurring threatened species.
Loss of individuals of a threatened species	Moderate: The removal of native vegetation and HBTs may result in death or injury to a limited number of threatened species. Recommendations for avoidance and mitigation are provided in Section 5.		
Removal or modification of threatened species habitat other than native vegetation	Low: No hollows of threatened species breeding habitat will be removed from the Mount Piper Substation – South Subject Site.	Moderate: A total of two hollows will be removed from the STR 117 Subject Site. The modification of habitat is considered to be limited due to the size and location of the Subject Site.	Moderate: A total of 31 hollows will be removed from the STR 229 Subject Site. The modification of habitat is considered to be limited due to the size and location of the Subject Site.



Impact	Extent of impact as a result of the Project		
	Mount Piper Substation – South	STR 117	STR 229
(micro-habitat features)		Recommendations for avoidance and mitigation are provided in Section 5.	Recommendations for avoidance and mitigation are provided in Section 5.
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 removal of vegetation as part of the proposed works 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 loss of refugia and increased edge effects that may create opportunities for predation by feral animals. 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. Only vegetation that sits inside the Subject Site will be cleared for necessary infrastructure upgrades.		
Loss of breeding opportunities	None: No hollows or significant habitat features will be removed from the Mount Pipier Substation – South Subject Site.	Moderate: The removal of hollows from the STR 117 Subject Site will reduce the availability of breeding habitat within the locality and subsequently reduce opportunities for breeding. Recommendations for avoidance and mitigation are provided in Section 5.	Moderate: The removal of hollows from the STR 229 Subject Site will reduce the availability of breeding habitat within the locality and subsequently reduce opportunities for breeding. Recommendations for avoidance and mitigation are provided in Section 5.
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 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.		



Impact	Extent of impact as a result of the Project		
	Mount Piper Substation - South	STR 117	STR 229
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.		

4.3 Significant Impact Assessment

Significant impact assessments were completed for all species identified with a moderate or higher likelihood of occurrence within the Study Area. Species were assessed in accordance with the relevant legislation's significant impact criteria.

A summary of the outcome of these assessments is detailed in Section **Error! Reference source not found.** The full assessments are available in Annex 4 for the BC Act five-part tests of significance and Annex 5 for the assessments of significant impact criteria (SIC) under the EPBC Act.

No TECs or threatened flora species listed under the BC Act or EPBC Act were recorded or considered to have a moderate or higher likelihood of occurring within the Study Areas and have therefore not been assessed further.

4.3.1 BC Act Five-part Test (Test of Significance)

A total of six threatened fauna species listed as threatened under the BC Act were considered to have a moderate likelihood of occurring or were recorded during targeted surveys within the STR Study Area and were therefore assessed against the BC Act Five-part ToS:

- Varied Sitella (*Daphoenositta chrysoptera*)
- Scarlet Robin (*Petroica boodang*)
- Flame Robin (*Petroica phoenicea*)
- Southern Greater Glider
- Gang-gang Cockatoo
- Eastern False Pipistrelle.

The ToS determined that the proposed works would not result in significant impacts to these threatened species. A summary of the outcomes is presented in Table 15 with the full assessment provided in Annex 4.



Table 15: Assessment of significance summary table for threatened species either known or predicted to occur within Subject Site

Site	Common name	Scientific name	BC Act	Outcome of BC Act Five-part Test of Significance	EPBC Act	Outcome of EPBC Act Significant Impact Criteria assessment (SIC)	Potential for impact	Formal assessment outcomes
STR 229	Varied Sittella	<i>Daphoenositta chrysoptera</i>	V	ToS completed. Significant impact unlikely .	Not Listed	Not Applicable	The proposed works will remove approximately 2.65 ha of native woodland vegetation within PCT 3735, which provides the mature eucalypt structure, mid-storey shrub layer, bark resources and open-woodland foraging conditions used by the Varied Sittella, Scarlet Robin and Flame Robin. Although these species have a high likelihood of occurrence in the locality and the site supports moderate- to high-condition patches that may offer foraging and occasional nesting opportunities, the Subject Site is relatively small and partly situated within an already disturbed transmission line corridor. Extensive areas of similar or higher-quality habitat occur immediately adjacent to the site, maintaining connectivity to intact woodland extending north and northwest toward Abercrombie National Park. As a result, the potential for significant impact is low, with effects limited to localised habitat loss rather than	Works are unlikely to cause a significant impact to this species.
STR 229	Scarlet Robin	<i>Petroica boodang</i>	V	ToS completed. Significant impact unlikely .	Not Listed	Not Applicable		
STR 229	Flame Robin	<i>Petroica phoenicea</i>	V	ToS completed. Significant impact unlikely .	Not Listed	Not Applicable		



Site	Common name	Scientific name	BC Act	Outcome of BC Act Five-part Test of Significance	EPBC Act	Outcome of EPBC Act Significant Impact Criteria assessment (SIC)	Potential for impact	Formal assessment outcomes
							any risk to the viability or persistence of local populations.	
STR 229	Southern Greater Glider	<i>Petauroides volans</i>	E	ToS completed. Provided mitigation measures are implemented, significant impact unlikely .	E	SIC completed. Provided mitigation measures are implemented, significant impact unlikely	Targeted surveys within the Southern Cluster recorded three Southern Greater Gliders in one night within the Subject Site on STR 229, confirming the species is present and actively using habitat consistent with that at STR 229. The proposed works at STR 229 involve clearing approximately 2.65 ha of native PCT 3735 forests, which is recognised as high-value glider habitat, supporting mature eucalypts, hollow-bearing trees and continuous canopy structure. Comparable assessments identify the loss of mature trees and multiple den-capable hollows (>8cm diameter)—such as the 24 suitably sized hollows recorded within the STR 229 Subject Site—as reducing den availability and disrupting essential canopy movement pathways. Given the confirmed presence of the species in nearby analogous, adjacent habitat, and the scale of clearing relative to the glider's small home ranges	Provided all mitigation measures are implemented, works are unlikely to cause a significant impact to this species.



Site	Common name	Scientific name	BC Act	Outcome of BC Act Five-part Test of Significance	EPBC Act	Outcome of EPBC Act Significant Impact Criteria assessment (SIC)	Potential for impact	Formal assessment outcomes
							However, mitigation measure such as replacing hollows with artificial hollows at a 1:1 ratio will minimise the potential for impact (Transport for NSW, 2024). Additionally, extensive areas of similar or higher-quality habitat occur immediately adjacent to the site, maintaining connectivity to intact woodland extending north and northwest toward Abercrombie National Park. As a result, the potential for significant impact is low, with effects limited to localised habitat loss rather than any risk to the viability or persistence of local populations.	
STR 229	Gang-gang Cockatoo	<i>Callocephalon fimbriatum</i>	E	ToS completed. Provided mitigation measures are implemented, significant impact unlikely .	E	SIC completed. Provided mitigation measures are implemented, significant impact unlikely	Targeted surveys in January 2026 identified eight individual Gang-gang Cockatoos within the Subject Site. Both males and females were identified foraging before exiting the site. There were no signs of breeding such as lone males, an occupied nest or begging young. The proposal includes the removal of 2.65 ha of native woodland vegetation within PCT 3735, which provides the tall-mature eucalypt forest in higher elevations that are occupied by	Provided all mitigation measures are implemented, works are unlikely to cause a significant impact to this species.



Site	Common name	Scientific name	BC Act	Outcome of BC Act Five-part Test of Significance	EPBC Act	Outcome of EPBC Act Significant Impact Criteria assessment (SIC)	Potential for impact	Formal assessment outcomes
							this species during the breeding season. Within the STR 229 Subject Site are 26 suitable hollows that meet the breeding requirements for the Gang-gang Cockatoo (>9cm diameter). However, mitigation measure such as replacing hollows with artificial hollows at a 1:1 ratio will minimise the potential for impact (Transport for NSW, 2024) Additionally, extensive areas of similar or higher-quality habitat occur immediately adjacent to the site, maintaining connectivity to intact woodland extending north and northwest toward Abercrombie National Park. As a result, the potential for significant impact is low, with effects limited to localised habitat loss rather than any risk to the viability or persistence of local populations.	
STR 229	Eastern False Pipistrelle	<i>Falsistrellus tasmaniensis</i>	V	ToS completed. Significant impact unlikely .	Not listed	SICSIC completed. Significant impact unlikely	The proposed activities would impact suitable foraging habitat and potentially suitable breeding habitat for the Eastern False Pipistrelle in the form of clearing up to 2.65 ha of native vegetation associated with the species.	Works are unlikely to cause a significant impact to this species.



Site	Common name	Scientific name	BC Act	Outcome of BC Act Five-part Test of Significance	EPBC Act	Outcome of EPBC Act Significant Impact Criteria assessment (SIC)	Potential for impact	Formal assessment outcomes
							The STR 229 Subject Site contains 18 suitably hollows comprising of very small (0-5 cm) to very large (>40 cm) hollows. All hollows have been considered as potential roosting habitat due to poorly known roost requirements. The Eastern False Pipistrelle was identified within the Subject Site using ultrasonic recording devices. This survey was conducted in January 2026. However, based on the results and analysis of these recordings, there were no consistent patterns or behaviours of emerging and pre-roost return activity. These recorded calls did not exhibit behavioural patterns consistent with nearby maternity or day-roost occupancy. As a result, the potential for significant impact is low, with effects limited to localised habitat loss rather than any risk to the viability or persistence of local populations.	



4.3.2 EPBC Act Significant Impact Criteria (SIC) assessment

A total of two threatened fauna species listed as threatened under the EPBC Act were recorded within the STR 229 Study Area and were assessed against the EPBC Act SIC:

- Southern Greater Glider
- Gang-gang Cockatoo.

The SIC assessment determined that the proposed works would not result in significant impacts to these threatened species. A summary of the outcomes is presented in Table 15 with the full assessment provided in Annex 5.

4.4 Aquatic ecological values

4.4.1 Threatened aquatic species

There are no aquatic species considered to be threatened under the FM Act or EPBC Act that are likely to 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 details of key design components will be refined during detailed design, taking into account site constraints.

STR 229 is the only site that contains a mapped waterway (two Strahler order 1 streams). The mapped waterways are ephemeral drainage lines that intersect the Subject Site; one crosses an existing easement and the other is diverted under an access track via a culvert. The proposed works may cause some localised disturbance to the drainage lines, however impact to aquatic habitat or fauna is unlikely to occur as a result.

It is also noted that no KFH occurs within the Subject Site. Therefore, no KFH will be directly or indirectly impacted.

Direct and indirect impacts have been considered, in particular the potential for impacts due to erosion and sedimentation or changes to local flow conditions. These impacts are likely to be highly localised and temporary in nature. It is anticipated that the risk of potential erosion and sedimentation impacts would 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.

The WM Act is supported by a series of guidelines, including design principles and overarching management measures for work on waterfront land. Potential direct and indirect impacts, recommended mitigation measures and the residual risks are provided in Section 5.3.1. Given the Project is partially located within areas of existing infrastructure and prior disturbance or modification, it is not expected to materially increase the likelihood or extent of disturbance. The requirements of the WM Act (Section 91E(1)) therefore likely do not apply.

4.4.3 Aquatic Key threatening processes

The Project is considered unlikely to contribute to 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), where relevant. Consultation with DPI Fisheries regarding the proposed works and any further requirements is not considered necessary.

The requirements of the WM Act (Section 91E(1)) likely do not apply and as such the project is likely 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 first
- Minimise and mitigate impacts where avoidance is not possible
- Offset where residual impacts cannot be avoided.

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, including preparation of an artificial hollow strategy, and incorporated into the resulting project construction environmental management plan (CEMP) following finalisation of detailed design

Provided avoidance and mitigation measures are implemented, the Project is expected to have a minor impact on biodiversity given the level of disturbance within the Study Area due to historic clearing and ongoing operational use of the transmission line. However, as threatened arboreal mammals were detected during targeted surveys, the removal of hollows and HBTs would result in a moderate impact to threatened fauna in the locality. Table 17 details the recommended mitigation measures for reducing potential impacts on locally occurring threatened species.

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 may not be 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 impact assessment stage to avoid impacts to flora, fauna, and their habitats:

- Disturbance of vegetation will be limited to that which has been assessed in the REF and 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 creek lines and drainage lines to protect water quality and threatened fauna that inhabit the waterways, where possible
- Refer to the habitat features identified in the constraints assessment and where possible align the final design to avoid impacts to these, including:
 - Large trees (greater than 50 cm diameter breast height) and stags
 - HBTs (Figure 2, Annex 3)
 - Large hollow logs.
- Hollow bearing trees may be retained by:
 - Locating new structures and benches outside the tree protection zone to allow trees to be retained wherever possible
 - Pruning trees rather than removing to retain hollow sections
 - Poisoning HBTs within the easement and retaining stags where impact cannot be avoided to retain hollows while still ensuring vegetation clearance requirements are maintained.
- Pre-clearing surveys of trees to be felled will be undertaken by a suitably qualified ecologist to reduce the risk of death or injury to resident fauna during construction
- Pre-clearing surveys of HBTs/ potential habitat trees to be removed to reduce the risk of harm to fauna during HBT removal.

To avoid significant impacts to recorded and potentially occurring threatened species from within the Subject Site, it is recommended that vegetation and habitat clearing not be conducted during threatened species breeding seasons, where possible. Table 16 details the threatened species' breeding seasons for those species occurring or likely to occur within the Subject Sites. The key breeding seasons listed in Table 16 are the approximate months each species utilises for breeding purposes while rearing young refers to the time required to care for dependent juveniles, or when young are likely to be susceptible to impact.

Table 16: Breeding seasons for recorded and potentially occurring threatened species

Scientific Name	Common Name	BC Act	EPBC Act	Breeding Season (+rearing young)	Relevant Site
<i>Callocephalon fimbriatum</i>	Gang-gang Cockatoo	E	E	October to January (to ~March)	STR 229
<i>Petauroides volans</i>	Southern Greater Glider	E	E	May to August (to ~December)	STR 229
<i>Falsistrellus tasmaniensis</i>	Eastern False Pipistrelle	V	Not listed	November to December (to ~January)	STR 229
<i>Daphoenositta chrysoptera</i>	Varied Sittella	V	Not listed	August to January (to ~February)	STR 229
<i>Petroica boodang</i>	Scarlet Robin	V	Not listed	July to January (to ~February)	STR 229
<i>Petroica phoenicea</i>	Flame Robin	V	Not listed	August to January (to ~February)	STR 229



5.3 Impact minimisation

5.3.1 Terrestrial and aquatic mitigation measures

To further minimise any impacts to flora, fauna and their habitat, it is recommended that the following mitigation measures in Table 17 be implemented:



Table 17: Terrestrial and aquatic ecology impact mitigation measures and recommendations:

Potential impact	Proposed mitigation	Procedure	Timing	Responsibility	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	Transgrid/Contractors	Mount Piper Substation - South STR 117 STR 229
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 Subject Site 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	Transgrid/Contractors/Ecologist	Mount Piper Substation - South STR 117 STR 229



Habitat removal during key breeding times	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: – 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 – 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.			
		If a Southern Greater Glider joey or dependent-juvenile (with its mother) is observed within a hollow to be removed, the following measures are to be taken: – The hollow is to be marked and left undisturbed – Clearing of surrounding, non HBT vegetation can proceed with caution in the presence of the Project Ecologist – A linear area of canopy vegetation (at least 20 m wide) providing connectivity with retained habitat outside the Subject Site boundary is to be retained to facilitate the Greater Glider to escape, – This linear area of vegetation must be determined and marked on site by the Project Ecologist – The hollow is to be re-inspected for the Greater Gliders the following day – The tree is to remain undisturbed until the Greater Gliders moves on naturally.			
	Pre clearance survey	– Vegetation, including hollows should be inspected immediately prior to (on the day of) clearing by a suitably qualified ecologist to identify the presence of any native fauna and allow for relocation or dispersal into adjacent habitat.	Pre-construction, During construction	Transgrid/ Contractors	Mount Piper Substation - South STR 117



		– In the instance threatened species are present, breeding or displaying breeding behaviour within or adjacent to the Subject Site works must follow a “stop-works” protocol to prevent impacts to threatened species or interruption of threatened species breeding: – Works are not to continue until it is certain that the threatened species would not be impacted by the Project – In the instance that the threatened species would be impacted by the proposed works, an ecological assessment is to be conducted to determine if the Project would result in a significant impact to the threatened species. – If the Project is unlikely to result in a significant impact to threatened species, the Project may recommence, provided the mitigation measures have been updated and are followed to reduce potential impacts to the threatened species as much as possible.			STR 229
	Hollow bearing tree and vegetation removal protocol	– Removal of vegetation and HBTs are to be restricted to Greater Glider and Eastern False Pipistrelle non-breeding months to reduce likelihood of interrupting breeding or disturbing young offspring. – Removal of hollow bearing trees must be supervised by a suitably qualified ecologist with wildlife handling experience. – 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	Pre-construction, During construction	Transgrid/ Contractors	Mount Piper Substation - South STR 117 STR 229



		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. Approach to be agreed with ecologist ahead of pre-clearing inspection.			
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	Transgrid/ Contractors	Mount Piper Substation - South STR 117 STR 229
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	Transgrid/ Contractors/ Ecologist	Mount Piper Substation - South STR 117 STR 229
Removal and storage of woody habitat	Reuse of habitat features on site	– Where the removal of woody vegetation is required, timber will be retained and relocated on 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	Transgrid/ Contractors	Mount Piper Substation - South STR 117 STR 229
Retention and relocation of rocky habitat features	Retention and relocation of habitat features on site	– Where it is required to be removed for the Project, bush rock and rocky habitat is to be retained and relocated into adjoining habitat. – If bats or other fauna are noted within rocky feature, fauna spotter catcher (FSC) to assess and relocate the microbats as needed using appropriate equipment.	Pre-construction, During construction	Transgrid/ Contractors	Mount Piper Substation - South STR 117 STR 229



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 $\geq 8\text{cm}$ diameter 1:2 for hollows $< 8\text{cm}$ 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	Transgrid/ Contractors/ Ecologist	STR 117 STR 229
Construction					
Harm through trampling Harm through vehicle strike	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.	Pre-construction; During construction	Transgrid/ Ecologist Transgrid/ Contractors	STR 117 STR 229 Mount Piper Substation - South STR 117 STR 229



	Exclusion zones	Vehicle or machinery access, storage of equipment or materials and temporary site infrastructure is restricted within exclusion zones.	Pre-construction; During construction	Transgrid/ Contractors	Mount Piper Substation - South STR 117 STR 229
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.	Pre-construction; During construction	Transgrid/ Contractors	Mount Piper Substation - South STR 117 STR 229



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 or Carved hollows using hollow hog method (for Southern Greater Glider) – Constructed timber hollows, vertical PVC piping, or repair and reinstallation of removed hollows (Gang-gang Cockatoo) – Carved hollows using hollow hog method or constructed timber bat box (for Eastern False Pipistrelle)
Relevant sites	STR 117 and STR 229.
Locations	Artificial hollows are to be installed on trees within intact areas of vegetation within, or in close proximity to, the STR 117 and STR 229 Study Areas.
Configuration	The following is a list of the required hollow configurations based on the hollow sizes to be removed: – 26 medium to large sized artificial hollows for Southern Greater Glider and Gang-gang Cockatoo – Four small artificial hollow for microbats (based on the target replacement ratio of 1:2)
Timing	Replacement hollows are to be installed within three months of hollow removal.
Monitoring and maintenance	Artificial hollow monitoring and maintenance is to be carried out annually for five years.

5.4 Offsetting

As these sites were assessed under Part 5 of the EP&A Act, no offsetting is 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 Key Fish Habitat – 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 Sites. This is in consideration of 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 - South Subject Site

- 1.56 ha of native vegetation (PCT 3735)

STR 117 Subject Site

- 2.56 ha of native vegetation (PCT 3366)
- 0.88 ha of native vegetation (PCT 3369)

STR 229 Subject Site

- 2.65 ha of native vegetation (PCT 3735)

The Project would also result in the removal of up to 33 hollows (31 from STR 229 and two from STR 117) from 18 HBTs (17 from STR 229 and one from STR 117). Nine threatened species have been identified as known to occur or likely to occur in the Subject Site and have been assessed for likelihood of significant impact through either targeted survey or tests of significance under the BC Act 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 the Significant Impact Assessments in Annex 4 and Annex 5.

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

- 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 ≥ 8 cm diameter
 - 1:2 for hollows < 8 cm diameter.
- Avoid removal of HBTs during breeding season of threatened fauna identified within the Subject Site, wherever possible.
- Avoid or minimise impacts to moderate or high condition PCTs and maximise use of cleared or low condition PCTs.
- Stop work protocols to avoid the Project impacting threatened fauna species identified during pre-clearance surveys as breeding in hollows within the or adjacent to the Subject Site.
- Avoid impacts to riparian areas wherever possible.
- Weed management.
- Pre-clearance surveys.
- Management of exclusion areas.
- Sediment control.
- Hygiene protocols.



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.

Given that the proposed works will not result in significant impacts to threatened entities and will not be undertaken in an AOBV, a BDAR or SIS is not required.



7. References

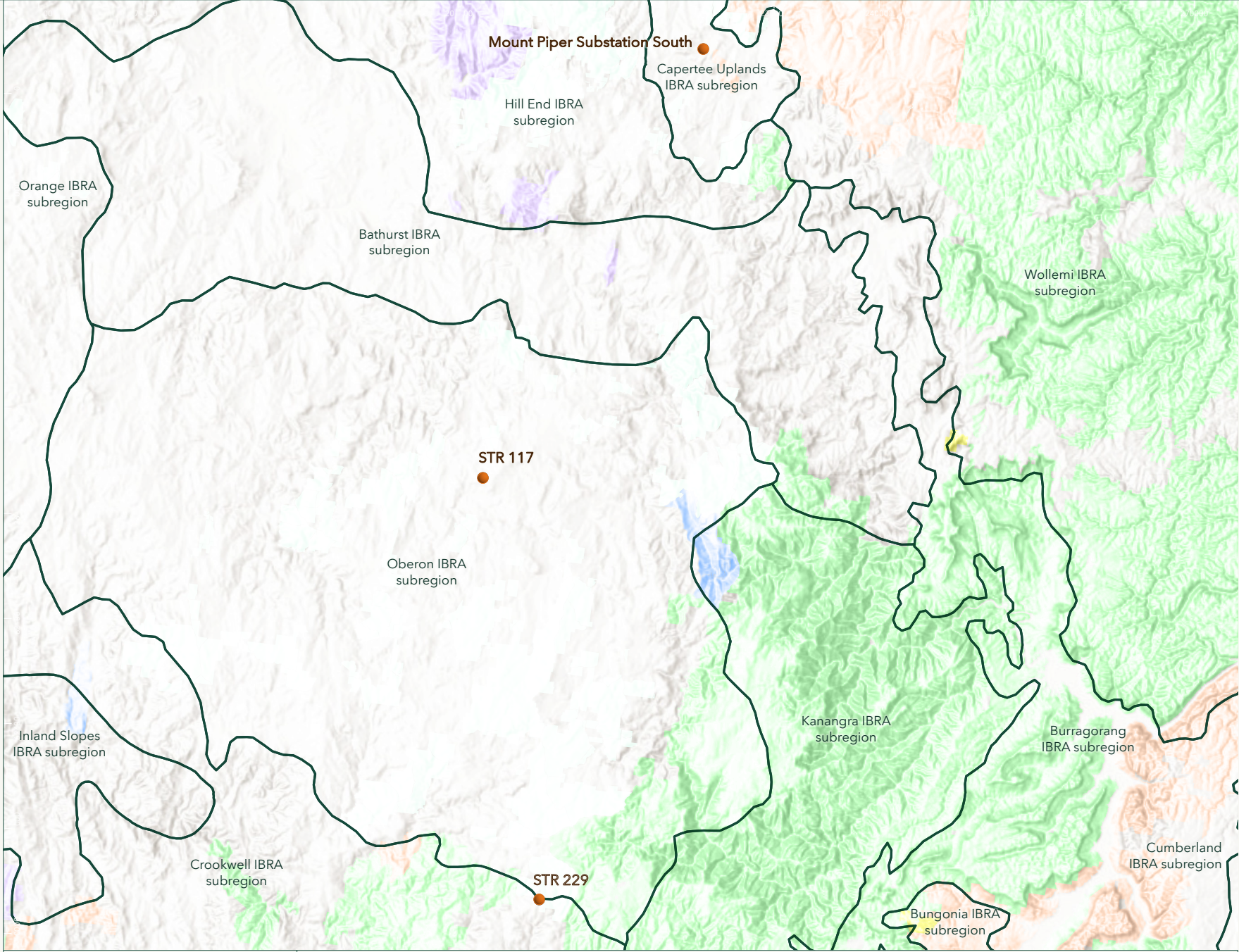
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Annex 1

Figures

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- Subject Site
- IBRA Subregion
- Protected Areas of NSW
 - National Park
 - Nature Reserve
 - Historic Site
 - Regional Park
 - Karst Conservation Reserve
 - State Conservation Area
 - State Forest



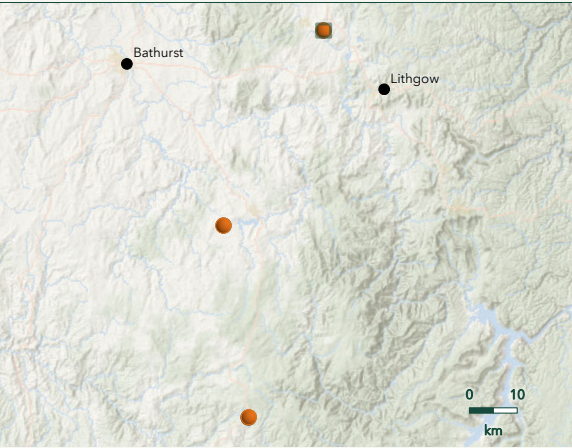
Figure 1
Project Overview southern cluster
Transgrid Transposition Towers Project

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



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: 5/02/2026

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- Study Area
- Subject Site
- Floristics RDP
- Observed fauna
 - Common Eastern Froglet (*Crinia signifera*)
- Bionet (09/03/2025)
 - Eucalyptus cannonii*
- Fauna habitat
 - Small Aquatic habitat (up to 3 meters diameter)
- Key Fish Habitat
 - Key Fish Habitat 2 - Areas
- Key Fish Habitat
 - Strahler >3
- Vegetation Zones
 - 3735: Moderate
 - 3735: Low
 - Not Native (Road)
 - Potential vegetated riparian zone
- Hydrography
 - Strahler stream order
 - 1
 - 3
 - Waterbody
- Administrative and Property Boundaries
 - Lot

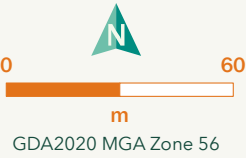


Figure 2.1: Mount Piper Substation South

Biodiversity Constraints southern cluster

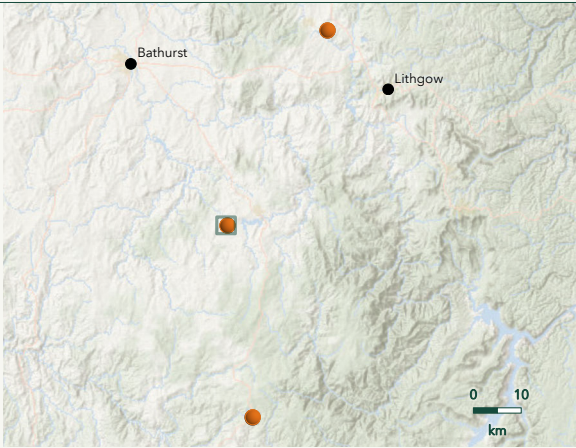
Transgrid Transposition Towers Project

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



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, CGIAR/ 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, Geodastystyrelsen, 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: 17/06/2026

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- Study Area
- Subject Site
- Floristics RDP
- Fauna habitat
- HBT hollows by size class (cm)
 - hollows 0-5 (1)
 - hollows 6-10 (1)
 - hollows 11-15 (1)
- Vegetation Zones
 - 0: Non-native
 - 3366: Moderate
 - 3366: Low
 - 3369: High
 - 3369: Low
 - Planted Vegetation
 - Not Native (Road)
- Biodiversity Values (DCCEEW)
 - Biodiverse riparian land
- Hydrography
 - Strahler stream order
 - 1
 - 2
 - Waterbody
- Administrative and Property Boundaries
 - Lot



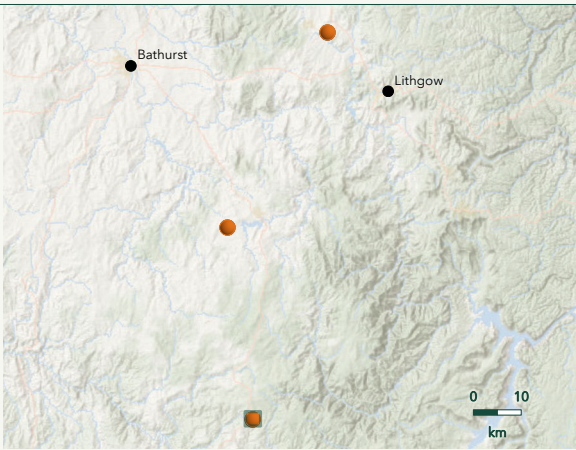
Figure 2.2: STR 117
Biodiversity Constraints southern cluster
Transgrid Transposition Towers Project

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



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: 17/06/2026

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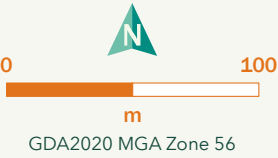


- Study Area
- Subject Site
- Floristics RDP
- Survey method
 - Bat recorder
 - Bird survey other
 - Spotlighting
- Threatened fauna records (Niche 2026)
 - Gang-gang Cockatoo (*Callocephalon fimbriatum*)
 - Southern Greater Glider (*Petauroides volans*)
 - Unidentified 'Barn' Owl (*Tyto sp.*)
- Fauna habitat
 - Burrow
 - Woody habitat features
- HBT hollows by size class (cm)
 - hollows 0-5 (8)
 - hollows 6-10 (15)
 - hollows 11-15 (12)
 - hollows 16-20 (10)
 - hollows 20-39 (7)
 - hollows >40 (3)
- Hollows suitable for Greater Glider and Gang Gang cockatoo
- Vegetation Zones
 - 3735: Central Tableland Peppermint Shrub-Grass Forest, Very high
 - 3735: High
 - 3735: Moderate
 - 3735: Low
 - Not Native (Road)
 - Potential vegetated riparian zone
- Hydrography
 - Strahler stream order
 - 1
 - 2
- Protected Areas of NSW
 - State Forest
- Administrative and Property Boundaries
 - Lot

Figure 2.3: STR 229
Biodiversity Constraints southern cluster
Transgrid Transposition Towers Project



Niche PM: Stephen Bloomfield
Niche Proj. #: 9216
Client: Arup



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, CGIAR/ 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: 18/08/2026



Annex 2

Likelihood of Occurrence Tables (LoO)



Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact			
					STR 117 + access	Likelihood and further assessment	STR 229 + access	Likelihood and further assessment
Flora								
<i>Acacia bynoeana</i>	Bynoe's Wattle, Tiny 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 to nil 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 to nil 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.
<i>Baloskion longipes</i>	Dense Cord-rush	V	V	Occurs in small populations between the Kanangra-Boyd area to the Southern Tablelands. Commonly found in swamps or depressions in sandy alluvium, sometimes growing with sphagnum moss. It also occurs in swales within tall forest, and in Eucalyptus aggregata woodland.	Nil records within 10km	Low to nil 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.	7 records within 10km, last recorded 1994 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Minimal suitable habitat on site, ephemeral waterway unlikely to support species. Minimal recent close records. No further assessment required.
<i>Carex klaphakei</i>	Klaphake's Sedge	E	Not Listed	Carex klaphakei is found in only three locations, from the Blue Mountains (at Blackheath and Mt Werong) to the Southern	Nil records within10km.	Low to nil likelihood of occurring on the site.	1 records within 10km, last recorded	Low likelihood of occurring on the site.



Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact			
					STR 117 + access	Likelihood and further assessment	STR 229 + access	Likelihood and further assessment
				Highlands (at Penrose). Grows with other native sedges and rushes in swamps on sandstone at altitudes of greater than 600 m.		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.	2000 (NSW DCCEEW, 2026a)	Minimal suitable habitat on site, ephemeral waterway unlikely to support species. Minimal recent close records. No further assessment required.
<i>Diuris aequalis</i>	Buttercup Doubletail	E	V	Occurs in higher areas of the tablelands between Braidwood and Kanangra-Boyd NP. Grows in forest, low open woodland with grassy understorey and secondary grassland on the higher parts of the Southern and Central Tablelands. Recorded from gravelly clay-loam soils, often on gentle slopes.	Nil records within 10km.	Low to nil 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.	336 records within 10km, last recorded 2024 (NSW DCCEEW, 2026a)	Moderate likelihood of occurring on the site. High number of recent records adjacent to site and suitable habitat on site. Surveyed 25 th November 2025, not found within suitable habitat. Assumed to be absent from site. Nil further assessment required.
<i>Dodonea procumbens</i>	Trailing Hop-bush	V	V	Creeping Hop-bush is found in the dry areas of the Monaro, between Michelago and Dalgety. Here it occurs mostly in Natural Temperate Grassland or Snow Gum Eucalyptus pauciflora Woodland. Grows in open bare patches where there is little competition from other species. Found on sandy-clay soils, usually	Nil records within 10km.	Low to nil 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 records within 10km.	Low to nil 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.



Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact			
					STR 117 + access	Likelihood and further assessment	STR 229 + access	Likelihood and further assessment
				on or near vertically-tilted shale outcrops.		Nil further assessment required.		Nil further assessment required.
<i>Eucalyptus aggregata</i>	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.	20 records within 10km, last recorded 2017 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Possible habitat but minimal recent close records, not noted during survey on site. Nil further assessment required.	1 record within 10km, last recorded 2024 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Possible habitat but minimal recent close records. Associated species of Ribbon Gum and tussocky understorey noted on site but not noted during survey. Nil further assessment required.
<i>Eucalyptus macarthurii</i>	Camden Woollybutt, Paddys River Box	E	E	Occurs from Moss Vale to Kanangra Boyd National Park. In the Southern Highlands occurs mainly on private land, often as isolated paddock trees. Grows in grassy woodlands on relatively fertile soils on broad cold flats.	1 record within 10km, last recorded 2018 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Possible habitat but minimal recent close records. Associated species not noted on site, most of site highly cleared.	Nil records within 10km.	Low to nil 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.



Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact			
					STR 117 + access	Likelihood and further assessment	STR 229 + access	Likelihood and further assessment
						Nil further assessment required.		Nil further assessment required.
<i>Eucalyptus pulverulenta</i>	Silver-leaved Mountain Gum, Silver-leaved Gum	V	V	The Silver-leaved 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-leaved Peppermint, Silvertop Ash and Apple Box. The Silver-leaved Gum is found in two quite separate areas, the Lithgow to Bathurst area and the Monaro (Bredbo, Bombala areas).	Nil records within 10km.	Low to nil 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 to nil 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.
<i>Eucalyptus robertsonii</i> subsp. <i>hemisphaerica</i>	Robertson's Peppermint	V	V	Known only from the central tablelands of NSW, at small disjunct localities from north of Orange to Burruga. 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 to nil 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 to nil 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.
<i>Euphrasia arguta</i>	null	C E	C E	Recently rediscovered near Nundle on the north-western slopes and tablelands, once known from scattered locations	Nil records within 10km.	Low to nil likelihood of occurring on the site.	Nil records within 10km.	Low to nil likelihood of occurring on the site.



Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact			
					STR 117 + access	Likelihood and further assessment	STR 229 + access	Likelihood and further assessment
				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.		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.		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.
<i>Hakea dohertyi</i>	Kowmung Hakea	E	E	Kowmung Hakea is confined to a small area (18 sq. km) in the Kowmung Valley in Kanangra Boyd National Park. Kowmung Hakea grows in dry sclerophyll forest, usually dominated by grey gum or silvertop ash, with a sparse groundcover and midstorey.	Nil records within 10km.	Low to nil 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 to nil 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.
<i>Hibbertia acaulothrix</i>	null	#N/A	#N/A	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	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. Site does not	Nil records within 10km.	Low to nil 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.



Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact			
					STR 117 + access	Likelihood and further assessment	STR 229 + access	Likelihood and further assessment
				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.		have suitable habitat for this species. Nil further assessment required.		Nil further assessment required.
<i>Kunzea cabbagei</i>	null	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. Cabbage Kunzea is restricted to damp, sandy soils in wet heath or mallee open scrub at higher altitudes on sandstone outcrops or Silurian group sediments.	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 further assessment required.	5 record within 10km, last recorded 1984 (NSW DCCEEW, 2026a)	Low to nil likelihood of occurring on the site. The species is considered unlikely to occur on site, as the site does not have suitable habitat for this species, or any recent records in the close vicinity. Nil further assessment required.
<i>Lepidium aschersonii</i>	Spiny Peppergrass	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 luehmannii 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	Nil records within 10km.	Low to nil likelihood of occurring on the site. The species is considered unlikely to occur on site, as the site does not have suitable habitat for this species. Nil further assessment required.	Nil records within 10km.	Low to nil likelihood of occurring on the site. The species is considered unlikely to occur on site, as the site does not have suitable habitat for this species. Nil further assessment required.



Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact			
					STR 117 + access	Likelihood and further assessment	STR 229 + access	Likelihood and further assessment
				introduced plants and occasional heavy litter.				
<i>Lepidium hyssopifolium</i>	Basalt Pepper-cress, Peppercress, Rubble Pepper-cress, Pepperweed	E	E	Currently known near Bathurst and Bungendore, with historic records near Armidale. Grows on light to heavy, often friable clay loams, often in highly modified environments amongst exotic pasture grasses and weeds. Requires bare ground to establish.	Nil records within 10km.	Low to nil 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 to nil 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.
<i>Leptospermum petraeum</i>		Not Listed	CE	It has a very limited distribution, growing around the Kanangra area in Kanangra-Boyd National Park in the Central Tablelands of NSW – west of Lake Burragorang and south-south-east of Jenolan Caves. It grows on exposed rocky outcrop in shrubland. The bark on older stems is thin and flaky.	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 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. Nil further assessment required.
<i>Pomaderris brunnea</i>	Rufous Pomaderris, 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	Nil records within 10km.	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as	Nil records within 10km.	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as



Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact			
					STR 117 + access	Likelihood and further assessment	STR 229 + access	Likelihood and further assessment
				in moist woodland or forest on clay and alluvial soils of flood plains and creek lines.		there are no recent records of occurrence in the area. Nil further assessment required.		there are no recent records of occurrence in the area. Nil further assessment required.
<i>Pomaderris cotoneaster</i>	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. The species is considered unlikely to occur on site, as 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. The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area. Nil further assessment required.
<i>Rhizanthella slateri</i>	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 the species is available. Flowers September and 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. 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. Nil further assessment required.
<i>Senecio macrocarpus</i>	Large-fruit Fireweed, Large-fruit Groundsel	Not Listed	V	In NSW <i>Senecio macrocarpus</i> is typically found in partly cleared dry forests and box-gum woodlands which transition to Brittle Gum Forest with a relatively	Nil records within 10km.	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as	Nil records within 10km.	Low likelihood of occurring on the site. The species is considered unlikely to occur on site, as



Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact			
					STR 117 + access	Likelihood and further assessment	STR 229 + access	Likelihood and further assessment
				undisturbed understorey of native grasses, forbs and subshrubs.		there are no recent records of occurrence in the area. Nil further assessment required.		there are no recent records of occurrence in the area. Nil further assessment required.
<i>Thesium australe</i>	Austral Toadflax, 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.	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 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. Nil further assessment required.
<i>Trachymene scapigera</i>	Mountain Trachymene	E	E	The species occurs at around four general locations between Jenolan caves and Gurnang State Forest on the Central Tablelands south east of Oberon. Associated vegetation across known sites varies from riparian tea-tree thickets to tall forest, to frost hollows.	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 further assessment required.	270 records within 10km, last recorded 2025 (NSW DCCEEW, 2026a)	Moderate likelihood of occurring on site. Multiple records in Gurnang State Forest (2km northeast of site, along significant waterway. Small ephemeral waterway within frost hollow present on site. Associated species of <i>Eucalyptus dalrympleana</i> and associated <i>Leptospermum</i> spp found on site.
<i>Veronica lithophila</i>	null	#N/A	#N/A	Veronica lithophila is endemic to the Blue Mountains-Colong region in the southeast of the	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			
					STR 117 + access	Likelihood and further assessment	STR 229 + access	Likelihood and further assessment
				Central Tablelands of New South Wales (Briggs and Ehrendorfer 1992; PlantNet 2023a). All known subpopulations of the species occur in Kanangra-Boyd National Park and Blue Mountains National Park. There are an estimated nine subpopulations of <i>Veronica lithophila</i> recorded since 1980: Mount Solitary, Cocks River near upper reaches of Lake Burragorang, Butchers Creek, Cedar Creek, near Ti Willa Plateau, Kowmung River, McMahon's Point, Ferny Flat Creek, Kanangra Boyd Lookout (ALA 2022). Older records from the 1950s and 1960s exist at Colong Point/upper Colong Creek and Cocks River near Bowtells Suspension Bridge (ALA 2022). There are no population estimates for <i>Veronica lithophila</i> nor estimates on the number of individuals in individual subpopulations (ALA 2022).		The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area. Nil further assessment required.		The species is considered unlikely to occur on site, as there are no recent records of occurrence in the area. Nil further assessment required.
<i>Xerochrysum palustre</i>	Swamp Everlasting, Swamp Paper Daisy	Not Listed	V	Found in Kosciuszko National Park and the eastern escarpment south of Badja. Swamp Everlasting grows in wetlands including sedge-swamps and shallow freshwater marshes, often on heavy black clay 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.	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			
					STR 117 + access	Likelihood and further assessment	STR 229 + access	Likelihood and further assessment
						Nil further assessment required.		Nil further assessment required.
Fauna								
<i>Anthochaera phrygia</i>	Regent Honeyeater	C E	C E	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 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	Nil records within 10km	Low likelihood of occurring on the site. The site is mostly cleared; however, the remnant trees may provide suitable foraging habitat for the species, however it is not known within the area. The Project would not result in the removal of habitat that is critical to the ongoing survival of the species within the locality. No further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. The site may provide suitable foraging habitat for the species; however, it is not known within the area. The Project would not result in the removal of habitat that is critical to the ongoing survival of the species within the locality. No further assessment required.



Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact			
					STR 117 + access	Likelihood and further assessment	STR 229 + access	Likelihood and further assessment
				species richness of bird species. These woodlands have significantly large numbers of mature trees, high canopy cover and abundance of mistletoes.				
<i>Aphelocephala leucopsis</i>	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. The site is mostly cleared; however, the remnant trees may provide suitable foraging habitat for the species, however it is not known within the area. The Project would not result in the removal of habitat that is critical to the ongoing survival of the species within the locality. No further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. The site may provide suitable foraging habitat for the species; however, it is not known within the area. The Project would not result in the removal of habitat that is critical to the ongoing survival of the species within the locality. No further assessment required.
<i>Aprasia parapulchella</i>	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 South Western 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 Territory. It's found to inhabit	Nil records within 10km	Low likelihood of occurring on the site. There are no recent close records of this species adjacent or on the site. The site is mostly cleared with minimal rocky habitat except directly adjacent to the current tower. Given the lack of rocky habitat and native grassland that forms the	Nil records within 10km	Low likelihood of occurring on the site. While there is rocky habitat on site that may be suitable habitat for this species, the understorey is mostly shrubby with grass tussocks. There are no recent close records of this species adjacent or on the site. Given these constraints, it is unlikely that



Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact			
					STR 117 + access	Likelihood and further assessment	STR 229 + access	Likelihood and further assessment
				sloping, open woodland areas with predominantly native grassy groundlayers, particularly those dominated by Kangaroo Grass (<i>Themeda australis</i>). 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.		species habitat, it is unlikely that the species would be found on site. No further assessment required.		the species would be found on site. No further assessment required.
<i>Artamus cyanopterus cyanopterus</i>	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	5 records within 10km, last recorded 2012 (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 further assessment required.	2 records within 10km, last recorded 2022 (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 further assessment required.



Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact			
					STR 117 + access	Likelihood and further assessment	STR 229 + access	Likelihood and further assessment
				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 (<i>Manorina melanocephala</i>) is a significant threat to this species.				
<i>Bidyanus bidyanus</i>	Silver Perch, Bidyan	V	E	In NSW now absent from much of their former range across the Murray-Darling. Most abundant remaining natural population occurs in the central Murray River downstream of Yarrawonga Weir as well as several of its anabranches and tributaries including the Edward River - an anabranch of the Murray River that flows through Deniliquin, and the Murrumbidgee River. Prefer fast-flowing, open waters, especially where there are rapids and races, however they will also inhabit warm, sluggish water with cover provided by large woody debris and reeds. Information on habitat preferences is scarce for this species.	Nil records within 10km	Nil likelihood of occurring on the site. This site does not impact any significant waterways within this species range. No further assessment required.	Nil records within 10km	Nil likelihood of occurring on the site. This site does not impact any significant waterways within this species range. No further assessment required.



Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact			
					STR 117 + access	Likelihood and further assessment	STR 229 + access	Likelihood and further assessment
<i>Botaurus poiciloptilus</i>	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 (<i>Typha</i> spp.) and spikerushes (<i>Eleocharis</i> 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	Nil likelihood of occurring on the site. This site does not impact any significant wetland habitat within this species range. No further assessment required.	Nil records within 10km	Nil likelihood of occurring on the site. This site does not impact any significant wetland habitat within this species range. No further assessment required.
<i>Callocephalon fimbriatum</i>	Gang-gang Cockatoo	V	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	28 records within 10km, last recorded 2026 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Some suitable hollows are located adjacent to the track; however, these are located outside of the subject site boundary and will not be impacted by these works. Given the limited connectivity, feed and nesting resources on site, this species is unlikely to depend on the resources on site.	32 records within 10km, last recorded 2024(NSW DCCEEW, 2026a)	Moderate likelihood of occurring on the site. Suitable hollows along access track and within clearing footprint that may not be able to be avoided. Moderate number of recent records in area suggests that species may be using this site for foraging and/ or breeding. Assessment of significance required.



Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact			
					STR 117 + access	Likelihood and further assessment	STR 229 + access	Likelihood and further assessment
				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.		No further assessment required.		
<i>Calyptrorhynchus lathamii</i>	South-eastern Glossy Black-Cockatoo	V	V	The species is uncommon although widespread throughout suitable forest and woodland habitats, from the central Queensland coast to East Gippsland in Victoria, and inland to the southern tablelands and central western plains of NSW, with a small population in the Riverina. It inhabits open forest and woodlands of the coast and the Great Dividing Range where stands of sheoak occur. Black Sheoak (<i>Allocasuarina littoralis</i>) and Forest Sheoak (<i>A. torulosa</i>) are important foods. Inland populations feed on a wide range of sheoaks, including Drooping Sheoak, <i>Allocasuarina diminuta</i> , and <i>A. gymnathera</i> . Belah is also utilised and may be a critical food source for some populations. The species is dependent on large hollow-bearing eucalypts for nest sites.	Nil records within 10km	Low likelihood of occurring on the site. Hollow bearing trees along track too small for species and no feed trees in vicinity. Low number of recent records surrounding site suggests that this species is unlikely to depend on the resources on site. No further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. Hollow bearing trees within clearing footprint and proposed track are appropriate size for species, however no feed trees in vicinity. Low number of recent records surrounding site suggests that this species is unlikely to depend on the resources on site. No further assessment required.



Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact			
					STR 117 + access	Likelihood and further assessment	STR 229 + access	Likelihood and further assessment
<i>Chalinolobus dwyeri</i>	Large-eared Pied Bat, Large Pied Bat	V	V	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 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 (<i>Petrochelidon ariel</i>), 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.	5 records within 10km, last recorded 2026 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. No caves, significant rocky overhangs or other like breeding habitat occurs within the subject area. Low number of recent records surrounding site suggests that this species is unlikely to depend on the resources on site. No further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. No caves, significant rocky overhangs or other like breeding habitat occurs within the subject area. Low number of recent records surrounding site suggests that this species is unlikely to depend on the resources on site. No further assessment required.
<i>Climacteris picumnus victoriae</i>	Brown Treecreeper (south-eastern)	V	Not Listed	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.	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. The site is mostly cleared; however, the remnant trees may provide suitable foraging habitat for	5 records within 10km, last recorded 2024(NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. No recent records and the area of impact does not contain habitat required by this species. The site is mostly cleared; however, the remnant trees may provide suitable foraging habitat for



Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact			
					STR 117 + access	Likelihood and further assessment	STR 229 + access	Likelihood and further assessment
				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 (<i>Eucalyptus camaldulensis</i>) 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 woodland habitats on the coastal ranges and plains.		the species, however it is not known within the area. The Project would not result in the removal of habitat that is critical to the ongoing survival of the species within the locality. No further assessment required.		the species, however it is not known within the area. The Project would not result in the removal of habitat that is critical to the ongoing survival of the species within the locality. No further assessment required.
<i>Daphoenositta chrysoptera</i>	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	5 records within 10km, last recorded 2021(NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. No recent records and the area of impact does not contain habitat required by this species. The site is mostly cleared; however, the remnant trees may provide suitable foraging habitat for the species, however it is not	16 records within 10km, last recorded 2024 (NSW DCCEEW, 2026a)	Moderate likelihood of occurring on site. Moderate number of recent records suggests that suitable foraging and or breeding habitat may occur on site



Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact			
					STR 117 + access	Likelihood and further assessment	STR 229 + access	Likelihood and further assessment
				branches, mallee and Acacia woodland.		known within the area. The Project would not result in the removal of habitat that is critical to the ongoing survival of the species within the locality. No further assessment required.		Assessment of significance required.
<i>Dasyurus maculatus</i> ; <i>Dasyurus maculatus maculatus</i> (SE mainland population)	Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population)			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 creek lines.	1 record within 10km, last recorded 2021(NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Low number of recent records adjacent to site. The site is mostly cleared; however, the remnant trees may provide suitable foraging habitat for the species, however it is not known within the area. The Project would not result in the removal of habitat that is critical to the ongoing survival of the species within the locality. No 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. The Project would not result in the removal of habitat that is critical to the ongoing survival of the species within the locality. No further assessment required.



Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact			
					STR 117 + access	Likelihood and further assessment	STR 229 + access	Likelihood and further assessment
<i>Euastacus armatus</i>	Murray Crayfish	#N/A	#N/A	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	Nil records within 10km	Nil likelihood of occurring on the site. This site does not impact any significant waterways within this species range. No further assessment required.	Nil records within 10km	Nil likelihood of occurring on the site. This site does not impact any significant waterways within this species range. No further assessment required.
<i>Falco hypoleucos</i>	Grey Falcon	E	Not Listed	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. Low number of recent records adjacent to site. The site is mostly cleared; however, the remnant trees may provide suitable breeding habitat for the species, however it is not known within the area. The Project would not result in the removal of habitat that is critical to the ongoing survival of the species within the locality. No further assessment required.	Nil records within 10km	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. The Project would not result in the removal of habitat that is critical to the ongoing survival of the species within the locality. No further assessment required.
<i>Falsistrellus tasmaniensis</i>	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	Nil records within 10km	Low likelihood of occurring on the site.	33 records within 10km, last recorded	Moderate likelihood of occurring on site.



Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact			
					STR 117 + access	Likelihood and further assessment	STR 229 + access	Likelihood and further assessment
				Tasmania. The species prefers moist habitats, with trees taller than 20 m.		Low number of recent records adjacent to site. The site is mostly cleared; however, the remnant trees may provide suitable foraging habitat for the species, however it is not known within the area. The Project would not result in the removal of habitat that is critical to the ongoing survival of the species within the locality. No further assessment required.	2023(NSW DCCEEW, 2026a)	Moderate number of recent records suggests that suitable foraging and or breeding habitat may occur on site Assessment of significance required.
<i>Grantiella picta</i>	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 (<i>Acacia pendula</i>), Brigalow (<i>A. harpophylla</i>) and Box-Gum Woodlands and Box-Ironbark Forests. It is a specialist feeder on the fruits of mistletoes growing on woodland eucalypts and acacias.	Nil records within 10km	Low likelihood of occurring on the site. Low number of recent records adjacent to site. The site is mostly cleared; however, the remnant trees may provide suitable foraging habitat for the species, however it is not known within the area. The Project would not result in the removal of habitat that is critical to the ongoing survival of the species within the locality. No further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. Low number of recent records adjacent to site. The site is mostly cleared; however, the remnant trees may provide suitable foraging habitat for the species, however it is not known within the area. The Project would not result in the removal of habitat that is critical to the ongoing survival of the species within the locality. No further assessment required.



Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact			
					STR 117 + access	Likelihood and further assessment	STR 229 + access	Likelihood and further assessment
				Prefers mistletoes of the genus Amyema.				
<i>Haliaeetus leucogaster</i>	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).	1 record within 10km, last recorded 2020(NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Low number of recent records adjacent to site and no foraging habitat on site. The Project would not result in the removal of habitat that is critical to the ongoing survival of the species within the locality. No further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. Low number of recent records adjacent to site and no foraging habitat on site. The Project would not result in the removal of habitat that is critical to the ongoing survival of the species within the locality. No further assessment required.
<i>Hieraaetus morphnoides</i>	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	3 records within 10km, last recorded 2021 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Low number of recent records adjacent to site. Remnant trees may provide suitable breeding habitat, however no stick nests noted on site. The Project would not result in the removal of habitat that is	1 record within 10km, last recorded 2004(NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Low number of recent records adjacent to site. Remnant trees may provide suitable breeding habitat, however no stick nests noted on site.



Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact			
					STR 117 + access	Likelihood and further assessment	STR 229 + access	Likelihood and further assessment
				living trees within a remnant patch, where pairs build a large stick nest in winter.		critical to the ongoing survival of the species within the locality. No further assessment required.		The Project would not result in the removal of habitat that is critical to the ongoing survival of the species within the locality. No further assessment required.
<i>Leipoa ocellata</i>	Malleefowl	E	V	The stronghold for the Malleefowl 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. Predominantly inhabit mallee communities, preferring the tall, dense and floristically-rich mallee found in higher rainfall (300 - 450 mm mean annual rainfall) areas. Utilises mallee with a spinifex understorey, but usually at lower densities than in areas with a shrub understorey. Less frequently found in other eucalypt woodlands, such as Inland Grey Box, Ironbark or Bimble Box Woodlands with thick understorey, or in other woodlands such	Nil records within 10km	Low to nil likelihood of occurring on the site. Outside of likely distribution, no suitable habitat on site. No further assessment required.	Nil records within 10km	Low to nil likelihood of occurring on the site. Outside of likely distribution, no suitable habitat on site. No further assessment required.



Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact			
					STR 117 + access	Likelihood and further assessment	STR 229 + access	Likelihood and further assessment
				dominated by Mulga or native Cypress Pine species. Prefers areas of light sandy to sandy loam soils and habitats with a dense but discontinuous canopy and dense and diverse shrub and herb layers				
<i>Litoria aurea</i>	Green and Golden Bell Frog	E	V	Since 1990 there have been approximately 50 recorded locations of Green and Golden Bell Frog in NSW, most of which are small, coastal, or near coastal populations. These locations occur over the species' former range, however they are widely separated and isolated. Large populations in NSW are located around the metropolitan areas of Sydney, Shoalhaven and mid north coast (one an island population). There is only one known population on the NSW Southern Tablelands. The species inhabits marshes, dams and stream-sides, particularly those containing bullrushes (<i>Typha</i> spp.) or spikerushes (<i>Eleocharis</i> spp.). Optimal habitat includes water-bodies that are unshaded, free of predatory fish such as Plague Minnow (<i>Gambusia holbrooki</i>), have a grassy area nearby and diurnal sheltering sites available. Some sites the species has been	1 record within 10km, last recorded 1977(NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Low number of recent records adjacent to site. No suitable habitat or waterways on site. No further assessment required	Nil records within 10km	Low likelihood of occurring on the site. Low number of recent records adjacent to site. No suitable habitat or waterways on site. No further assessment required



Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact			
					STR 117 + access	Likelihood and further assessment	STR 229 + access	Likelihood and further assessment
				recorded in, occur in highly disturbed areas.				
<i>Litoria booroolongensis</i>	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 have been recorded on or near cobble banks and other rock structures within stream margins.	97 records within 10km, last recorded 2024 (NSW DCCEE, 2026a)	Low likelihood of occurring on the site. Moderate number of recent records adjacent to site, however no suitable habitat or waterways on site. No further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. Low number of recent records adjacent to site and no suitable habitat or waterways on site. No further assessment required.
<i>Litoria castanea</i>	Yellow-spotted Tree Frog, Yellow-spotted Bell Frog	C E	E	There is a single known population of Yellow-spotted Tree Frog on the Southern Tablelands, near Yass. The species require large permanent ponds or slow flowing 'chain-of-ponds' streams with abundant emergent vegetation such as bulrushes and aquatic vegetation.	Nil records within 10km	Low likelihood of occurring on the site. Low number of recent records adjacent to site. No suitable habitat on site. No further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. Low number of recent records adjacent to site. No suitable habitat on site. No further assessment required.



Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact			
					STR 117 + access	Likelihood and further assessment	STR 229 + access	Likelihood and further assessment
<i>Litoria raniformis</i>	Southern Bell Frog, Growling Grass Frog, Green and Golden Frog, Warty Swamp Frog, Golden Bell Frog	E	V	Currently, the Growling Grass Frog is known to exist only in isolated populations in the Coleambally Irrigation Area, the Lowbidgee floodplain and around Lake Victoria. A few yet unconfirmed records have also been made in the Murray Irrigation Area in recent years. The species is usually found in or around permanent or ephemeral Black Box/Lignum/Nitre Goosefoot swamps, Lignum/Typha swamps and River Red Gum swamps or billabongs along floodplains and river valleys. They are also found in irrigated rice crops, particularly where there is no available natural habitat. Breeding occurs during the warmer months and is triggered by flooding or a significant rise in water levels. The species has been known to breed anytime from early spring through to late summer/early autumn	Nil records within 10km	Low likelihood of occurring on the site. Low number of recent records adjacent to site. No suitable habitat on site. No further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. Low number of recent records adjacent to site. No suitable habitat on site. No further assessment required.
<i>Maccullochella macquariensis</i>	Trout Cod	E	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	Nil records within 10km	Nil likelihood of occurring on the site. No suitable waterway habitat on site. No further assessment required.	Nil records within 10km	Nil likelihood of occurring on the site. No suitable waterway habitat on site. No further assessment required.



Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact			
					STR 117 + access	Likelihood and further assessment	STR 229 + access	Likelihood and further assessment
				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.				
<i>Maccullochella peelii</i>	Murray Cod	Not Listed	E	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 suitable waterway habitat on site. No further assessment required.	Nil records within 10km	Nil likelihood of occurring on the site. No suitable waterway habitat on site. No further assessment required.
<i>Macquaria australasica</i>	Macquarie Perch	E	E	The Macquarie Perch is known only from scattered localities in the cool upper reaches of the 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	Nil records within 10km	Nil likelihood of occurring on the site. No suitable waterway habitat on site.	Nil records within 10km	Nil likelihood of occurring on the site. No suitable waterway habitat on site.



Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact			
					STR 117 + access	Likelihood and further assessment	STR 229 + access	Likelihood and further assessment
				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.		No further assessment required.		No further assessment required.
<i>Melanodryas cucullata cucullata</i>	South-eastern Hooded Robin, Hooded Robin (south-eastern)	V	Not Listed	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 <i>cucullata</i>) 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 <i>picata</i> . 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.	Nil records within 10km	Low likelihood of occurring on the site. Low number of recent records adjacent to site and no foraging habitat on site. The Project would not result in the removal of habitat that is critical to the ongoing survival of the species within the locality. No further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. Low number of recent records adjacent to site and no foraging habitat on site. The Project would not result in the removal of habitat that is critical to the ongoing survival of the species within the locality. No further assessment required.



Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact			
					STR 117 + access	Likelihood and further assessment	STR 229 + access	Likelihood and further assessment
<i>Miniopterus orianae oceanensis</i>	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, storm-water tunnels, buildings and other man-made structures.	18 records within 10km, last recorded 2026(NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Moderate number of recent records, however no caves, significant rocky overhangs or other like breeding habitat occurs within the subject area. This species is unlikely to depend on the resources on site. No further assessment required.	7 records within 10km, last recorded 2023 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Moderate number of recent records, however no caves, significant rocky overhangs or other like breeding habitat occurs within the subject area. This species is unlikely to depend on the resources on site. No further assessment required.
<i>Mixophyes balbus</i>	Stuttering Frog, Southern Barred Frog (in Victoria)	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. Low number of recent records adjacent to site. No suitable habitat or waterways on site. No further assessment required.	38 records within 10km, last recorded 2004 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Moderate number of recent records adjacent to site. No suitable habitat or waterways on site. No further assessment required.



Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact			
					STR 117 + access	Likelihood and further assessment	STR 229 + access	Likelihood and further assessment
<i>Neophema chrysostoma</i>	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 the site. Low number of recent records adjacent to site, foraging habitat is highly degraded and grazed. The Project would not result in the removal of habitat that is critical to the ongoing survival of the species within the locality. No further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. Low number of recent records adjacent to site, foraging habitat is highly degraded and grazed. The Project would not result in the removal of habitat that is critical to the ongoing survival of the species within the locality. No further assessment required.
<i>Ninox strenua</i>	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	Nil records within 10km	Low likelihood of occurring on the site. No recent records adjacent to site. Hollows likely to be impacted are unlikely to be of adequate size for breeding. The Project would not result in the removal of habitat that is critical to the ongoing survival of the species within the locality.	8 records within 10km, last recorded 2024 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Low number of recent records adjacent to site. Hollows likely to be impacted are unlikely to be of adequate size for breeding. The Project would not result in the removal of habitat that is critical to the ongoing survival of the species within the locality.



Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact			
					STR 117 + access	Likelihood and further assessment	STR 229 + access	Likelihood and further assessment
				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.		No further assessment required.		No further assessment required.
<i>Nyctophilus corbeni</i>	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	Nil records within 10km	Low likelihood of occurring on the site. No recent records adjacent to site. Habitat and location of site is unlikely to be suitable for this species. The Project would not result in the removal of habitat that is critical to the ongoing survival	Nil records within 10km	Low likelihood of occurring on the site. No recent records adjacent to site. Habitat and location of site is unlikely to be suitable for this species. The Project would not result in the removal of habitat that is critical to the ongoing



Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact			
					STR 117 + access	Likelihood and further assessment	STR 229 + access	Likelihood and further assessment
				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.		of the species within the locality. No further assessment required.		survival of the species within the locality. No further assessment required
<i>Oxyura australis</i>	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.	1 record within 10km, last recorded 2008 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. No suitable habitat or waterways on site. No further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. No suitable habitat or waterways on site. No further assessment required.
<i>Paralucia spinifera</i>	Bathurst Copper Butterfly, Purple Copper Butterfly, Bathurst Copper,	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 found at 35 locations, all within the Greater Lithgow, Bathurst Regional and Oberon local government areas.	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. No feed plants	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. No feed plants



Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact			
					STR 117 + access	Likelihood and further assessment	STR 229 + access	Likelihood and further assessment
	Bathurst Copper Wing, Bathurst-Lithgow Copper, Purple Copper			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 <i>Bursaria spinosa</i> subsp. <i>lasiophylla</i> .		<i>(Bursaria spinosa subsp lasiophylla)</i> found on site. Unlikely to be impact by clearing. No further assessment required.		<i>(Bursaria spinosa subsp lasiophylla)</i> found on site. Unlikely to be impact by clearing. No further assessment required.
<i>Petalura gigantea</i>	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 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.	Nil records within 10km	Low likelihood of occurring on the site. No recent records adjacent to site. No suitable habitat on site. No further assessment required.	2 records within 10km, last recorded 2008 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Low number of recent records adjacent to site. No suitable habitat on site. No further assessment required.
<i>Petauroides volans</i>	Greater Glider (southern and central)	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	1 record within 10km, last recorded 2018(NSW	Low likelihood of occurring on the site. Low number of recent records adjacent to site. Suitably sized hollows on site, however given disconnected	181 records within 10km, last recorded 2024 (NSW	Moderate likelihood of occurring on site. High number of recent records suggests that suitable foraging and or breeding habitat may occur



Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact			
					STR 117 + access	Likelihood and further assessment	STR 229 + access	Likelihood and further assessment
				prefers taller montane, moist eucalypt forest with relatively old trees and abundant hollows.	DCCEEW, 2026a)	vegetation and paucity of records unlikely to be utilised by species. The Project would not result in the removal of habitat that is critical to the ongoing survival of the species within the locality. No further assessment required.	DCCEEW, 2026a)	on site. Suitably sized hollows within proposed impact area. Assessment of significance required.
<i>Petaurus australis</i> ; <i>Petaurus australis australis</i>	Yellow-bellied Glider; Yellow-bellied Glider (south-eastern)	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 the site. Low number of recent records adjacent to site. Suitably sized hollows on site, however given disconnected vegetation and paucity of records unlikely to be utilised by species. The Project would not result in the removal of habitat that is critical to the ongoing survival of the species within the locality. No further assessment required..	16 records within 10km, last recorded 2022 (NSW DCCEEW, 2026a)	Moderate likelihood of occurring on site. Moderate number of recent records suggests that suitable foraging and or breeding habitat may occur on site. Suitably sized hollows within proposed impact area. Assessment of significance required.



Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact			
					STR 117 + access	Likelihood and further assessment	STR 229 + access	Likelihood and further assessment
<i>Petaurus norfolcensis</i>	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.	2 records within 10km, last recorded 2021(NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Low number of recent records adjacent to site. Suitably sized hollows adjacent to track are not within impact area. Given paucity of records adjacent to site, unlikely to utilise site. The Project would not result in the removal of habitat that is critical to the ongoing survival of the species within the locality. No further assessment required.	1 record within 10km, last recorded 2022 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Low number of recent records adjacent to site. Suitably sized hollows within proposed impact area, however given paucity of records, unlikely to utilise site. The Project would not result in the removal of habitat that is critical to the ongoing survival of the species within the locality. No further assessment required.
<i>Petrogale penicillata</i>	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	Nil records within 10km	Low likelihood of occurring on the site. Low number of recent records adjacent to site. The Project would not result in the removal of habitat that is critical to the ongoing survival of the species within the locality. No further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. Low number of recent records adjacent to site. The Project would not result in the removal of habitat that is critical to the ongoing survival of the species within the locality. No further assessment required.



Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact			
					STR 117 + access	Likelihood and further assessment	STR 229 + access	Likelihood and further assessment
				most active at night when foraging.				
<i>Petroica boodang</i>	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.	1 record within 10km, last recorded 2010 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Low number of recent records adjacent to site. The Project would not result in the removal of habitat that is critical to the ongoing survival of the species within the locality. No further assessment required.	21 records within 10km, last recorded 2024 (NSW DCCEEW, 2026a)	Moderate likelihood of occurring on site. Moderate number of recent records suggests that suitable foraging and or breeding habitat may occur on site Assessment of significance required.
<i>Petroica phoenicea</i>	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	2 records within 10km, last recorded 2014 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Low number of recent records adjacent to site. The Project would not result in the removal of habitat that is critical to the ongoing survival	18 records within 10km, last recorded 2022 (NSW DCCEEW, 2026a)	Moderate likelihood of occurring on site. Moderate number of recent records suggests that suitable foraging and or breeding habitat may occur on site



Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact			
					STR 117 + access	Likelihood and further assessment	STR 229 + access	Likelihood and further assessment
				eucalypt forests and woodlands, often on ridges and slopes, it prefers clearings or areas with open understoreys.		of the species within the locality. No further assessment required.		Assessment of significance required.
<i>Phascolarctos cinereus</i> ; <i>Phascolarctos cinereus</i> (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, 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.	3 records within 10km, last recorded 2024 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Low number of recent records adjacent to site. Nil feed trees present within subject area. The Project would not result in the removal of habitat that is critical to the ongoing survival of the species within the locality. No further assessment required.	4 records within 10km, last recorded 2021 (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 further assessment required.
<i>Polytelis swainsonii</i>	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,	Nil records within 10km	Low likelihood of occurring on the site. Low number of recent records adjacent to site. The Project would not result in the removal of habitat that is	Nil records within 10km	Low likelihood of occurring on the site. Low number of recent records adjacent to site. The Project would not result in the removal of habitat that



Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact			
					STR 117 + access	Likelihood and further assessment	STR 229 + access	Likelihood and further assessment
				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.		critical to the ongoing survival of the species within the locality. No further assessment required.		is critical to the ongoing survival of the species within the locality. No further assessment required.
<i>Pseudomys novaehollandiae</i>	New Holland Mouse, Pookila	Not Listed	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 the site. Low number of recent records adjacent to site. The Project would not result in the removal of habitat that is critical to the ongoing survival of the species within the locality. No further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. Low number of recent records adjacent to site. The Project would not result in the removal of habitat that is critical to the ongoing survival of the species within the locality. No further assessment required.
<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox	V	V	Grey-headed Flying-foxes are generally found within 200 km of the eastern coast of Australia, from Rockhampton in Queensland to Adelaide in South Australia. In times of natural resource shortages, they may be found in unusual locations. The species	1 record within 10km, last recorded 2020 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Low number of recent records adjacent to site. The Project would not result in the removal of habitat that is	1 record within 10km, last recorded 2023 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Low number of recent records adjacent to site. The Project would not result in the removal of habitat that



Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact			
					STR 117 + access	Likelihood and further assessment	STR 229 + access	Likelihood and further assessment
				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.		critical to the ongoing survival of the species within the locality. No further assessment required.		is critical to the ongoing survival of the species within the locality. No further assessment required.
<i>Pycnoptilus floccosus</i>	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.	Nil records within 10km	Low likelihood of occurring on the site. Low number of recent records adjacent to site. The Project would not result in the removal of habitat that is critical to the ongoing survival of the species within the locality. No further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. Low number of recent records adjacent to site. The Project would not result in the removal of habitat that is critical to the ongoing survival of the species within the locality. No further assessment required.
<i>Pyrrholaemus sagittatus</i>	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	1 record within 10km, last recorded 2003(NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Low number of recent records adjacent to site. The Project would not result in the removal of habitat that is	Nil records within 10km	Low likelihood of occurring on the site. Low number of recent records adjacent to site. The Project would not result in the removal of habitat that



Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact			
					STR 117 + access	Likelihood and further assessment	STR 229 + access	Likelihood and further assessment
				Dividing Range, and rarely from the coast. There has been a 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.		critical to the ongoing survival of the species within the locality. No further assessment required.		is critical to the ongoing survival of the species within the locality. No further assessment required.
<i>Rostratula australis</i>	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	Nil records within 10km	Low likelihood of occurring on the site. Low number of recent records adjacent to site. No wetland habitat on site. No further assessment required.	Nil records within 10km	Low likelihood of occurring on the site. Low number of recent records adjacent to site. No wetland habitat on site. No further assessment required.



Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact			
					STR 117 + access	Likelihood and further assessment	STR 229 + access	Likelihood and further assessment
				marshy areas where there is a cover of grasses, lignum, low scrub or open timber.				
<i>Saccolaimus flaviventris</i>	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 North West Slopes. It forages in most habitats across its very wide range, with and without trees; appears to defend an aerial territory.	8 records within 10km, last recorded 2026 (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 further assessment required.	2 records within 10km, last recorded 2023 (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 further assessment required.
<i>Scoteanax rueppellii</i>	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	7 records within 10km, last recorded 2026 (NSW DCCEEW, 2026a)	Low likelihood of occurring on the site. Low to moderate number of recent records, however the site lacks the gully habitat more commonly required for 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.	4 records within 10km, last recorded 2004 (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 further assessment required.



Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact			
					STR 117 + access	Likelihood and further assessment	STR 229 + access	Likelihood and further assessment
				most commonly found in tall wet forest.		No further assessment required.		
<i>Stagonopleura guttata</i>	Diamond Firetail	V	Not Listed	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 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 records within 10km	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 further assessment required.	Nil records within 10km	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 further assessment required.



Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact			
					STR 117 + access	Likelihood and further assessment	STR 229 + access	Likelihood and further assessment
<i>Synemon plana</i>	Golden Sun Moth	E	C E	The Golden Sun Moth's NSW populations are found in the area between Queanbeyan, Gunning, Young and Tumut. The species' historical distribution extended from Bathurst (central NSW) through the NSW Southern Tablelands, through to central and western Victoria, to Bordertown in eastern South Australia. The species occurs in Natural Temperate Grasslands and grassy Box-Gum Woodlands in which groundlayer is dominated by wallaby grasses <i>Austrodanthonia</i> spp.	Nil records within 10km	Low likelihood of occurring on the site. Low number of recent records adjacent to site. Grassland is majority pasture improved, and heavily grazed. No further assessment required.	Nil records within 10km	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 further assessment required.
<i>Tympanocryptis mcartneyi</i>	Bathurst Grassland Earless Dragon	0	0	<i>Tympanocryptis mcartneyi</i> 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 (Melville et al. 2019). 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 (Melville et al. 2019). <i>Tympanocryptis mcartneyi</i> is a grassland specialist, inhabiting treeless plains, open grasslands and fringes of open woodlands. The species has been found along	Nil records within 10km	Low likelihood of occurring on the site. Low number of recent records adjacent to site. Grassland is majority pasture improved and heavily grazed with most surface rocks removed. Potential for spider holes in paddock that may be habitat, however current track is utilised and unlikely to have habitat. No further assessment required.	Nil records within 10km	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 further assessment required.



Scientific Name	Common Name	BC Act	EPBC Act	Habitat	Likelihood of occurrence and impact			
					STR 117 + access	Likelihood and further assessment	STR 229 + access	Likelihood and further assessment
				railway tracks, with weedy Paspalum grass thickets, and in vacant paddocks with tall pasture grass (Melville et al. 2019). Within its habitat, apparently prefers areas with a more open structure, characterised by small patches of bare ground between the grasses and herbs. Little is known about habitat requirements of this species, but other species of grassland earless dragons have been discovered beneath rocks in either burrows, rock crevices or depressions. Burrows excavated by wolf spiders (Lycosidae sp.) associated with partially embedded surface rocks are of critical importance to T. mccartneyi. These burrows provide shelter sites for overwintering, refuge from trampling by livestock and predation and as locations where eggs can be laid. Fidelity to these burrows is known to increase with the onset of winter and the species is reported to be torpid in winter between May and September				



Annex 3

Hollow-bearing Trees



Site ID	Tree ID	Tree species	Longitude	Latitude	Within Subject Site Y/ N	Hollow size (0-5cm)	Hollows size (6-10cm)	Hollows size (11-15cm)	Hollows size (16-20cm)	Hollows size (20-39cm)	Hollows size (>40cm)	Total hollows / Fissures / other features per tree
			GDA2020	GDA2020								
STR 117	34	Stag	149.7856	-33.7314	Yes	2						2
STR 117	35	<i>Eucalyptus macrorhyncha</i> (Red Stringybark)	149.7811	-33.7306	No			1				1
STR 117	36	<i>Eucalyptus macrorhyncha</i> (Red Stringybark)	149.7809	-33.7306	No		1					1
STR 117 Subtotals						2	1	1	0	0	0	4
STR 229	22	<i>Eucalyptus dives</i> (Broad-leaved Peppermint)	149.8321	-34.0905	Yes	1					1	2
STR 229	23	<i>Eucalyptus dalrympleana</i> (Mountain Gum)	149.8326	-34.0912	No		1					1
STR 229	24	<i>Eucalyptus macrorhyncha</i> (Red Stringybark)	149.8299	-34.0877	Yes		1					1
STR 229	25	Dead	149.8326	-34.0914	Yes	1	1					2
STR 229	26	<i>Eucalyptus macrorhyncha</i> (Red Stringybark)	149.8305	-34.0876	Yes		1	1	1			3
STR 229	27	<i>Eucalyptus dives</i> (Broad-leaved Peppermint)	149.8324	-34.0916	No			1				1
STR 229	28	<i>Eucalyptus dalrympleana</i> (Mountain Gum)	149.8321	-34.0905	Yes	1	1					2
STR 229	28	<i>Eucalyptus dalrympleana</i> (Mountain Gum)	149.8324	-34.0916	Yes		1					1
STR 229	29	<i>Eucalyptus dives</i> (Broad-leaved Peppermint)	149.8324	-34.0916	Yes	1						1

Site ID	Tree ID	Tree species	Longitude	Latitude	Within Subject Site Y/ N	Hollow size (0-5cm)	Hollows size (6-10cm)	Hollows size (11-15cm)	Hollows size (16-20cm)	Hollows size (20-39cm)	Hollows size (>40cm)	Total hollows / Fissures / other features per tree
			GDA2020	GDA2020								
STR 229	29	<i>Eucalyptus dives</i> (Broad-leaved Peppermint)	149.8326	-34.0912	No		1					1
STR 229	30	<i>Eucalyptus dives</i> (Broad-leaved Peppermint)	149.8326	-34.0912	Yes		2					2
STR 229	31	<i>Eucalyptus macrorhyncha</i> (Red Stringybark)	149.8324	-34.0918	Yes			1				1
STR 229	32	<i>Eucalyptus dives</i> (Broad-leaved Peppermint)	149.831	-34.0914	No			1				1
STR 229	33	<i>Eucalyptus dalrympleana</i> (Mountain Gum)	149.8326	-34.0912	Yes		2					2
STR 229	60	<i>Eucalyptus dalrympleana</i> (Mountain Gum)	149.831	-34.0914	Yes			2				2
STR 229	61	<i>Eucalyptus dalrympleana</i> (Mountain Gum)	149.8309	-34.0875	Yes				1			1
STR 229	62	<i>Eucalyptus dives</i> (Broad-leaved Peppermint)	149.8309	-34.0875	No			1				1
STR 229	63	<i>Eucalyptus dalrympleana</i> (Mountain Gum)	149.8299	-34.0877	Yes			1	1			2
STR 229	64	<i>Eucalyptus dalrympleana</i> (Mountain Gum)	149.831	-34.0914	No				1			1
STR 229	65	<i>Eucalyptus dalrympleana</i> (Mountain Gum)	149.8309	-34.0875	No				1			1
STR 229	66	<i>Eucalyptus dalrympleana</i> (Mountain Gum)	149.8305	-34.0876	Yes				1			1
STR 229	67	Dead	149.8324	-34.0916	No						1	1

Site ID	Tree ID	Tree species	Longitude	Latitude	Within Subject Site Y/ N	Hollow size (0-5cm)	Hollows size (6-10cm)	Hollows size (11-15cm)	Hollows size (16-20cm)	Hollows size (20-39cm)	Hollows size (>40cm)	Total hollows / Fissures / other features per tree
			GDA2020	GDA2020								
STR 229	68	<i>Eucalyptus dalrympleana</i> (Mountain Gum)	149.8299	-34.0877	No		1					1
STR 229	69	Dead	149.8324	-34.0916	No					2		2
STR 229	70	<i>Eucalyptus viminalis</i>	149.8321	-34.0905	No			1		1		2
STR 229	71	<i>Eucalyptus macrorhyncha</i> (Red Stringybark)	149.8299	-34.0877	No	1	1					2
STR 229	72	<i>Eucalyptus dalrympleana</i> (Mountain Gum)	149.8324	-34.0918	Yes			1		1		2
STR 229	73	<i>Eucalyptus dalrympleana</i> (Mountain Gum)	149.8299	-34.0877	Yes	1			1	1		3
STR 229	74	<i>Eucalyptus dalrympleana</i> (Mountain Gum)	149.8305	-34.0876	No		1					1
STR 229	75	<i>Eucalyptus dalrympleana</i> (Mountain Gum)	149.8323	-34.0908	Yes	1			1	1		3
STR 229	75	<i>Eucalyptus dalrympleana</i> (Mountain Gum)	149.8324	-34.0918	No			1				1
STR 229	76	<i>Eucalyptus dives</i> (Broad-leaved Peppermint)	149.831	-34.0914	Yes				1			1
STR 229	77	<i>Eucalyptus dalrympleana</i> (Mountain Gum)	149.8321	-34.0905	No				1	1		2
STR 229	78	<i>Eucalyptus dalrympleana</i> (Mountain Gum)	149.8321	-34.0907	Yes		1	1				2
STR 229	79	<i>Eucalyptus macrorhyncha</i> (Red Stringybark)	149.8321	-34.0905	Yes	1						1

Site ID	Tree ID	Tree species	Longitude	Latitude	Within Subject Site Y/ N	Hollow size (0-5cm)	Hollows size (6-10cm)	Hollows size (11-15cm)	Hollows size (16-20cm)	Hollows size (20-39cm)	Hollows size (>40cm)	Total hollows / Fissures / other features per tree
			GDA2020	GDA2020								
STR 229	80	<i>Eucalyptus dives</i> (Broad-leaved Peppermint)	149.8309	-34.0875	Yes						1	1
STR 229 Subtotals						8	15	12	10	7	3	55
Total number of hollows / fissures or other features						10	16	13	10	7	3	59



Annex 4

Tests of Significance under the BC Act (5-Part Test)



BC Act Five-part Test of Significance (ToS)

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 229:

- Woodlands birds: Varied Sittella (*Daphoenositta chrysoptera*), Scarlet Robin (*Petroica boodang*), Flame Robin (*Petroica phoenicea*) will be assessed together due to similar habitat constraints.
- Southern Greater Glider (*Petauroides volans*)
- Gang-gang Cockatoo (*Callocephalon fimbriatum*)
- Eastern False Pipistrelle (*Falsistrellus tasmaniensis*).

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 229 - Woodlands birds

Varied Sittella - Vulnerable

Scarlet Robin - Vulnerable

Flame Robin - Vulnerable

Regional context: All three of these woodland bird species have been recorded within 10 km of the Subject Site (NSW DCCEEW, 2025a) Varied Sittella has 16 records, Scarlet Robin has 18 records, and Flame Robin has 18 records. All three of these woodland bird species are associated with the PCT (3735) present within the Subject Site.

Impact summary: A total of 2.65 ha of native vegetation and 0.09 ha of non-native vegetation (roads) (total 2.74 ha) was recorded within the Subject Site (refer to Table 6). 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 2.65 ha of open forest/woodland vegetation. However, given the existing disturbance (transmission line footprint), which contributes to 1.12 ha of low condition vegetation, coupled with the 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 2.65 ha of potentially suitable habitat 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 high condition native vegetation, as well as non-native vegetation. Habitat Fragmentation The Subject Site is adjacent to large areas of intact vegetation to the north and northwest, which leads into Abercrombie National Park. The proposed activities will not further contribute to the fragmentation of habitat for these species. This is partially because the Subject Site occurs over an existing road and the remainder of the Subject Site does not cut off these species accessing more intact/suitable vegetation. 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 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 fragment or isolate these species from accessing more intact and continuous vegetation that occurs to the north/northwest of 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 AOBV occurs 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.	Key Threatening Processes (KTPs) listed under the BC Act relevant for these species include: – Clearing of native vegetation: up to 2.65 ha of potentially suitable habitat would be cleared as a result of the proposed activities. Overall, while the proposal is associated with listed KTPs, the scale of impact and the mitigation and management measures proposed mean it is unlikely to significantly increase the impact of any KTP on these species.
Conclusion: On the basis of the above considerations, it is unlikely that the proposed works would result in significant impacts to the following woodland bird species: – Varied Sitella – Scarlet Robin – Flame Robin.	



STR 229 - Southern Greater Glider - Endangered

Regional context: 167 BioNet records of this species have been found within 10kms of this site (NSW DCCEE, 2025a). The Southern Greater Glider is associated with the PCT (3735) present within the Subject Site.

Impact summary: The proposal will clear 1.53 ha of suitable Southern Greater Glider habitat, including 24 suitable hollows from 17 HBTs and mature peppermint-dominated forest. Confirmed occupancy and loss of den and foraging resources indicate a significant impact, with habitat fragmentation and reduced connectivity likely to compromise the local population's long-term viability. Under a Part 5 assessment, a suite of avoidance and mitigation measures will be implemented, including:

- Retain hollow-bearing trees where safe and feasible. Salvage of suitable hollows and/or installation of artificial hollows/nest boxes in adjacent intact habitat at a minimum 1:1 replacement ratio, to maintain den availability within the broader local population.
- Pre-clearing spotlight surveys and fauna handling procedures to avoid direct injury or mortality and allow gliders to relocate to retained habitat.
- Timing of clearing outside the peak breeding season (late autumn-winter) where practicable, to avoid disturbance of dependent young
- A stop-works protocol to avoid the Project impacting threatened fauna species identified during pre-clearance surveys as breeding in hollows within the or adjacent to 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 works will adversely affect the life cycle of the Southern Greater Glider at STR 229 by removing 1.53 ha of occupied habitat, including 24 hollows/fissures suitable for denning (>8cm diameter) within mature PCT 3735 forests. Three individuals were recorded in targeted surveys, indicating use of the impact area as part of their home ranges for foraging and denning. The species has small home ranges (approximately 1-4 ha), high den fidelity and a strong reliance on multiple large den hollows. However, the surrounding landscape is highly intact and has similar densities of hollows as found on site. The Subject Site is embedded in a larger area of intact forest with comparable densities of hollow-bearing trees and continuous canopy, which will continue to provide extensive foraging and denning resources for the broader local population However, loss of den trees within a home range can lead to localised displacement and, in the absence of mitigation, likely to result in a reduction in local population size. Considering the relatively small area of habitat to be removed in the context of the surrounding forest, the mitigation measures outlined above, and the ability for resident gliders to relocate to adjacent retained habitat containing alternative hollows, it is unlikely that the proposed development will have an adverse effect on the life cycle of the Southern Greater Glider such that a viable local population is placed at risk of extinction. Risks would be further reduced through the implementation of a stop-work protocol throughout the life of the Project.
b) In the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity:	Not applicable.
– 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,	
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 Approximately 2.65 ha of native vegetation will be removed or modified, comprising PCT 3735 Central Tableland Peppermint Shrub-Grass Forest in low, moderate, high and very high condition. However, only 1.53 ha is considered suitable habitat for the greater glider. This vegetation provides key foraging foliage and contains several hollow-bearing trees along the access track and disturbance edge, including 24 hollows/fissures suitable for denning by the Southern Greater Glider. The proposed clearing will directly reduce the availability of both foraging habitat and den resources within an area confirmed to be occupied by the species. Habitat Fragmentation The Southern Greater Glider relies on continuous mid-to-upper canopy pathways for movement between foraging and denning sites. While the proposed works will likely impact breeding habitat, and reduce shelter and suitable habitat marginally for this species, the current footprint is unlikely to further fragment the connectivity of habitat more than it is currently. All current habitat will maintain connectivity to the north and west, with no new gaps greater than 30m between patches of habitat. Importance of Habitat to be Impacted The affected habitat is locally important, as it is currently occupied and contains multiple den resources within preferred PCT 3735 forests. However, similar habitat is extensive in the surrounding landscape, and the project will implement hollow salvage and artificial hollow installation at a minimum 1:1 ratio, thereby maintaining or potentially increasing the availability of den structures within the broader local population's range. When considered in the context of the broader availability of suitable habitat in the locality, the relatively small scale of clearing, and the mitigation and compensatory measures to retain and replace den resources, the habitat to be removed may cause some individuals to be displaced temporarily, but is not critical for the long-term survival of the Southern Greater Glider in the locality. A significant impact on habitat at the local population scale is therefore unlikely.
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 these species include: – Clearing of native vegetation Overall, while the proposal is associated with listed KTPs, the scale of impact and the mitigation and management measures proposed mean it is unlikely to significantly increase the impact of any KTP on the Southern Greater Glider.
Conclusion: On the basis of the above considerations, and assuming full implementation of the mitigation measures outlined for this Part 5 activity (including pre-clearing surveys, fauna handling, timing of works [where possible], micro-siting to retain hollow-bearing trees where safe, and hollow salvage/artificial hollow installation at a minimum 1:1 ratio), the proposed works are not likely to have a significant impact on the Southern Greater Glider such that a viable local population would be placed at risk of extinction under s7.3 of the BC Act.	



STR 229 - Gang-gang Cockatoo - Endangered

Regional context: Gang-gang Cockatoo have been recorded within the locality (32 records within 10 km radius), last recorded in 2024 (NSW DCCEEW, 2025a). The record from 2024 also occurs within 2.5 km of the Subject Site. Furthermore, the Gang-gang cockatoo is known to occur within the Subject Site, based on targeted surveys conducted in January 2026. The Gang-gang Cockatoo is associated with the PCT (3735) present within the Subject Site. This PCT is consistent with the tall forests occupied by Gang-gang Cockatoos during the breeding season between October and January.

Impact summary: A total of 2.65 ha of native vegetation, with 1.53 ha of habitat suitable for the Gang-gang cockatoo recorded within the Subject Site. The proposed activities would impact the Gang-gang Cockatoo through removal of potential foraging habitat and potentially suitable hollows for breeding. The Subject Site contains 26 hollows potentially suitable for breeding and the Gang-gang Cockatoo is known to occur within the Subject Site.

Under a Part 5 assessment, a suite of avoidance and mitigation measures will be implemented, including:

- Retain hollow-bearing trees where safe and feasible. Salvage of suitable hollows and/or installation of artificial hollows/nest boxes in adjacent intact habitat at a minimum 1:1 replacement ratio, to maintain den availability within the broader local population.
- Pre-clearing spotlight surveys, soft felling and fauna handling procedures to avoid direct injury or mortality and allow gliders to relocate to retained habitat.
- Timing of clearing outside the peak breeding season (October to January) where practicable, to avoid disturbance of nests and dependent young
- A stop-works protocol to avoid the Project impacting threatened fauna species identified during pre-clearance surveys as breeding in hollows within or adjacent to 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 observed suitable foraging habitat and potentially suitable breeding habitat for the Gang-gang Cockatoo in the form of clearing up to 1.53 ha of native vegetation forming habitat suitable for the species. The Subject Site contains 26 hollows from 17 hollow bearing trees that satisfy the breeding habitat requirements for the Gang-gang Cockatoo (at least 3 m above the ground and hollow diameter of 9 cm or larger). As well as this, in January 2026 a flock of eight adult Gang-gang Cockatoos, males and females, were observed within the Subject Site. These individuals were observed to be foraging on site and then dispersed from the Subject Site. No signs of breeding, such as lone males, an occupied nest or begging young, were noted within the Subject Site during this time. Under this Part 5 proposal, a range of specific measures will be implemented to mitigate the impact of the proposed activities. These mitigation measure contribute to determining that the proposed activities are unlikely 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. These measures are detailed in Table 18. The Subject Site is embedded in a larger area of intact forest with comparable densities of hollow-bearing trees and continuous canopy, which will continue to provide extensive foraging and breeding resources for the broader local population. Considering, the relatively small area of habitat to be removed in the context of the surrounding forest and other foraging and breeding resources, it is unlikely that the proposed development will have an adverse effect on the life cycle of the Gang-gang Cockatoo such that a viable local population is placed at risk of extinction.
b) In the case of an endangered ecological community or critically endangered	Not applicable.



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,	
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 Approximately 2.65 ha of native vegetation will be removed or modified within the Subject Site, including 1.53 ha of PCT 3735 Central Tableland Peppermint Shrub-Grass Forest in moderate, high and very high condition. This vegetation provides observed foraging habitat and contains 17 HBTs along the access track and disturbance edge, including 326 hollows potentially suitable for breeding for the Gang-gang Cockatoo. The proposed clearing will directly reduce the availability of both foraging habitat and hollow resources suitable for breeding within an area that the species is known to occur. Habitat Fragmentation The Subject Site is adjacent to large areas of intact vegetation to the north and northwest, which leads into Abercrombie National Park. The proposed activities will not further contribute to the fragmentation of habitat for the Gang-gang Cockatoo. This is partially because the proposed activities will only widen an existing cleared area in the northern and southern extents of the Subject Site. The proposed activities will not cut off the species from accessing other areas of foraging and breeding habitat. Therefore, given the relatively small area of vegetation to be removed in the context of the locality, as well as the mobile nature of this species, the proposed activities would not fragment or isolate the Gang-gang Cockatoo from accessing other areas of habitat. Importance of Habitat to be Impacted The habitat to be removed is known foraging habitat, and potential breeding habitat as it contains numerous hollows in a suitable size class and height from the ground. The PCT present within the Subject Site is consistent with the tall forests occupied by Gang-gang Cockatoos during the breeding season between October and January. However, similar habitat is extensive in the surrounding landscape in areas such as Abercrombie River National Park to the west and Blue Mountains National Park to the east. It is possible for these areas to supplement the loss of habitat within the Subject Site as a result of the proposed activities. Therefore, when considered in the context of the broader availability of suitable habitat in the locality, and the mitigation and compensatory measures to retain and replace breeding resources, the habitat to be removed is not critical or irreplaceable for the long-term survival of the Gang-gang Cockatoo.
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	KTPs listed under the BC Act relevant for these species include:



process or is likely to increase the impact of a key threatening process.

- Clearing of native vegetation
- Loss of hollow-bearing trees

Approximately 2.65 ha of native vegetation will be removed or modified, with 1.53 ha of this suitable breeding and foraging habitat. The Subject Site also contains 26 hollows in a suitable size class and height from the ground, which are potential breeding sites for the Gang-gang Cockatoo.

Overall, while the proposal is associated with listed KTPs, the scale of impact and the mitigation and management measures proposed mean it is **unlikely** to significantly increase the impact of any KTP on the Gang-gang Cockatoo.

Conclusion: On the basis of the above considerations, and assuming full implementation of the mitigation measures outlined for this Part 5 activity (including pre-clearing surveys, fauna handling, timing of works [where possible], micro-siting to retain hollow-bearing trees where safe, and hollow salvage/artificial hollow installation at a minimum 1:1 ratio), the proposed works are not likely to have a significant impact on the Gang-gang Cockatoo such that the species' population would be placed at risk of extinction under s7.3 of the BC Act.



STR 229 - Eastern False Pipistrelle - Vulnerable

Regional context: Eastern False Pipistrelle have been recorded within the locality (33 records within 10 km radius), last recorded in 2023 (NSW DCCEEW, 2025a). The closest record occurs within 3.5 km of the Subject Site. The Eastern False Pipistrelle is associated with the PCT (3735) present within the Subject Site. This PCT is consistent with the tall forests occupied by the Eastern False Pipistrelle where they will hunt flying insects above or below the canopy.

Impact summary: A total of 2.65 ha of native vegetation was recorded within the Subject Site. The proposed activities would impact the Eastern False Pipistrelle through removal of potential foraging habitat and potentially suitable hollows for breeding. The Subject Site contains 18 hollows potentially suitable for roosting.

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 suitable foraging habitat and potentially suitable breeding habitat for the Eastern False Pipistrelle in the form of clearing up to 1.53 ha of native vegetation associated with the species. The Subject Site contains 18 hollows from 17 hollow bearing trees, comprising of very small (0-5 cm) to very large (>40 cm) hollows. All hollows have been considered as potential roosting habitat due to poorly known roost requirements. The Eastern False Pipistrelle was identified within the Subject Site using ultrasonic recording devices. This survey was conducted in January 2026, within this species' breeding season (November to March [NSW DCCEEW 2025b]). However, based on the results and analysis of these recordings, there were no consistent patterns or behaviours of emerging and pre-roost return activity. These recorded calls did not exhibit behavioural patterns consistent with nearby maternity or day-roost occupancy. Therefore, the analysis of this survey has determined that the Subject Site is not being utilised for roosting for the Eastern False Pipistrelle. Whilst the species may be foraging within the Subject Site, the Subject Site is embedded in a larger area of intact forest with comparable densities of hollow-bearing trees and continuous canopy, which will continue to provide extensive foraging and roosting resources for the broader local population. Considering, the relatively small area of habitat to be removed in the context of the surrounding forest and other foraging and breeding resources, it is unlikely that the proposed development will have an adverse effect on the life cycle of the Eastern False Pipistrelle such that a viable 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,

Approximately 2.65 ha of native vegetation will be removed or modified, comprising PCT 3735 Central Tableland Peppermint Shrub-Grass Forest in low, moderate, high and very high condition. This vegetation provides foraging habitat (1.53 ha) and contains several hollow-bearing trees along the access track and disturbance edge, including 18 hollows potentially suitable for roosting for the Eastern False Pipistrelle. However, survey results indicate the Subject Site is not currently being utilised for roosting. The proposed clearing will directly reduce the availability of both foraging habitat and hollow resources suitable for breeding within an area that the species is known to occur.

Habitat Fragmentation

The Subject Site is adjacent to large areas of intact vegetation to the north and northwest, which leads into Abercrombie National Park. The proposed activities will not further contribute to the fragmentation of habitat for the Eastern False Pipistrelle. This is partially because the proposed activities will only widen an existing cleared area in the northern and southern extents of the Subject Site. The proposed activities will not cut off the species from accessing other areas of foraging and roosting habitat. Therefore, given the relatively small area of vegetation to be removed in the context of the locality, as well as the mobile nature of this species, the proposed activities would not fragment or isolate the Eastern False Pipistrelle from accessing other areas of habitat.

Importance of Habitat to be Impacted

The habitat to be removed is foraging habitat, and potential roosting habitat as it contains numerous hollows in a range of size classes. The PCT present within the Subject Site is consistent with the tall forests occupied by the Eastern Pipistrelle. However, similar habitat is extensive in the surrounding landscape in areas such as Abercrombie River National Park to the west and Blue Mountains National Park to the east. It is possible for these areas to supplement the loss of habitat within the Subject Site as a result of the proposed activities.

Therefore, when considered in the context of the broader availability of suitable habitat in the locality, as well as no roosting habitat currently being occupied, the habitat to be removed is not critical or irreplaceable for the long-term survival of the Eastern False Pipistrelle.

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 AOBV occurs 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 these species include:

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

Approximately 1.53 ha of native vegetation will be removed or modified. This area contains foraging habitat, and the species was recorded within the Subject Site in January 2026. The Subject Site also contains 18 hollows in a range of size classes potentially suitable for roosting for this species.

Overall, while the proposal is associated with listed KTPs, the scale of impact and the mitigation and management measures proposed mean it is **unlikely** to significantly increase the impact of any KTP on the Eastern False Pipistrelle.

Conclusion: On the basis of the above considerations, the proposed works are not likely to have a significant impact on the Eastern False Pipistrelle such that the species' population would be placed at risk of extinction under s7.3 of the BC Act.



Annex 5

EPBC Act - Significant Impact Criteria



EPBC Act Significant Impact Criteria (SIC) assessment

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

STR 229:

- Southern Greater Glider (*Petauroides volans*)
- Gang-gang Cockatoo (*Callocephalon fimbriatum*)



STR 229 - Gang-gang Cockatoo (Endangered)

Distribution

Gang-gang Cockatoos are endemic to south-eastern Australia. The species 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 (Higgins 1999). It is adapted to cooler conditions and has always been more common at higher elevations and more southern latitudes (NSW Threatened Species Scientific Committee).

An estimated 54% of the species' distribution occurs within New South Wales National Parks and Wildlife Service estates (NSW OEH 2017a). BirdLife Australia's Birddata (BirdLife Australia 2021) records indicate that Gang-gang Cockatoos are present in the Greater Blue Mountains World Heritage Area and Mid and Lower Central Coast. Older reports also suggest Gang-gang Cockatoos were historically widespread in eastern New South Wales, ranging from the central slopes and tablelands, east to the south coast and central eastern New South Wales (Shields & Crome 1992). The species also occurs in the Australian Capital Territory. In Victoria, Gang-gang Cockatoos are widespread through northeast and southern regions, with some records in east Melbourne, Mornington Peninsula, and south-western Gippsland (Higgins 1999; Menkhorst et al. 2017) (NSW Threatened Species Scientific Committee, 2024).

Habitat in the Study Area

The Study Area at STR 229 contains 1.53 ha of native vegetation proposed for removal. Suitable habitat within the Study Area is characteristic of PCT 3735 - Central Tableland Peppermint Shrub-Grass Forest in moderate (0.02), high (0.67) and very high (0.84) condition. This PCT is associated with the Gang-gang Cockatoo. PCT 3735 typically comprises mature stands of *Eucalyptus radiata*, *Eucalyptus dives*, *Eucalyptus mannifera*, *Eucalyptus dalrympleana*, and in some areas *Eucalyptus viminalis*—all key hollow-forming eucalypts utilised by Gang-gang Cockatoos. These canopy species not only provide hollows for breeding but are also a key food group for the species providing nuts and flowers.

Structurally, the Study Area supports tall, mature eucalypt woodland typically exceeding 20-25 m in height, with a sparse to patchy shrub layer. This vegetation and the elevation of the Study Area (~ 100 m ASL) are key environmental and geographical attributes utilised by the Gang-gang Cockatoo during the summer breeding months. A total of 36 HBTs with suitably sized hollows were recorded within the STR 229 Study Area, 17 of which occurred within the Subject Site.

The surrounding forested landscape remains largely intact, offering continuous canopy connectivity essential for glider movement. This connectivity supports dispersal, mate-finding, and access to additional den trees.

Targeted spotlighting detected eight Gang-gang Cockatoos, both male and female, observed foraging within the Study Area before dispersing from the Study Area. No signs of breeding, such as lone males, an occupied nest or begging young, were noted within the subject site during this time.

Overall, the Study Area contains high-value, structurally mature forest with multiple HBTs, reliable foraging resources, and partially intact canopy connectivity.

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 a population	The proposed activities would impact observed suitable foraging habitat and potentially suitable breeding habitat for the Gang-gang Cockatoo in the form of clearing up to 1.53 ha of native vegetation associated with the species. The Study Area contains 47 hollows from 33 HBTs that satisfy the breeding habitat requirements for the Gang-gang Cockatoo (at least 3 m above the ground and hollow diameter of 9 cm or larger), 26 of which occur within the Subject Site. As well as this, in January 2026 a flock of eight adult Gang-gang Cockatoos, males and females, were observed within the subject site. These individuals were observed to be foraging within the Study Area and then dispersed from the Study Area. No signs of breeding, such as lone males, an occupied nest or begging young, were noted within the Study Area during this time. The Gang-gang Cockatoo has experienced significant population declines by approximately 69% between 1999 and 2019 (Cameron et al. 2021). Following the 2019/2020 bushfires an expert elicitation estimated a further overall population decline of 21% one-year post-fire (Legge et al. 2021). Therefore, the population present within the locality of the Study Area are facing significant environmental pressures. However, the Study Area is embedded in a larger area of intact forest, with comparable densities of hollow-bearing trees and continuous canopy, which will continue to provide extensive foraging and breeding resources for the broader local population. Considering, the



	relatively small area of habitat to be removed in the context of the surrounding forest and other foraging and breeding resources, it is unlikely that the proposed development will lead to a long-term decrease in the size of a population of the Gang-gang Cockatoo. This conclusion of an unlikely significant impact is contingent on the effective implementation of mitigation measures, including pre-clearing spotlight surveys and the salvage of suitable hollows or installation of artificial hollows in adjacent habitat installed at a minimum ratio of 1:1 artificial hollows for every existing hollow removed (refer to Section 5 of the BAR for detailed requirements). Additional measures to be implemented to reduce likelihood of significant impacts would include retention of hollows wherever possible, habitat removal conducted outside species' breeding season [where possible], and a stop-works protocol.
Reduce the area of occupancy of the species	The EOO for the species is estimated at 380,000–410,000 km², and AOO at 22,700–40,000 km². (Cameron et al. 2021). The EOO is based on all records since 1990. The minimum AOO is the number of 2x2 km squares within which the species has been recorded since 1990 but, given the remoteness of much of the distribution, the real AOO is assumed to be at least twice that, and probably substantially greater (Cameron et al. 2021). Approximately 1.53 ha of native vegetation will be removed or modified, comprising PCT 3735 Central Tableland Peppermint Shrub-Grass Forest in moderate, high and very high condition. This vegetation provides observed foraging habitat and contains 26 hollows potentially suitable for breeding for the Gang-gang Cockatoo. The proposed clearing will directly reduce the availability of both foraging habitat and hollow resources suitable for breeding within an area that the species is known to occur. However, provided that mitigation measures are strictly implemented – including pre-clearing spotlight surveys and the salvage of suitable hollows or installation of artificial hollows within adjacent habitat (See section 5 in the BAR)– the impact is unlikely to result in a sustained reduction in the species' area of occupancy at the site.
Fragment an existing population into two or more populations	At STR 229, the proposed action will remove 1.53 ha of native vegetation dominated by PCT 3735 – Central Tableland Peppermint Shrub-Grass Forest, which provides high-quality habitat for the species when mature. The proposed activities involve widening an existing cleared area in the northern and southern aspects of the Study Area. Gang-gang Cockatoos are a highly mobile species capable of crossing transmission line clearings and roads. This ability coupled with the large areas of intact vegetation adjacent to the Study Area will ensure that an existing population will not be fragmented into two or more populations.
Adversely affect habitat critical to the survival of a species	Habitat critical to the survival of the Gang-gang Cockatoo during Spring and Summer consists of mature, tall eucalypt forests in higher altitudes. These areas provide foraging habitat of flowers and seed pods and contain high densities of well-developed hollows necessary for breeding. Further information to habitat critical to the survival includes HBTs with known or potential Gang-gang Cockatoo hollow chambers that are generally around 15-24 cm floor diameter, around 22-90 cm deep and occur between around 5-9.4 m above the ground (Davey & Mulvaney 2020; Davey et al 2021). However, Gang-gang Cockatoos have been observed utilising hollows as small as 9cm diameter. The proposed activities within the Study Area will remove 1.53 ha of native vegetation containing moderate, high and very high condition PCT 3735 – Central Tableland Peppermint Shrub-Grass Forest. The STR 229 Study Area contains 47 hollows from 33 HBTs that satisfy the breeding habitat requirements for the Gang-gang Cockatoo (at least 3 m above the ground and hollow diameter of 9 cm or larger), 26 of which occur within the Subject Site. During a targeted survey conducted in January 2026, eight Gang-gang Cockatoos, comprising both males and females, were observed foraging within the Study Area before flying off and exiting the site.



	Assuming mitigation measures are implemented – including the installation of artificial hollows at a minimum of 1:1 replacement ratio and the completion of pre-clearing surveys – the loss of natural HBTs is expected to result in some reduction in local carrying capacity and may lead to the displacement of resident individuals. However, given the species' mobility, the availability of surrounding habitat, and the proposed mitigation measures, the removal of these hollow resources is unlikely to result in a significant impact that would be critical to the survival of the species.
Disrupt the breeding cycle of a population	The Gang-gang Cockatoo is monogamous. Breeding usually occurs between October and January (Higgins 1999). Clutch sizes of two eggs are typical, but occasionally one or three are laid. Both sexes incubate the eggs over a period of 3-4 weeks (Dave & Mulvaney 2020). The fledging period lasts for 7-8 weeks, and the young continue to be fed by parents for 4-6 weeks after fledging. Pairs also utilise multiple nest trees over different years, which may be a way of minimising nest parasitism or predation. Only about half of known nest trees are utilised each year (Davey & Mulvaney 2020). The proposed activities within the Study Area will remove 1.53 ha of native vegetation containing moderate, high and very high condition PCT 3735 – Central Tableland Peppermint Shrub-Grass Forest. The STR 229 Study Area contains 47 hollows from 33 HBTs that satisfy the breeding habitat requirements for the Gang-gang Cockatoo (at least 3 m above the ground and hollow diameter of 9 cm or larger), 26 of which occur within the Subject Site. During a targeted survey in January 2026, eight Gang-gang Cockatoos, male and females, were observed foraging before flying off and exiting the Study Area. Whilst, no signs of breeding or an active nest were detected during this survey, the proposed activities will remove potential breeding hollows. Furthermore, given that the Gang-gang Cockatoo is known to only utilise about half of known nest trees each year, it is possible the HBTs within the Study Area are an active nest tree but were not being utilised at the time of survey. However, the Study Area is embedded in a larger area of intact forest with comparable densities of hollow-bearing trees and continuous canopy, which may provide extensive foraging and breeding resources for the broader local population If construction occurs during spring through summer, or if dependent young are present within hollows at the time of clearing, the action is highly likely to disrupt the breeding cycle of the local population. A non-significant impact for this species is contingent on mitigation measures being strictly implemented – including staging clearing outside of the breeding season [where possible], pre-clearing spotlight surveys, implementation of a stop-works protocol, retain of hollows where possible, and the salvage of suitable hollows or installation of artificial hollows within adjacent habitat (See section 5 in the BAR). Failure to implement these measures would be likely to result in a significant impact to the breeding cycle of the population on site.
Modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline	Whilst the Study Area is embedded in a larger area of intact forest with comparable densities of hollow-bearing trees and continuous canopy, the Gang-gang Cockatoo is an endangered species under the EPBC Act, and the Study Area contains habitat that is equivalent to habitat critical for its survival. The STR 229 Study Area contains 47 hollows from 33 HBTs that satisfy the breeding habitat requirements for the Gang-gang Cockatoo (at least 3 m above the ground and hollow diameter of 9 cm or larger), 26 of which occur within the Subject Site. During a targeted survey in January 2026, eight Gang-gang Cockatoos, male and females, were observed foraging before flying off and exiting the Study Area. The proposed activities within the Subject Site will remove 1.53 ha of native vegetation. Given this information, the proposed activities will remove the availability or quality of habitat for the Gang-gang Cockatoo. If mitigation measures are implemented, it will minimise the possibility that the removed habitat will contribute to the decline of the species.



	Such measures include staging clearing outside of the breeding season (where possible), pre-clearing spotlight surveys and the salvage of suitable hollows or installation of artificial hollows within adjacent habitat (See section 5 in the BAR). Failure to implement these measures would be likely to result in a significant impact to the species such as that it may 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 weed species (See section 5 in the BAR)
Introduce disease that may cause the species to decline	The Gang-gang Cockatoo is susceptible to Psittacine beak and feather disease, which reduces fitness in and contributes to mortality in infected individuals (Sarker et al. 2014). This disease is known to spread rapidly where there are pressures on habitat, which can cause overcrowding. Given the planned mitigation measures and the adjacent suitable habitat, overcrowding is unlikely to occur, and the Project is unlikely to result in the introduction of disease that may cause this species to decline assuming mitigation measures are adhered to (See section 5 in the BAR).
Interfere substantially with the recovery of the species.	Given all above impacts, if mitigation measures are able to be strictly adhered to (refer to section 5 in BAR for mitigation measures) it is unlikely that proposed actions on site will substantially interfere with the recovery of the species.
Conclusion: On the basis of the above considerations, it is unlikely that the proposed works would result in a significant impact on the Gang-gang Cockatoo. A referral to the Commonwealth under the EPBC Act is not required.	



Annex 6

Site Descriptions



Mount Piper South substation

PCT 3735 - Central Tableland Peppermint Shrub-Grass Forest	
Vegetation formation	Vegetation formation
Vegetation class	Vegetation class
Soils and Landscape Position	The Study Area occurred on sedimentary substrates and heavily disturbed soils with granitic fill noted. This PCT occurred south of the current Mount Piper substation, adjacent to several high voltage towers.
Conservation status	No associated TEC
Photos	



PCT 3735 - Central Tableland Peppermint Shrub-Grass Forest



PCT 3735 Low





PCT 3735 - Central Tableland Peppermint Shrub-Grass Forest



PCT 3735 Moderate

Canopy	In low condition, scattered <i>Eucalyptus</i> spp. regrowth, likely <i>Eucalyptus dives</i>, were found within the vegetation zone. Most were in a disturbed condition in line with managed vegetation under the current transmission tower high voltage power line. Small stands of exotic <i>Pinus radiata</i> were also present within this vegetation zone. In moderate condition, a small stand of mature trees and regrowth is present adjacent to the substation, consisting of co-dominant <i>Eucalyptus dives</i> and <i>Eucalyptus dalrympleana</i>.
Midstorey	In Low condition, shrub cover was dense but patchy, with large areas heavily disturbed with gravelly imported fill. In depressions and wetter areas, <i>Leptospermum polygalifolium</i> dominated in dense thickets. On rises, patchy regrowth of <i>Acacia buxifolia</i> and <i>Cassinia sifton</i> was present. Stands of <i>Acacia decurrens</i> were scattered within the vegetation zone, usually growing against fences or within stands of <i>Leptospermum polygalifolium</i>, with Blackberry (<i>Rubus fruticosus</i>) also present and entangled within these stands. In moderate condition, the midstory was sparse with patchy regrowth of <i>Cassinia sifton</i> and <i>Acacia buxifolia</i> between the mature trees.
Groundcover	In Low condition, the groundcover was heavily modified with imported fill, however maintained a high level of diversity, with <i>Poa sieberiana</i> dominating, and scattered occurrences of <i>Lomandra longifolia</i>, and <i>Themeda triandra</i>. In moderate condition, the groundcover was patchy and but diverse in areas under the mature canopy trees, as much of the soils have been altered with imported fill. Native grasses and forbs included <i>Lomandra longifolia</i>, <i>Poa sieberiana</i>, <i>Dichondra repens</i>, <i>Hydrocotyle laxiflora</i>, and <i>Microlaena stipoides</i>.
Fauna habitat	– Substrate gravelly, heavily modified with imported fill, however no distinct surface rock – Minimal woody debris across site – Artificial drainage lines and basins across site provide heavily modified aquatic habitat



STR 117

0 Non Native (Grassland)	
Vegetation formation	Non-Native
Vegetation class	Non-Native
Soils and Landscape Position	Rolling plains of loamy, fertile soils.
Conservation status	No associated TEC
	 PCT 0_Non-native
Condition	The area of non-native grassland on site exists between areas of native vegetation, where the fertile slopes have been heavily pasture improved with Ryegrass (<i>Lolium spp</i>), Phalaris (<i>Phalaris aquatica</i>) and Cocksfoot (<i>Dactylis glomerata</i>), with no native forbs or grasses evident at time of survey. This area was heavily grazed with minimal spent seedheads on remnant grasses.
TEC Alignment	N/A - No associated TEC.
Fauna habitat	No fauna habitat noted



PCT 3366: Central Tableland Clay Apple Box Grassy Forest	
Vegetation formation	Grassy Woodlands
Vegetation class	Southern Tableland Grassy Woodlands
Soils and Landscape Position	Rockley Plains – Low rolling hills on plateau surface with Silurian and Ordovician slate, phyllites, felspathic sandstones and interbedded volcanics. General elevation over 1000m, relief to 150m. Red and yellow texture-contrast soils with often with prominent bleached A2 horizons. (Mitchell Landscapes)
Conservation status	No associated TEC
Photo	 PCT 3366 Moderate



PCT 3366: Central Tableland Clay Apple Box Grassy Forest



PCT 3366 Low

Canopy	In moderate condition, a small stand of mature Apple Box (<i>Eucalyptus bridgesiana</i>) trees is adjacent to the current high voltage transmission line. In low condition, the canopy layer is absent.
Midstorey	In moderate and low condition, the midstorey layer is absent.
Groundcover	In both low and moderate condition, which runs mostly under the current transmission line, the ground layer is still highly exotic, with dominant highly grazed Phalaris (<i>Phalaris aquatica</i>), however this area also includes scattered, spent Red grass (<i>Bothriochloa macra</i>). In moderate condition class, there are additional scattered forbs and native grasses around the base of the trees, including <i>Dichondra repens</i> and <i>Microlaena stipoides</i> ,
Fauna habitat	– Substrate sandy loam, a pile of rocks, likely residual from rock picking on the site, is found adjacent to the current high voltage transmission tower.



PCT 3366: Central Tableland Clay Apple Box Grassy Forest



-
- Minimal woody debris across PCT
- No aquatic habitat found on site.



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 sedimentary substrates and heavily disturbed soils with granitic fill noted. This PCT occurred south of the current Mount Piper substation, adjacent to several high voltage towers.
Conservation status	No associated TEC
Photo	 PCT 3369 High



PCT 3369: Central Tableland Ranges Peppermint-Gum Grassy Forest



PCT 3369 High





PCT 3369: Central Tableland Ranges Peppermint-Gum Grassy Forest



PCT 3369 Low

Canopy	In high condition, in the southern edge of the site near the entry gate to the paddock, a significant stand of mature <i>Eucalyptus</i> trees exists, dominated by <i>Eucalyptus dives</i>, with some <i>Eucalyptus macrorhyncha</i> and <i>Eucalyptus dalrympleana</i>. A current access track runs through this stand of trees. In low condition, the canopy is absent.
Midstorey	In high condition, the mid story is very sparse to absent, with only some scattered <i>Acacia dealbata</i> seedlings present. This sparse nature aligns with the PCT description; however the area has also been subject to grazing. In low condition, the midstory is absent.
Groundcover	In high condition, the ground cover had a moderate level of litter cover, with most of the ground layer dominated <i>Poa sieberiana</i>, with other native grasses and forbs (including <i>Hydrocotyle laxiflora</i>, <i>Microlaena stipoides</i> and <i>Acaena novae-zelandiae</i>) scattered within the vegetation zone, particularly under the dense woody habitat around the mature trees. In low condition, the grassland is heavily modified and pasture improved, with <i>Phalaris</i> (<i>Phalaris aquatica</i>) and Cocksfoot (<i>Dactylis glomerata</i>) dominant. Native grasses including Red grass (<i>Bothriochloa macra</i>) and <i>Microlaena stipoides</i> are scattered within the vegetation zone. Litter cover varied from moderate to very low. Both condition classes have been subject to heavy grazing pressure and identification was difficult due to both the season surveyed and lack of seed heads.
Fauna habitat	– Substrate sandy loam, nil significant rocky habitat – Large amounts of woody debris across site – Hollows present within the high vegetation zone. – No aquatic habitat noted on site.



STR 229

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	Rockley Plains - Low rolling hills on plateau surface with Silurian and Ordovician slate, phyllites, felspathic sandstones and interbedded volcanics. General elevation over 1000m, relief to 150m. Red and yellow texture-contrast soils with often with prominent bleached A ₂ horizons. (Mitchell Landscapes)
Conservation status	No associated TEC
Photo	 PCT 0_Non-native (Track only)



PCT 3735 - Central Tableland Peppermint Shrub-Grass Forest



PCT 3735_Very Low



PCT 3735_Low



PCT 3735 - Central Tableland Peppermint Shrub-Grass Forest



PCT 3735_High



PCT 3735_Very High

Canopy

Very low condition
No canopy species were present.



PCT 3735 - Central Tableland Peppermint Shrub-Grass Forest	
	Low condition Very sparse canopy present as regrowth only. Maintained to a low height under easement. High condition Dominated by <i>Eucalyptus dives</i> and <i>Eucalyptus macrorhyncha</i> transitioning to <i>Eucalyptus dalrympleana</i> and <i>Eucalyptus viminalis</i> on lower slopes and drainage depressions. Canopy species were small in diameter (< 20 cm DBH) and closely spaced with dense canopy cover. Few very large trees were present. Some recruitment of canopy species was observed. Very high condition Dominated by <i>Eucalyptus dives</i> and <i>Eucalyptus macrorhyncha</i> transitioning to <i>Eucalyptus dalrympleana</i> and <i>Eucalyptus viminalis</i> on lower slopes and drainage depressions. Mature canopy species were present (> 100 cm DBH) with more open canopy cover and hollow bearing trees. Recruitment of canopy species was observed.
Midstorey	Very low condition No midstorey species were present. Low condition Regenerating shrubs dominated by <i>Cassinia sifton</i> throughout the easement clearing with dense cover. Other species observed include <i>Acacia</i> sp. and <i>Cassinia</i> sp. Maintained to a low height under easement. High condition Very sparse midstorey in line with PCT description with few native species including scattered <i>Hibbertia obtusifolia</i> and <i>Hovea linearis</i>. Very high condition Very sparse midstorey in line with PCT description with few native species including scattered <i>Hibbertia obtusifolia</i> and <i>Hovea linearis</i>.
Groundcover	Very low condition Groundcover heavily disturbed and dominated by <i>Anthoxanthum odoratum</i> with high cover. Low condition Regenerating native grasses, dominated by <i>Poa sieberiana</i> were present and a lack of litter cover was observed. Despite disturbance from vegetation clearing, the presence of exotic species remains low. High condition The ground cover in the high condition class was largely intact and devoid of exotic species, and consisted of a very high cover of <i>Poa sieberiana</i>, with some <i>Rytidosperma pallidum</i>, <i>Dichondra repens</i> and <i>Microlaena stipoides</i> present. Minimal exotic species noted. Very high condition Similar to high condition, the ground cover in the very high condition class consisted of a very high cover of <i>Poa sieberiana</i>, with some <i>Rytidosperma pallidum</i>, <i>Dichondra repens</i> and <i>Microlaena stipoides</i> present. Minimal exotic species noted.
Justification of TEC Alignment	N/A - No associated TEC.
Fauna habitat	Fauna habitat observed in the Study Area include hollow bearing trees, burrows, termite mounds and large woody debris. Hollow bearing trees were most prevalent in very high condition vegetation. In addition, evidence of fauna activity includes marks on trees indicating the presence of feeding gliders. Litter cover was high (40%). Surface rock common across site. Ephemeral drainage line provides aquatic habitat.



Annex 7

Anabat analysis - STR 229



9216 Southern Cluster STR229

Method description

Two Anabat Swift ultrasonic recording devices were deployed for a period of five nights, the 12/01/2026 to the 16/01/2026, to record bat calls. The devices were deployed at rock crevices and suitable habitat features close to an area of identified rocky overhang within the impact area of the Subject site. The locations of both ultrasonic detectors and a summary of detection results can be found in the Northern Cluster Biodiversity Assessment Report (BAR).

Ultrasonic data analysis methodology

The ultrasonic data was analysed using Anabat Insight version 2.1.7-0 by Titley Scientific. A specific filter was employed within Anabat Insight to automatically identify files containing bat calls. This filter required a file to contain >4 bat pulses that met the following criteria:

- 10-200 kHz characteristic frequency
- Calls with a 2-100 milliseconds (ms) duration, and
- Calls with 5-1500 ms between pulses (Time Between Calls).

All non-bat files (files that did not meet the above filter criteria) were deleted. All “bat” files were run through an average pulse decision tree in Anabat Insight. The decision tree utilised in Anabat Insight is comprised of filters that compress files to remove noise and isolate pulses in a file that meet specified metric conditions and search for calls containing defining characteristics attributed to certain species in the dataset which automatically labels files with either a species or species complex. The labelled calls were then manually verified to confirm the identified calls for each species and species complex.

The Bat Calls of New South Wales (Pennay et al. 2004) and the Key to the Bat Calls of South-East Queensland and North-East New South Wales (Reinhold et al. 2001) were used to guide filter selection, metric thresholds, and species identification. Only search-phase call sequences containing three or more valid pulses were analysed. Calls with fewer than three valid pulses were excluded due to poor call quality and the increased risk of misidentification.

Species identification was based on Sydney Basin-specific call metrics and characteristics, recognising documented regional variation in call structure. Calls were assigned to species level only where distinctive characteristics were present and there was a low likelihood of confusion with sympatric taxa exhibiting overlapping frequencies or similar call morphologies.

Where overlapping frequency ranges or ambiguous call characteristics prevented confident separation, call sequences were conservatively assigned to species complexes, comprising two or more potential species consistent with the observed call features. Recordings containing simultaneous calls from multiple bats were manually filtered to isolate individual call sequences prior to analysis. This approach enabled the extraction of key diagnostic parameters for each call, including characteristic frequency, pulse shape, pulse interval, slope, and the presence or absence of harmonics.

Call analysis search parameters specifically targeted the earliest recorded echolocation sequences following dusk and the latest sequences preceding sunrise. This filtering approach was applied to maximise detection of emergence and pre-roost return activity to improve the likelihood of identifying acoustics exhibiting behavioural patterns consistent with nearby maternity or day-roost occupancy.



Target species

Eastern False Pipistrelle (*Falsistrellus tasmaniensis*) calls can be difficult to differentiate from *Scotorepens orion* and *Scoteanax rueppellii*. It has a characteristic frequency between 35 and 39 kHz with an often curved and steep pulse without an up-sweeping tail. It can sometimes have a down-sweeping or no tail. When calls could not be confidently assigned to species level due to overlapping characteristics, they were classified as species complexes based on the features that best matched the call profiles. Similarly, call sequences that exhibited excited, feeding buzz, or attack-phase pulses characterised by changes in frequency, shape, and structure were discarded if they lacked sufficient search-phase pulses typically required for reliable species identification.

Results

Target threatened species *F. tasmaniensis*/*S. rueppellii*/*S. orion* species complex were identified (Table 1). Table 2 showcases the call considered most representative of *F. tasmaniensis*, along with the justification of the metrics used for the identification. Table 3 details the earliest and latest call times detected for this target species.

Overall, there were no consistent patterns or behaviours of emerging or re-entering bats.

Table 19: Anabat Insight analysis target results

Common name	Scientific name	Threatened status	Detector #
Unresolved			
*Eastern False Pipistrelle/Greater Broad-nosed Bat/Eastern Broad Nosed Bat	* <i>Falsistrellus tasmaniensis</i> / <i>Scoteanax rueppellii</i> / <i>Scotorepens orion</i>	*Vulnerable under the Biodiversity Conservation Act 2016 (BC Act)	1231 and 2003

Table 20: Representative target species calls

Figure 1	Representative species call																																																
Eastern False Pipistrelle (<i>F. tasmaniensis</i>) / Greater Broad-nosed Bat (<i>S. rueppellii</i>) / Eastern Broad-nosed Bat (<i>S. orion</i>) species complex. Fc around 36-37 kHz No tail or down-sweeping tail Short pre-characteristic section	<table border="1"> <thead> <tr> <th>Metrics</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>2C Metrics</td> <td></td> </tr> <tr> <td> N</td> <td>15</td> </tr> <tr> <td> F_c</td> <td>37.1855</td> </tr> <tr> <td> F₀</td> <td>58.0862</td> </tr> <tr> <td> F_{max}</td> <td>71.8621</td> </tr> <tr> <td> F_{min}</td> <td>37.1203</td> </tr> <tr> <td> F_{mean}</td> <td>48.5271</td> </tr> <tr> <td> F_{SD}</td> <td>60.3956</td> </tr> <tr> <td> F_{SDS}</td> <td>66.5429</td> </tr> <tr> <td> F_{sk}</td> <td>40.8053</td> </tr> <tr> <td> Quality</td> <td>0.82115</td> </tr> <tr> <td> S1</td> <td>426.835</td> </tr> <tr> <td> S2</td> <td>5.6392</td> </tr> <tr> <td> PAC</td> <td>92.6667</td> </tr> <tr> <td> Curvature</td> <td>-0.198018</td> </tr> <tr> <td> Estart</td> <td>71.8624</td> </tr> <tr> <td> Fend</td> <td>37.154</td> </tr> <tr> <td> Smax</td> <td>-16.4327</td> </tr> <tr> <td> Smin</td> <td>780.82</td> </tr> <tr> <td> Srand</td> <td>65.9493</td> </tr> <tr> <td>User Metrics</td> <td></td> </tr> <tr> <td> D₀-T₀/D₀</td> <td>0.425541</td> </tr> <tr> <td> F₀-F_c</td> <td>3.41987</td> </tr> </tbody> </table>	Metrics	Value	2C Metrics		N	15	F _c	37.1855	F ₀	58.0862	F _{max}	71.8621	F _{min}	37.1203	F _{mean}	48.5271	F _{SD}	60.3956	F _{SDS}	66.5429	F _{sk}	40.8053	Quality	0.82115	S1	426.835	S2	5.6392	PAC	92.6667	Curvature	-0.198018	Estart	71.8624	Fend	37.154	Smax	-16.4327	Smin	780.82	Srand	65.9493	User Metrics		D ₀ -T ₀ /D ₀	0.425541	F ₀ -F _c	3.41987
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Table 21: Earliest and latest target species calls

Species	Date	Earliest call(s) detected	Latest call(s) detected
Eastern False Pipistrelle (<i>F. tasmaniensis</i>) / Greater Broad-nosed Bat (<i>S. rueppellii</i>) / Eastern Broad-nosed Bat (<i>S. orion</i>) species complex.	27/01/2026	21:20:32 21:41:44	-
	28/01/2026	20:50:44 21:05:22 21:41:20	01:32:15 02:51:07 04:01:36 04:07:02
	29/01/2026	22:39:24 23:37:35	02:42:37 04:08:52 04:51:53 05:10:06
	30/01/2026	20:46:48 21:15:41 22:37:50 23:23:58	04:03:11 04:31:09 04:55:07
	31/01/2026		01:42:18 04:43:15 05:28:26

*Detector 2003 and Detector 1231



References

Pennay, M., Law B. and Reinhold, L. (2004). *Bat Calls of New South Wales: Region based guide to the echolocation calls of Microchiropteran bats*. NSW Department of Environment and Conservation, Hurstville.

Reinhold, L., Law, B. and Pennay, M. (2001). *Key to the bat calls of south-east Queensland and north-east New South Wales*. Available at: https://www.researchgate.net/publication/303821240_Key_to_the_bat_calls_of_south-east_Queensland_and_north-east_New_South_Wales.



Annex 8

Aquatic habitat photos



Table 22: Aquatic habitat within Southern Cluster

Mount Piper South aquatic habitat	
	
Concreted drainage line south of current substation, within heavily degraded and modified vegetation. Within current high voltage powerline easement.	<i>Leptospermum</i> spp. grove in wet area south of current substation, within current high voltage powerline easement.



Structure 229 aquatic habitat



Uphill of Strahler 1 unnamed creek, showing drainage line at base of slope.



Strahler 1 ephemeral drainage line, no visible water, soil not damp to touch.



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Our expertise



Natural capital
and offsetting



Ecology



Heritage
management



Spatial Services

Appendix E Aboriginal Objects Due Diligence Assessment



Assessment Report

Line 5A3/5A4 - Structure 169 Transposition Works

Upper Hunter Local Government Area

Prepared for Arup on behalf of Transgrid

Prepared by Niche Environment and Heritage Pty Ltd | 2 September 2026

Document control

Project number	Client	Project manager	LGA
9211	Arup on behalf of Transgrid	Ben Slack	Upper Hunter

Version	Author	Review	Status	Comments	Date
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D05	Samuel Riley		Client review		17 July 2026
F01	Samuel Riley		Finalising		2 September 2026

Acknowledgement to Country

Niche would like to pay our respect to and acknowledge the Traditional Custodians of the land where this Project took place, the contributions of the Aboriginal people who participated in this Project, and to pay our respects to the Elders past, present, and emerging.

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Executive Summary

Transgrid is proposing to undertake transposition works on Line 5A3/5A4, Structure 169, located on Lot 7 DP 1279168, approximately 18 kilometres southwest of Merriwa, New South Wales (NSW) (hereafter referred to as the 'Subject Area'; Figure 1 and Figure 2). The Subject Area is situated within the Upper Hunter Local Government Area (LGA).

The works would involve ground disturbance and vegetation clearing at a location where Aboriginal heritage objects have been recorded. Desktop assessment and an initial field survey have indicated that there is potential to harm Aboriginal objects. Given that Aboriginal objects and Aboriginal Places are protected under the National Parks and Wildlife Act 1974 (NPW Act), an Aboriginal Cultural Heritage (ACHA) is required in order to investigate the presence of Aboriginal objects within the Subject Area, assess any potential harm to the heritage values associated with these objects, and provide recommendations for management measures to manage or prevent harm.

Arup on behalf of Transgrid ('the Proponent') has engaged Niche to assist with the development of an ACHA that:

- Identifies the nature and extent of any Aboriginal objects that may be present within the Subject Area.
- Determines the cultural significance of Aboriginal objects and /or places relevant to the Subject Area.
- Prepares an impact assessment and provides appropriate management recommendations for any identified Aboriginal objects that might be identified during the process.
- Details the community consultation process and any Aboriginal cultural heritage values identified, in compliance with the Aboriginal Cultural Heritage Consultation Requirements for Proponents (ACHCRPs) (DECCW 2010b).

The ACHA process includes background archaeological and historical investigation, ongoing consultation with Registered Aboriginal Parties (RAPs) and an archaeological site inspection.

[Redacted text block]

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Based on the community consultation with the Aboriginal stakeholders and archaeological investigations undertaken for the Project by Niche, several recommendations for the Subject Area are included in Table 16.

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.
Aboriginal object(s)	The legal definition for material Aboriginal cultural heritage under the <i>NSW National Parks and Wildlife Act 1974</i> .
Aboriginal stakeholders	Members of a local Aboriginal land council, registered holders of Native Title, Aboriginal groups or other Aboriginal people who may have an interest in the Project.
ACHA	Aboriginal Cultural Heritage Assessment.
ACHCRP	<i>Aboriginal Cultural Heritage Consultation Requirements for Proponents</i>
AHIMS	Aboriginal Heritage Information Management System.
AHIP	Aboriginal Heritage Impact Permit.
Artefact	An object made by human agency (e.g. stone artefacts).
ASIRF	Aboriginal Site Impact Recording Forms.
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.
BCD	The Biodiversity and Conservation Division (formerly the Office of Environment and Heritage and now NSW Environment and Heritage of the NSW Department of Climate Change, Energy, the Environment and Water).
Code of Practice	<i>Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales</i> .
Community Collection	A process undertaken involving RAPs whereby visible surface Aboriginal artefacts are systematically identified, recorded and collected from an area proposed to be impacted by the proposed activity. The process provides Aboriginal community representatives with an opportunity to participate directly in the management of Aboriginal cultural heritage and informs decisions regarding the long-term care, control and management of recovered artefacts.
Cumulative impacts	Combination of individual effects of the same kind due to multiple actions from various sources over time.
DCCEEW	NSW 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.
DPHI	The Department of Planning, Housing and Infrastructure, formerly DPIE the Department of Planning, Industry and Environment.
EIS	Environmental Impact Statement.
EP&A Act	<i>NSW Environmental Planning and Assessment Act 1979</i> .

Flake	A piece of stone detached from a core, displaying a bulb of percussion and striking platform.
Harm	With regard to Aboriginal objects, this has the same meaning as the definition given in the <i>NSW National Parks and Wildlife Act 1974</i> .
Heritage NSW	Aboriginal cultural heritage regulator in the NSW Department of Planning and Environment for the management of Aboriginal Cultural Heritage (ACH) regulation functions under the <i>National Parks and Wildlife Act 1974</i> . Formerly BCD of DPIE.
<i>In situ</i>	Latin term meaning 'on the spot, undisturbed'.
Isolated artefact / find	A single artefact found in an isolated context.
LALC	Local Aboriginal Land Council.
LEP	Local Environmental Plan.
LGA	Local Government Area.
NPW Act	<i>National Parks and Wildlife Act 1974</i> .
NPW Regulation	<i>National Parks and Wildlife Regulation 2019</i> .
Open camp 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.
Proposed impact area	Area within Subject Area where impacts are proposed
RAP	Registered Aboriginal Party.
SHR	State Heritage Register
SU	Survey Unit
Subject Area	Area surveyed during the ACHA assessment
Survey coverage	A graphic and statistical representation of how much of an impact area was surveyed and therefore assessed.

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1. Introduction

1.1 Background

Transgrid is proposing to undertake transposition works on Line 5A3/5A4 Structure 169, located on Lot 7 DP 1279168, approximately 18 kilometres southwest of Merriwa, New South Wales (NSW) (hereafter referred to as the 'Subject Area'; Figure 1 and Figure 2). The Subject Area is situated within the Upper Hunter Local Government Area (LGA).

1.2 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 significantly increase energy generation on 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).

The proposed works for the purposes of this Aboriginal Cultural Heritage Assessment (ACHA) include:

- Installation of four new steel pole transmission structures at Structure 169 on Transgrid's existing transmission line 5A3/5A4
- Establishment of a level construction bench at the Subject Area to support the safe operation of elevated working platforms and cranes as part of structure assembly.
- Vegetation clearing
- Construction and upgrade of access tracks to the Subject Area.

In addition, the existing transmission line easement in the Subject Area at Structure 169 would be widened from 70 metres to 120 metres.

These works will occur in what has been defined as the 'proposed impact area' on Figure 2.

Construction of the proposed works is expected to commence in Quarter 1 2027 and is expected to take approximately twelve months to complete. The proposed activity start date may alter with revision of Transgrid's project program including outage constraints, although the duration of the construction activities would remain the same.

One of the transposition sites, the Subject Area, is situated at a location where Aboriginal heritage objects have been recorded. Desktop assessment and an initial field survey have indicated that there is potential to harm Aboriginal objects. Given that Aboriginal objects and Aboriginal Places are protected under the *National Parks and Wildlife Act 1974* (NPW Act), an ACHA is required in order to investigate the presence of Aboriginal objects within the Subject Area, assess any potential harm to the heritage values associated with these objects, and provide recommendations for management measures to manage or prevent harm.

1.3 Location

The Subject Area is situated within the suburb of Merriwa in the Upper Hunter LGA and is located approximately 18 km southwest of the Merriwa township. It lies within the County of Brisbane and the Parish of Campbell and within the Wanaruah Local Aboriginal Land Council (LALC). The Subject Area comprises Lot 7 DP 1279168. The location of the Subject Area is illustrated in Figure 1 and Figure 2.

1.4 Project need

The proposed activity is needed to address predicted voltage imbalance on key 500 kV transmission lines 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.

1.5 Statutory and regulatory framework

1.5.1 Commonwealth and national legislation

1.5.1.1 Environment Protection and Biodiversity Conservation Act 1999

The Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) is the Australian Government's central piece of environmental legislation. It provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places, amongst other 'matters of national environmental significance'. Under the EPBC Act, protected heritage items of significance are listed on the National Heritage List (NHL) or the Commonwealth Heritage List (CHL). The NHL provides protection to places of cultural significance to the nation of Australia, while the CHL comprises natural, Aboriginal and historic heritage places owned and controlled by the Commonwealth.

No items on CHL or NHL were identified within the Subject Area.

1.5.1.2 Aboriginal and Torres Strait Islander Heritage Protection Act 1984

The Aboriginal and Torres Strait Islander Heritage Protection Act 1984 (ATSHP Act) is aimed at the protection from injury and desecration of areas and objects that are of significance to Aboriginal Australians. This legislation has usually been invoked in emergency and conflicted situations.

No areas or items which would warrant invocation of the ATSHP Act were identified within the Subject Area.

1.5.2 Native title legislation

1.5.2.1 Native Title Act 1993

The Native Title Act 1993 (NTA) provides a legislative framework to:

- a. Recognise and protect native title.

- b. Establish ways in which future dealings affecting native title may proceed and to set standards for those dealings, including providing certain procedural rights for registered native title claimants and native title holders in relation to acts which affect native title.
- c. Establish a mechanism for determining claims to native title.
- d. Provide for, or permit, the validation of past acts that would otherwise be invalid because of the existence of native title.

The NTA was introduced to make sure laws of NSW are consistent with the Commonwealth's NTA on future dealings. It validates past and intermediate acts that may otherwise have been invalid because of the existence of native title.

A search of the National Native Title Register determined the Native Title does not exist across the Subject Area.

1.5.3 NSW state legislation

1.5.3.1 NSW Environment Planning and Assessment Act 1979

The Environment Planning & Assessment Act (EP&A Act) establishes the framework for cultural heritage values to be formally assessed in the land use planning process in NSW. The EP&A Act also requires local governments to prepare planning instruments, such as Local Environmental Plans (LEP) which identify heritage items with statutory protections under the EP&A Act.

As the project is not a State Significant Development, Section 5.23 of the EP&A Act does not apply and an Aboriginal Heritage Impact Permit (AHIP) under Section 90 of the National Parks and Wildlife Act 1974 would be required.

1.5.3.2 NSW National Parks and Wildlife Act 1974

Aboriginal objects are protected under the NSW National Parks and Wildlife Act 1974 (NPW Act). Under section 85 of the NPW Act, the Director General (DG) of the Department of Premier and Cabinet is responsible for the protection of Aboriginal objects and places in NSW. In particular, the DG is responsible for the preservation and protection of any Aboriginal objects or places on land reserved under the NPW Act, and for the proper restoration of any such land that has been disturbed or excavated in accordance with approval. Part 6 of the NPW Act provides specific protection for Aboriginal objects and places by making it an offence to harm or desecrate them. Harm means '... any act or omission that destroys, defaces or damages an object or place or, in relation to an object, moves the object from the land on which it had been situated' (section 5 of NPW Act).

The assessment, investigation and reporting on Aboriginal objects and cultural heritage is guided by the National Parks and Wildlife Regulation 2019 (NPW Regulation), as amended, which establishes three subordinate regulatory instruments:

- Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW (DECCW 2010a) (hereafter referred to as 'the Code of Practice').
- Aboriginal Cultural Heritage Consultation Requirements for Proponents (Department of Environment, Climate Change and Water [DECCW] 2010b) (ACHCRPs).
- Guide to investigating, assessing and reporting Aboriginal cultural heritage in NSW (Office of Environment and Heritage [OEH] 2011a).

This ACHA report has been prepared in compliance with the above listed regulatory instruments.

1.5.3.3 NSW Heritage Act 1977

Under section 170 of the Heritage Act 1977, NSW government agencies are required to maintain a register of heritage assets under their control or ownership. Each government agency is responsible for ensuring that the items entered on its register under section 170 are maintained with due diligence in accordance with State Owned Heritage Management Principles. Items listed in section 170 Heritage and Conservation Registers are listed on the Stage Heritage Inventory, and some are also listed on the State Heritage Register (SHR).

No heritage items on the section 170 listing are located within the Subject Area.

No heritage items on the SHR are located within the Subject Area.

1.5.3.4 Aboriginal Land Rights Act 1983

The NSW Aboriginal Land Rights Act 1983 establishes the NSW Aboriginal Land Council (NSWALC) and Local Aboriginal Land Councils (LALCs). The Act requires these bodies to:

- a. Take action to protect the culture and heritage of Aboriginal persons in the council's area, subject to any other law.
- b. Promote awareness in the community of the culture and heritage of Aboriginal persons in the council's area.

These requirements recognise and acknowledge the statutory role and responsibility of the NSWALC and LALCs.

This project is located within the boundaries of the Wanaruah LALC.

1.5.3.5 The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Heritage Significance

The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance (Australia ICOMOS 2013) is a non-statutory instrument that is accepted as presenting the best practice methods for the assessment of cultural heritage values.

This ACHA report has been prepared in compliance with the Burra Charter.

1.6 Purpose and structure of this report

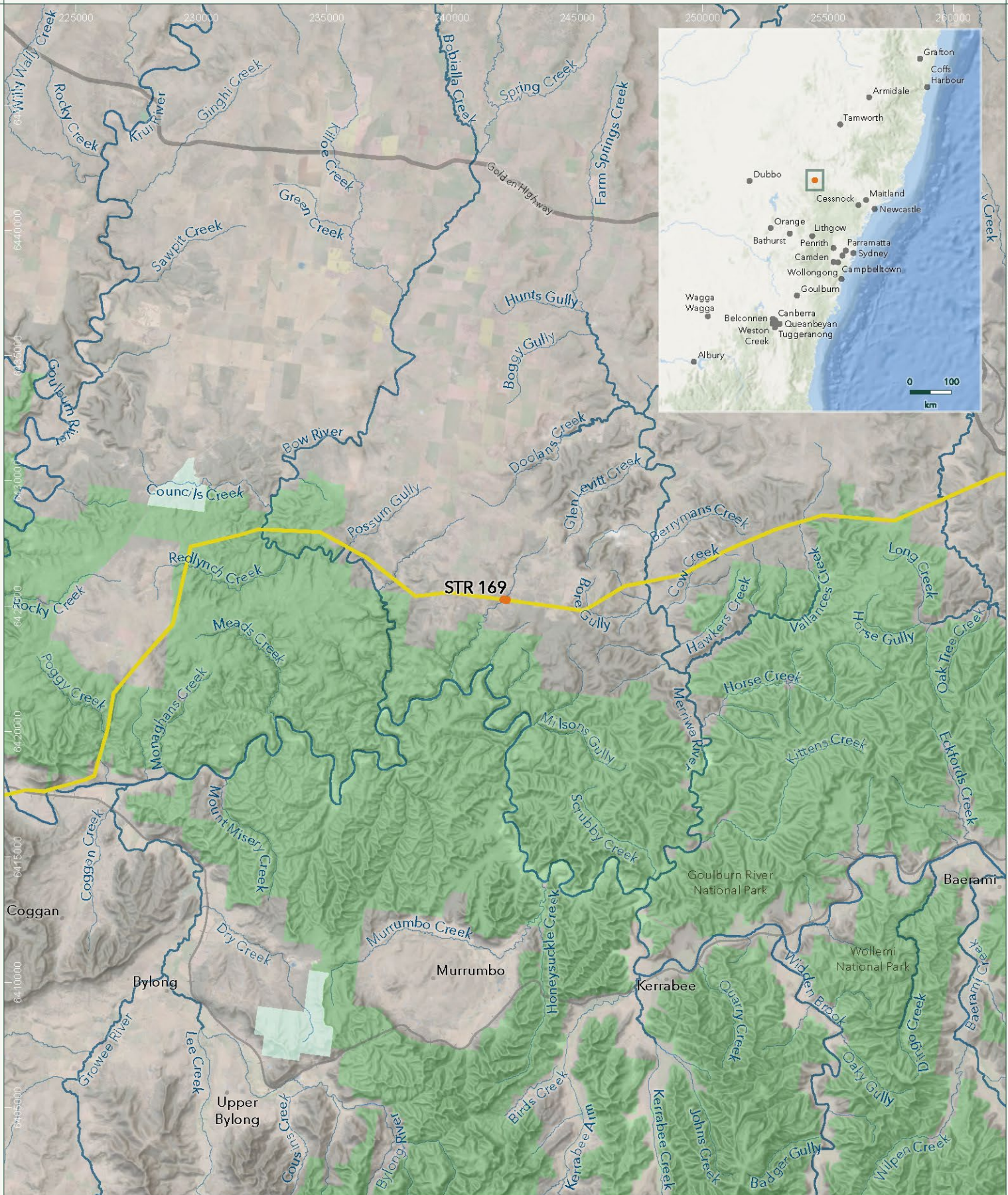
Arup on behalf of Transgrid ('the Proponent') has engaged Niche to assist with the development of an ACHA that:

- Identifies the nature and extent of any Aboriginal objects that may be present within the Subject Area.
- Determines the cultural significance of Aboriginal objects and /or places relevant to the Subject Area.
- Prepares an impact assessment and provides appropriate management recommendations for any identified Aboriginal objects that might be identified during the process.
- Details the community consultation process and any Aboriginal cultural heritage values identified, in compliance with the ACHCRPs (DECCW 2010b).

This ACHA report is designed to inform the proposed works and to manage and mitigate harm to Aboriginal objects and cultural heritage values during proposed future development within the Subject Area. This ACHA will also inform the AHIP application for the Subject Area. The assessment requirements and objectives for the ACHA are provided in Table 1 below.

Table 1: Assessment requirements and objectives

Objectives	Addressed in
Identify whether Aboriginal objects could be present within the Subject Area.	Section 2 and 4
Undertake further investigation within areas identified as having potential high sensitivity. .	Section 2 and 5
Provide a description of the Aboriginal objects and declared Aboriginal places located within the area of the proposed activity.	Section 2 and 4
Provide a description of the cultural heritage values, including the significance of the Aboriginal objects and declared Aboriginal places, that exist across the whole area that will be affected by the proposed activity and the significance of these values for the Aboriginal people who have a cultural association with the land.	Section 6
Demonstrate how the requirements for consultation with Aboriginal people have been met (as specified in clause 80C of the NPW Regulation).	Section 3, Appendix 1 and Appendix 2
Present the views of Aboriginal people who were consulted regarding the likely impact of the proposed activity on their cultural heritage (if any submissions have been received as a part of the ACHCRPs, the report must include a copy of each submission and response).	Section 3 and 6, Appendix 1 and Appendix 2
Provide an assessment of actual or likely harm posed to the Aboriginal objects or declared Aboriginal places from the proposed activity, with reference to the cultural heritage values identified.	Section 7
Provide any practical measures that may be taken to protect and conserve those Aboriginal objects or declared Aboriginal places and any practical measures that may be taken to avoid or mitigate any actual or likely harm, alternatives to harm or, if this is not possible, to manage (minimise) harm.	Section 7 and 8



 Subject area
 Line 5A3/5A4

Transport
 Major road
 Rail

Hydrography
 Perennial Stream
 Non Perennial Stream
 Waterbody

Protected Areas of NSW
 National Park
 State Forest



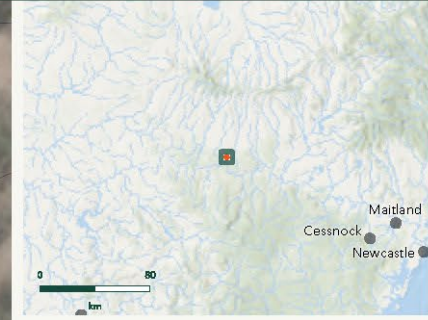
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 GDA2020 MGA Zone 56



Figure 1
Location Map
 Arup Transgrid Transposition Towers Heritage - Northern Cluster ACHA

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

Drawn by: Andrea Sward \Niche\GIS - APPX - APR\A9200\A9211_TranspositionTowers_NSW_Northern_ACHA.aprx. Last updated: 2/02/2026 7:16 PM



- Subject area
- Proposed impact area
- Transport**
 - Minor road
- Hydrography**
 - Strahler stream order
 - 1
 - 2
 - 4
- Administrative and Property Boundaries**
 - Lot
 - Local Government Area



Figure 2
Subject Area - STR 169
Arup Transgrid Transposition Towers Heritage - Northern Cluster ACHA

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



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, Geodastatyselsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap, and the GIS user community/ Transparency Mask: / World Imagery: Source: Esri, Vantor, 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: 2/02/2026

2. Description of the area

2.1 Landscape context

The landscape context for the Subject Area is described in detail in the Archaeological Report (AR) and summarised again below.

Historical aerial imagery demonstrates that the Subject Area has undergone notable disturbance associated with the development of the transmission line and its access track. In 1970, the landscape appears largely intact, with no linear clearing or associated infrastructure visible. By 1992, however, the establishment of the transmission line corridor and an access track has resulted in significant ground disturbance, vegetation removal, and modification of the natural land surface.

This pattern of disturbance is consistent with broader land use practices within the Wappinguy soil landscape, where clearing for utilities and grazing has altered vegetation structure, ground visibility, and soil stability. The construction and operation of the transmission line likely involved use of machinery, excavation, periodic slashing or grading of the track, and vehicular access, each of which may contribute to soil profile mixing, erosion, and reduced integrity of surviving archaeological deposits. Disturbance would be most intensive along the access track and tower pads, with more moderate impacts extending into adjacent areas from runoff, compaction, and vegetation clearance.

From an archaeological perspective, these past land-use impacts diminish the likelihood of intact surface expressions of Aboriginal cultural material in highly modified areas but do not entirely eliminate the potential for subsurface archaeological deposits to persist. The broader geomorphic setting—characterised by alluvial and colluvial soils, shallow slopes and periodic drainage activity—suggests that even within disturbed corridors, pockets of preserved deposit may remain in less-impacted micro-landforms. Understanding the spatial distribution and intensity of disturbance is therefore essential for predicting archaeological potential, framing targeted survey and testing strategies, and informing impact assessments for the proposed transposition works.

2.1.1 Geology

The underlying geology of the Subject Area is comprised of the Narrabeen Group and Pilliga Sandstone Geological Units. These geological units include quartz and lithic sandstone, shale, conglomerate, siltstone and green and red claystone (DPIE 2020). Quartz, siltstone and silcrete conglomerates are suitable raw materials for stone tool manufacture.

2.1.2 Soils

The Subject Area is situated entirely within the Wappinguy soil landscape (Figure 3).

The Wappinguy soil landscape consists of Solodic Soils on sandstone slopes, in association with Siliceous and Earthy Sands and sandstone outcrops (DPIE 2020). Brown Clays occur midslope over sandstone (DPIE 2020). Red Earth – Euchrozem intergrades and Euchrozems occur on slopes with some basaltic colluvium in the parent material (DPIE 2020). Prairie Soils occur in drainage lines with alluvial loams and clays (DPIE 2020). Gleyed Soloths occur in some other drainage lines (DPIE 2020).

2.1.3 Topography and Hydrology

The Subject Area is situated entirely within the Wappinguy soil landscape (DPIE 2020).

The Wappinguy soil landscape generally consists of rolling low hills with some rocky sandstone knolls, hills and cuestas (DPIE 2020). There are some sandstone benches (DPIE 2020). Most valleys are broad and shallow, with some narrow valleys along rocky jointed surfaces (DPIE 2020). Elevations vary from 240-405 m, with slopes less than 15% (except for rock outcrops) (DPIE 2020). Slope lengths are 80-1000 m (DPIE 2020). Local relief is 40-80 m, with some sandstone hills to 120 m (DPIE 2020). Drainage lines occur at intervals of 700-1000 m (DPIE 2020).

2.1.4 Flora

Woodland covers most of the Wappinguy soil landscape (DPIE 2020). Narrow-leaved red ironbark (*Eucalyptus crebra*) dominates on the coarser textured soils on ridges (DPIE 2020). White box (*Eucalyptus albens*) and Blakelys red gum (*Eucalyptus blakelyi*) also occur (DPIE 2020). Many parts of the landscape have been cleared extensively for grazing on voluntary and native pasture (DPIE 2020). A shrub woodland of ironbarks (*Eucalyptus* spp.) occurs on rocky sandstone knolls and hills along with some black cypress pine (*Callitris endlicheri*), forest red gum (*Eucalyptus tereticornis*) and brown bloodwood (*Corymbia trachyphloia*) (DPIE 2020). Wattles (*Acacia* spp.) are common as the major shrub types. Much of this shrub woodland is uncleared (DPIE 2020)

2.2 Archaeological context

2.2.1 AHIMS Sites

[REDACTED]
 [REDACTED]
 [REDACTED]
 [REDACTED]
 [REDACTED]
 [REDACTED]
 [REDACTED]

Table 2: Summary of Aboriginal sites registered on AHIMS within search area

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.

2.2.2 Aboriginal occupation and land use of the Subject Area

Water is one of the most important resources for human occupation in a landscape and is considered the primary factor for the prediction of Aboriginal sites' potential presence in a landscape. Across NSW, there is a strong correlation between the presence, frequency, and density of Aboriginal objects with the abundance and permanency of water sources. Areas within 200 m of water are identified by the *Due Diligence Code of Practice*

for the Protection of Aboriginal Objects in New South Wales (DECCW 2010c) as landscape features likely to indicate the presence of Aboriginal objects.

Historical aerals from 1970 (Plate 1) and 1992 (Plate 2) demonstrate the disturbance that has taken place across the Subject Area. In 1970 the transmission line and associated access track has not been constructed yet, and the Subject Area has not been totally cleared. By 1992 the transmission line and access track have been constructed. Details of the archaeological survey undertaken and full background of Aboriginal occupation can be found in Appendix 1 with a summary provided in Section 4.0.

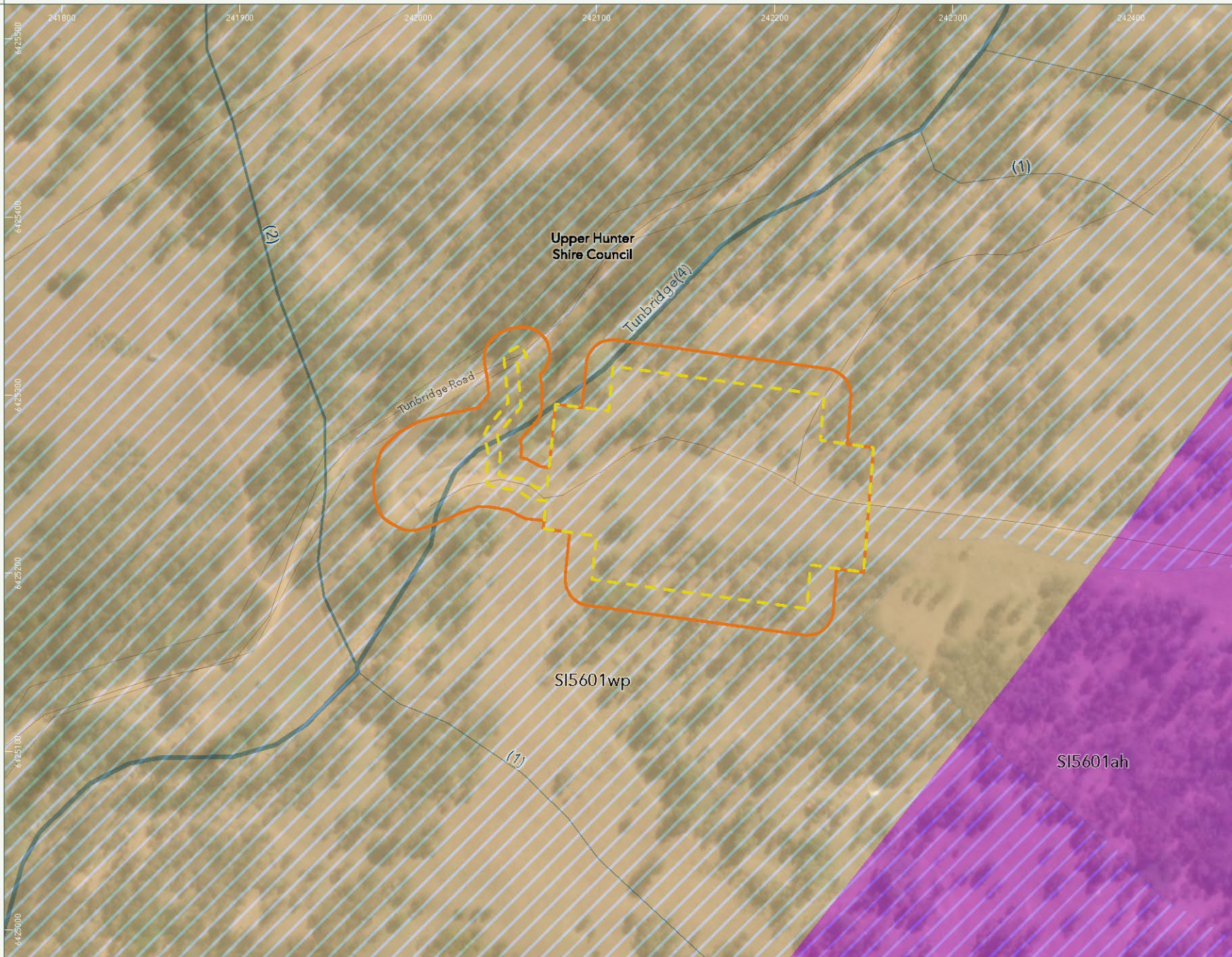


Plate 1: 1970 historical aerial



Plate 2: 1992 historical aerial

Drawn by: Andrea Sward | Filer: C:\Users\Andrea Sward\Niche\GIS-APR-X-APR-X-APR-X\9200\9211_TranspositionTowers_NSW_Northern_ACHA.aprx Last updated: 2/02/2026 7:16 PM



- Subject area
- Proposed impact area
- Transport**
 - Minor road
- Hydrography**
 - Strahler stream order
 - 1
 - 2
 - 4
 - Watercourse buffer (200m)
- Administrative and Property Boundaries**
 - Lot
 - Local Government Area
- Soil Landscapes of Central and Eastern NSW**
 - SI5601ah, Ant Hill
 - SI5601wp, Wappinguy



Figure 3

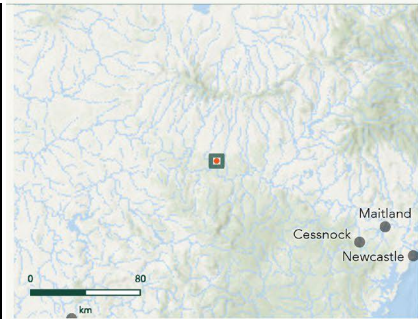
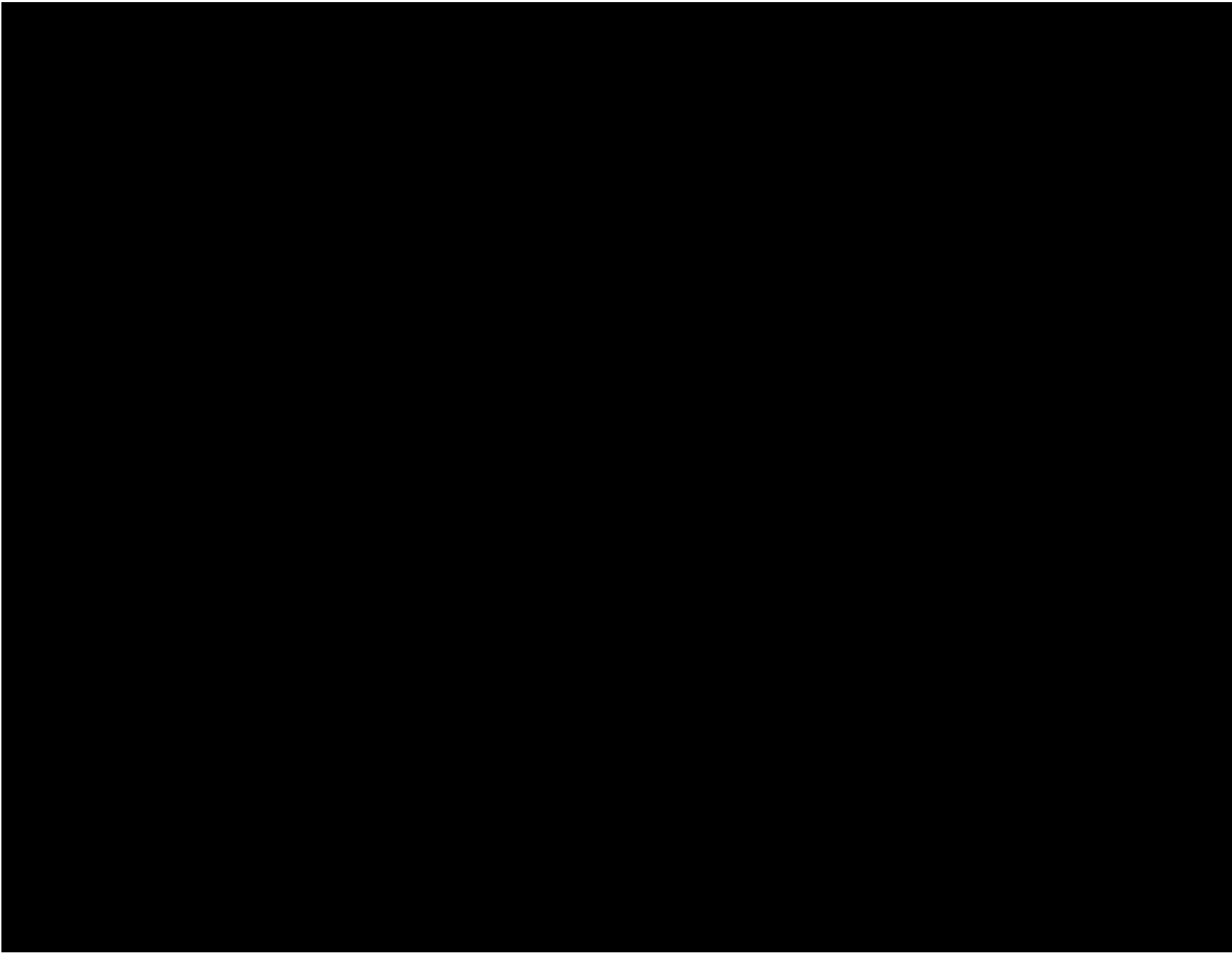
Soil landscapes and hydrology in the local area - STR 169
Arup Transgrid Transposition Towers Heritage - Northern Cluster ACHA

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



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: Source: Esri, Vantor, 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: 2/02/2026

Drawn by: AndreaSward File: C:\Users\AndreaSward\Niche\GIS - APRX - APRX\AprX\9200\AprX\9211_TranspositionTowers_NSW_Northern_ACHA.aprx Last updated: 2/02/2026 7:16 PM



- Subject area
- Proposed impact area
- Transport
 - Minor road
- Hydrography
 - Strahler stream order
 - 1
 - 2
 - 4
- Administrative and Property Boundaries
 - Lot
 - Local Government Area
- AHIMS
 - Artefact



Figure 4
AHIMS Sites and Heritage Items - STR 169
Arup Transgrid Transposition Towers Heritage - Northern Cluster ACHA

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



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: 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/ State Heritage Register Curtilage: / Local Heritage Place: / Transparency Mask: / World Imagery: Source: Esri, Vantor, 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: 2/02/2026

3. Consultation process

In administering its statutory functions under Part 6 of the NPW Act, Heritage NSW requires that proponents consult with Aboriginal people about the Aboriginal cultural heritage values (cultural significance) of Aboriginal objects and/or places within any given development area, in accordance with Section 60 of NSW National Parks and Wildlife Regulation 2009 ('the Regulation').

Heritage NSW maintains that the objective of consultation with Aboriginal communities about the cultural heritage values of Aboriginal objects and places is to ensure that Aboriginal people have the opportunity to improve ACHA outcomes (DECCW 2010b). This is ensured by:

- Providing relevant information about the cultural significance and values of Aboriginal objects and /or places.
- Informing the design of the methodology to assess the cultural and significance of Aboriginal objects and/or places.
- Actively contributing to the development of cultural heritage management options and recommendations for any Aboriginal objects and/or places within the proposed Subject Area.
- Commenting on draft assessment reports before they are submitted by the Proponent to Heritage NSW.

Consultation in the form outlined in the ACHCRPs (DECCW 2010b) is a formal requirement in cases where a proponent is aware that their development activity has the potential to harm Aboriginal objects or places. Heritage NSW also recommends that these requirements be used when the certainty of harm is not yet established but a proponent has, through some formal development mechanism, been required to undertake a cultural heritage assessment to establish the potential harm their proposal may have on Aboriginal objects and/or places.

The ACHCRPs outline a four-stage consultation process that includes detailed step-by-step guidance as to the aim of the stage, how it should proceed, and what actions are necessary for it to be considered successfully completed. The four stages are:

- Stage 1 - Notification of project proposal and registration of interest.
- Stage 2 - Presentation of information about the proposed project.
- Stage 3 - Gathering information about the cultural significance of the project area.
- Stage 4 - Review of the draft Aboriginal Cultural Heritage Assessment report.

The ACHCRPs also outline the roles and responsibilities of Heritage NSW, Registered Aboriginal Parties (RAPs) including Local and State Aboriginal Land Councils, and proponents throughout the consultation process.

To meet the requirements of consultation it is expected that the proponent will:

- Bring the RAPs (or their nominated representatives) together and be responsible for ensuring appropriate administration and management of the consultation process.
- Consider the cultural perspectives, views, knowledge, and advice of the RAPs involved in the consultation process when they assess cultural significance and work together to develop any heritage management outcomes for Aboriginal object(s) and/or place(s).
- Provide evidence to Heritage NSW of consultation by including information such as cultural perspectives, views, knowledge, and advice provided by the RAPs.

- Accurately record and clearly articulate all consultation findings in the final cultural heritage assessment report, and
- Provide copies of the final cultural heritage assessment report to the RAPs who have been consulted.

The consultation process undertaken to seek active involvement from appropriate Aboriginal representatives for the project followed the current NSW statutory guidelines – the ACHCRPs. Section 1.3 of the ACHCRPs describes the guiding principles of the document, which have been derived directly from the principles section of the Australian Heritage Commission’s *Ask First: A guide to respecting Indigenous heritage places and values* (Australian Heritage Commission, 2002). Both documents share the aim of creating a system where advice can be sought from the Aboriginal community.

The following sections outline the process and results of the consultation conducted during this assessment to ascertain and reflect the Aboriginal cultural heritage values of the Subject Area. Further detail regarding the Aboriginal community consultation process is outlined in Appendix 2.

3.1 Stage 1 – Notification of project proposal and registration of interest

3.1.1 Notification of agencies

Notification was initiated on 30 January 2026 to all relevant organisations named under Section 4.1.2 of the ACHCRPs guidelines. This is done to identify Aboriginal people who may have cultural knowledge relevant to the Subject Area and who may have an interest in the proposed project. The list of the contacted organisations is provided in Table 3 below and a copy of the notification letter is provided in Appendix 2.

Table 3: List of contacted organisations

Name of Organisation	Date of notification sent	Date of response received
Heritage NSW	30 January 2026	2 February 2026
Hunter Local Land Services	30 January 2026	30 January 2026
Upper Hunter Council	30 January 2026	No response received
Wanaruah Local Aboriginal Land Council	30 January 2026	30 January 2026
National Native Title Tribunal	30 January 2026	30 January 2026
NTS Corp	30 January 2026	No response received
ORALRA	30 January 2026	2 February 2026

3.1.2 Advertisement

In accordance with Section 4.1.3 of the ACHCRPs guidelines, a newspaper advertisement was placed in the Muswellbrook Chronicle on 25 February 2026, with a closing date of 5 pm on 11 March 2026 to provide additional opportunity for Aboriginal people who may be interested in the project to come forward. A copy of the advertisement is included in Appendix 2.

3.1.3 Notification of potential stakeholders

A list of potential cultural knowledge holders was compiled from submissions and information collected during the notification and registration periods. A list of the potential stakeholders is provided in Table 4 below.

Table 4: List of potential Aboriginal stakeholders

Potential Aboriginal stakeholders	
A1 Indigenous Services	Aboriginal Native Title Consultants
AGA Services	Aliera French Trading
Alison Sampson	Amanda Hickey Cultural Services
AT Gomilaroi Cultural Consultancy	Cacatua Culture Consultants
Corroboree Aboriginal Corporation	Crimson Rosie
Culturally Aware	DFTV Enterprises
Deslee Talbott Consultants	Didge Ngunawal Clan
Forster Local Aboriginal Land Council	Gidawaa Walang & Barkuma Neighbourhood Centre Inc.
Gilay Consultants	Glen Morris
Gomeroi People (c/- NTSCorp Ltd)	Gomery Cultural Consultants
Hunter Traditional Owner	Hunter Valley Aboriginal Corporation
Hunter Valley Cultural Surveying	Hunters & Collectors
Indigenous Learning	Jarban & Mugrebea
Jumbunna Traffic Management Group Pty Ltd	Kamilaroi Yankuntjatjara Working Group
Kauma Pondee Inc.	Kawul Pty Ltd trading as Wonn1 Sites
Konanggo Aboriginal Cultural Heritage Services	Lower Hunter Aboriginal Incorporated
Lower Hunter Wonnarua Cultural Services	Lower Wonnaruah Tribal Consultancy Pty Ltd
Michelle Saunders	Mudgee Local Aboriginal Land Council
Murra Bidgee Mullangari Aboriginal Corporation	Muswellbrook Cultural Consultants
Myland Cultural & Heritage Group	Nunawanna Aboriginal Corporation
Nungaroo Local Aboriginal Land Council	Purfleet/Taree Local Aboriginal Land Council
Steve Talbott	Thomas Dahlstrom
Scott Franks on behalf of the Wonnarua PBC	Ungooroo Aboriginal Corporation
Upper Hunter Wonnarua Council Inc.	Walhallow Local Aboriginal Land Council
Wallagan Cultural Services	Wanaruah Local Aboriginal Land Council
Warragil Cultural Services	Wattaka Pty Ltd
Widescope Indigenous Group	Wonnarua Cultural Heritage

Potential Aboriginal stakeholders	
Wonnarua Elders Council	Wonnarua Nation Aboriginal Corporation
Yinarr Cultural Services	Bariyan Cultural Connections
Girragirra Murun Aboriginal Corporation	Wingarra Wilay Aboriginal Corporation
Long Gully Cultural Services	Bill Trewlynn
Mura Gadi Aboriginal Corporation	Ngagga Ngagga
George Flick Cultural Services	Turtle Dreaming
Cole Perry	Budgewoi Barray Pty Ltd
Guugaburra Yiramiilan	Marri Culture & Heritage

A copy of the notification letter that was sent to the above organisations and individuals on 25 February 2026 is included in Appendix 2.

3.1.4 Registered Aboriginal parties

As a result of the Stage 1 enquiries, the following 23 organisations and/or individuals have become RAPs for this project (see Table 5), and a consultation log of all correspondence is included in Appendix 2.

Table 5: RAP organisations and contacts

Organisation	Contact Name
Didge Ngunawal Clan	Lillie Carroll & Paul Boyd
Corroboree Aboriginal Corporation	Marilyn Carroll Johnson
Ngagga Ngagga	Raiwyn Towney
Ungooroo Aboriginal Corporation	Alan Paget
Amanda Hickey Cultural Services	Amanda Hickey
A1 Indigenous Services	Carolyn Hickey
Gomery Cultural Consultants	David Horton
Long Gully Cultural Services	Ethan Trewlynn
Culturally Aware	Tracey Skene
Guugaburra Yiramiilan	Steven Carroll
Thomas Dahlstrom	Thomas Dahlstrom
Mura Gadi Aboriginal Corporation	Tiarna Bird
Hunter Valley Aboriginal Corporation	Kylie Pascoe
Budgewoi Barray Pty Ltd	Matthew Syron
Jarban & Mugrebea	Les Atkinson
AGA Services	Ashley Sampson

Organisation	Contact Name
Cacatua Culture Consultants	George Sampson
George Flick Cultural Services	Steven Flick
Girragirra Murun	Malcolm Briggs
Wingarra Wilay	Ray Moon
Lower Hunter Aboriginal Incorporated	David Ahoy
Widescope Indigenous Group	Steven Hickey
Wanaruah LALC	De-anne Douglas

3.1.5 Notification to HNSW and LALC

Notification of RAPs to Heritage NSW and Wanaruah LALC, as per Section 4.1.6 of the ACHCRP guidelines was sent on 12 March 2026.

3.2 Stage 2 and 3 – Presentation of project information, assessment methodology and gathering information about the cultural significance of the Subject Area

3.2.1 Project information and assessment methodology

The RAPs were provided with a letter outlining information about the project and an assessment methodology in accordance with the ACHCRPs (DECCW 2010b) and the Code of Practice (DECCW, 2010a).

The purpose of the letter and project information document was to:

- Describe the project, outline the project scope, time frame and proposed works.
- Describe the environment of the Subject Area and information relevant to the ACHA process.
- Provide an opportunity for the RAPs to actively contribute to the development of cultural heritage management options and recommendations and comment on the proposed methodology.
- Set a time frame for providing feedback and comments on the methodology and project information.

The project information and assessment methodology were sent to the RAPs on 23 March 2026. The RAPs were provided 28 days review period to provide comments with a closing date of 20 April 2026. A copy of the cover letter and methodology is included in Appendix 2.

A number of RAPs provided feedback on the project information and assessment methodology. Their comments and/or review are outlined in Table 6, and copies of all submissions made are included in Appendix 2.

Table 6: Details of RAP feedback on the project information and assessment methodology

RAP	Comment made
Ethan Trewlynn Long Gully Cultural Services	Hi Samuel, I have read the information and methodology for this project and I'm in support as it is up to standards. Kind regards,

RAP	Comment made
	Ethan
Amanda Hickey Amanda Hickey Cultural Services	Hi Sam, I have read through & support the ACHA methodology. Have a great day, Amanda Hickey
Carolyn Hickey A1 Indigenous Services	Good day, Sam, Thank you for providing the Project Information and Proposed Assessment Methodology for the 9211 Transgrid Transposition Towers. I have reviewed the document and am pleased to express my full support for both the information and the methodology outlined.

3.2.2 Survey engagement application process

Survey information proposed for April was included in the project methodology sent to the RAPs on 23 March 2026. A site inspection invitation letter was provided to select stakeholders with existing relationships with the Proponent on 15 April 2026, as discussed with the Proponent (Appendix 2).

3.2.2.1 Aboriginal heritage survey

An Aboriginal cultural heritage survey was conducted over one day, on 28 April 2026. Table 7 summarises the representatives of the RAPs who attended the survey. Details of the survey method and results are summarised in Section 4.0 and detailed in the Archaeological Report in Appendix 1.

Table 7: Aboriginal cultural heritage survey attendance

RAP	Stakeholder
Gomery Cultural Consultants	David Horton
Hunter Valley Aboriginal Corporation	Leanne Kirkman
Wanaruah Local Aboriginal Land Council	Invited however no stakeholder in attendance
Ungooroo Aboriginal Corporation	Invited however no stakeholder in attendance

3.3 Stage 4 – Review of preliminary draft Aboriginal cultural heritage assessment report

The draft report was provided to RAPs on 17 July 2026 and they were provide days to comment with a closing date of 14 August 2026. Table 8 details the submissions and comments received

Copies of all submissions made and received are included in Appendix 2.

Table 8: Details of RAP feedback on the draft ACHA

RAP	Comment made
Carolyn Hickey A1 Indigenous Services	Hi Samuel, Thank you for sending the draft Aboriginal Cultural Heritage Assessment for Merriwa, NSW. I have carefully reviewed the document and fully support the findings and information presented in the assessment. Thank you again, and I hope you have a great weekend. Kind regards, Carolyn Hickey
Robbie Simpson Marri Culture & Heritage	Hi Sam Thank you for your email and positive engagement and consultation with Marri Culture and Heritage seeking Aboriginal Cultural Heritage input and Aboriginal Cultural Heritage Assessment & Reports.(ACHAR) - Marri Culture & Heritage would like to register our interest for further consultation as a RAP. Regards Robbie Simpson
Ethan Trewlynn Long Gully Cultural Services	Hi Sam, I have read everything and I'm happy with it. Kind regards, Ethan

4. Results synthesis

This section provides a brief summary of the results of the archaeological assessment for this project. The results are discussed in further detail in the archaeological report which is provided as Appendix 1 of this report.

4.1 Location and environmental context

The Subject Area is located approximately 18 km southwest of Merriwa within the Upper Hunter LGA and is situated within the Wappinguy soil landscape. The area comprises rolling low hills and slopes associated with Tunbridge Creek, an ephemeral fourth-order tributary of the Goulburn River located approximately 2.3 km to the south. The underlying geology consists of the Narrabeen Group and Pilliga Sandstone formations, which include quartz, sandstone- and silcrete-bearing lithologies suitable for stone tool manufacture.

Vegetation within the area is characterised by woodland communities dominated by ironbark and box eucalypts, although parts of the landscape have been cleared for grazing. Historical aerial imagery indicates that the transmission line corridor and associated access track were constructed between 1970 and 1992, resulting in vegetation clearing, ground disturbance and modification of the natural land surface.

While transmission infrastructure and associated maintenance activities have reduced the integrity of some areas, the surrounding slopes, drainage features and colluvial/alluvial soils retain potential for the preservation of Aboriginal cultural material in less disturbed locations.

4.2 Previous archaeological work

[REDACTED]
[REDACTED]
[REDACTED] Searches of other heritage registers and the AHIP public register identified no additional Aboriginal or historical heritage constraints relevant to the project area.

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

Other assessments recorded either low-density artefact scatters or no Aboriginal objects within development footprints, indicating that archaeological material occurs variably across the landscape but is commonly associated with waterways, terraces and areas suitable for occupation and resource use.

4.3 Predictions

The predictive model was developed using regional archaeological evidence (summarised here and presented in full in Appendix 1), environmental characteristics and cultural context information. The presence of two nearby AHIMS-listed artefact sites and archaeological investigations undertaken in the wider Merriwa region indicate that Aboriginal cultural material is likely to occur across similar landforms in the local area.

Landforms within the Subject Area, including slopes, sandstone benches and areas adjacent to drainage features, provide suitable conditions for past Aboriginal movement, resource gathering, tool manufacture and short-term occupation. Although previous disturbance associated with the transmission line corridor has affected portions of the area, intact soils may persist within less disturbed locations.

Overall, the Subject Area was assessed as having moderate archaeological potential. The most likely evidence comprises isolated artefacts and low-density artefact scatters, with a moderate possibility of subsurface archaeological deposits. More complex site types, such as rock shelters and grinding groove sites, were considered unlikely due to the absence of suitable geological features.

4.4 Survey methodology

A pedestrian archaeological survey of the entire Subject Area was undertaken on 28 April 2026 in accordance with the Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW. The survey formed part of a broader assessment process incorporating Aboriginal community consultation, archaeological research and landscape analysis.

The survey involved systematic inspection of landforms and exposed ground surfaces, with an emphasis on areas considered archaeologically sensitive based on the predictive model. GPS data were collected, representative photographs taken, and exposure, visibility and effective survey coverage recorded in accordance with the Code of Practice.

Survey effectiveness was constrained by dense grass cover and vegetation, with the primary exposures occurring along vehicle tracks, erosion features and disturbed ground associated with existing transmission infrastructure. These factors limited Aboriginal site detection across some portions of the Subject Area.

4.5 Results and analysis

[REDACTED]

The Subject Area was divided into two survey units encompassing lower and mid-slope landforms. Ground visibility and exposure were generally low due to dense grass cover, although exposures associated with tracks and disturbed areas enabled identification of archaeological material. [REDACTED]

[REDACTED]

5. Assessment of significance

5.1 Methods for assessing heritage significance

Heritage significance is assessed by considering each cultural, or archaeological site, against the significance criteria set out in the *Guide to investigating, assessing and reporting Aboriginal cultural heritage in NSW* (Office of Environment and Heritage 2011).

In all cases, the assessment of significance detailed below is informed by the Aboriginal community, which is documented in this report. If any culturally sensitive values were identified they would be specifically included in the report, or made publicly available, but would be documented and lodged with the knowledge holder providing the information.

5.2 Assessment frameworks

The Burra Charter (Australia ICOMOS 2013) defines the basic principles and procedures to be observed in the conservation of important places. It provides the primary framework within which decisions about the management of heritage sites in Australia should be made.

5.3 Identifying values

The information collected during the background review of the project (Section 4.0 and Appendix 1) can be used to help identify social, historical, scientific, and aesthetic values. The review of background information and information gained through consultation with Aboriginal people (Section 3.0) should provide insight into past events. These include how the landscape was used and why the identified Aboriginal objects are in this location, along with contemporary uses of the land.

Information gaps are not uncommon and should be acknowledged. They may require further investigation to adequately identify the values present across the Subject Area. It may be helpful to prepare a preliminary values map that identifies, to the extent of information available, the:

- Known places of social spiritual, and cultural value, including natural resources of significance.
- Known historic places.
- Known Aboriginal objects and/or declared Aboriginal places.
- Potential places/ areas of social, spiritual, and cultural value, including natural resources, and historic or archaeological significance.

Places of potential value that are not fully identified or defined should be included as 'sensitive' areas to target further investigation.

5.3.1 Significance as defined by the Burra Charter

The Burra Charter defines cultural significance as being derived from the following values: aesthetic value, historic value, scientific value, and social value. However, more precise categories may be developed as an understanding of a particular place or site increases. The values are outlined below in Table 9.

Table 9: Values from which cultural significance is derived

Value type	Description
Aesthetic value	Aesthetic value includes aspects of sensory perception for which criteria can and should be stated. Such criteria may include consideration of the form, scale, colour, texture, and material of the fabric; the smells and sounds associated with the place and its use.
Historic value	Historic value encompasses the history of aesthetics, science, and society, and therefore to a large extent underlies all of the terms set out in this section. A place may have historic value because it has influenced, or has been influenced by, a historic figure, event, phase, or activity. It may also have historic value as the site of an important event. For any given place the significance will be greater where evidence of the association or event survives in situ, or where the setting is substantially intact than where it has been changed or evidence does not survive. However, some events or associations may be so important that the place retains significance regardless of subsequent treatment.
Scientific value	The scientific or research value of a place will depend upon the importance of the data involved, its rarity, quality, or representativeness (conservation value), and the degree to which the place may contribute further substantial information.
Social value	Social or cultural value refers to the spiritual, traditional, historical, or contemporary associations and attachments the place or area has for Aboriginal people. Social or cultural value is how people express their connection with a place and the meaning that place has for them. Places of social or cultural value have associations with contemporary community identity. These places can have associations with tragic or warmly remembered experiences, periods, or events. Communities and individuals can experience a sense of loss should a place of social or cultural value be damaged or destroyed.

5.4 Assessing values and significance

This stage is used to assess and discuss the cultural significance of the values identified during the identification and assessment of cultural significance by consulting Aboriginal people and preparing a statement of significance. The assessment of values is a discussion of what is significant and why. An assessment of values is more than simply restating the evidence collected during the background review and identification of values stages of the project. Rather, the assessment should lead to a statement of significance that sets out succinct and salient values that have been identified.

The assessment and justification in the statement of significance must discuss whether any value meets the following criteria (NSW Heritage Office, 2001):

- Does the Subject Area have a strong or special association with a particular community or cultural group for social, cultural, or spiritual reasons? (Social value).
- Is the Subject Area important to the cultural or natural history of the local area and/ or region and/ or state? (Historic value).
- Does the Subject Area have the potential to yield information that would contribute to an understanding of the cultural or natural history of the local area and/ or region and/ or state? (Scientific (archaeological) value).

- Is the Subject Area important in demonstrating aesthetic characteristics in the local area and/or region and/or state? (Aesthetic value).

Assessment of each of the criteria (above) should be graded in terms that allow the significance to be described and compared, for example, as high, moderate, or low. In applying these criteria, consideration should be given to:

- Research potential: does the evidence suggest any potential to contribute to an understanding of the area and/or region and/or state's natural and cultural history?
- Representativeness: how much variability (outside and/or inside the Subject Area) exists, what is already conserved, and how much connectivity is there?
- Rarity: is the Subject Area important in demonstrating a distinctive way of life, custom, process, land use, function or design no longer practised? Is it in danger of being lost or of exceptional interest?
- Educational potential: does the Subject Area contain teaching sites that might have teaching potential?

Then discuss what is significant and why- this should be summarised into a statement of significance. Thus, the statement of significance is a succinct summary of the salient values drawn from the identification of values.

5.4.1 Grading scientific values

The following gradations, where a site or zone satisfies at least one criterion, have been applied to provide a measure of the values/significance for Aboriginal objects identified within the Subject Area, and to provide an overall assessment of the significance of each of the zones used that define the Subject Area.

Table 10: Criteria for grading scientific values

Gradation	Description
Low	The site or object contains only a single or limited number of features and has no potential to meaningfully inform our understanding of the past beyond what it contributes through its current recording (i.e. no or low research potential). The site or object is a representative but unexceptional example of the most common class of sites or objects in the region. Many more similar examples can be confidently predicted to occur within the Subject Area and in the region.
Moderate	The site or object derives value because it contains features, both archaeological and contextual, which through further investigation may contribute to our understanding of the local past. These features include but are not limited to the relationship with landscape features or other Aboriginal archaeological sites or areas of identified heritage importance; diagnostic archaeological or landscape features that inform a chronology; and a relatively large assemblage of stone artefacts. The presence of a diverse artefact and feature assemblage, and connectedness with landscape features and other notable sites provide relatively higher representative and rarity values than sites of low significance.
High	The site or object has value because it contains archaeological and/or contextual features which through further investigation may significantly contribute to our understanding of the past, both locally and on a regional scale. These features include but are not limited to Aboriginal ancestral remains; the site's relationship with landscape features or other Aboriginal archaeological sites or areas of identified heritage importance; diagnostic archaeological or landscape features that inform a chronology; and a very large assemblage of stone artefacts associated with other features such as oven remains or shell midden. Such sites will be relatively rare and will be representative of a limited number of similar sites that make up this class; hence they derive high representative and rarity values.

5.5 Site-specific significance assessment

Table 11 provides an assessment of significance and summarises identified heritage values for individual Aboriginal sites identified during the survey. A statement of significance, including an assessment of the social, aesthetic, cultural and historic values is provided in Section 5.6.

Table 11: Significance assessment

AHIMS ID	Site name	Feature/s	Representativeness/conservation value	Rarity	Educational potential	Aesthetic value	Historic value	Social or cultural value

5.6 Statement of significance for the Subject Area as a whole

Statements of significance for the Subject Area are presented in the following sub-sections. These statements of significance have been prepared in consideration of comments received from the RAPs during the consultation process and the interrelationships between the cultural and spiritual values with the natural landscape.

5.6.1 Social value

The Subject Area is of social significance to the Aboriginal community as it is part of a broader cultural landscape in which the sum of known cultural heritage and associated resources identified within the Subject Area help to define the community's identity and historic relationship to the region.

5.6.2 Aesthetic value

The Subject Area has limited aesthetic value due to the extent of existing disturbance and surface modification that was observed during the site inspection.

5.6.3 Historic value

The Subject Area contains no identified historic values relating to Aboriginal heritage, however there is a strong likelihood that the Subject Area would have been visited frequently by the Aboriginal community in the past.

5.6.4 Scientific (Archaeological) value

The Subject Area contains one Aboriginal cultural heritage site. The archaeological value of the Subject Area is considered low, with the representativeness of the identified Aboriginal cultural heritage site, being a low-density artefact scatter, being common in the wider region.

6. Impact assessment

6.1 Aboriginal objects which are proposed to be harmed

The Aboriginal Heritage Information Management System (AHIMS) search, desktop assessment, and archaeological field inspection, undertaken for this report, determined that no previously recorded Aboriginal cultural heritage sites registered on AHIMS and one newly recorded Aboriginal cultural heritage site are located within the Subject Area.

Further details of the Aboriginal cultural heritage sites are summarised in Section 4.0 and detailed in the Archaeological Report (AR) in Appendix 1.

Table 12: Details of Aboriginal cultural heritage site identified within the Subject Area

Portion of site to be impacted	AHIMS ID#	Site name	Site type	Easting (GDA 94, Zone 56)	Northing (GDA 94, Zone 56)

6.2 Potential for harm and likely impacted values

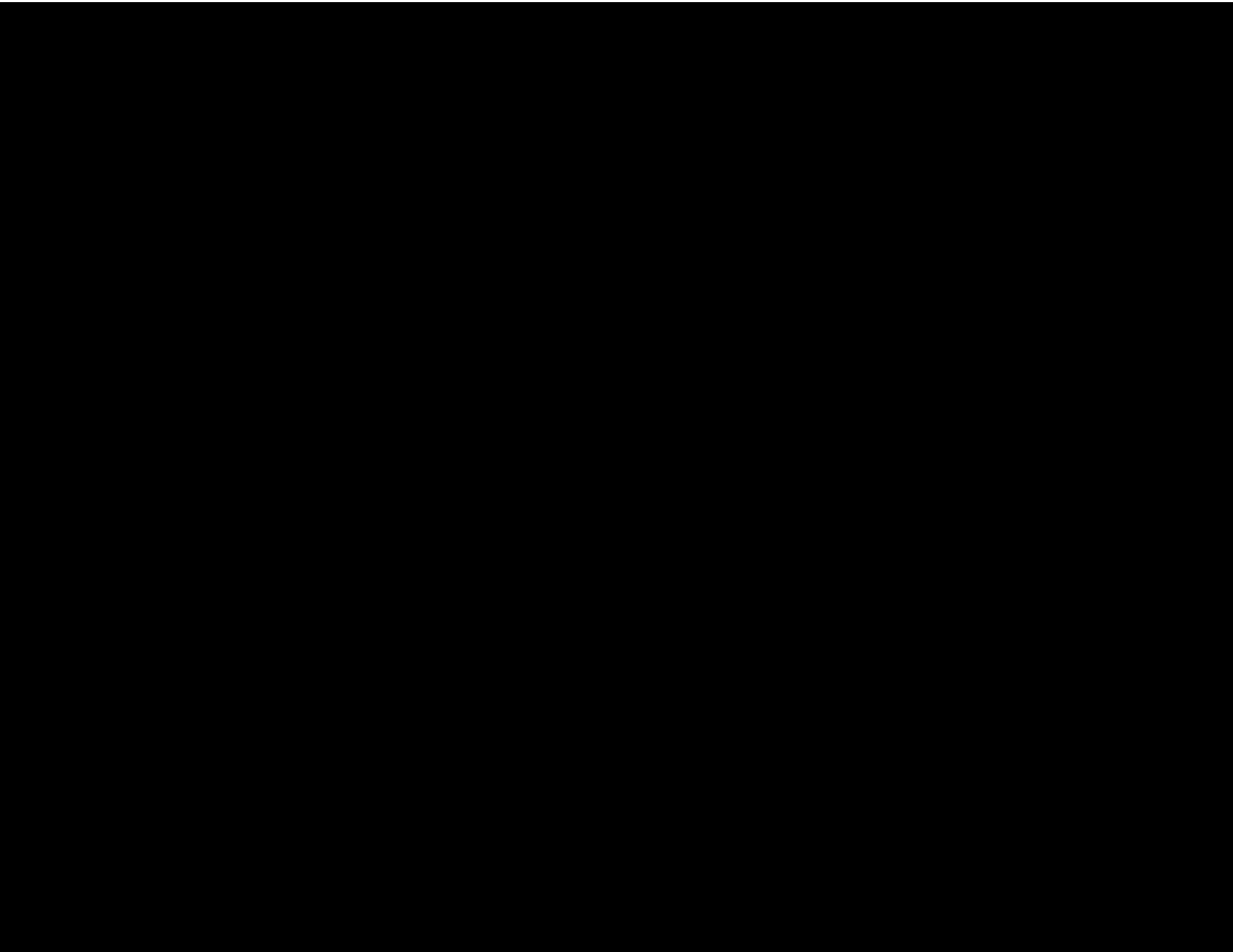
The *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH 2011) requires that both direct and indirect harm to Aboriginal objects and Aboriginal places be considered. Generally, direct harm refers to occasions where an activity physically impacts a site or objects and therefore affects the heritage values possessed by the site or objects. Indirect harm is usually taken to mean harm stemming from secondary consequences of the activity and may affect sites or objects as an indirect consequence of the activity. Examples of such indirect harm are increased visitors to a site or increased erosion in an area as a result of an activity.

The results of the AHIMS search, desktop assessment and survey of the Subject Area have determined that:

- Two previously recorded Aboriginal cultural heritage sites occur in proximity to the Subject Area. Neither site has the potential to be directly impacted by the proposed works
- This site has the potential to be directly impacted by the proposed works. Figure 5 shows the location of the site in relation to the Subject Area and proposed impact area.
- Partial avoidance is possible due to the parts of the site being located outside the Subject Area. Total avoidance and in-situ conservation is not warranted given the low archaeological significance of the site
- Harm caused by mitigating circumstances comprising community collection will occur at one Aboriginal cultural heritage site.

Management measures are warranted to ensure impacts to the cultural heritage site and values of the Subject Area are mitigated.

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- Subject area
- Proposed impact area
- Survey tracks

Survey results

- Artefact

AHIMS

- Artefact

Survey units

- SU1
- SU2

Transport

- Minor road

Hydrography

Strahler stream order

- 1
- 2
- 4

Administrative and Property Boundaries

- Lot



Figure 5

Site inspection results and Aboriginal heritage constraints - STR 169
Arup TransGrid Transposition Towers Heritage - Northern Cluster ACHA

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



7. Avoiding and minimising harm

Management and mitigation measures have been prepared in consideration of the results of archaeological investigations and comments received from the RAPs during the consultation process. Since harm to Aboriginal objects is proposed (as Transgrid are proposing to collect artefacts under an AHIP), the management and mitigation measures in Table 13 should be considered to ensure continued compliance with the NPW Act. All comments received from the RAPs are considered in Section 3.4.

7.1 Mitigating harm

Harm to Aboriginal objects is justified due to the need for the proposed activity as described in Section 1.4.

Since harm to Aboriginal objects is proposed, management measures are warranted to mitigate the loss of values to Aboriginal sites, objects and values that would result from the proposed activity. Management and mitigation measures are also warranted to ensure continued compliance with the *National Parks and Wildlife Act 1974* should be considered to ensure continued compliance with the NPW Act.

Mitigation of harm in the form of total avoidance of impacts to [REDACTED] is not considered warranted due to the moderate archaeological value and high representativeness of the site. Partial avoidance of impacts can be implemented as there are portions of the site which are located outside the Subject Area and area of impacts. Of the identified artefacts across [REDACTED], artefacts within the proposed impact area will be subject to Aboriginal community collection in line with the Code of Practice under the AHIP for the Subject Area and those that are outside the proposed impact area will be avoided. The AHIP will allow future Aboriginal community collection should changes to the impact area be required. It will also allow for management measures described in Table 13 to be implemented. Long-term storage and care of Aboriginal objects, which may include reburial On Country in an area that will not be impacted by the proposed works, will be discussed on site with the RAPs during the community collection.

Management measures are warranted to mitigate the potential impacts on the Aboriginal sites and values that would result from the proposed activities. Management and mitigation measures are required to ensure continued compliance with the NPW Act. Consideration and discussion of management and mitigation options are provided in Table 13.

Table 13: Consideration of management and mitigation measures

Management risk / impacted value	Mitigation measures	Description
Management risk - impacts to cultural values and stakeholder values	Partial avoidance of sites and <i>in situ</i> conservation	— The extent of [REDACTED] (Figure 5) extends beyond the boundaries of the proposed impact area. Therefore partial avoidance of [REDACTED] is possible and the artefacts located beyond the bounds of the proposed impact area will be conserved. — Where practical, temporary high visibility fencing and/or star pickets with flags shall be established around the recorded coordinates of artefacts to be avoided. All buffer zones around artefacts must be shown on construction planning mapping.
	Continued consultation with the RAPs	— The proponent should continue to consult with the RAPs in regard to the Subject Area in accordance with the ACHCRPs Consultation may include, but is not limited to: • Finalisation of ACHA • RAP involvement in community collection and management of artefacts • Unexpected finds. — Throughout the construction phase, project updates should be sent to RAPs every 6 months at a minimum to ensure the consultation associated with this ACHA remains active.
	Aboriginal community collection	— An AHIP will be required for the portion of [REDACTED] within the impact area prior to works commencing to allow for community collection
	Entering into a Care Agreement with the RAPs to determine the keeping place of Aboriginal objects collected during community collection within the Subject Area	— Long-term storage and care of Aboriginal objects recovered during any community collection are required under S.89 of the National Parks and Wildlife Act through a Care Agreement. Provision should be made to return Aboriginal objects to RAPs entitled to, and willing to accept possession, custody or control of the Aboriginal object in accordance with Aboriginal tradition. OR — In consultation with the RAPs onsite, an area for reburial within the Subject Area but outside the area of impacts must be identified, and reburial must be undertaken in accordance with the Code.
Management risk - Compliance and unexpected finds (excluding human remains)	Communication with employees, site visitors, contractors and landowners	— All workers should be inducted into the Subject Area, so they are made aware of their obligations under the <i>National Parks and Wildlife Act 1974</i> and any conditions of any future AHIP prior to and during and after construction activities.

Management risk / impacted value	Mitigation measures	Description
		— In the event of the identification of artefacts within the Subject Area, work in the surrounding area is to stop immediately: — A temporary fence is to be erected around the Aboriginal cultural heritage site, with an appropriate buffer zone around the known edge of the Aboriginal cultural heritage site. — An appropriately qualified archaeological consultant is to be engaged to identify the material. — If the material is an Aboriginal object, the Proponent will notify: — the HNSW's Enviroline on 1300 361 967; and — representatives of the RAPs. — Facilitate, in co-operation with the appropriate authorities and the RAPs: — The recording and assessment of the finds in Compliance with any legal requirements and HNSW directions — The development and implementation of appropriate management strategies based on an assessment of the significance of the finds. — The recommencement of ground disturbance works may only resume once legal requirements are fulfilled
Management risk - unexpected finds - human remains	Stop work and follow the procedure for the discovery of suspected human remains	— All workers should be inducted into the Subject Area, so they are made aware of their obligations under the NPW Act and any conditions of any future AHIP prior to and during and after construction activities. — In the unlikely event that suspected human remains are encountered during construction, all work in the area that may cause further impact, must cease immediately. — 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 notification to the Proponent. — If the skeletal remains are identified as Aboriginal, the Proponent or their agent must contact: — the Heritage NSW's Enviroline on 1300 361 967; and — Representatives of the RAPs.

Management risk / impacted value	Mitigation measures	Description
		— No works are to continue until Heritage NSW provides written notification to the Proponent or their Agent.

The proposed mitigation measures for the site [REDACTED] within the Subject Area are included in Table 14.

Table 14: Proposed mitigation measures for [REDACTED]

AHIMS ID	Site name	Status	Type of harm (direct/indirect/none)	Primary proposed mitigation measure
[REDACTED]	[REDACTED]	The site is currently listed in AHIMS as being 'valid'	Direct	Community collection of the site under an AHIP is warranted. An ASIRF is to be submitted at the completion of the community collection works to change the status to 'partially destroyed'

7.2 Consideration of cumulative impacts

A cumulative impact is the combined effects of environmental or social impacts that occur because of a range of activities or developments within a particular local area or region that impact on Aboriginal cultural heritage. Ideally cumulative impacts should be assessed from a baseline of data relating to the incremental impact of the actions of a development when added to other past, present and reasonably foreseeable future impacts.

One site was identified within the proposed impact area. Two previously registered sites were identified within proximity to the Subject Area.

The project will have a cumulative impact on the distribution of Aboriginal sites recorded in the Merriwa area. The overall cumulative impact on the archaeological record for the region is likely to be minimal, assuming a similar density of artefact sites remain across the wider region. The proposed activity will have minimal impacts to Aboriginal values if appropriate mitigation measures are adhered to.

The extensive AHIMS search identified two recorded Aboriginal sites in the vicinity of the Subject Area. Neither of these sites are listed as having already been totally destroyed or partially destroyed. No impacts to these sites are proposed, therefore there is no cumulative impact on these sites.

7.3 Consideration of ecologically sustainable development

Section 5(vii) of the *Environmental Planning and Assessment Act 1979* requires proponents to consider the key principles of Ecologically Sustainable Development (ESD) in the design of their projects. The principles of ESD are defined within the Protection of the *Environment Administration Act 1991*. This Act defines the precautionary principle and the principles of inter-generational equity, conservation of biological diversity and ecological integrity. The precautionary principle is defined as:

"If there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation".

Australia's National Strategy for Ecologically Sustainable Development (1992) defines ecologically sustainable development as: 'using, conserving and enhancing the communities' resources so that ecological processes, on which life depends, are maintained, and the total quality of life, now and in the future, can be increased.' Aboriginal heritage programs which seek to address indigenous concerns in relation to the land, heritage, economic and cultural development include the Commonwealth Indigenous Protected Areas Initiative, Land

Acquisition and Maintenance, and Heritage Protection Programs; the Victorian Aboriginal Capital Projects and Aboriginal Cultural Heritage Programs; and the South Australian Aboriginal Tourism Strategy.' (Australian Government 1992: Chapter 22).

Ecologically Sustainable Development (ESD) in regard to the aforementioned Aboriginal cultural heritage sites needs to consider intergenerational equality; this is fundamental to identifying Aboriginal culture and identity in the future.

Table 15 considers the key principles of ESD with respect to the results of the literature review, Aboriginal heritage survey and significance assessment contained within this report.

Table 15: Assessment of ESD

Principles of the EIA and ESD guidelines	ESD assessment
A fundamental consideration for the conservation of biological diversity and ecological integrity.	This assessment takes into account consideration of the conservation of cultural heritage. The Proponent has undertaken an ACHA in consultation with the RAPs and determined that there is one Aboriginal cultural heritage site within the Subject Area The proposed activity would result in irreversible damage to the cultural heritage environment and result in intergenerational loss of cultural heritage items at one Aboriginal cultural heritage sites.
Careful evaluation to avoid, wherever practicable, serious, or irreversible damage to the environment.	The proponent has undertaken an ACHA and has provided consideration of options to avoid harm to Aboriginal objects. In the case of this assessment, it has been that partial avoidance is possible due to the footprint of the proposed impacts. Consideration of harm and mitigation strategies is considered throughout Section 7.
Consideration of intergenerational equity.	The assessment has considered intergenerational equity by undertaking community consultation with RAPs regarding the cultural values within the Subject Area and the management of Aboriginal sites and Aboriginal heritage values.
Where the risk of serious or irreversible harm and lack of scientific knowledge of the nature of environmental harm combine, the precautionary principle applies. Where there is a risk of serious or irreversible harm, it is necessary to establish whether there is adequate scientific knowledge of the subject to evaluate the perceived threat.	This assessment has considered a review of all Aboriginal heritage sites within and on the boundary of the Subject Area. Consultation with the RAPs has been undertaken in accordance with the ACHCRPs. The assessment requires further consultation to definitively identify Aboriginal objects, their likelihood and significance. Significance and impact assessments are outlined in Section 5.
An assessment of the risk-weighted consequences of various options.	A consideration of harm and mitigation is provided above in Section 7.3. Avoidance is always preferred however the characteristics of the landform on which the Subject Area is situated and the minor material traces of Aboriginal occupation of the site provide little justification for the redesign of the proposed activity. To offset the proposed impacts, therefore, a community collection program is proposed.

8. Conclusion and recommendations

This ACHA presents the results of an Aboriginal cultural heritage site inspection completed by Niche and representatives of the Proponent and RAPs in compliance with the requirements of the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010a).

An assessment of the potential impacts of the proposed works and associated ground disturbance indicates that one Aboriginal cultural heritage site has the potential to be directly harmed resulting in partial impacts to the site. Avoidance and mitigation measures are therefore warranted and must be implemented prior to works proceeding.

Based on the community consultation with the Aboriginal stakeholders and archaeological investigations undertaken for the Project by Niche, several recommendations are included in Table 16. Additional detail regarding the implementation of these recommendations is provided in Table 13. These recommendations will be included in the AHIP for the Subject Area, to manage the site during construction. This will include an unexpected finds protocol.

Table 16: Recommendations for the Project

Recommendations	
Known and unknown Aboriginal heritage sites	
1.	[REDACTED]. An AHIP will be required to mitigate impacts to the site prior to works commencing. The AHIP would allow for community collection of artefacts within the proposed impact area, as described in Table 13.
2.	The portion of [REDACTED] identified during the survey that is outside the proposed impact area will be avoided and conserved.
3.	The Proponent should continue to consult with the RAPs during construction in accordance with the ACHCRPs.
4.	The long-term management of any artefacts recovered during the community collection of [REDACTED] should be formalised in a care agreement as determined by the RAPs. On-Country reburial of artefacts in areas not subject to future disturbance activities will be considered by the Proponent, in consultation with the RAPs.
5.	An Aboriginal Site Impact Recording Form (ASIRF) must be submitted for the site [REDACTED] once community collections works have been completed.
General	
6.	All workers should be inducted into the Subject Area in line with the process outlined in Table 13.
7.	Unexpected finds should be managed in line with the process outlined in Table 13.
8.	If human remains are uncovered during the project, they should be managed in line with the process outlined in Table 13.

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Appendix 1

Archaeological report



Report

Line 5A3/5A4 - Structure 169 Transposition Works

Upper Hunter LGA

Prepared for Arup on behalf of Transgrid

Prepared by Niche Environment and Heritage Pty Ltd | 1 September 2026

Document control

Project number	Client	Project manager	LGA
9211	Arup on behalf of Transgrid	Ben Slack	Upper Hunter Shire

Version	Author	Review	Status	Comments	Date
D01	Samuel Riley	Shezani Nasoordeen	Draft		18 May 2026
D02	Samuel Riley		Client Review		20 May 2026
D03	Samuel Riley		Client Review		30 June 2026
D04	Samuel Riley		Client Review		17 July 2026
F01	Samuel Riley		Finalising		1 September 2026

Acknowledgement to Country

Niche would like to pay our respect to and acknowledge the Traditional Custodians of the land where this Project took place, the contributions of the Aboriginal people who participated in this Project, and to pay our respects to the Elders past, present, and emerging.

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Executive Summary

Project outline

Niche Environment and Heritage Pty Ltd (Niche) has been commissioned by Arup (the 'Proponent') to prepare an Aboriginal Cultural Heritage Assessment (ACHA) and Archaeological Report (AR) with Aboriginal community consultation in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* Guidelines (Department of Environment, Climate Change and Water NSW, 2010, [DECCW 2010b; ACHCRPs]). The ACHA and AR will be used to inform the proposed transposition works at Structure 169 located at Lot 7 DP 1279168 near Merriwa, New South Wales (NSW).

The ACHA and AR present the results of an Aboriginal archaeological assessment completed to inform the proposed works. The ACHA and AR reports has been carried out in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (Department of Environment, Climate Change and Water NSW, 2010, [DECCW 2010a] 'Code of Practice').

The ACHA report process includes background archaeological and historical investigation, ongoing consultation with Registered Aboriginal Parties (RAPs) and archaeological site inspections.

Summary of findings

No previously identified Aboriginal cultural heritage sites were identified within the Subject Area. The site survey was completed over one day, on 28 April 2026. While survey works attempted to cover 100% of the Subject Area, primary focus points were relevant landforms and areas of exposure where ground visibility was present.

During the course of the survey, one new Aboriginal cultural heritage site was identified within the Subject Area

Summary of potential impacts

Part 6 of the *NSW National Parks and Wildlife Act 1974* (NPW Act) provides protection for all Aboriginal objects and declared Aboriginal places from harm. Harm is defined as destroying, defacing, damaging or moving an object from the land.

The project has the potential to harm Aboriginal objects. Therefore, an ACHA report is required to investigate the presence of Aboriginal objects within the proposed impact area for the project, assess the potential harm to the heritage values associated with these objects and provide recommendations for management measures to manage or prevent harm associated with the project.

One Aboriginal cultural heritage site is located within the Subject Area comprising [REDACTED]
[REDACTED] This site will require Aboriginal community collection of artefacts prior to the proposed works. An Aboriginal Heritage Impact Permit (AHIP) application will be submitted for the project (see Figure 7 of the AR for the proposed AHIP application area).

Conclusions and recommendations

Regulatory requirements and recommendations for Aboriginal objects and sites are protected under the NPW Act. As impacts are currently proposed to Aboriginal cultural heritage sites within the Subject Area, an Aboriginal Heritage Impact Permit must be acquired prior to these sites being impacted.

Management measures are warranted to mitigate the loss of value to the Aboriginal sites that would result from the proposed development activities. Management and mitigation measures proposed should include community collection under an Aboriginal Heritage Impact Permit.

Based on the community consultation with the Aboriginal stakeholders and archaeological investigations undertaken for the Project by Niche, several recommendations for the Project are included in Table 13.

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.
ACHMP	Aboriginal Cultural Heritage Management Plan
Aboriginal object(s)	The legal definition for material Aboriginal cultural heritage under the NSW <i>National Parks and Wildlife Act 1974</i> .
Aboriginal stakeholders	Members of a local Aboriginal land council, registered holders of Native Title, Aboriginal groups or other Aboriginal people who may have an interest in the Project.
AHIMS	Aboriginal Heritage Information Management System.
AHIP	Aboriginal Heritage Impact Permit.
AR	Archaeological Report.
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 investigation	The process of assessing the archaeological potential of an impact area by a qualified archaeologist.
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.
BCD	The Biodiversity and Conservation Division (formerly the Office of Environment and Heritage and now Heritage NSW of the NSW Department of Planning and Environment).
Code of Practice	<i>Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales</i> .
Community Collection	A process undertaken involving RAPs whereby visible surface Aboriginal artefacts are systematically identified, recorded and collected from an area proposed to be impacted by the proposed activity. The process provides Aboriginal community representatives with an opportunity to participate directly in the management of Aboriginal cultural heritage and informs decisions regarding the long-term care, control and management of recovered artefacts.

Cumulative impacts	Combination of individual effects of the same kind due to multiple actions from various sources over time.
DECCW	The Department of Conservation, Climate Change and Water, replaced by the Biodiversity and Conservation Division (BCD) of the Department of Planning, Industry and Environment (DPIE) and now Heritage NSW of the Department of Premier and Cabinet (DPC).
Development	The processes involved in preparing the Subject Area for subdivision and associated road infrastructure, including levelling and compacting for future housing constructing, and cutting and compacting areas for road infrastructure.
DA	Development Application.
DG	Director General.
DPHI	The Department of Planning, Housing and Infrastructure.
Drainage	Natural or artificial means for the interception and removal of surface or subsurface water.
EP&A Act	NSW <i>Environmental Planning and Assessment Act 1979</i> .
Flake	A piece of stone detached from a core, displaying a bulb of percussion and striking platform.
Harm	With regard to Aboriginal objects this has the same meaning as the definition given in the NSW <i>National Parks and Wildlife Act 1974</i> .
Heritage NSW	Aboriginal cultural heritage regulator in the NSW Department of Planning and Environment for the management of Aboriginal Cultural Heritage (ACH) regulation functions under the National Parks and Wildlife Act 1974. Formerly BCD of DPIE.
Impact	Influence or effect exerted by a project or other activity on the natural, built and community environment.
Impact area	An area that requires archaeological investigation and management assessment.
In situ	Latin term meaning 'on the spot, undisturbed'.
Isolated artefact / find	A single artefact found in an isolated context.
Landscape character	The aggregate of built, natural and cultural aspects that make up an area and provide a sense of place. Includes all aspects of a tract of land - built, planted and natural topographical and ecological features.
Land unit	An area of common landform, and frequently with common geology, soils and vegetation types, occurring repeatedly at similar points in the landscape over a defined region. It is a constituent part of a land system.
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.
Methodology	The procedures used to undertake an archaeological investigation.

Mitigation	To address the problem of conflict between land use and site conservation.
NPW Act	National Parks and Wildlife Act 1974.
NPW Regulation	National Parks and Wildlife Regulation 2019.
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 Heritage NSW of the Department of Premier and Cabinet.
Open camp 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.
Proposed impact area	Area within Subject Area where impacts are proposed
RAP	Registered Aboriginal Party.
Site recording	The systematic process of collecting archaeological data for an archaeological investigation.
Site	A place where past human activity is identifiable.
Subject Area	Area surveyed during the ACHA assessment
Survey coverage	A graphic and statistical representation of how much of an impact area was actually surveyed and therefore assessed.

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1. Introduction

1.1 Background

This AR presents the results of an archaeological assessment which included a site inspection to inform the proposed transposition works at Structure 169 located at Lot 7 DP 1279168 near Merriwa, New South Wales (NSW). (hereafter referred to as the 'Subject Area'; Figure 1 and Figure 2). The Subject Area is situated within the suburb of Merriwa in the Upper Hunter Local Government Area (LGA). It lies within the County of Brisbane and Parish of Campbell and within the Wanaruah Local Aboriginal Land Council (LALC).

1.2 Project brief

The Transposition Project involves installation of a transposition structure 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 significantly increase energy generation on 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).

One of the transposition sites, the Subject Area, is situated at a location where Aboriginal heritage objects have been recorded. Desktop assessment and an initial field survey have indicated that there is potential to harm Aboriginal objects. Given that Aboriginal objects and Aboriginal Places are protected under the *National Parks and Wildlife Act 1974* (NPW Act), an ACHA is required in order to investigate the presence of Aboriginal objects within the Subject Area, assess any potential harm to the heritage values associated with these objects, and provide recommendations for management measures to manage or prevent harm.

The proposed works include:

- Installation of four new steel pole transmission structures at Structure 169 on Transgrid's existing transmission line 5A3/5A4.
- Establishment of level construction benches at the Subject Area to support the safe operation of elevated working platforms and cranes as part of structure assembly
- Vegetation clearing
- Construction and upgrade of access tracks to the Subject Area locations.

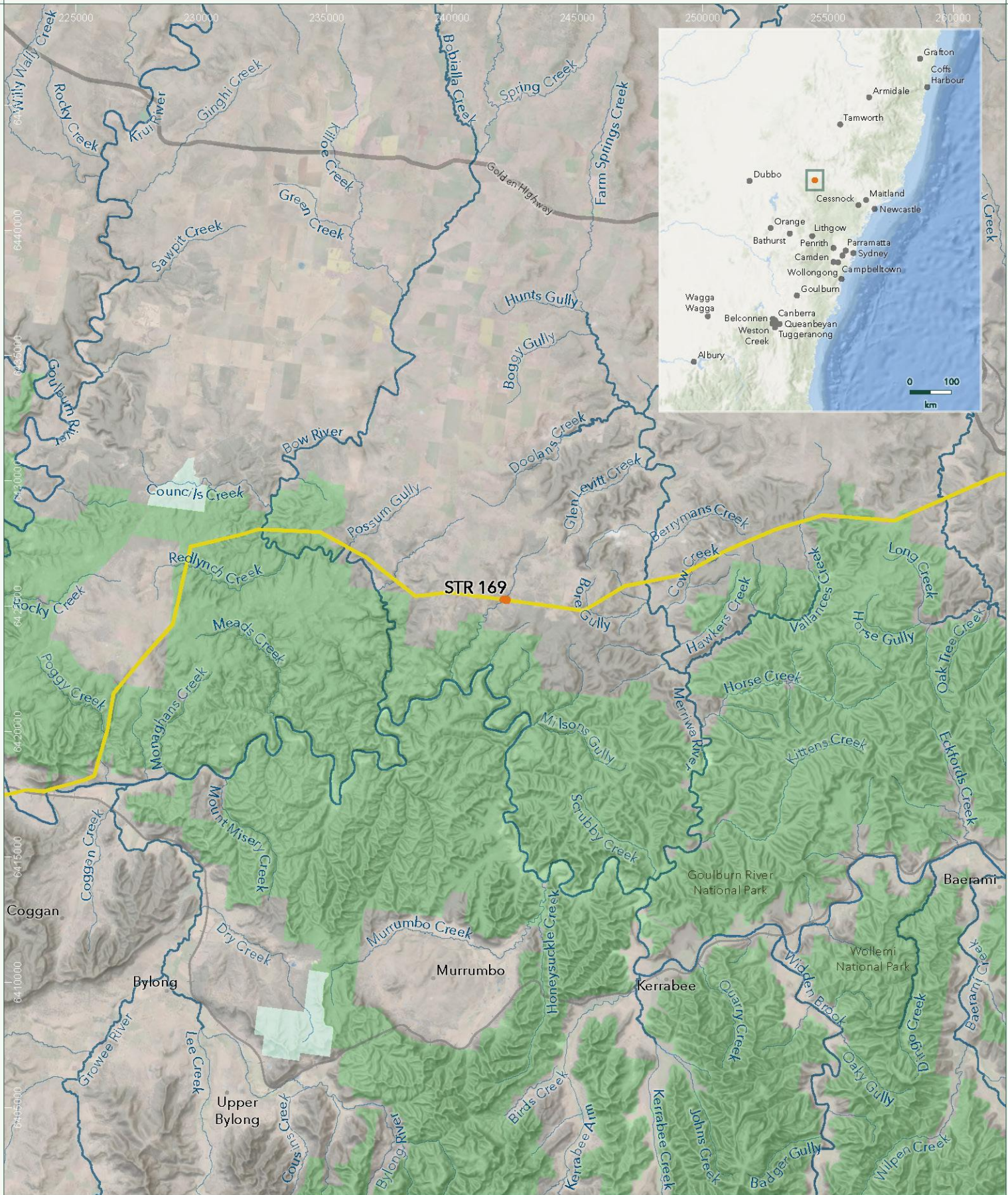
In addition, the existing transmission line easement in the area at Structure 169 would be widened from 70 metres to 120 metres.

1.3 Purpose of the archaeological investigation and objectives of the assessment

Niche has prepared this AR in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW, 2010a).

As per the Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW 2010b), the objectives of the archaeological assessment undertaken to inform the ACHA were:

- Describe the aims of the project and the rationale for the archaeological assessment.
- Present a feasible and appropriate methodology for the archaeological survey and other investigations.
- Undertake field surveys in accordance with Section 2.2 of the Code of Practice for Archaeological *Investigation of Aboriginal Objects in NSW 2010*
- Present the findings and interpretation of the results within a wider context of archaeological knowledge and Aboriginal history.
- Ensure that the findings and interpretation of the results support the assessment of the archaeological significance of the Subject Area.



 Subject area
 Line 5A3/5A4

Transport
 Major road
 Rail

Hydrography
 Perennial Stream
 Non Perennial Stream
 Waterbody

Protected Areas of NSW
 National Park
 State Forest



 0 6
 km
 GDA2020 MGA Zone 56



Figure 1
Location Map
 Arup Transgrid Transposition Towers Heritage - Northern Cluster ACHA

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

Drawn by: Andrea Sward
Filer: C:\Users\Andrea Sward\Documents\GIS - APRX - APRX\9200\9211_TranspositionTowers_NSW_Northern_ACHA.aprx
Last updated: 2/02/2026 7:16 PM



- Subject area
- Proposed impact area
- Transport**
 - Minor road
- Hydrography**
 - Strahler stream order
 - 1
 - 2
 - 4
- Administrative and Property Boundaries**
 - Lot
 - Local Government Area



Figure 2
Subject Area - STR 169
Arup Transgrid Transposition Towers Heritage - Northern Cluster ACHA

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



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: Source: Esri, Vantor, 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: 2/02/2026

2. Investigator and contributors

The contributors to this AR and their project roles are listed in Table 1 below.

Table 1: Contributors, affiliations and contributions

Contributor	Affiliation	Contribution	Qualification
Ben Slack	Niche	Project Manager, Quality Control and Technical Review	BA
Samuel Riley	Niche	Aboriginal Community Consultation, Field Survey, Contributing Author	BArch, MRes
Andrea Sward	Niche	GIS, Mapping	BSc

RAPs		
Contact person	Organisation	Contribution
Lillie Carroll & Paul Boyd	Didge Ngunawal Clan	Registered Aboriginal Party, document review
Marilyn-Carroll Johsons	Corroboree Aboriginal Corporation	Registered Aboriginal Party, document review
Raiwyn Towney	Ngagga Ngagga	Registered Aboriginal Party, document review
Alan Paget	Ungooroo Aboriginal Corporation	Registered Aboriginal Party, document review
Amanda Hickey	Amanda Hickey Cultural Services	Registered Aboriginal Party, document review
Carolyn Hickey	A1 Indigenous Services	Registered Aboriginal Party, document review
David Horton	Gomery Cultural Consultants	Registered Aboriginal Party, document review, site officers attended survey
Ethan Trewlynn	Long Gully Cultural Services	Registered Aboriginal Party, document review
Tracey Skene	Culturally Aware	Registered Aboriginal Party, document review
Steven Carroll	Guugaburra Yiramiilan	Registered Aboriginal Party, document review
Thomas Dahlstrom	Thomas Dahlstrom	Registered Aboriginal Party, document review
Tiarna Bird	Mura Gadi Aboriginal Corporation	Registered Aboriginal Party, document review
Kylie Pascoe	Hunter Valley Aboriginal Corporation	Registered Aboriginal Party, document review, site officers attended survey
Matthew Syron	Budgewoi Barray Pty Ltd	Registered Aboriginal Party, document review
Les Atkinson	Jarban & Mugrebea	Registered Aboriginal Party, document review
Ashley Sampson	AGA Services	Registered Aboriginal Party, document review
George Sampson	Cacatua Culture Consultants	Registered Aboriginal Party, document review

RAPs		
Contact person	Organisation	Contribution
Steven Flick	George Flick Cultural Services	Registered Aboriginal Party, document review
Malcolm Briggs	Girragirra Murun	Registered Aboriginal Party, document review
Ray Moon	Wingarra Wilay	Registered Aboriginal Party, document review
David Ahoy	Lower Hunter Aboriginal Incorporated	Registered Aboriginal Party, document review
Steven Hickey	Widescope Indigenous Group	Registered Aboriginal Party, document review
De-anne Douglas	Wanaruah LALC	Registered Aboriginal Party, document review

3. Description of the development proposal

3.1 Project location

The Subject Area is situated within the suburb of Merriwa in the Upper Hunter LGA and is located approximately 18 km southwest of the Merriwa township. It lies within the County of Brisbane and the Parish of Campbell and within the Wanaruah LALC. The Subject Area comprises Lot 7 DP 1279168.

3.2 Proposed development description

The proposed works include:

- Installation of four new steel pole transmission structures at Structure 169 on Transgrid's existing transmission line 5A3/5A4.
- Establishment of level construction benches at the Subject Area to support the safe operation of elevated working platforms and cranes as part of structure assembly
- Vegetation clearing
- Construction and upgrade of access tracks to the Subject Area locations.

In addition, the existing transmission line easement in the area at Structure 169 would be widened from 70 metres to 120 metres.

These works will occur in what has been defined as the 'proposed impact area' on Figure 2.

4. Previous archaeological work

4.1 Heritage registers

4.1.1 AHIMS

An extensive search of the AHIMS was carried out on 5 August 2025 [redacted]; Appendix A) for the Subject Area comprising of Lot 7 DP 1279168 with an approximate buffer of 200 m. [redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

Table 2: Summary of AHIMS site features within the wider region of the AHIMS search

[redacted]

Table 3 below provides a summary of recorded sites registered on AHIMS and their proximity to the Subject Area.

Table 3: Summary of Aboriginal sites registered on AHIMS within search area

[redacted]

4.1.1.1 Assessment of robustness of AHIMS data

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.

4.1.2 Other registers

Searches of the Australian World Heritage Database, the Commonwealth Heritage List, National Heritage List, State Heritage Register, State Heritage Inventory, and the Upper Hunter Local Environmental Plan (LEP) (2013) were conducted on 5 August 2025.

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

Assessment of historical heritage constraints associated with the Subject Area is beyond the scope of this ACHA.

4.1.3 AHIP public register

A search was conducted of the Department of Planning, Housing Infrastructure (DPHI) Aboriginal Heritage Impact Permit (AHIP) public register on 13 July 2026. It was determined that no AHIPs have been registered in proximity to the current Subject Area.

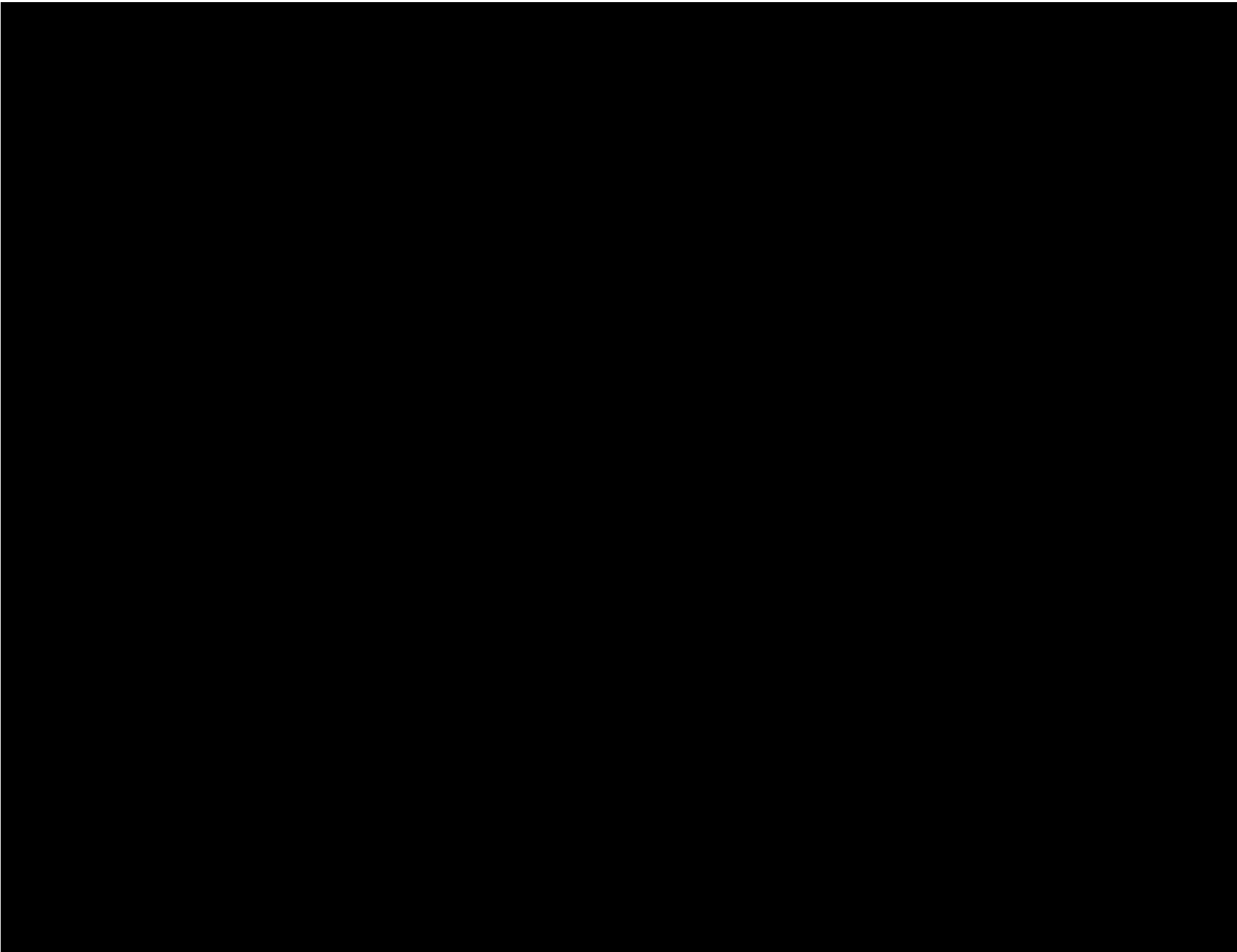
4.2 Previous heritage assessments of the wider region

Several heritage assessments have been undertaken within the vicinity of the Subject Area. While these reports mostly focus on the presence and absence of Aboriginal objects within a limited area of works, they provide an insight into the nature of the broader archaeological landscape and are useful in the development of a predictive model for the region. A summary of the most relevant heritage assessments undertaken in the surrounding region, as identified based on the search of the AHIMS report register and other archaeological reports, is provided in Table 4 below.

Table 4: Regional heritage assessments considered

Report details	Proximity to Subject Area	Details
Haglund (1980-81) Kerrabee Dam Aboriginal Heritage Study (proposed dam at Goulburn-Merriwa River junction).	Approximately 2 km SE of the Subject Area	Extensive survey prior to a now-shelved dam project. 343 Aboriginal sites were recorded in the inundation zone – including numerous stone artefact scatters, grinding groove sites, and rock shelters with cultural deposits and art. Some shelters were excavated, yielding faunal remains (kangaroo, possum, fish, etc.), shell, and charcoal. The study highlighted the high archaeological significance of the Merriwa/Goulburn River confluence, demonstrating long-term Aboriginal occupation.
NSW DLWC & Upper Hunter Wonnarua Council (V. Perry, 1999) Merriwa River & Coulsons Creek Bank Rehabilitation Works	Approximately 20 km NE of the Subject Area	A due-diligence Aboriginal heritage assessment undertaken as part of creek bank stabilisation works (post-flood repairs). The survey targeted the Merriwa River and Coulsons Creek junction area for any Aboriginal objects or places. No new Aboriginal sites or objects were identified in the works footprint, indicating minimal impact to heritage.
Upper Hunter Wonnarua Council (V. Perry, 2001) "Poggy" Merriwa Sand Quarry Cultural Heritage Assessment	Approximately 12 km NW of the Subject Area	An Aboriginal cultural heritage assessment for a proposed sand quarry (nicknamed "Poggy") near Merriwa. The study involved community consultation and field survey of the quarry site and nearby Merriwa River terraces. It identified a low-density scatter of stone artefacts on the proposed extraction area, indicating past tool-making or campsite activity. No rock art or significant in-situ sites were found.

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- Subject area
- Proposed impact area
- Transport**
 - Minor road
- Hydrography**
 - Strahler stream order**
 - 1
 - 2
 - 4
- Administrative and Property Boundaries**
 - Lot
 - Local Government Area
- AHIMS**
 - Artefact



Figure 3
AHIMS Sites and Heritage Items - STR 169
Arup Transgrid Transposition Towers Heritage - Northern Cluster ACHA

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



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: 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/ State Heritage Register Curtilage: / Local Heritage Place: / Transparency Mask: / World Imagery: Source: Esri, Vantor, 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: 2/02/2026.

5. Landscape context

5.1 Preamble

Understanding the past and present environmental contexts of a Subject Area is requisite in any Aboriginal archaeological and cultural heritage investigation (DECCW 2010a). The landscape context may provide insight as to areas of land that may have been more intensively used by Aboriginal people in the past due to the presence of resources such as water, stone, plants and animals and other raw materials or landscape features associated with sustenance, shelter, tool manufacture and cultural activities. Furthermore, the landscape provides the context within which the material remains of past Aboriginal occupation may be preserved and detectable due to the movement of soil through geomorphic processes such as erosion or its removal from the landscape through past land use and disturbance (DECCW 2010a: 8). By considering these factors, an Aboriginal cultural heritage investigation may develop a sampling strategy for identifying any tangible Aboriginal heritage values within the Subject Area. It allows for an understanding of what activities would likely have taken place across the Subject Area in the past and the likelihood that any trace of these would have survived below the surface. The following section provides details of the environmental characteristics of the Subject Area.

5.2 Topography, hydrology and landforms

The Subject Area is situated entirely within the Wappinguy soil landscape (DPIE 2020).

The Wappinguy soil landscape generally consists of rolling low hills with some rocky sandstone knolls, hills and cuestas (DPIE 2020). There are some sandstone benches (DPIE 2020). Most valleys are broad and shallow, with some narrow valleys along rocky jointed surfaces (DPIE 2020). Elevations vary from 240-405 m, with slopes less than 15% (except for rock outcrops) (DPIE 2020). Slope lengths are 80-1000 m (DPIE 2020). Local relief is 40-80 m, with some sandstone hills to 120 m (DPIE 2020). Drainage lines occur at intervals of 700-1000 m (DPIE 2020).

There is one watercourse within the Subject Area, being Tunbridge Creek, an ephemeral fourth order watercourse which is a tributary of the Goulburn River. The Goulburn River is located approximately 2.3 km south of the Subject Area.

5.3 Geology and soils

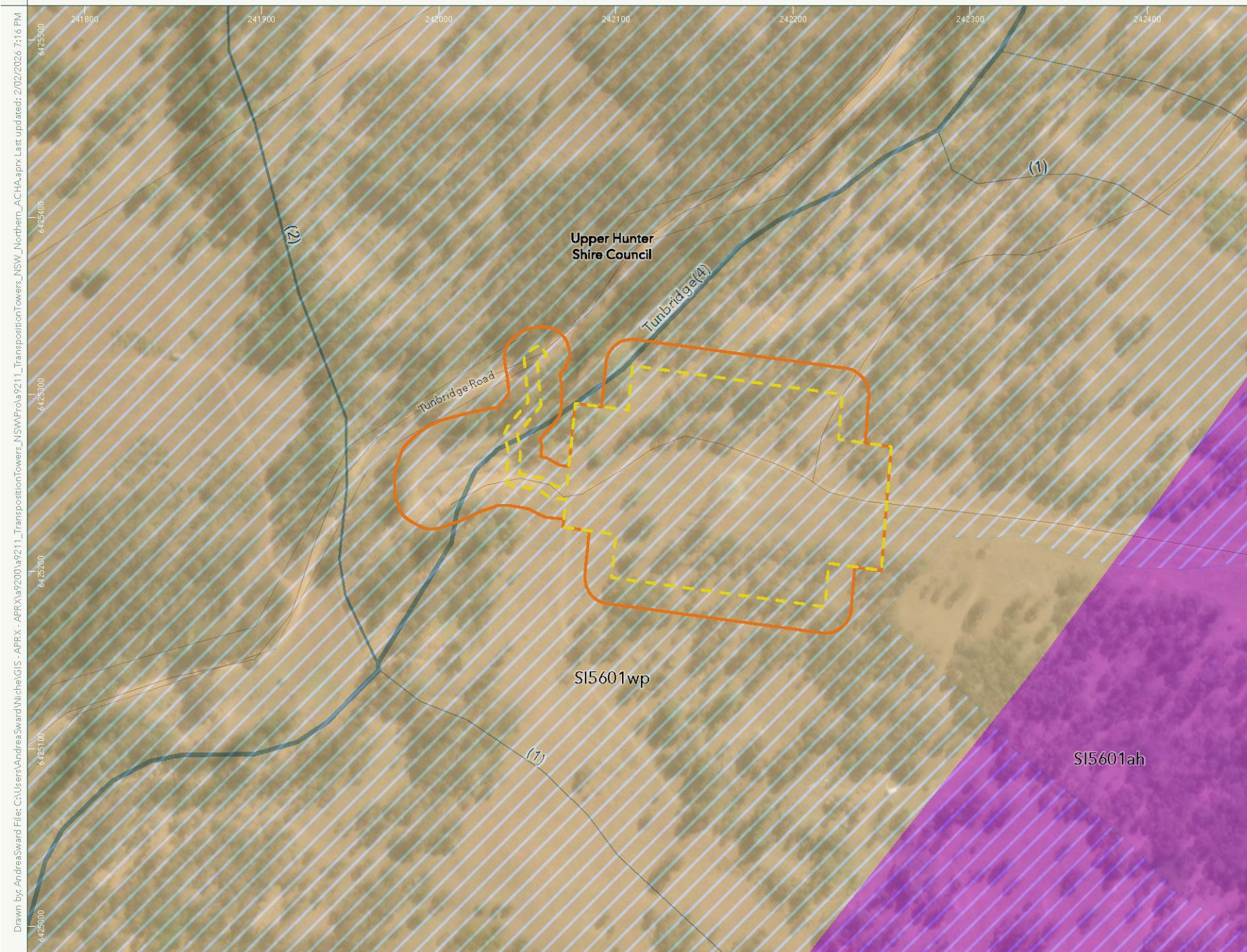
The underlying geology of the Subject Area is comprised of the Narrabeen Group and Pilliga Sandstone Geological Units. These geological units include quartz and lithic sandstone, shale, conglomerate, siltstone and green and red claystone (DPIE 2020). Quartz, siltstone and silcrete conglomerates are suitable raw materials for stone tool manufacture.

The Wappinguy soil landscape consists of Solodic Soils on sandstone slopes, in association with Siliceous and Earthy Sands and sandstone outcrops (DPIE 2020). Brown Clays occur midslope over sandstone (DPIE 2020). Red Earth – Euchrozem intergrades and Euchrozems occur on slopes with some basaltic colluvium in the parent material (DPIE 2020). Prairie Soils occur in drainage lines with alluvial loams and clays (DPIE 2020). Gleyed Soloths occur in some other drainage lines (DPIE 2020).

The topsoil of the Red Solodic Soils comprises of dull to dark reddish brown sandy loam and the subsoil comprises a clear to gradual change to dark reddish brown sandy clay loam (DPIE 2020). The topsoil of the

Yellow Solodic Soils comprises of yellowish brown, brown or reddish brown sandy loam or clayey sand and the subsoil comprises a clear change to bright reddish brown or bright brown sandy clay loam, fine sandy loam or sandy clay (DPIE 2020). The topsoil of the Brown Solodic Soils comprises of dark brown sandy loams and the subsoil comprises a clear change to brown sandy clay (DPIE 2020). The topsoil of the Gleyed Soloths comprises dark brown clayey sand and the subsoil comprises a clear change to light yellow orange light medium clay (DPIE 2020). The topsoil of the Red Earth-Euchrozem intergrades comprise dark reddish brown light sandy clay loam and the subsoil comprises a clear change to dark reddish brown sandy clay loam (DPIE 2020). The topsoil of the Siliceous Sands comprises of very dark reddish brown sandy loam and the subsoil comprises a gradual change to a very dark reddish brown clayey sand (DPIE 2020). The topsoil of the Earthy Sands comprises a dull yellowish brown sandy loam and the subsoil comprises a gradual change to brown clayey sand (DPIE 2020). The topsoil of the Prairie Soils comprises a brown sandy loam and the subsoil comprises a clear change to brown sandy clay (DPIE 2020). The topsoil of the Grey Solodic Soils comprises dark brown sandy loam and the subsoil comprises a clear change to orange sandy clay (DPIE 2020). The topsoil of the Brown Clay comprises a very dark brown light medium clay and the subsoil comprises a gradual change to dark brown medium clay (DPIE 2020). The topsoil of the Euchrozems comprises a dark reddish brown clay loam and the subsoil comprises a clear change to reddish brown light clay (DPIE 2020). The topsoil of the loam Alluvial Soils comprises brownish black light clay and the subsoil comprises a gradual change to brown sandy clay loam (DPIE 2020). The topsoil of the clay Alluvial Soils comprises brownish black light medium clay and the subsoil comprises a gradual change to brownish black medium clay (DPIE 2020).

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- Subject area
- Proposed impact area
- Transport**
 - Minor road
- Hydrography**
 - Strahler stream order
 - 1
 - 2
 - 4
 - Watercourse buffer (200m)
- Administrative and Property Boundaries**
 - Lot
 - Local Government Area
- Soil Landscapes of Central and Eastern NSW**
 - SI5601ah, Ant Hill
 - SI5601wp, Wappinguy



Figure 4
Soil landscapes and hydrology in the local area - STR 169
Arup Transgrid Transposition Towers Heritage - Northern Cluster ACHA

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



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: Source: Esri, Vantor, 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: 2/02/2026

5.4 Vegetation

Woodland covers most of the Wappinguy soil landscape (DPIE 2020). Narrow-leaved red ironbark (*Eucalyptus crebra*) dominates on the coarser textured soils on ridges (DPIE 2020). White box (*Eucalyptus albens*) and Blakelys red gum (*Eucalyptus blakelyi*) also occur (DPIE 2020). Many parts of the landscape have been cleared extensively for grazing on voluntary and native pasture (DPIE 2020). A shrub woodland of ironbarks (*Eucalyptus* spp.) occurs on rocky sandstone knolls and hills along with some black cypress pine (*Callitris endlicheri*), forest red gum (*Eucalyptus tereticornis*) and brown bloodwood (*Corymbia trachyphloia*) (DPIE 2020). Wattles (*Acacia* spp.) are common as the major shrub types. Much of this shrub woodland is uncleared (DPIE 2020).

5.5 Past land use disturbance

Historical aerials from 1970 and 1992 demonstrate the disturbance that has taken place across the Subject Area. In 1970 the transmission line and associated access track has not been constructed yet, and the Subject Area has not been totally cleared. By 1992 the transmission line and access track have been constructed.



Plate 1: 1970 historical aerial



Plate 2: 1992 historical aerial

5.6 Summary and analysis of environmental context

Historical aerial imagery demonstrates that the Subject Area has undergone notable disturbance associated with the development of the transmission line and its access track. In 1970, the landscape appears largely intact, with no linear clearing or associated infrastructure visible. By 1992, however, the establishment of the transmission line corridor and an access track has resulted in significant ground disturbance, vegetation removal, and modification of the natural land surface. These changes reflect a transition from a partially uncleared landscape to one characterised by infrastructure-related clearance and ongoing maintenance activities.

This pattern of disturbance is consistent with broader land-use practices within the Wappinguy soil landscape, where clearing for utilities and grazing has altered vegetation structure, ground visibility, and soil stability. The construction and operation of the transmission line likely involved machinery, excavation, periodic slashing or grading of the track, and vehicular access, each of which contributes to soil profile mixing, erosion, and reduced integrity of any surviving archaeological deposits. Disturbance would be most intensive along the access track and tower pads, with more moderate impacts extending into adjacent areas from runoff, compaction, and vegetation clearance.

From an archaeological perspective, these past land-use impacts diminish the likelihood of intact surface expressions of Aboriginal cultural material in highly modified areas but do not entirely eliminate the potential for subsurface archaeological deposits to persist. The broader geomorphic setting—characterised by alluvial and colluvial soils, shallow slopes and periodic drainage activity—suggests that even within disturbed corridors, pockets of preserved deposit may remain in less-impacted micro-landforms. Understanding the spatial distribution and intensity of disturbance is therefore essential for predicting archaeological potential, framing targeted survey and testing strategies, and informing impact assessments for the proposed transposition works.

6. Regional character

6.1 Ethnography and history

Ethnographic information can be used to interpret and contextualise the archaeological record by providing meaning, value, and significance to the physical evidence. In turn, the archaeological evidence can validate claims to place and country, or reject misinformation, and incomplete or biased ethnohistorical accounts. Therefore, the archaeological significance or potential for an area of interest can best be understood when it is situated within its broader cultural context which requires a consideration of the Subject Area's ethnographic history.

The Subject Area lies within Country historically associated with the Wanaruah/Wonnarua people, whose broader territory extends across the Upper Hunter Valley. Ethnographic records, early settler journals and regional archaeological research indicate that this region supported long-standing Aboriginal occupation, sustained by a landscape offering diverse ecological resources. Rolling low hills, sandstone knolls, broad valleys and intermittent drainage lines provided access to water, raw materials, plant foods, and fauna. The presence of suitable stone—particularly quartz, lithic sandstone and silcrete within the Narrabeen and Pilliga geological units—would have supported tool manufacture and contributed to repeated land use.

Archaeological evidence from nearby Merriwa Creek, Coulsons Creek and the Goulburn-Merriwa River confluence demonstrates a rich cultural landscape characterised by large artefact scatters, grinding groove sites, rock shelters with cultural deposit, and repeated subsistence activity. These studies show that the wider region was used for habitation, tool-making, food processing, ceremonial activity and movement along waterways.

The environmental context of the Subject Area—particularly access to drainage lines spaced 700–1000 m apart, presence of sandstone benches and knolls, and varied vegetation communities—would have facilitated movement, hunting, foraging and transient camping by Aboriginal groups. Ethnographic literature emphasises that these landforms formed part of a network of seasonal routes and resource zones, where Aboriginal people maintained cultural, social and economic relationships with Country.

6.2 Contact Period

European presence in the Upper Hunter Valley during the early 19th century significantly altered traditional lifeways. Early explorers, pastoralists and government surveyors recorded brief observations of Aboriginal groups in the region; however, these descriptions were often filtered through settler cultural bias and recorded at a time when dispossession was already underway.

As pastoral expansion spread across the Hunter, Aboriginal access to Country became increasingly restricted. Water sources, productive flats and resource-rich ridgelines—areas previously relied upon for food gathering, travel and ceremonial activity—were rapidly transformed by farming, fencing, stock routes and timber extraction. Despite these pressures, Aboriginal families continued to occupy and move through the region, adapting their traditional economy to the altered landscape.

The establishment of homesteads and grazing properties around Merriwa introduced new patterns of movement and work. Aboriginal people engaged with settlers through labouring, stock work and seasonal employment, maintaining cultural knowledge and kinship networks while negotiating the introduced economy. This period also marks the early phases of direct landscape modification in the Subject Area, including vegetation clearing and the creation of access tracks, which have contributed to present-day archaeological visibility.

6.3 Post-Contact Period

Throughout the late 19th and early 20th centuries, pastoral consolidation and infrastructure development in the Upper Hunter continued to reshape Aboriginal land use. Large properties and transport corridors further reduced access to traditional resource patches, while activities such as grazing, ploughing, dam construction and road formation altered the integrity of soil profiles and archaeological deposits across the region.

Aboriginal people continued to maintain cultural connections with the region during the post-contact period, often through family networks, ongoing use of Country, participation in rural industries and involvement in community-driven heritage assessments. These connections remain central to understanding and interpreting the archaeological record, underscoring the continuing cultural significance of the landscape.

7. Predictions

The predictive model for the Subject Area is based on the combined the archaeological, environmental and cultural information presented in the previous sections. Archaeological work undertaken in the wider Merriwa region demonstrates that open artefact scatters, isolated finds, and occasional higher-density sites occur commonly across comparable landforms. Two AHIMS-registered open artefact sites in proximity to the Subject Area indicate that Aboriginal cultural material has been deposited in the local landscape, and that similar low-density artefact distributions may extend into the Subject Area.

The environmental characteristics of the Wappinguy soil landscape contribute significantly to archaeological potential. Rolling low hills, sandstone benches, drainage depressions and colluvial soils present landforms that Aboriginal people are known to have used for movement, resource gathering and short-term occupation. Materials suitable for stone tool production—including quartz and silcrete—occur naturally in the Narrabeen and Pilliga geological units underlying the Subject Area. Landforms near drainage lines, in particular, offer conditions conducive to both past occupation and the preservation of subsurface archaeological deposits. Although past land-use disturbance related to the transmission line has impacted some areas, intact pockets of soil are likely to remain in undisturbed and vegetated micro-landforms.

Ethnographic and archaeological evidence from across the Upper Hunter Valley shows that Aboriginal people used this landscape intensively and repeatedly over long periods. Movement along creek lines, ridgelines and resource corridors is a significant regional pattern, and the Subject Area lies within one of these broader cultural pathways. The combination of water sources, raw materials and varied ecological niches means that even areas not adjacent to major waterways were used for travel, transient camping and tool manufacture. While European land-use practices have altered surface integrity in places, they do not eliminate the possibility of deeper, intact archaeological deposits.

Collectively, these factors indicate that the Subject Area has a moderate likelihood of containing Aboriginal cultural material. The most likely archaeological features include isolated artefacts and low-density scatters occurring on slopes, benches, ridgelines and near drainage features. Subsurface deposits may occur where alluvial or colluvial processes have protected buried soils from disturbance. Complex or stratified sites are considered unlikely due to the landforms present, and rock shelters or grinding groove features are improbable because suitable geological formations are absent.

If artefacts are present, they are expected to comprise flaked stone items such as flakes, flaked pieces and occasional cores, made predominantly from quartz, silcrete or mudstone. These materials reflect the raw material availability of the local geology and align with artefact types documented in comparable studies across the region. Background scatter across the landscape is also anticipated, representing repeated short-term use rather than intensive occupation.

The Subject Area exhibits moderate archaeological potential, characterised by a likely presence of isolated artefacts or low-density scatters and a moderate chance of subsurface archaeological deposits in less-disturbed contexts.

8. Methods

8.1 Assessment methodology

The purpose of the field survey was to assist in the identification of cultural heritage values and to record a representative sample of the material traces and evidence of Aboriginal land use that are visible at or on the ground surface, or exposed in sections or visible as features and to identify those areas where it can be inferred that, although not visible, material traces or evidence of Aboriginal land use have a likelihood of being present under the ground surface (potential archaeological deposits [PADs]) (DECCW, 2010a).

An assessment methodology was developed and is outlined below and presented in Appendix 2 of the ACHA (Niche, March 2026).

The following methods were used to identify archaeological resources, heritage values and significant cultural themes for the Subject Area:

- Aboriginal community input - this was sought throughout the project via the consultation process, participation in archaeological fieldwork and other correspondence.
- Archaeological research - this included landscape characterisation, analysis of previous archaeological works in the region and field survey.

8.2 Sensitive cultural information – management protocol

During the consultation process, the proponent (Transgrid) and Niche provided the opportunity for the RAPs to provide cultural information, including a statement of the value of identified sites and other matters. The input points were listed within the survey methodology that has been included in Appendix 2, information will be accepted at any point during the project prior to the finalisation of the ACHA and AR.

RAPs were made aware that the proponent and Niche staff would seek cultural information and supporting evidence in regard to matters of cultural value.

In the event that a stakeholder had sensitive or restricted public access information, it was proposed that the proponent and Niche would manage this information (if provided by the Aboriginal community) in accordance with a sensitive cultural information management protocol. It is anticipated that the protocol will include making note of and managing the material in accordance with the following key limitations as advised by Aboriginal people at the time of the information being provided:

- Any restrictions on access to the material.
- Any restrictions on communication of the material (confidentiality).
- Any restrictions on the location/storage of the material.
- Any cultural recommendations on handling the material.
- Any names and contact details of persons authorised within the relevant Aboriginal stakeholder to make decisions concerning the Aboriginal material and the degree of authorisation.
- Any details of any consent given in accordance with customary law.
- Any access and use by the registered Aboriginal stakeholders of the cultural information in the material.

8.3 Survey methods

The purpose of the field survey was to assist in the identification of cultural heritage values and to record a representative sample of the material traces and evidence of Aboriginal land use that are visible at or on the ground surface, or exposed in sections or visible as features and to identify those areas where it can be inferred that, although not visible, material traces or evidence of Aboriginal land use have a likelihood of being present under the ground surface (Potential Archaeological Deposits [PADs]) (DECCW, 2010).

The entire Subject Area was inspected on foot on 28 April 2026. Opportunistic inspection of exposures across the Subject Area was undertaken during the field survey. The survey coverage is shown in Figure 5, however it should be noted that survey tracks are representative only of the ground covered by the Niche heritage consultant in attendance.

The survey methodology is outlined below:

- A hand-held non-differential GPS unit was used to record all tracks and appropriate site data for the survey with spatial data recorded in terms of Datum and grid coordinates (i.e., Zone, Easting, Northing) as per Requirement 8b of The Code.
- Representative photographs were taken of survey units, different visibility levels, exposures and disturbed areas. A survey unit is the minimum analytical or descriptive unit for the survey. For the survey undertaken for this assessment, the survey units have been broken down by landform. The survey units (SU1 and SU2) are shown on Figure 5.
- A proportional emphasis was placed on the landforms identified within the predictive model as likely to contain Aboriginal archaeological objects or sites
- Different types and levels of exposure were recorded. Exposure was defined as an estimate of the area which has a likelihood of revealing buried artefacts and/or deposits. Exposure is represented as a percentage of land for which erosion and exposure were sufficient to reveal archaeological evidence on the surface of the ground. As Burke and Smith (2004: 78-80) phrase it: exposure refers to what reveals. Exposure types are based on the results of erosional processes (e.g. sheet wash, gully, blow-outs, animal tracks or PADs, vehicle or walking tracks etc).
- Archaeological visibility was recorded, defined as the amount of bare ground on the exposures which might reveal artefacts or other archaeological materials. As Burke and Smith (2004: 78-80) phrase it: visibility refers to what conceals. Visibility is affected by vegetation, leaf litter, stone ground, introduced material etc.
- Effective survey coverage area was also recorded (the area of the Survey unit multiplied by the visibility percentage and exposure percentage and given in either m² or ha) as per Requirement 9 of The Code.

8.4 Survey limitations

An assessment of the limitations to site detection is made to assist in formulating a view as to the effectiveness the field survey to find Aboriginal sites and cultural heritage materials. It also assists in forming a view of the likelihood of concealed sites, keeping in mind a site-specific knowledge of the disturbance impacts that European land uses and natural processes may have had on the survivability of Aboriginal sites in the study area.

The limitations to site detection are almost always influenced by post-European settlement land uses and seldom by natural erosion processes. The area of surface exposure and the degree of surface visibility within exposed surfaces are usually the product of recent land uses, for example land clearing, ploughing, road construction, natural and manmade erosion (McDonald et. al. 1990:92). In this case, the major limitations to Aboriginal site survivability and detection are the existing transmission tower and vehicle tracks within the Subject Area.

9. Results

9.1 Survey coverage

The Subject Area was surveyed on foot by six people on 28 April 2026. The survey attendees were:

- Samuel Riley (Niche)
- Carl Little (Transgrid)
- Jack Rosenberg (Transgrid)
- Thomas Frank (Transgrid)
- Leanne Kirkman (Hunter Valley Aboriginal Corporation)
- David Horton (Gomery Cultural Consultants)

Ground cover across the Subject Area predominantly consists of dense grass cover, with exposures occurring along the access track, around the base of Structure 169 itself, and several isolated exposures mainly consisting of ant nests across the area. Exposure and visibility generally varied between 0% and 60%.

Disturbances across the Subject Area predominantly consist of Structure 169 itself and disturbance associated with the access track, including a concrete culvert across the creekline in the western region of the Subject Area. This creekline was noted to be dry at the time of the survey.

Visibility and exposure levels were low within the Subject Area as outlined in This survey unit encompassed approximately 23,500 square metres and comprises the central and eastern portion of the Subject Area. Disturbances within this survey unit included the Structure 169 transmission tower itself, along with vehicle tracks. There is a much higher density of vegetation within this survey unit, however no trees of sufficient age or size were identified that could hold signs of cultural modification.

Sixteen artefacts were identified within survey unit 2 (SU2).

Table 5 and Table 6. The survey covered all landform units within the Subject Area, and they are divided into two survey units, as shown on Figure 5.

9.1.1 Survey unit 1

This survey unit encompassed approximately 7,600 square metres and comprises the western portion of the Subject Area. This area is situated at a lower elevation than the remainder of the Subject Area. Disturbances within this survey unit predominantly comprise the culvert across Tunbridge Creek and associated drainage and vehicle tracks. This survey unit has been predominantly cleared of vegetation, and no trees of sufficient age or size were identified that could hold signs of cultural modification.

Three artefacts were identified within survey unit 1 (SU1).

9.1.2 Survey unit 2

This survey unit encompassed approximately 23,500 square metres and comprises the central and eastern portion of the Subject Area. Disturbances within this survey unit included the Structure 169 transmission tower itself, along with vehicle tracks. There is a much higher density of vegetation within this survey unit, however no trees of sufficient age or size were identified that could hold signs of cultural modification.

Sixteen artefacts were identified within survey unit 2 (SU2).

Table 5: Survey coverage

Survey unit	Landform	Survey unit area (m ²)	Survey coverage (m ²)	Visibility (%)	Exposure (%)	Effective coverage (m ²)	Effective coverage (%)
SU1	Lower slope	7,600	3,040	40	40	3,040	40
SU2	Mid slope	23,500	2,585	60	60	2,585	11

Table 6: Landform summary - sampled areas

Survey unit	Landform	Number of sites	Number of artefacts or features
SU1	Lower slope	1	3
SU2	Mid slope	1	16



Plate 3: View east from central Subject Area



Plate 4: View west towards Structure 169 and western Subject Area



Plate 5: View east across SU1



Plate 6: View east of exposed vehicle track in SU1



Plate 7: View west of vegetation cover in SU2



Plate 8: View east across SU2



9.2 Survey results

One artefact scatter was identified during the survey. The details of the site are outlined below.

Table 7: Site details for [REDACTED]

[illegible]

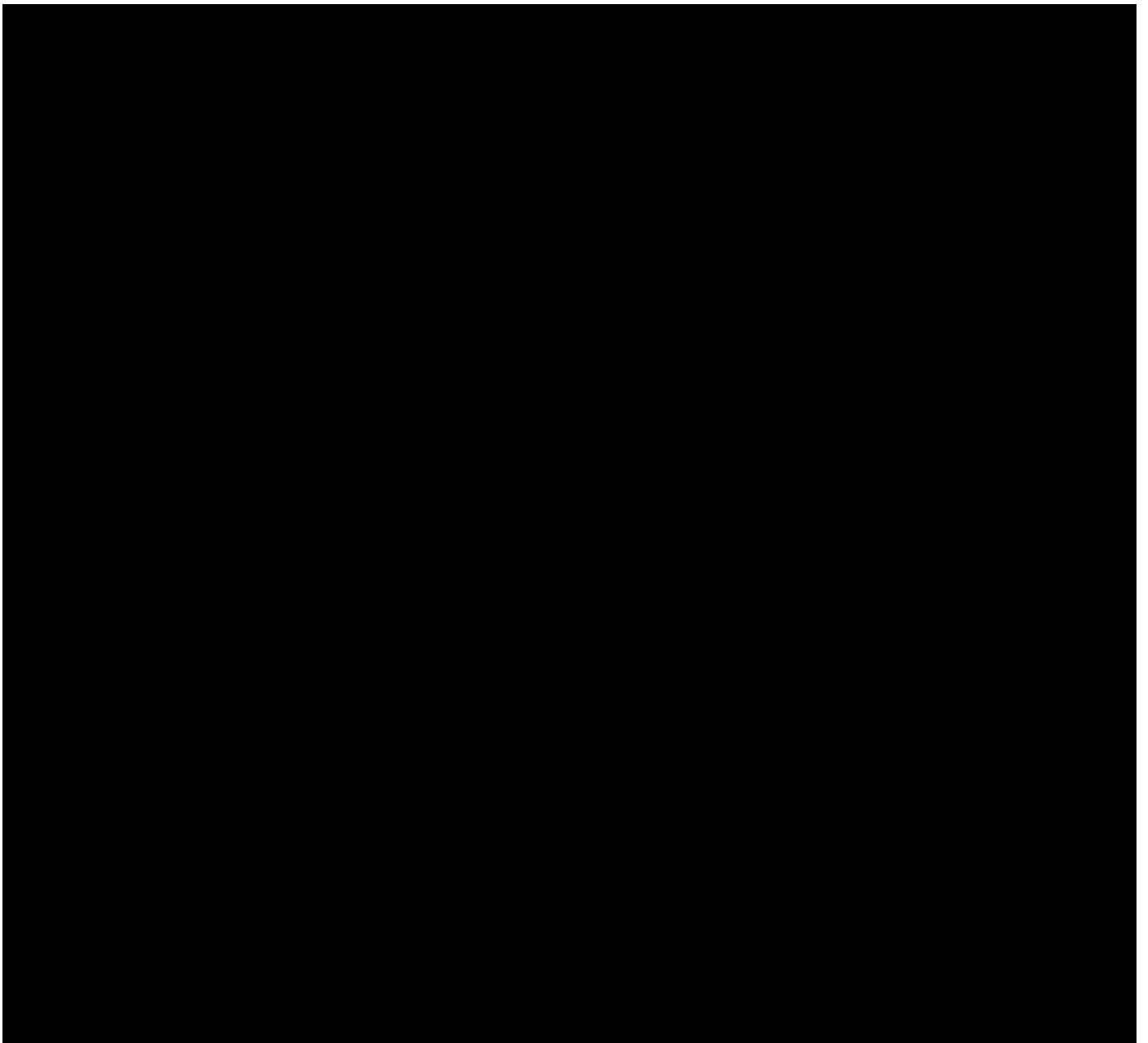




Plate 11: Artefact 1



Plate 12: Artefact 2 and Artefact 3



Plate 13: Artefact 4



Plate 14: Artefact 5



Plate 15: Artefact 6



Plate 16: Artefact 7



Plate 17: Artefact 8



Plate 18: Artefact 9



Plate 19: Artefact 10



Plate 20: Artefact 11 and Artefact 12



Plate 21: Artefact 13



Plate 22: Artefact 14



Plate 23: Artefact 15



Plate 24: Artefact 16



Plate 25: Artefact 17



Plate 26: Artefact 18



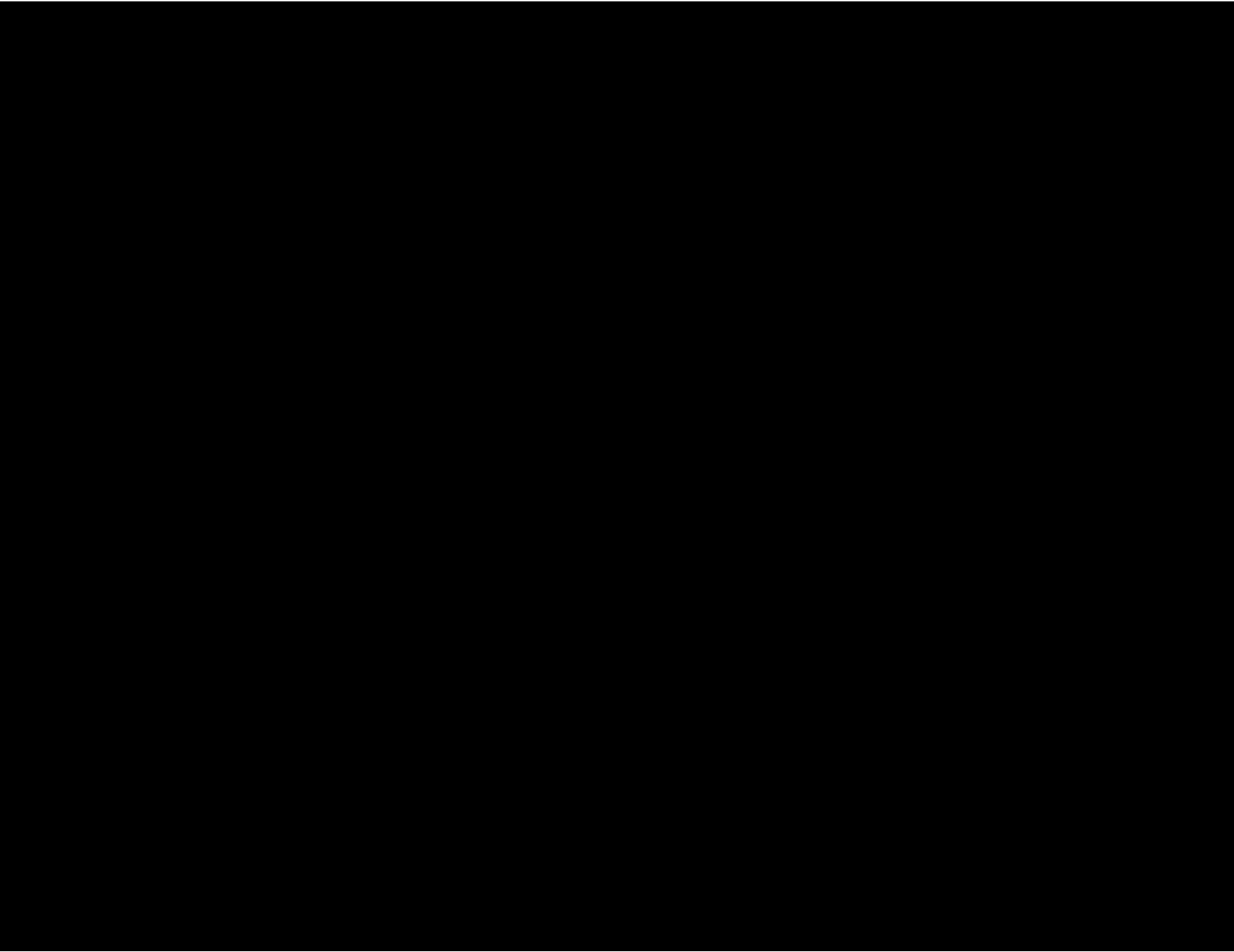
Plate 27: Artefact 19



Plate 28: Artefact 20 and Artefact 21



Plate 29: Artefact 22



- Subject area
- Proposed impact area
- Survey tracks

Survey results

- Artefact

AHIMS

- Artefact

Survey units

- SU1
- SU2

Transport

- Minor road

Hydrography

Strahler stream order

- 1
- 2
- 4

Administrative and Property Boundaries

- Lot



Figure 5

Site inspection results and Aboriginal heritage constraints - STR 169
Arup TransGrid Transposition Towers Heritage - Northern Cluster ACHA

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



10. Scientific values and significance assessment

10.1 Assessment framework

The Burra Charter (Australia ICOMOS 2013) defines the basic principles and procedures to be observed in the conservation of important places. It provides the primary framework within which decisions about the management of heritage sites in Australia should be made. The Burra Charter defines cultural significance as being derived from aesthetic, historic, social and scientific values. The aesthetic, historic, and social values are considered part of the broader ACHA and only the scientific values are discussed below. The scientific values, as outlined by the Burra Charter, are detailed in Table 8.

Table 8: Scientific values as outlined by the Burra Charter

Value type	Description
Scientific value	The scientific or research value of a place will depend upon the importance of the data involved, on its rarity, quality or representativeness, and on the degree to which the place may contribute further substantial information.

10.2 Other approaches

The categorisation into aesthetic, historic, scientific and social values is one approach to understanding the concept of cultural significance. However, more precise categories may be developed as an understanding of a particular place increases.

The NSW DECCW guidelines for the significance assessment of Aboriginal archaeological sites are contained within the Aboriginal Cultural Heritage Standards and Guidelines Kit (National Parks and Wildlife Service 1997). The Kit identifies two main streams in the overall significance assessment process: the assessment of cultural/social significance to Aboriginal people and the assessment of scientific significance to archaeologists.

This approach encapsulates those aspects of the Burra Charter that are relevant to Aboriginal archaeological sites. The guidelines specify the following criteria for archaeological significance, as paraphrased in Table 9.

Table 9: Criteria specified for archaeological significance

Criteria	Description
Research potential	It is the potential to elucidate past behaviour which gives significance under this criterion rather than the potential to yield collections of artefacts. Matters considered under this criterion include – the intactness of a site, the potential for the site to build a chronology and the connectedness of the site to other sites in the archaeological landscape.
Representativeness	As a criterion, representativeness is only meaningful in relation to a conservation objective. Presumably, all sites are representative of those in their class or they would not be in that class. What is at issue is the extent to which a class of sites is conserved and whether the particular site being assessed should be conserved in order to ensure that we retain a representative sample

Criteria	Description
	of the archaeological record as a whole. The conservation objective which underwrites the 'representativeness' criteria is that such a sample should be conserved.
Rarity	This criterion cannot easily be separated from that of representativeness. If a site is 'distinctive' then it will, by definition, be part of the variability which a representative sample would represent. The criteria might best be approached as one which exists within the criteria of representativeness, giving a particular weighting to certain classes of site. The main requirement for being able to assess rarity will be to know what is common and what is unusual in the site record but also the way that archaeology confers prestige on certain sites because of their ability to provide certain information. The criterion of rarity may be assessed at a range of levels: local, regional, state, national, and global.
Educational Potential	Heritage sites and areas should be conserved and managed in relation to their value to people. It is assumed that archaeologists have the ability to speak of the value of sites to members of their own profession. Where archaeologists or others carrying out assessments are speaking for the educational value of sites to the public, the onus is on them to go to the public for an assessment of this value, or to reputable studies which have canvassed public demand for education. The danger, otherwise, is that archaeologists would be projecting their values onto a public which is itself given no voice on the matter.
Aesthetics	Archaeologists are not expected to include an assessment of aesthetic significance along with their assessment of scientific significance. In relation to heritage places, aesthetic significance is generally taken to mean the visual beauty of the place. Aesthetic value is not inherent in a place but arises in the sensory response people have to it. Although the guidelines provide no expectation for archaeologists to consider aesthetic values it is often the case that a site's or a landscape's aesthetic is a significant contributory value to significance. Examples of archaeological sites that may have high aesthetic values would be rock art sites or sites located in environments that evoke strong sensory responses. For this reason, we consider it appropriate to include aesthetic values as part of the significance assessments for the sites identified during this assessment.

10.3 Statement of significance

The full statement of significance is discussed in the ACHA. The overall scientific significance related to the Subject Area and sites identified are discussed below.

10.4 Scientific (Archaeological) value

The Subject Area contains one Aboriginal cultural heritage site. The archaeological value of the Subject Area is considered low, with the representativeness of the identified Aboriginal cultural heritage site, being a low-density artefact scatter, being common in the wider region.

11. Impact assessment

11.1 Assessment of harm

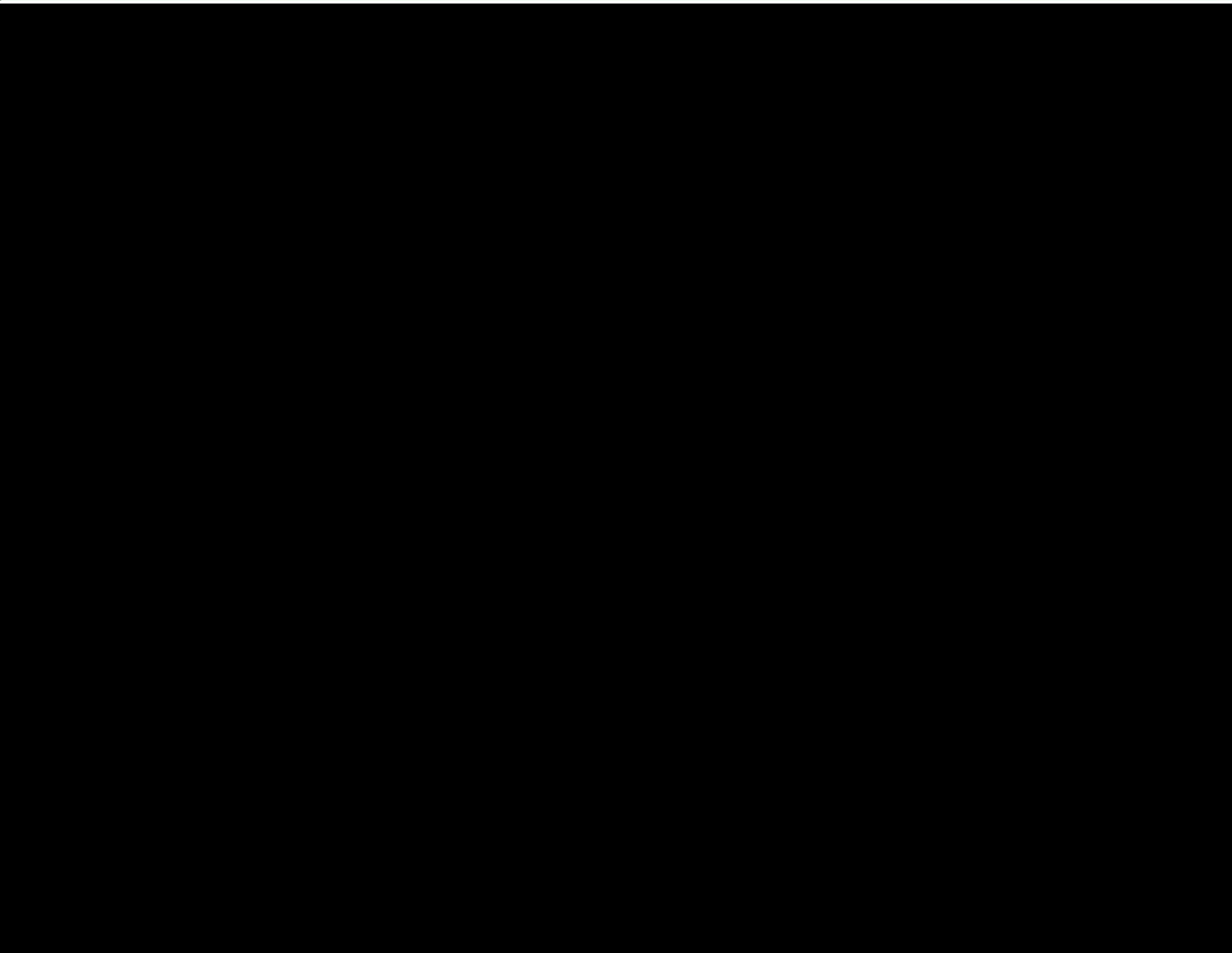
The *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH 2011) requires that both direct and indirect harm to Aboriginal objects and Aboriginal places be considered. Generally, direct harm refers to occasions where an activity physically impacts a site or objects and therefore affects the heritage values possessed by the site or objects. Indirect harm is usually taken to mean harm stemming from secondary consequences of the activity and may affect sites or objects as an indirect consequence of the activity. Examples of such indirect harm are increased visitors to a site or increased erosion in an area as a result of an activity.

The identified harm to the Aboriginal heritage sites identified within the Subject Area is included in Table 10 and shown in Figure 6.

Table 10: Identified harm to known Aboriginal heritage sites within the Subject Area

AHIMS ID	Site name	Type of harm	Degree of harm	Consequence of harm
		Direct	Partial	Partial loss of value

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Survey results

- Artefact
- Aboriginal heritage site boundary

AHIMS

- Artefact
- Survey tracks
- Proposed impact area
- Subject area

Transport

- Minor road

Hydrography

Strahler stream order

- 1
- 2
- 4

Administrative and Property Boundaries

- Lot



Figure 6

AHIMS Boundary

Arup TransGrid Transposition Towers Heritage - Northern Cluster ACHA

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



12. Management and mitigation measures

12.1 Conservation principles and management framework

The two founding principles behind the *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (OEH 2011:12) are ecologically sustainable development and intergenerational equity. These principles hold that “the present generation should make every effort to ensure the health, diversity and productivity of the environment – which includes cultural heritage – is available for the benefit of future generations”.

The strong emphasis, as in the Burra Charter, is to quantify and understand the heritage values of a place, a site, or an object and exhaust avenues of avoiding harm to those values. If harm cannot be avoided, then there must be consideration and implementation of strategies to minimise harm (OEH 2011:13).

It follows that the hierarchy for consideration in terms of the management strategies available for surface stone artefacts and subsurface stone artefacts and areas of archaeological potential, fall into four general categories, in order of preference from a conservation perspective:

- Avoidance and *in-situ* conservation
- Partial avoidance and partial *in-situ* conservation (includes partial harm)
- Harm caused by mitigating circumstances such as collection and
- Unmitigated harm.

The four general categories (described above) have been considered in the following subsections with regard to both direct impacts (e.g. surface disturbance) and indirect impacts (e.g. monitoring activities).

The management and mitigation measures have been prepared in consideration of comments received from the RAPs during the consultation process. These comments include those related to cultural considerations surrounding mitigation works and the handling of artefactual materials, as well as the cultural significance of all sites. All comments received from the RAPs are considered in Section 3.3 of the ACHA.

Management measures are warranted to mitigate the loss of value to the Aboriginal sites that would result from the proposed subdivision and development activities. Management and mitigation measures are required to ensure continued compliance with the NPW Act.

Consideration and discussion of management and mitigation options are provided in Table 11.

Table 11: Consideration of management and mitigation measures

Management risk / impacted value	Mitigation measures	Description
Management risk – impacts to cultural values and stakeholder values	Partial avoidance of sites and <i>in situ</i> conservation	– The extent of [REDACTED] (Figure 5) extends beyond the boundaries of the proposed impact area. Therefore partial avoidance of [REDACTED] is possible and the artefacts located beyond the bounds of the proposed impact area will be conserved.

Management risk / impacted value	Mitigation measures	Description
		Where practical, temporary high visibility fencing and/or star pickets with flags shall be established around the recorded coordinates of artefacts to be avoided. All buffer zones around artefacts must be shown on construction planning mapping.
	Continued consultation with the RAPs	- The proponent should continue to consult with the RAPs in regard to the Subject Area in accordance with the ACHCRPs Consultation may include, but is not limited to: - Finalisation of ACHA. - RAP involvement in community collection and management of artefacts - Unexpected finds. - Throughout the construction phase, project updates should be sent to RAPs every 6 months at a minimum to ensure the consultation associated with this ACHA remains active.
	Aboriginal community collection	An AHIP will be required for the portion of [REDACTED] within the impact area prior to works commencing to allow for community collection.
	Entering into a Care Agreement with the RAPs to determine the keeping place of Aboriginal objects collected during community collection within the Subject Area or collection	- Long-term storage and care of Aboriginal objects recovered during any community collection are required under S.89 of the National Parks and Wildlife Act through a Care Agreement. Provision should be made to return Aboriginal objects to RAPs entitled to, and willing to accept possession, custody or control of the Aboriginal object in accordance with Aboriginal tradition. OR - In consultation with the RAPs onsite, an area for reburial within the Subject Area but outside the area of impacts must be identified, and reburial must be undertaken in accordance with the Code.
Management risk - Compliance and unexpected finds (excluding human remains)	Communication with employees, site visitors, contractors and landowners	- All workers should be inducted into the Subject Area, so they are made aware of their obligations under the <i>National Parks and Wildlife Act 1974</i> and any conditions of any future AHIP prior to and during and after construction activities. - In the event of the identification of artefacts within the Subject Area, work in the surrounding area is to stop immediately. - A temporary fence is to be erected around the Aboriginal cultural heritage site, with a buffer zone of at least 10 m around the known edge of the Aboriginal cultural heritage site. - An appropriately qualified archaeological consultant is to be engaged to identify the material. - If the material is an Aboriginal object, the Proponent will notify: - the HNSW's Enviroline on 1300 361 967; and - representatives of the RAPs. - Facilitate, in co-operation with the appropriate authorities and the RAPs: - The recording and assessment of the finds in Compliance with any legal requirements and HNSW directions

Management risk / impacted value	Mitigation measures	Description
		— The development and implementation of appropriate management strategies based on an assessment of the significance of the finds. — The recommencement of ground disturbance works may only resume once legal requirements are fulfilled
Management risk - unexpected finds - human remains	Stop work and follow the procedure for the discovery of suspected human remains	— All workers should be inducted into the Subject Area, so they are made aware of their obligations under the NPW Act and any conditions of any future AHIP prior to and during and after construction activities. — In the unlikely event that suspected human remains are encountered during construction, all work in the area that may cause further impact, must cease immediately. — 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 notification to the Proponent. — If the skeletal remains are identified as Aboriginal, the Proponent or their agent must contact: — the Heritage NSW's Enviroline on 1300 361 967; and — Representatives of the RAPs. — No works are to continue until Heritage NSW provides written notification to the Proponent or their Agent.

The proposed mitigation measures for the individual sites within the Subject Area are included in Table 12.

Table 12: Proposed mitigation measures for the site

AHIMS ID	Site name	Status	Type of harm (direct/indirect/none)	Primary proposed mitigation measure
		The site is currently listed on AHIMS as being 'valid'	Direct	Community collection of the site under an AHIP is warranted. An ASIRF is to be submitted at the completion of the community collection works to change the status to 'partially destroyed'

loss or damage arising from its use, or errors, or omissions therein. Positional variations of some features within the map may occur due to differences between the sources of the information; this includes scale, date and method of collection'



Figure 7

AHIP Application

Arup TransGrid Transposition Towers Heritage - Northern Cluster ACHA

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

13. Recommendations

Niche was commissioned by Arup on behalf of Transgrid to prepare an ACHA for the Subject Area.

This AR presents the results of an Aboriginal cultural heritage site inspection completed by Niche and representatives of the Proponent and RAPs in compliance with the requirements of the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010a).

An assessment of the potential impacts of the proposed works and associated ground disturbance indicates that one Aboriginal cultural heritage site has the potential to be directly harmed resulting in partial impacts to the site. Avoidance and mitigation measures are therefore warranted and must be implemented prior to works proceeding.

Based on the community consultation with the Aboriginal stakeholders and archaeological investigations undertaken for the Subject Area by Niche, several recommendations are included in Table 13. Additional detail regarding the implementation of these recommendations is provided in Table 11. These recommendations will be included in the AHIP for the Subject Area, to manage the site during construction. This will include an unexpected finds protocol.

Table 13: Recommendations for the Subject Area

Recommendations	
Known and unknown Aboriginal heritage sites	
1.	One Aboriginal site was identified within the Subject Area during the assessment (██████████). An AHIP will be required to mitigate impacts to the site prior to works commencing. The AHIP would allow for community collection of artefacts within the proposed impact area, as described in Table 11.
2.	The portion of ██████████ identified during the survey that is outside the proposed impact area will be avoided and conserved.
3.	The Proponent should continue to consult with the RAPs during construction in accordance with the ACHCRPs.
4.	The long-term management of any artefacts recovered during the community collection of ██████████ should be formalised in a care agreement as determined by the RAPs. On-Country reburial of artefacts in areas not subject to future disturbance activities will be considered by the Proponent, in consultation with the RAPs.
5.	An Aboriginal Site Impact Recording Form (ASIRF) must be submitted for the site ██████████ once community collections works have been completed.
General	
6.	All workers should be inducted into the Subject Area in line with the process outlined in Table 11.
7.	Unexpected finds should be managed in line with the process outlined in Table 11.
8.	If human remains are uncovered during the project, they should be managed in line with the process outlined in Table 11.

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Upper Hunter Wonnarua Council (V. Perry, 2001). *"Poggy" Merriwa Sand Quarry Cultural Heritage Assessment*.



Appendix A

AHIMS extensive search



AHIMS Web Services (AWS)
Extensive search - Site list report

Your Ref/PO Number : 9211
Client Service ID : 1176792

Siteld	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports

**** 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 25/08/2026 for Samuel Riley for the following area at Lat, Long From : -32.2815, 150.2589 - Lat, Long To : -32.2784, 150.2666. Number of Aboriginal sites and Aboriginal objects found is 3



AHIMS Web Services (AWS)
Extensive search - Site list report

Your Ref/PO Number : Structure 169
Client Service ID : 1030253

<u>SiteID</u>	<u>SiteName</u>	<u>Datum</u>	<u>Zone</u>	<u>Easting</u>	<u>Northing</u>	<u>Context</u>	<u>Site Status **</u>	<u>SiteFeatures</u>	<u>SiteTypes</u>	<u>Reports</u>

**** 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 : -32.2815, 150.2589 - Lat, Long To : -32.2784, 150.2666. Number of Aboriginal sites and Aboriginal objects found is 2

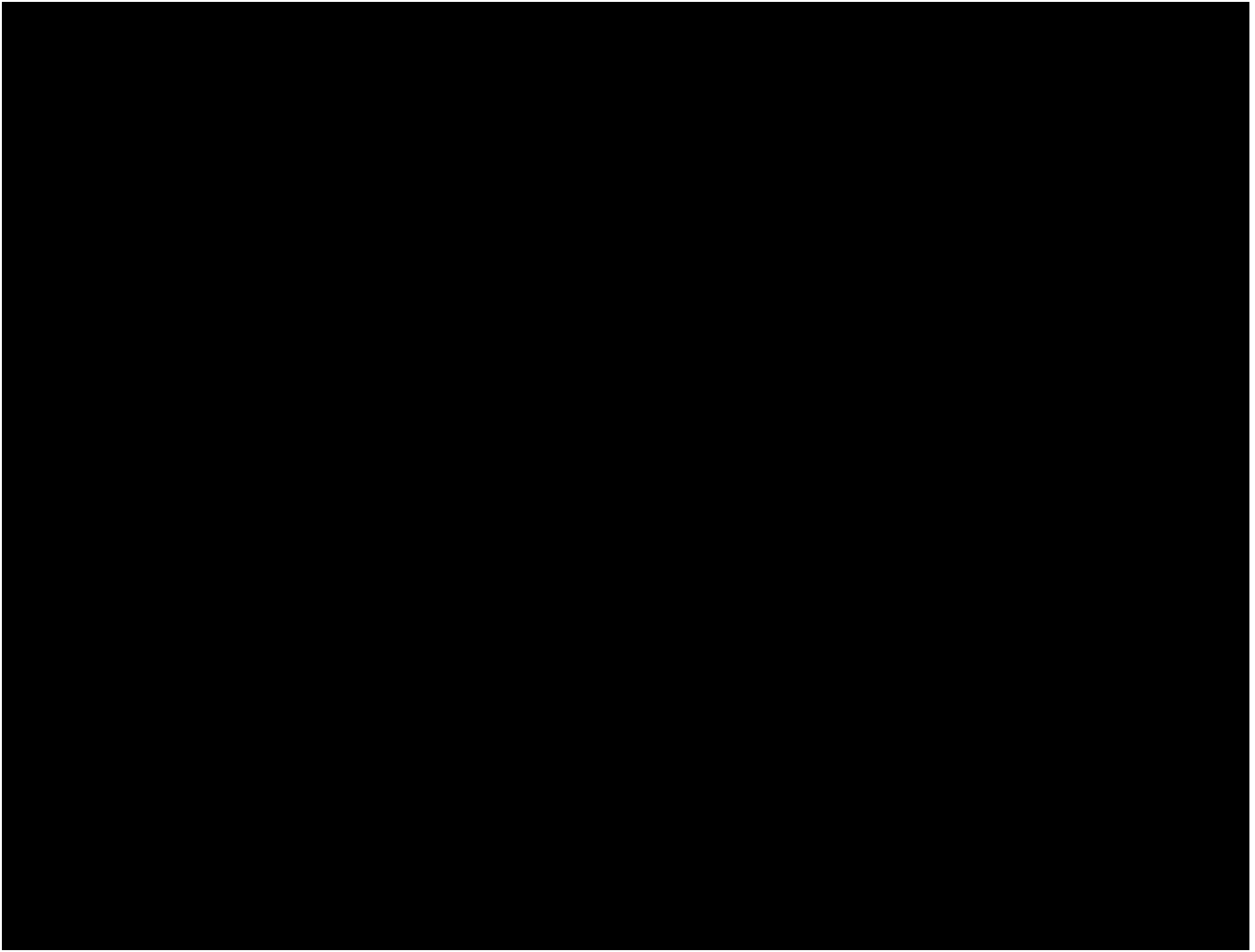


Appendix B

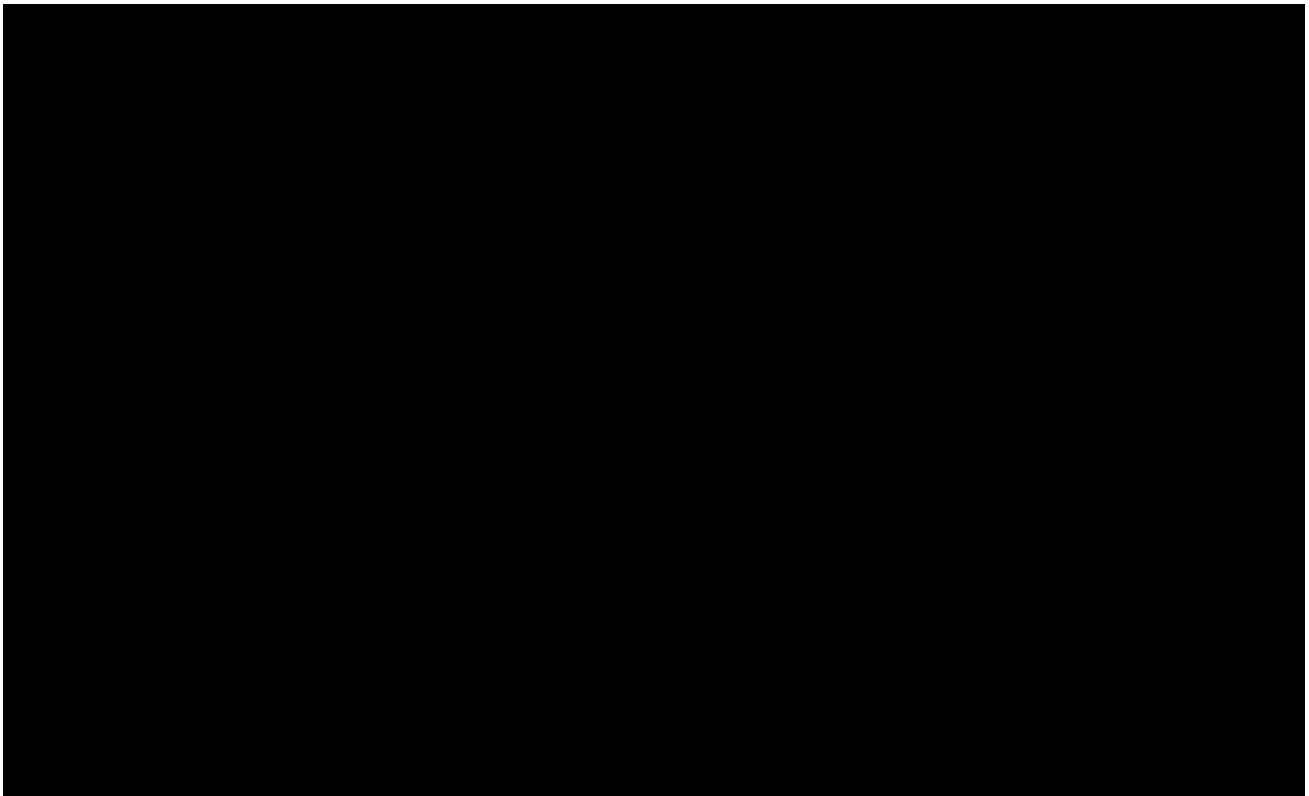
AHIMS site cards

[Redacted content]

Site location map



Site plan



Features:

Number of
features

Length of
feature(s)
extent (m)

Width of
feature (s)
extent (m)

Scarred Trees			
Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species

4.

Feature condition:

Description:

Features:

Number of
features

Length of
feature(s)
extent (m)

Width of
feature (s)
extent (m)

Scarred Trees			
Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species

5.

Feature condition:

Description:

Site restrictions

Do you want to
Restrict this site?: ☐

Restriction type: Gender ☐ General ☐ Location ☐
N/A

Why is this site restricted?:

Further information contact

Title	Surname	First name
Mr.	Riley	Samuel
Organisation: Niche Environment and Heritage		
Address: Suite 501, Level 5, 33 Argyle St Parramatta NSW 2150		
Phone:	E-mail: sriley@niche-eh.com	

Site interpretation and community statement



Contact us

info@niche-eh.com
niche-eh.com

NSW office

Sydney: Gadigal Country
02 9630 5658
Level 3, 31 Alfred Street
Sydney NSW 2000

QLD office

Brisbane: Turrbal and Jagera Country
07 2104 8594
Level 6, 200 Adelaide Street
Brisbane QLD 4000

VIC office

Melbourne: Wurundjeri Country
0488 224 036
Level 3, 162 Collins Street
Melbourne VIC 3000

Our expertise



Natural capital
and offsetting



Ecology



Heritage
management



Spatial Services

Appendix 2

Aboriginal community consultation

30 January 2026

NSW Environment and Heritage
Locked Bag 5020
Parramatta NSW 2124

heritagemailbox@environment.nsw.gov.au

To whom it may concern,

Re: Transgrid Transposition Towers – Aboriginal Cultural Heritage Assessment (Niche ref: #9211)

Niche Environment and Heritage (Niche) have been engaged by Transgrid (hereafter referred to as 'the Proponent'), to assist in the preparation of an Aboriginal Cultural Heritage Assessment (ACHA) including Aboriginal community consultation for proposed transposition and vegetation clearing works located at Lot 7 DP 1279168 within the Upper Hunter Local Government Area in New South Wales.

At this location, Transgrid is proposing to install four new steel poles around an existing structure (Transmission Line 5A3/5A4 Structure 169) and upgrade an access track. A preliminary heritage assessment involving a desktop search of the Aboriginal Heritage Information Management System (AHIMS) and a site walkover identified Aboriginal objects within the area of interest.

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Samuel Riley

Heritage Consultant

Niche

E - sriley@niche-eh.com

T - 0488 774 037

Niche Environment and Heritage Pty Ltd

NSW Office – Sydney
Dharug Country
02 9630 5658
L3, 93 George St
Parramatta NSW 2150

QLD Office – Brisbane
Turrbal and Jagera Country
Ground Floor, Suite 3 North Tower 527
Gregory Terrace
Fortitude Valley QLD 4006

VIC Office – Melbourne
Wurundjeri Country Level 3,
162 Collins Street
Melbourne VIC 3000

T - 02 9630 5658
E - info@niche-eh.com
ABN - 19 137 111 721

[Niche-eh.com](https://www.niche-eh.com)

Niche will write to each Aboriginal person or group whose details are provided to notify them of the proposed project and invite them to register an interest in the community consultation process.

The Proponent, Transgrid, can be contacted via:

Carl Little

First Nations Engagement and Access Officer

Transgrid

Carl.Little@transgrid.com.au

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Yours sincerely,



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30 January 2026

Hunter Local Land Services
181 Bettington Street
Merriwa NSW 2329

admin.hunter@lls.nsw.gov.au

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30 January 2026

Native Title Services Corporation
PO Box 2105
Strawberry NSW 2012

information@ntscorp.com.au

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30 January 2026

The Registrar
PO Box 787
Parramatta NSW 2124

aboriginalowners@oralra.nsw.gov.au

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30 January 2026

Upper Hunter Shire Council
34-40 Vennacher Street
Merriwa NSW 2329

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30 January 2026

Wanaruah Local Aboriginal Land Council
17-19 Maitland Street
Muswellbrook NSW 2333
admin@wanaruahlandcouncil.com.au

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Request for Spatial Search of Tribunal Registers



Your assistance in providing information in the correct format will ensure that your search request is dealt with as efficiently as possible. **The completed form must accompany your emailed request.**

It may take up to three working days to provide you with your search results when you submit conventional search criteria (tenement or land parcel identifiers). It may take up to five working days for more complex or larger searches. The Tribunal will contact you if a result cannot be provided within this timeframe.

Parcel Identifiers

The NNTT uses the terminology and formatting of unique identifiers used in each state to uniquely identify a land parcel. Please identify land parcels using the formats below:

1. **Western Australia and Queensland** – use Lot on plan details (e.g. WA - 124/P098764 or QLD - 124DP98764).
2. **New South Wales** – use Lot/Section/Plan details (e.g. 124/7/DP258456 or 124//DP568954).
3. **Northern Territory** - use LAISKEY details (e.g. 695 1256 or 000 2568). The laiskey is a unique identifier for each parcel comprised of the location code, LTO code (derived from the survey plan) where applicable and the parcel number
4. **South Australia** – use Plan/Parcel ID (e.g. H529687AL125). Concatenation of Plan Type, Plan, Parcel Type and Parcel.
5. **Victoria** - use SPI (Standard Parcel Identifier) details (e.g. 1\PP2870 or 9E~\PP3306).

The Search Form

1. Specify only **one jurisdiction** (e.g. Queensland) and **one type of tenure** (e.g. mining tenement) per form.
2. You can add up to 20 separate tenements or parcels per search request. Enter one parcel identifier per form field. Do not use ranges such as lots 5 to 15 on Plan DP1486.
3. **For more than 20 parcels or tenements, please submit additional search requests or alternatively attach an Excel spreadsheet along with your completed search form.** List the parcel identifiers in the correct unique format (see above).
4. If your area of interest cannot be clearly identified from the search form, or is not held in NNTT datasets, we may instead provide search results for a surrounding local government area, or other suitable regional area

Disclaimers and additional notes in relation to timeframes, freehold land and cultural heritage in NSW are addressed on the [Geospatial Searches](#) homepage and these should be referred to prior to lodging your request.

If you have any further queries please contact GeospatialSearch@NNTT.gov.au to discuss.

Request for Spatial Search of Tribunal Registers



National
Native Title
Tribunal

1: Your details

Your name:	Samuel Riley		
Your company:	Niche Environment and Heritage		
E-mail address:	sriley@niche-eh.com	Phone:	0488 774 037
Your reference:	9211	Your state:	New South Wales
☒	I have read and acknowledge the terms and conditions on the previous page.		

2: Areas to be searched

Jurisdiction to be searched:	New South Wales	Tenure to be searched:	Land Parcel
------------------------------	-----------------	------------------------	-------------

Parcel or tenement identifiers (add up to 20 separate identifiers). **Please see previous page for parcel identifiers.**

Parcel 1:	7//DP1279168	Parcel 2:	Click or tap here to enter text.
Parcel 3:	Click or tap here to enter text.	Parcel 4:	Click or tap here to enter text.
Parcel 5:	Click or tap here to enter text.	Parcel 6:	Click or tap here to enter text.
Parcel 7:	Click or tap here to enter text.	Parcel 8:	Click or tap here to enter text.
Parcel 9:	Click or tap here to enter text.	Parcel 10:	Click or tap here to enter text.
Parcel 11:	Click or tap here to enter text.	Parcel 12:	Click or tap here to enter text.
Parcel 13:	Click or tap here to enter text.	Parcel 14:	Click or tap here to enter text.
Parcel 15:	Click or tap here to enter text.	Parcel 16:	Click or tap here to enter text.
Parcel 17:	Click or tap here to enter text.	Parcel 18:	Click or tap here to enter text.
Parcel 19:	Click or tap here to enter text.	Parcel 20:	Click or tap here to enter text.

If your search area is not a parcel or mining or petroleum tenement, you can enter other tenure or administrative regions here (e.g. local government area, townsite or county). Please provide as much detail as you can.

Click or tap here to enter text.

E-mail the completed form to GeospatialSearch@NNTT.gov.au

From: [Ceo](#)
To: [Sam Riley](#)
Subject: FW: Transgrid Transposition Towers - Aboriginal Cultural Heritage Assessment (Niche Ref #9211)
Date: Friday, 30 January 2026 9:09:06 AM
Attachments: [image001.png](#)
[9211_Agency_Notification_Letter_Wanaruah_LALC_260130.pdf](#)

Sam

Please note the Ceo email is the correct email to send this to.

We would like to register our interest.

Thank you

De-anne

From: Admin <admin@wanaruahlandcouncil.com.au>
Sent: Friday, 30 January 2026 8:57 AM
To: Ceo <ceo@wanaruahlandcouncil.com.au>
Subject: Fw: Transgrid Transposition Towers - Aboriginal Cultural Heritage Assessment (Niche Ref #9211)

From: Sam Riley <sriley@niche-eh.com>
Sent: 30 January 2026 08:40
To: Admin <admin@wanaruahlandcouncil.com.au>
Subject: Transgrid Transposition Towers - Aboriginal Cultural Heritage Assessment (Niche Ref #9211)

You don't often get email from sriley@niche-eh.com. [Learn why this is important](#)

Good morning,

Niche Environment and Heritage (Niche) has been engaged by Transgrid (hereafter referred to as 'the Proponent') to assist in the preparation of an Aboriginal Cultural Heritage Assessment including Aboriginal community consultation for proposed transposition and vegetation clearing works at Lot 7 DP 1279168 located in the Upper Hunter Council Local Government Area.

If you know of any interested Aboriginal people who hold cultural knowledge relevant to, or who have a right or interest in determining the cultural heritage significance of Aboriginal object(s) and/or place(s) in the Subject Area, please provide their details by **5pm on Friday 13 February 2026**.

Please see the attached letter for further details.

Many thanks,

Samuel Riley BArch, MRes
Heritage Consultant

T - 0488 774 037
E - sriley@niche-eh.com

NSW - Central Coast
Awabakal and Worimi Country

From: [Barry Gunther](#)
To: [Sam Riley](#)
Subject: Heritage NSW Aboriginal stakeholder list for Lot 7 DP 1279168 Transgrid Transposition Towers
Date: Monday, 2 February 2026 2:20:06 PM
Attachments: [image001.png](#)
[9211_Agency_Notification_Letter_Heritage_NSW_260130.pdf](#)
[Heritage NSW Aboriginal stakeholder list for Lot 7 DP 1279168 Transgrid Transposition Towers Upper Hunter LGA.docx](#)

You don't often get email from barry.gunther@dcceew.nsw.gov.au. [Learn why this is important](#)

Hi Samuel,

Please find attached the Heritage NSW Aboriginal stakeholder list for Lot 7 DP 1279168 Transgrid Transposition Towers.

regards

Barry Gunther
Aboriginal Senior Assessment Officer
Heritage NSW
Department of Climate Change,
Energy, the Environment and Water

www.environment.nsw.gov.au/topics/heritage

Locked bag 5020
Parramatta NSW 2124

Working days Monday to Friday, 9:00am - 5:00pm

I acknowledge the traditional custodians of the land and pay respects to Elders past and present. I also acknowledge all the Aboriginal and Torres Strait Islander staff working with NSW Government at this time.

Please consider the environment before printing this email.

From: Sam Riley <sriley@niche-eh.com>
Sent: Friday, 30 January 2026 8:41 AM
To: Heritage NSW <support@zendesk.environment.nsw.gov.au>
Subject: Transgrid Transposition Towers - Aboriginal Cultural Heritage Assessment (Niche Ref #9211)

Good morning,

Niche Environment and Heritage (Niche) has been engaged by Transgrid (hereafter referred to as 'the Proponent') to assist in the preparation of an Aboriginal Cultural Heritage Assessment including Aboriginal community consultation for proposed transposition and vegetation clearing works at Lot 7 DP 1279168 located in the Upper Hunter Council Local Government Area.

If you know of any interested Aboriginal people who hold cultural knowledge relevant to, or who have a right or interest in determining the cultural heritage significance of Aboriginal object(s) and/or place(s) in the Subject Area, please provide their details by **5pm on Friday 13 February**

2026.

Please see the attached letter for further details.

Many thanks,

Samuel Riley BArch, MRes
Heritage Consultant

T - 0488 774 037
E - sriley@niche-eh.com

NSW - Central Coast
Awabakal and Worimi Country
02 9630 5658

Niche-eh.com



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From: [Geospatial Search Requests](#)
To: [Sam Riley](#)
Subject: RE: SR26/127 - Transgrid Transposition Towers - Aboriginal Cultural Heritage Assessment (Niche Ref #9211) [SEC=OFFICIAL]
Date: Friday, 30 January 2026 3:57:34 PM
Attachments: [image002.png](#)
[image003.png](#)

OFFICIAL

Your ref: 9211 **Our ref:** SR26/127

Dear Samuel Riley,

Thank you for your search request, please find your results below.

Search Results

The results provided are based on the information you supplied and are derived from a search of the following Tribunal databases:

0. Schedule of Native Title Determination Applications
1. Register of Native Title Claims
2. Native Title Determinations
3. Indigenous Land Use Agreements (Registered and notified)

Results for overlapping native title matters in NSW:

Feature ID	Tenure	Cadastral Data As At	Feature Area SqKm	Overlapping Native Title Feature				
				NNTT File Number	Name	Category	Overlap Area SqKm	% Selected Feature
7//DP1279168	FREEHOLD	25/01/2026	1.0036	NC2011/006	Gomerioi People	Applications (Schedule)	1.0036	100.00%
				NC2011/006	Gomerioi People	Applications (RNTC)	1.0036	100.00%

For more information about the Tribunal's registers or to search the registers yourself and obtain copies of relevant register extracts, please visit our [website](#).

Information on native title claims and freehold land can also be found on the Tribunal's website here: [Native title claims and freehold land](#).

Please note: There may be a delay between a native title determination application being lodged in the Federal Court and its transfer to the Tribunal. As a result, some native title determination applications recently filed with the Federal Court may not appear on the Tribunal's databases.

The search results are based on analysis against external boundaries of applications only. Native title applications commonly contain exclusions clauses which remove areas from within the external boundary. To determine whether the areas described are in fact subject to claim, you need to refer to the "Area covered by claim" section of the relevant Register Extract or Schedule Extract and any maps attached.

Search results and the existence of native title

Please note that the enclosed information from the Register of Native Title Claims and/or the Schedule of Applications is **not** confirmation of the existence of native title in this area. This cannot be confirmed until the Federal Court makes a determination that native title does or does not exist in relation to the area. Such determinations are registered on the National Native Title Register.

The Tribunal accepts no liability for reliance placed on enclosed information

The enclosed information has been provided in good faith. Use of this information is at your sole risk. The National Native Title Tribunal makes no representation, either express or implied, as to the accuracy or suitability of the information enclosed for any particular purpose and accepts no liability for use of the information or reliance placed on it.

If you have any further queries, please do not hesitate to contact us via GeospatialSearch@NNTT.gov.au

Regards,

Geospatial Searches

National Native Title Tribunal | Perth

Email: GeospatialSearch@nntt.gov.au | www.nntt.gov.au



A Reconciled Future I acknowledge the traditional custodians of the lands where we live, learn and work

From: Sam Riley <sriley@niche-eh.com>
Sent: Friday, 30 January 2026 8:44 AM
To: Geospatial Search Requests <GeospatialSearch@NNTT.gov.au>
Subject: SR26/127 - Transgrid Transposition Towers - Aboriginal Cultural Heritage Assessment (Niche Ref #9211)

Caution: This is an external email. DO NOT click links or open attachments unless you recognise the sender and know the content is safe.

To whom it may concern,

I hope this email finds you well.

See attached a request for Spatial Search of Tribunal Registers form for the Transgrid Transposition Towers ACHA (Niche ref #9211).

Kind regards,

Samuel Riley BArch, MRes
Heritage Consultant

T - 0488 774 037
E - sriley@niche-eh.com

NSW - Central Coast
Awabakal and Worimi Country
02 9630 5658

Niche-eh.com



Creating a sustainable future.

From: [Aboriginal Owners](#)
To: [Sam Riley](#)
Subject: RE: Transgrid Transposition Towers - Aboriginal Cultural Heritage Assessment (Niche Ref #9211)
Date: Monday, 2 February 2026 10:29:04 AM
Attachments: [image002.png](#)
[image003.png](#)
[20260202_Transgrid_Wanaruah LALC Niche.pdf](#)

OFFICIAL

Dear Samuel,

Please find attached the response from the Office of the Registrar, ALRA to your email of 07 January 2026 regarding the proposed transposition and vegetation clearing works at Lot 7 DP 1279168 located in the Upper Hunter Council Local Government Area, NSW.

If you have any further questions, please respond by return email.

Kind Regards

The Aboriginal Owners team

Office of the Registrar, Aboriginal Land Rights Act 1983
T (02) 8575 1160 E aboriginalowners@oralra.nsw.gov.au
www.oralra.nsw.gov.au

PO Box 787
PARRAMATTA NSW 2124
Working days Monday to Friday, 9:00 am – 5:00 pm



I acknowledge the traditional custodians of the land and pay respects to Elders past and present. I also acknowledge all the Aboriginal and Torres Strait Islander staff working with NSW Government at this time.

Please consider the environment before printing this email.

OFFICIAL

From: Sam Riley <sriley@niche-eh.com>
Sent: Friday, 30 January 2026 8:41 AM
To: Aboriginal Owners <aboriginalowners@oralra.nsw.gov.au>
Subject: Transgrid Transposition Towers - Aboriginal Cultural Heritage Assessment (Niche Ref #9211)

[CAUTION: This email originated from outside of the organisation. Do not click links or open attachments unless you recognise the sender and know the content is safe.]

Good morning,

Niche Environment and Heritage (Niche) has been engaged by Transgrid (hereafter referred to as 'the Proponent') to assist in the preparation of an Aboriginal Cultural Heritage Assessment including Aboriginal community consultation for proposed transposition and vegetation clearing works at Lot 7 DP 1279168 located in the Upper Hunter Council Local Government Area.

If you know of any interested Aboriginal people who hold cultural knowledge relevant to, or who have a right or interest in determining the cultural heritage significance of Aboriginal object(s) and/or place(s) in the Subject Area, please provide their details by **5pm on Friday 13 February 2026**.

Please see the attached letter for further details.

Many thanks,

From: [LLS Admin Hunter Mailbox](#)
To: [Sam Riley](#)
Subject: Re: Transgrid Transposition Towers - Aboriginal Cultural Heritage Assessment (Niche Ref #9211)
Date: Friday, 30 January 2026 1:19:20 PM
Attachments: [image001.png](#)
[Outlook-Illustrati.png](#)

Hi

Hunter Local Land Services do not have a list of all of the relevant Aboriginal Traditional Custodians that are within your project area. Could you please contact the relevant Local Aboriginal Land Council (LALC) for the list of Aboriginal Traditional Custodians that have interest within the project site area. See following link to LALC contact details:

https://alc.org.au/land_council/

Also, please check the National Native Title Tribunal and search for Registered Native Title Claims for your area, to view list of Claims please access the following link:

<http://www.nntt.gov.au/searchRegApps/NativeTitleRegisters/Pages/Search-Register-of-Native-Title-Claims.aspx>

For further questions please contact Toby Whaleboat on details below.

toby.whaleboat@lls.nsw.gov.au

0429 303 765

Regards, Jacqui

Jacqueline Myhill

Customer Service & Administration Coordinator

Local Land Services

P 0429 204 130 E jacqueline.myhill@lls.nsw.gov.au

lls.nsw.gov.au

Scone



Local Land Services



We stand on Country that always was and always will be Aboriginal land. We acknowledge the Traditional Custodians of the land and waters, and we show our respect for Elders past, present and emerging. We are committed to providing places in which Aboriginal people are included socially, culturally and economically through thoughtful and collaborative approaches to our work.

From: Sam Riley <sriley@niche-eh.com>

Sent: Friday, 30 January 2026 8:40 AM

To: LLS Admin Hunter Mailbox <admin.hunter@lls.nsw.gov.au>

Subject: Transgrid Transposition Towers - Aboriginal Cultural Heritage Assessment (Niche Ref #9211)

Good morning,

Niche Environment and Heritage (Niche) has been engaged by Transgrid (hereafter referred to as 'the Proponent') to assist in the preparation of an Aboriginal Cultural Heritage Assessment including Aboriginal community consultation for proposed transposition and vegetation clearing works at Lot 7 DP 1279168 located in the Upper Hunter Council Local Government Area.

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Please see the attached letter for further details.

Many thanks,

Samuel Riley BArch, MRes
Heritage Consultant

T - 0488 774 037

E - sriley@niche-eh.com

NSW - Central Coast

Awabakal and Worimi Country

02 9630 5658

[Niche-eh.com](https://www.niche-eh.com)



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From: [Sam Riley](#)
To: [Heritage NSW](#)
Subject: Transgrid Transposition Towers - Aboriginal Cultural Heritage Assessment (Niche Ref #9211)
Date: Friday, 30 January 2026 8:41:00 AM
Attachments: [9211_Agency_Notification_Letter_Heritage_NSW_260130.pdf](#)
[image001.png](#)

Good morning,

Niche Environment and Heritage (Niche) has been engaged by Transgrid (hereafter referred to as 'the Proponent') to assist in the preparation of an Aboriginal Cultural Heritage Assessment including Aboriginal community consultation for proposed transposition and vegetation clearing works at Lot 7 DP 1279168 located in the Upper Hunter Council Local Government Area.

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Please see the attached letter for further details.

Many thanks,

Samuel Riley BArch, MRes
Heritage Consultant

T - 0488 774 037
E - sriley@niche-eh.com

NSW - Central Coast
Awabakal and Worimi Country
02 9630 5658

Niche-eh.com



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sustainable future.

From: [Sam Riley](#)
To: council@upperhunter.nsw.gov.au
Subject: Transgrid Transposition Towers - Aboriginal Cultural Heritage Assessment (Niche Ref #9211)
Date: Friday, 30 January 2026 8:41:00 AM
Attachments: [9211_Agency_Notification_Letter_UHSC_260130.pdf](#)
[image001.png](#)

Good morning,

Niche Environment and Heritage (Niche) has been engaged by Transgrid (hereafter referred to as 'the Proponent') to assist in the preparation of an Aboriginal Cultural Heritage Assessment including Aboriginal community consultation for proposed transposition and vegetation clearing works at Lot 7 DP 1279168 located in the Upper Hunter Council Local Government Area.

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Please see the attached letter for further details.

Many thanks,

Samuel Riley BArch, MRes
Heritage Consultant

T - 0488 774 037
E - sriley@niche-eh.com

NSW - Central Coast
Awabakal and Worimi Country
02 9630 5658

Niche-eh.com



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From: [Sam Riley](#)
To: [Aboriginal Owners](#)
Subject: Transgrid Transposition Towers - Aboriginal Cultural Heritage Assessment (Niche Ref #9211)
Date: Friday, 30 January 2026 8:40:00 AM
Attachments: [9211_Agency_Notification_Letter_ORALRA_260130.pdf](#)
[image001.png](#)

Good morning,

Niche Environment and Heritage (Niche) has been engaged by Transgrid (hereafter referred to as 'the Proponent') to assist in the preparation of an Aboriginal Cultural Heritage Assessment including Aboriginal community consultation for proposed transposition and vegetation clearing works at Lot 7 DP 1279168 located in the Upper Hunter Council Local Government Area.

If you know of any interested Aboriginal people who hold cultural knowledge relevant to, or who have a right or interest in determining the cultural heritage significance of Aboriginal object(s) and/or place(s) in the Subject Area, please provide their details by **5pm on Friday 13 February 2026**.

Please see the attached letter for further details.

Many thanks,

Samuel Riley BArch, MRes
Heritage Consultant

T - 0488 774 037
E - sriley@niche-eh.com

NSW - Central Coast
Awabakal and Worimi Country
02 9630 5658

Niche-eh.com



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From: [Sam Riley](#)
To: information@ntscorp.com.au
Subject: Transgrid Transposition Towers - Aboriginal Cultural Heritage Assessment (Niche Ref #9211)
Date: Friday, 30 January 2026 8:40:00 AM
Attachments: [9211_Agency_Notification_Letter_NTSCorp_260130.pdf](#)
[image001.png](#)

Good morning,

Niche Environment and Heritage (Niche) has been engaged by Transgrid (hereafter referred to as 'the Proponent') to assist in the preparation of an Aboriginal Cultural Heritage Assessment including Aboriginal community consultation for proposed transposition and vegetation clearing works at Lot 7 DP 1279168 located in the Upper Hunter Council Local Government Area.

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Please see the attached letter for further details.

Many thanks,

Samuel Riley BArch, MRes
Heritage Consultant

T - 0488 774 037
E - sriley@niche-eh.com

NSW - Central Coast
Awabakal and Worimi Country
02 9630 5658

Niche-eh.com



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From: [Sam Riley](#)
To: admin@wanaruahlandcouncil.com.au
Subject: Transgrid Transposition Towers - Aboriginal Cultural Heritage Assessment (Niche Ref #9211)
Date: Friday, 30 January 2026 8:40:00 AM
Attachments: [9211_Agency_Notification_Letter_Wanaruah_LALC_260130.pdf](#)
[image001.png](#)

Good morning,

Niche Environment and Heritage (Niche) has been engaged by Transgrid (hereafter referred to as 'the Proponent') to assist in the preparation of an Aboriginal Cultural Heritage Assessment including Aboriginal community consultation for proposed transposition and vegetation clearing works at Lot 7 DP 1279168 located in the Upper Hunter Council Local Government Area.

If you know of any interested Aboriginal people who hold cultural knowledge relevant to, or who have a right or interest in determining the cultural heritage significance of Aboriginal object(s) and/or place(s) in the Subject Area, please provide their details by **5pm on Friday 13 February 2026**.

Please see the attached letter for further details.

Many thanks,

Samuel Riley BArch, MRes
Heritage Consultant

T - 0488 774 037
E - sriley@niche-eh.com

NSW - Central Coast
Awabakal and Worimi Country
02 9630 5658

Niche-eh.com



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sustainable future.

From: [Sam Riley](#)
To: [LLS Admin Hunter Mailbox](#)
Subject: Transgrid Transposition Towers - Aboriginal Cultural Heritage Assessment (Niche Ref #9211)
Date: Friday, 30 January 2026 8:40:00 AM
Attachments: [9211_Agency_Notification_Letter_Hunter_LLS_260130.pdf](#)
[image001.png](#)

Good morning,

Niche Environment and Heritage (Niche) has been engaged by Transgrid (hereafter referred to as 'the Proponent') to assist in the preparation of an Aboriginal Cultural Heritage Assessment including Aboriginal community consultation for proposed transposition and vegetation clearing works at Lot 7 DP 1279168 located in the Upper Hunter Council Local Government Area.

If you know of any interested Aboriginal people who hold cultural knowledge relevant to, or who have a right or interest in determining the cultural heritage significance of Aboriginal object(s) and/or place(s) in the Subject Area, please provide their details by **5pm on Friday 13 February 2026**.

Please see the attached letter for further details.

Many thanks,

Samuel Riley BArch, MRes
Heritage Consultant

T - 0488 774 037
E - sriley@niche-eh.com

NSW - Central Coast
Awabakal and Worimi Country
02 9630 5658

Niche-eh.com



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From: [Sam Riley](#)
To: [Geospatial Search Requests](#)
Subject: Transgrid Transposition Towers - Aboriginal Cultural Heritage Assessment (Niche Ref #9211)
Date: Friday, 30 January 2026 8:44:00 AM
Attachments: [9211_GeospatialSearch_20260130.docx](#)
[image001.png](#)

To whom it may concern,

I hope this email finds you well.

See attached a request for Spatial Search of Tribunal Registers form for the Transgrid Transposition Towers ACHA (Niche ref #9211).

Kind regards,

Samuel Riley BArch, MRes
Heritage Consultant

T - 0488 774 037
E - sriley@niche-eh.com

NSW - Central Coast
Awabakal and Worimi Country
02 9630 5658

[Niche-eh.com](https://niche-eh.com)



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Aboriginal Community Consultation and Registration of Interest

Niche Environment and Heritage (Niche) has been commissioned by Transgrid to conduct an Aboriginal Cultural Heritage Assessment (ACHA) for proposed works associated with proposed transposition and vegetation clearing located at Lot 7 DP 1279168 within the Upper Hunter Local Government Area in New South Wales. The proposed works will include the installation four new steel poles around an existing structure (Transmission Line 5A3/5A4 Structure 169) and the upgrade of an access track. These works may require the application for an Aboriginal Heritage Impact Permit (AHIP) under the *National Parks and Wildlife Act 1974 (NSW)*.

The Proponent, Transgrid, can be contacted via:

Carl Little

First Nations Engagement and Access Officer

Transgrid

Carl.Littletransgrid.com.au

In accordance with Section 4.1.3 of the Office of Environment and Heritage *Aboriginal cultural heritage consultation requirements for proponents 2010*, Transgrid is seeking to consult with any Aboriginal persons or groups who may hold cultural knowledge of, or who have the right or interest in Aboriginal cultural heritage of the Subject Area. The purpose of the consultation will be to assist the Proponent in the preparation of:

- An Aboriginal Cultural Heritage Assessment.
- Determining the significance of any Aboriginal objects and/or places within the Subject Area.
- Appropriate management recommendations for any Aboriginal objects and/or places that might be identified during the process.
- A potential AHIP application to manage any Aboriginal objects identified during the Aboriginal Cultural Heritage Assessment and to assist Heritage NSW in their consideration and determination of the application.

Please be advised that, as per Section 4.1.6 of the *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (OEH, 2010) the names of Aboriginal persons and groups who register an interest will be forwarded to Heritage NSW and the Wanaruah Local Aboriginal Land Council, unless the person or group specifies that they do not want their details released.

All registrations for the project must be received by 5 pm on Wednesday 11 March 2026 and should be directed in writing to:

Samuel Riley

Niche Environment and Heritage

Suite 501, Level 5, 33 Argyle St

Parramatta NSW 2150

Tel: 0488 774 037

Email: consultationniche-eh.com

25 February 2026

To whom it may concern,

Re: Transgrid Transposition Towers – Aboriginal Cultural Heritage Assessment (Niche ref: #9211)

Niche Environment and Heritage (Niche) have been engaged by Transgrid (hereafter referred to as 'the Proponent'), to assist in the preparation of an Aboriginal Cultural Heritage Assessment (ACHA) including Aboriginal community consultation for proposed transposition and vegetation clearing works located at Lot 7 DP 1279168 within the Upper Hunter Local Government Area in New South Wales.

At this location, Transgrid is proposing to install four new steel poles around an existing structure (Transmission Line 5A3/5A4 Structure 169) and the upgrade of an access track. A preliminary heritage assessment involving a desktop search of the Aboriginal Heritage Information Management System (AHIMS) and a site walkover identified Aboriginal objects within the area of interest.

The ACHA is to be conducted under the *Guide to Investigating Aboriginal Cultural Heritage in NSW* (OEH 2011) and in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW 2010). The ACHA report would detail Aboriginal heritage constraints within the Subject Area and provide recommendations regarding the proposed works.

The Proponent, Transgrid, can be contacted via:

Carl Little

First Nations Engagement and Access Officer

Transgrid

Carl.Little@transgrid.com.au

In accordance with Section 4.1.3 of DECCW (2010), the Proponent invites any Aboriginal persons or groups who may hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the Subject Area, or who have a right or interest in Aboriginal cultural heritage of the Subject Area, to participate in a process of Aboriginal community consultation. The purpose of the Aboriginal community consultation will be to assist the Proponent with:

- An Aboriginal Cultural Heritage Assessment Report
- Identification and determination of the significance of Aboriginal objects and/or places in the Subject Area
- Appropriate management recommendations for any other Aboriginal objects that might be identified in the Subject Area during the process.
- To assist the Director General of Heritage NSW in their consideration and determination of any subsequent Aboriginal Heritage Impact Permit application.

Please provide written confirmation of your registration to the following postal address or email by **5pm Wednesday 11 March 2026:**

Samuel Riley
Heritage Consultant
Niche Environment and Heritage
Suite 501, Level 5, 33 Argyle St
Parramatta NSW 2150
Tel: 0488 774 037
Email: sriley@niche-eh.com

We encourage any project specific consultation to be directed to Niche.

Niche Environment and Heritage Pty Ltd

NSW Office – Sydney
Dharug Country
02 9630 5658
L3, 93 George St
Parramatta NSW 2150

QLD Office – Brisbane
Turrbal and Jagera Country
Ground Floor, Suite 3 North Tower 527
Gregory Terrace
Fortitude Valley QLD 4006

VIC Office – Melbourne
Wurundjeri Country Level 3,
162 Collins Street
Melbourne VIC 3000

T – 02 9630 5658
E – info@niche-eh.com
ABN – 19 137 111 721

Niche-eh.com

Inclusion in the consultation process does not automatically result in paid site assessment. The decision on who is engaged for delivering particular services is based on a range of considerations including skills, relevant experience, and providing necessary certificates of currency.

Please be advised that, as per the Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW 2010) the names of Aboriginal persons and groups who register an interest will be forwarded to Heritage NSW and the Bathurst Local Aboriginal Land Council unless we are advised not to release particular details.

Yours sincerely,



Samuel Riley

Heritage Consultant

Niche

E - sriley@niche-eh.com

T - 0488 774 037

Niche Environment and Heritage Pty Ltd

NSW Office - Sydney
Dharug Country
02 9630 5658
L3, 93 George St
Parramatta NSW 2150

QLD Office - Brisbane
Turrbal and Jagera Country
Ground Floor, Suite 3 North Tower 527
Gregory Terrace
Fortitude Valley QLD 4006

VIC Office - Melbourne
Wurundjeri Country Level 3,
162 Collins Street
Melbourne VIC 3000

T - 02 9630 5658
E - info@niche-eh.com
ABN - 19 137 111 721

Niche-eh.com

From: [Lower Hunter Aboriginal Incorporated](#)
To: [Sam Riley](#)
Subject: Expression of Interest
Date: Monday, 9 March 2026 3:32:43 PM

Hi

On behalf of LHAI, I would like to register an Interest in the 9211 Transgrid Transposition Works project.

--

Thank You David Ahoy

Sites Manager

LHAI

Mobile [0431764850](#)

Lower Hunter Aboriginal Incorporated

ABN: 8192 4628 138

Email: lowerhunterai@gmail.com

PO BOX 185 Jesmond 2299

This email and any files transmitted with it are confidential and intended solely for the use of the individual or entity to whom they are addressed.

If you have received this email in error please notify the sender immediately.

From: Admin
To: Sam Riley
Subject: FW: 9211 Transgrid Transposition Works: Invitation to register
Date: Wednesday, 25 February 2026 4:19:37 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)
[image006.png](#)
[image007.png](#)
[image008.png](#)
[9211 RAP Notification Letter 260225.pdf](#)

Good afternoon

We would like to register our interest in the above-mentioned project please.

Thank you

Estelle



Admin |
Ungooroo Aboriginal Corporation
T 02 6571 5111
M
E admin@ungooroo.com.au
W <https://www.ungooroo.com.au>
A Shop 1 - 6, 157 - 159 John St Singleton NSW 2330

From: Sam Riley <sriley@niche-eh.com>
Sent: Wednesday, 25 February 2026 3:58 PM
Subject: 9211 Transgrid Transposition Works: Invitation to register

You don't often get email from sriley@niche-eh.com. [Learn why this is important](#)

Dear Stakeholder,

I hope this email finds you well.

Your organisation has been identified as a stakeholder for the proposed transposition and vegetation works located at Lot 7 DP 1279168 within the Upper Hunter Local Government Area. Please find attached an invitation to register an interest in the Aboriginal Cultural Heritage Assessment for the project that is being conducted by Niche Environment and Heritage.

Details of the project, contact information and how to register are in the attached letter. Registrations are required by 5pm on Wednesday 11 March 2026.

Yours sincerely,

Samuel Riley BArch, MRes
Heritage Consultant

T - 0488 774 037
E - sriley@niche-eh.com

NSW - Central Coast
Awabakal and Worimi Country
02 9630 5658

From: [Ray Moon](#)
To: [Sam Riley](#)
Subject: Re: 9211 Transgrid Transposition Works: Invitation to register
Date: Friday, 6 March 2026 4:50:01 PM

Good afternoon, Sam,

would you please register Wingarra Wilay as a RAP for this project our details are:

RAP- Ray Moon
wingarrawilay@yahoo.com
0433510072

Kind Regards

Mel Chown for Ray Moon
Wingarra Wilay

From: [Girra Murun](#)
To: [Sam Riley](#)
Subject: Re: 9211 Transgrid Transposition Works: Invitation to register
Date: Friday, 6 March 2026 4:33:58 PM
Attachments: [image001.png](#)

Good afternoon, Sam,

would you please register Girragirra Murun as a RAP for this project.

RAP- Malcolm Briggs
girragirramurun@yahoo.com
0484120690

Kind Regards

Diana Astin
Girragirra Murun

On Wednesday 25 February 2026 at 03:58:20 pm AEDT, Sam Riley <sriley@niche-eh.com> wrote:

Dear Stakeholder,

I hope this email finds you well.

Your organisation has been identified as a stakeholder for the proposed transposition and vegetation works located at Lot 7 DP 1279168 within the Upper Hunter Local Government Area. Please find attached an invitation to register an interest in the Aboriginal Cultural Heritage Assessment for the project that is being conducted by Niche Environment and Heritage.

Details of the project, contact information and how to register are in the attached letter. Registrations are required by 5pm on Wednesday 11 March 2026.

Yours sincerely,

Samuel Riley BArch, MRes
Heritage Consultant

T – 0488 774 037
E – sriley@niche-eh.com

NSW – Central Coast
Awabakal and Worimi Country
02 9630 5658

[Niche-eh.com](https://www.niche-eh.com)



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From: [Steven Flick](#)
To: [Sam Riley](#)
Subject: Re: 9211 Transgrid Transposition Works: Invitation to register
Date: Friday, 6 March 2026 9:46:11 AM
Attachments: [image001.png](#)

I would like to take part thanks. George flick

On Wed, Feb 25, 2026 at 3:58 PM Sam Riley <sriley@niche-eh.com> wrote:

Dear Stakeholder,

I hope this email finds you well.

Your organisation has been identified as a stakeholder for the proposed transposition and vegetation works located at Lot 7 DP 1279168 within the Upper Hunter Local Government Area. Please find attached an invitation to register an interest in the Aboriginal Cultural Heritage Assessment for the project that is being conducted by Niche Environment and Heritage.

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Yours sincerely,

Samuel Riley BArch, MRes
Heritage Consultant

T - 0488 774 037

E - sriley@niche-eh.com

NSW - Central Coast
Awabakal and Worimi Country

02 9630 5658

Niche-eh.com



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From: [Robert John Simpson](#)
To: [Sam Riley](#)
Subject: Re: 9211 Transgrid Transposition Works: Invitation to register
Date: Tuesday, 3 March 2026 9:34:50 PM
Attachments: [image001.png](#)

Hi Sam

Thank you for your email and positive engagement and consultation with Marri Culture and Heritage seeking Aboriginal Cultural Heritage input and Aboriginal Cultural Heritage Assessment & Reports.(ACHAR) - Marri Culture & Heritage would like to register our interest for further consultation as a RAP.

Regards

Robbie Simpson

On Wed, 25 Feb 2026 at 3:58 pm, Sam Riley <sriley@niche-eh.com> wrote:

Dear Stakeholder,

I hope this email finds you well.

Your organisation has been identified as a stakeholder for the proposed transposition and vegetation works located at Lot 7 DP 1279168 within the Upper Hunter Local Government Area. Please find attached an invitation to register an interest in the Aboriginal Cultural Heritage Assessment for the project that is being conducted by Niche Environment and Heritage.

Details of the project, contact information and how to register are in the attached letter. Registrations are required by 5pm on Wednesday 11 March 2026.

Yours sincerely,

Samuel Riley BArch, MRes
Heritage Consultant

T - 0488 774 037

E - sriley@niche-eh.com

From: [Leslie Atkinson](#)
To: [Sam Riley](#)
Subject: Re: 9211 Transgrid Transposition Works: Invitation to register
Date: Friday, 27 February 2026 11:06:01 AM
Attachments: [image001.png](#)

Yamma Sam

hope all is well , Les Atkinson from jarban & Mugrebe

Yes i would like to lodge An EOI in this project

I hold knowledge of identifying places and objects of the area

i would also like to place an EOI in in all aspects of field work surveying , test excavations and salvage works i hold all relevant COCs of insurances copies may be forwarded on request ; if you require any further information please do not hesitate to call Les

From: Sam Riley <sriley@niche-eh.com>
Sent: Wednesday, February 25, 2026 3:57 PM
Subject: 9211 Transgrid Transposition Works: Invitation to register

Dear Stakeholder,

I hope this email finds you well.

Your organisation has been identified as a stakeholder for the proposed transposition and vegetation works located at Lot 7 DP 1279168 within the Upper Hunter Local Government Area. Please find attached an invitation to register an interest in the Aboriginal Cultural Heritage Assessment for the project that is being conducted by Niche Environment and Heritage.

Details of the project, contact information and how to register are in the attached letter. Registrations are required by 5pm on Wednesday 11 March 2026.

Yours sincerely,

Samuel Riley BArch, MRes
Heritage Consultant

T - 0488 774 037
E - sriley@niche-eh.com

NSW - Central Coast
Awabakal and Worimi Country
02 9630 5658

[Niche-eh.com](https://niche-eh.com)



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From: [Manager](#)
To: [Sam Riley](#)
Subject: Re: 9211 Transgrid Transposition Works: Invitation to register
Date: Thursday, 26 February 2026 9:33:21 AM
Attachments: [image001.png](#)
[Outlook-2tabiwo1.png](#)

Good Morning Sam,

Thank you for the opportunity to register for the Transgrid Transposition Towers ACHA. Please accept this email to confirm the registration. Our details are as below.

Much Appreciated

Regards,

Kylie Pascoe | CEO



Hunter Valley Aboriginal Corporation

Ph: (02) 6543 4822

M: 0439 918 992

35 Maitland Street, Muswellbrook NSW

E: ceo@hvabcorp.org.au

From: Sam Riley <sriley@niche-eh.com>
Sent: Wednesday, 25 February 2026 3:57 PM
Subject: 9211 Transgrid Transposition Works: Invitation to register

Dear Stakeholder,

I hope this email finds you well.

Your organisation has been identified as a stakeholder for the proposed transposition and vegetation works located at Lot 7 DP 1279168 within the Upper Hunter Local Government Area. Please find attached an invitation to register an interest in the Aboriginal Cultural Heritage Assessment for the project that is being conducted by Niche Environment and Heritage.

Details of the project, contact information and how to register are in the attached letter. Registrations are required by 5pm on Wednesday 11 March 2026.

Yours sincerely,

Samuel Riley BArch, MRes
Heritage Consultant

T - 0488 774 037
E - sriley@niche-eh.com

NSW - Central Coast
Awabakal and Worimi Country
02 9630 5658

From: [Tiarna Bird](#)
To: [Sam Riley](#)
Subject: Re: 9211 Transgrid Transposition Works: Invitation to register
Date: Thursday, 26 February 2026 7:02:26 AM
Attachments: [image001.png](#)

Goodmorning, I would like to register interest thanks!

Tiarna Bird
Director
Mura Gadi Aboriginal Corporation

On Wed, 25 Feb 2026 at 15:58, Sam Riley <sriley@niche-eh.com> wrote:

Dear Stakeholder,

I hope this email finds you well.

Your organisation has been identified as a stakeholder for the proposed transposition and vegetation works located at Lot 7 DP 1279168 within the Upper Hunter Local Government Area. Please find attached an invitation to register an interest in the Aboriginal Cultural Heritage Assessment for the project that is being conducted by Niche Environment and Heritage.

Details of the project, contact information and how to register are in the attached letter. Registrations are required by 5pm on Wednesday 11 March 2026.

Yours sincerely,

Samuel Riley BArch, MRes
Heritage Consultant

T - 0488 774 037

E - sriley@niche-eh.com

NSW - Central Coast
Awabakal and Worimi Country

02 9630 5658

From: [Thomas Dahlstrom](#)
To: [Sam Riley](#)
Subject: Re: 9211 Transgrid Transposition Works: Invitation to register
Date: Wednesday, 25 February 2026 10:02:12 PM
Attachments: [image001.png](#)

Hi Sam

Thank you for your email. Can you please register me as an individual RAP for this.

Kind regards

Thomas Dahlstrom

From: Sam Riley <sriley@niche-eh.com>
Sent: Wednesday, February 25, 2026 3:57:43 PM
Subject: 9211 Transgrid Transposition Works: Invitation to register

Dear Stakeholder,

I hope this email finds you well.

Your organisation has been identified as a stakeholder for the proposed transposition and vegetation works located at Lot 7 DP 1279168 within the Upper Hunter Local Government Area. Please find attached an invitation to register an interest in the Aboriginal Cultural Heritage Assessment for the project that is being conducted by Niche Environment and Heritage.

Details of the project, contact information and how to register are in the attached letter. Registrations are required by 5pm on Wednesday 11 March 2026.

Yours sincerely,

Samuel Riley BArch, MRes
Heritage Consultant

T - 0488 774 037
E - sriley@niche-eh.com

NSW - Central Coast
Awabakal and Worimi Country
02 9630 5658

Niche-eh.com



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From: [Stephen Carroll](#)
To: [Sam Riley](#)
Subject: Re: 9211 Transgrid Transposition Works: Invitation to register
Date: Wednesday, 25 February 2026 9:11:26 PM
Attachments: [image001.png](#)

Hi Sam,

We Guugaburra Yiramiilan as descendants of Wonnarua traditional Aboriginal bloodlines would like to register our interest for further consultation and engagement ACHA proposed transposition and vegetation works located at Lot 7 DP 1279168 within the Upper Hunter Local Government Area.

Regards

Stephen Carroll

On Wed, Feb 25, 2026 at 3:58 PM Sam Riley <sriley@niche-eh.com> wrote:

Dear Stakeholder,

I hope this email finds you well.

Your organisation has been identified as a stakeholder for the proposed transposition and vegetation works located at Lot 7 DP 1279168 within the Upper Hunter Local Government Area. Please find attached an invitation to register an interest in the Aboriginal Cultural Heritage Assessment for the project that is being conducted by Niche Environment and Heritage.

Details of the project, contact information and how to register are in the attached letter. Registrations are required by 5pm on Wednesday 11 March 2026.

Yours sincerely,

Samuel Riley BArch, MRes
Heritage Consultant

T - 0488 774 037

E - sriley@niche-eh.com

NSW - Central Coast
Awabakal and Worimi Country

02 9630 5658

From: [Tracey Skene](#)
To: [Sam Riley](#)
Subject: Re: 9211 Transgrid Transposition Works: Invitation to register
Date: Wednesday, 25 February 2026 6:01:55 PM
Attachments: [image001.png](#)

Good evening Sam
Culturally Aware would like to put their EOI in for this project and familiar with the Cultural Landscape and surroundings of this area
Tracey
Culturally Awarr

Kind regards
Tracey Skene
7 Crawford Place, Millfield NSW 2325
Mobile 0474106537



On Wed, 25 Feb 2026 at 3:58 pm, Sam Riley <sriley@niche-eh.com> wrote:

Dear Stakeholder,

I hope this email finds you well.

Your organisation has been identified as a stakeholder for the proposed transposition and vegetation works located at Lot 7 DP 1279168 within the Upper Hunter Local Government Area. Please find attached an invitation to register an interest in the Aboriginal Cultural Heritage Assessment for the project that is being conducted by Niche Environment and Heritage.

Details of the project, contact information and how to register are in the attached letter. Registrations are required by 5pm on Wednesday 11 March 2026.

Yours sincerely,

From: [Ethan Trewlynn](#)
To: [Sam Riley](#)
Subject: Re: 9211 Transgrid Transposition Works: Invitation to register
Date: Wednesday, 25 February 2026 5:32:45 PM
Attachments: [image001.png](#)
[image001.png](#)

Hi Sam,

I would like to register Long Gully Cultural Services for this project.

Kind regards,

Ethan

On Wed, 25 Feb 2026, 3:58 pm Sam Riley, <sriley@niche-eh.com> wrote:

Dear Stakeholder,

I hope this email finds you well.

Your organisation has been identified as a stakeholder for the proposed transposition and vegetation works located at Lot 7 DP 1279168 within the Upper Hunter Local Government Area. Please find attached an invitation to register an interest in the Aboriginal Cultural Heritage Assessment for the project that is being conducted by Niche Environment and Heritage.

Details of the project, contact information and how to register are in the attached letter. Registrations are required by 5pm on Wednesday 11 March 2026.

Yours sincerely,

Samuel Riley BArch, MRes
Heritage Consultant

T - 0488 774 037

E - sriley@niche-eh.com

NSW - Central Coast
Awabakal and Worimi Country

02 9630 5658

From: [David Horton](#)
To: [Sam Riley](#)
Subject: Re: 9211 Transgrid Transposition Works: Invitation to register
Date: Wednesday, 25 February 2026 5:24:44 PM
Attachments: [image001.png](#)
[image001.png](#)

Hi Sam, its dave horton gomery cultural consultants, like to register for project please myself and partner have 25 years in culture n heritage works.

On Wed, 25 Feb 2026, 3:58 pm Sam Riley, <sriley@niche-eh.com> wrote:

Dear Stakeholder,

I hope this email finds you well.

Your organisation has been identified as a stakeholder for the proposed transposition and vegetation works located at Lot 7 DP 1279168 within the Upper Hunter Local Government Area. Please find attached an invitation to register an interest in the Aboriginal Cultural Heritage Assessment for the project that is being conducted by Niche Environment and Heritage.

Details of the project, contact information and how to register are in the attached letter. Registrations are required by 5pm on Wednesday 11 March 2026.

Yours sincerely,

Samuel Riley BArch, MRes
Heritage Consultant

T - 0488 774 037

E - sriley@niche-eh.com

NSW - Central Coast
Awabakal and Worimi Country

02 9630 5658

Niche-eh.com



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From: [Carolyn .H](#)
To: [Sam Riley](#)
Subject: Re: 9211 Transgrid Transposition Works: Invitation to register
Date: Wednesday, 25 February 2026 4:48:32 PM
Attachments: [image001.png](#)
[Outlook-x4kmkgu0.png](#)
[Outlook-zyftvafy.png](#)
[A1.WC.2027.pdf](#)
[A1.PL.2027.pdf](#)



Contact: Carolyn Hickey
Mobile: 0411650057
Email: Cazadirect@live.com
Address: 73 Russell St, Emu Plains, NSW 2750
ABN: 20 616 970 327

Good afternoon Sam,

Hope you're having a great day!

Thank you for your email. I would like to formally express my interest in being involved in all levels of consultation for this project. This includes attending meetings, preparing reports, sharing cultural information, and participating in available fieldwork.

A bit about myself: I am a Traditional Owner with over 25 years of experience in preserving Aboriginal cultural heritage. My extensive cultural knowledge is essential in determining the significance of Aboriginal objects and values within the project area.

I have attached A1 Indigenous Services Insurances.

Please do not publish this email

I agree to my details being shared with OEH and the LALC. Please feel free to contact me using the details provided above.

Kind regards,
Carolyn Hickey

A1 Indigenous Services is a 100% Indigenous-owned Australian company offering a range of services to the construction industry. Our mission is to commit to an innovative approach for a better future for Indigenous employment and community, while improving ways to close the gap in Aboriginal participation in the construction industry. We are dedicated to building strength in Aboriginal communities and our Indigenous labour force.



A1 Indigenous Services is a member of the NSW Indigenous Chamber of Commerce (NSWICC). A business or enterprise carrying the NSWICC Assured logo has met national policy requirements as upheld by FACCI, ensuring that it is identified as a First Nations business owner or entrepreneur and that it demonstrates compliance with government and industry regulators.



From: Sam Riley <sriley@niche-eh.com>

Sent: Wednesday, 25 February 2026 3:57 PM

Subject: 9211 Transgrid Transposition Works: Invitation to register

Dear Stakeholder,

I hope this email finds you well.

Your organisation has been identified as a stakeholder for the proposed transposition and vegetation works located at Lot 7 DP 1279168 within the Upper Hunter Local Government Area. Please find attached an invitation to register an interest in the Aboriginal Cultural Heritage Assessment for the project that is being conducted by Niche Environment and Heritage.

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Yours sincerely,

Samuel Riley BArch, MRes
Heritage Consultant

T - 0488 774 037

E - sriley@niche-eh.com

NSW - Central Coast
Awabakal and Worimi Country
02 9630 5658

[Niche-eh.com](https://www.niche-eh.com)



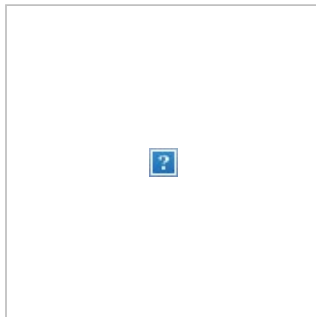
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From: [Amanda Hickey](#)
To: [Sam Riley](#)
Subject: Re: 9211 Transgrid Transposition Works: Invitation to register
Date: Wednesday, 25 February 2026 4:37:32 PM
Attachments: [image001.png](#)
[Inviro Logo \(180 x 60 px\).svg](#)

Hi Sam,

Amanda Hickey Cultural Services would like to register an interest in this project.

Have a great day,
Amanda Hickey



From: Sam Riley <sriley@niche-eh.com>
Date: Wednesday, 25 February 2026 at 15:58
To:
Subject: 9211 Transgrid Transposition Works: Invitation to register

Dear Stakeholder,

I hope this email finds you well.

Your organisation has been identified as a stakeholder for the proposed transposition and vegetation works located at Lot 7 DP 1279168 within the Upper Hunter Local Government Area. Please find attached an invitation to register an interest in the Aboriginal Cultural Heritage Assessment for the project that is being conducted by Niche Environment and Heritage.

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Yours sincerely,

Samuel Riley BArch, MRes
Heritage Consultant

T - 0488 774 037
E - sriley@niche-eh.com

NSW - Central Coast
Awabakal and Worimi Country
02 9630 5658

From: [Raiwyn Towney](#)
To: [Sam Riley](#)
Subject: Re: 9211 Transgrid Transposition Works: Invitation to register
Date: Wednesday, 25 February 2026 4:11:46 PM
Attachments: [image001.png](#)

Ngagga Ngagga as a Registered Aboriginal Party (RAP)

Good Afternoon,

I would like to formally register my interest in having our group recognised as an individual Registered Aboriginal Party (RAP).

The name of our RAP is Ngagga Ngagga.

Our representatives, Greg Kennedy and Raymond Hampton, bring extensive experience in cultural heritage surveys and excavations. Their work includes major projects such as:

- Wilpinjong Coal Mine (Peabody) extension
- Ulan West Mine (Glencore) underground extension
- Lake Lyell Pumped Hydro project
- EnergyCo REZ project
- As well as various other smaller heritage projects across their respective regions

Ngagga Ngagga is committed to participating in all aspects of projects, regardless of size.

For your reference, I have attached our insurance and public liability documentation in PDF format.

Our current rates are as follows:

- \$150.00 per hour, charged in half-day or full-day blocks
- Half-day (0–4 hours): \$600.00
- Full-day (4–8 hours): \$1200.00

Could you please confirm receipt of this email and provide verification of our registration?

Thank you for your time and consideration.

Kind regards,
Raiwyn Towney
Ngagga Ngagga

(Look Listen Learn)

Raiwyn Towney

On Wed, 25 Feb 2026 at 3:58 pm, Sam Riley <sriley@niche-eh.com> wrote:

Dear Stakeholder,

I hope this email finds you well.

Your organisation has been identified as a stakeholder for the proposed transposition and vegetation works located at Lot 7 DP 1279168 within the Upper Hunter Local Government Area. Please find attached an invitation to register an interest in the Aboriginal Cultural Heritage Assessment for the project that is being conducted by Niche Environment and Heritage.

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Yours sincerely,

Samuel Riley BArch, MRes
Heritage Consultant

T - 0488 774 037

E - sriley@niche-eh.com

NSW - Central Coast
Awabakal and Worimi Country

02 9630 5658

Niche-eh.com



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From: [lilly_carroll](#)
To: [Sam Riley](#)
Subject: Re: 9211 Transgrid Transposition Works: Invitation to register
Date: Wednesday, 25 February 2026 4:04:03 PM
Attachments: [image001.png](#)

Hi Sam

Can u plz register us on the transgrid transposition works project

Kind regards
Paul Boyd & Lilly Carroll
Directors DNC
0426823944
[Sent from Yahoo Mail for iPhone](#)

On Wednesday, February 25, 2026, 15:58, Sam Riley <sriley@niche-eh.com> wrote:

Dear Stakeholder,

I hope this email finds you well.

Your organisation has been identified as a stakeholder for the proposed transposition and vegetation works located at Lot 7 DP 1279168 within the Upper Hunter Local Government Area. Please find attached an invitation to register an interest in the Aboriginal Cultural Heritage Assessment for the project that is being conducted by Niche Environment and Heritage.

Details of the project, contact information and how to register are in the attached letter. Registrations are required by 5pm on Wednesday 11 March 2026.

Yours sincerely,

Samuel Riley BArch, MRes
Heritage Consultant

T – 0488 774 037
E – sriley@niche-eh.com

NSW – Central Coast
Awabakal and Worimi Country
02 9630 5658

[Niche-eh.com](https://www.niche-eh.com)



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From: [Steven Hickey](#)
To: [Sam Riley](#)
Subject: Re: 9211 Transgrid Transposition Works: Invitation to register
Date: Tuesday, 10 March 2026 8:59:26 PM
Attachments: [image001.png](#)

Hi Sam,

Thank you for reaching out and sharing the details of the upcoming transposition and vegetation works. Please register Steven Hickey's interest in the project we appreciate you including us in the process and sending through the invitation for the Aboriginal Cultural Heritage Assessment.

Kind Regards

Widescope Indigenous Group

Donna Hickey

0425232056

Administration

From: Sam Riley <sriley@niche-eh.com>
Sent: Wednesday, February 25, 2026 3:57:43 PM
Subject: 9211 Transgrid Transposition Works: Invitation to register

Dear Stakeholder,

I hope this email finds you well.

Your organisation has been identified as a stakeholder for the proposed transposition and vegetation works located at Lot 7 DP 1279168 within the Upper Hunter Local Government Area. Please find attached an invitation to register an interest in the Aboriginal Cultural Heritage Assessment for the project that is being conducted by Niche Environment and Heritage.

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Yours sincerely,

Samuel Riley BArch, MRes
Heritage Consultant

T - 0488 774 037
E - sriley@niche-eh.com

NSW - Central Coast
Awabakal and Worimi Country
02 9630 5658

Niche-eh.com



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From: [Marilyn Carroll-Johnson](#)
To: [Sam Riley](#)
Subject: Re: 9211 Transgrid Transposition Works: Register
Date: Wednesday, 25 February 2026 4:05:20 PM
Attachments: [image001.png](#)

Hi Sam

9211 Transgrid Transposition Works: Register in full capacity and non disclosure to LALC.

Kind regards

Marilyn Carroll

M: 0415911159

Director CAC

E: corroboreecorp@outlook.com

We respectfully acknowledge the Traditional Owners of the lands upon which we work and pay our deep respect to Elders past, present and emerging

On 25 Feb 2026, at 3:58 pm, Sam Riley <sriley@niche-eh.com> wrote:

Dear Stakeholder,

I hope this email finds you well.

Your organisation has been identified as a stakeholder for the proposed transposition and vegetation works located at Lot 7 DP 1279168 within the Upper Hunter Local Government Area. Please find attached an invitation to register an interest in the Aboriginal Cultural Heritage Assessment for the project that is being conducted by Niche Environment and Heritage.

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Yours sincerely,

Samuel Riley BArch, MRes
Heritage Consultant

T - 0488 774 037

E - sriley@niche-eh.com

NSW - Central Coast

Awabakal and Worimi Country

02 9630 5658

[<image001.png>](#)

From: [Matthew Syron](#)
To: [Sam Riley](#)
Subject: Register my Business for Culture & Heritage Assessment- Transgrid Transport Towers.
Date: Thursday, 26 February 2026 4:25:38 PM

My name is Matt Syron and I would like to register my interest in this upcoming project.

I am a descendant of the Pambalong clan of the Worrimai/Birripai people. I hold not only cultural knowledge of this area, I have a strong family and spiritual connection.

My family has remained in this area unbroken. Dozens of my family members and I have enlisted to the defense force in Newcastle since WW1 till the present. I share this information to provide proof of my skillset and Cultural Connection. I am fit for work, reliable, hardworking and I am prepared to work in any conditions.

Budgewoi Barray Pty Ltd is my business and we specialize in Cultural Emersion, Culture and Heritage surveys, Land Management, Mentoring in schools and DCJ's.

I would like any pertinent information on this project sent to me please and also suggest a face to face meeting with all RAOs whom have registered to make sure the correct knowledge holders are engaged for these works.

Murrung(thankyou) for this opportunity and should you choose to work with me I will not let you down.

Please don't hesitate to call me to discuss further. I look forward to working with you.

Yiiguwaba

Matt Syron

0416 330 099

From: [Sam Riley](#)
To: heritagemailbox@environment.nsw.gov.au
Subject: 9211 Structure 169 Transposition Works ACHA
Date: Thursday, 12 March 2026 9:25:00 AM
Attachments: [9211 RAP Notification Letter 260225.pdf](#)
[image001.png](#)
[9211 RAPnotificationletter_Heritage NSW_20260312.pdf](#)

Good morning,

Please see attached for copies of the notification of our RAP list for the Structure 169 Transposition Works ACHA.

A copy of the potential stakeholder letter is also provided for your reference.

Thanks,

Samuel Riley BArch, MRes
Heritage Consultant

T - 0488 774 037
E - sriley@niche-eh.com

NSW - Central Coast
Awabakal and Worimi Country
02 9630 5658

Niche-eh.com



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From: [Sam Riley](#)
To: [Ceo](#)
Subject: 9211 Structure 169 Transposition Works ACHA
Date: Thursday, 12 March 2026 9:25:00 AM
Attachments: [9211 RAP Notification Letter 260225.pdf](#)
[image001.png](#)
[9211 RAPnotificationletter_Wanaruah LALC_20260312.pdf](#)

Good morning,

Please see attached for copies of the notification of our RAP list for the Structure 169 Transposition Works ACHA.

A copy of the potential stakeholder letter is also provided for your reference.

Thanks,

Samuel Riley BArch, MRes
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12 March 2025

NSW Environment and Heritage
North Metro Branch
Locked Bag 5020
Parramatta NSW 2124

heritagemailbox@environment.nsw.gov.au

To whom it may concern,

Re: Transgrid Transposition Towers – Aboriginal Cultural Heritage Assessments (Niche ref: #9211)

I am writing to inform NSW Environment and Heritage as per Section 4.1.6 of the *Aboriginal Cultural Heritage Consultation Requirements for Proponents* DECCW 2010, that the following Aboriginal groups and/or individuals have registered for the proposed transposition and vegetation clearing works located at Lot 7 DP 1279168 within the Upper Hunter Local Government Area in New South Wales as listed in Table 1.

Table 1: List of Registered Aboriginal Parties (RAPs)

Organization
Didge Ngunawal Clan
Corroboree Aboriginal Corporation
Ngagga Ngagga
Ungooroo Aboriginal Corporation
Amanda Hickey Cultural Services
A1 Indigenous Services
Gomery Cultural Consultants
Long Gully Cultural Services
Culturally Aware
Guugaburra Yiramiiland
Thomas Dahlstrom
Mura Gadi Aboriginal Corporation
Hunter Valley Aboriginal Corporation

Niche Environment and Heritage Pty Ltd

NSW Office – Sydney
Dharug Country
02 9630 5658
L3, 93 George St
Parramatta NSW 2150

QLD Office – Brisbane
Turrbal and Jagera Country
Ground Floor, Suite 3 North Tower 527
Gregory Terrace
Fortitude Valley QLD 4006

VIC Office – Melbourne
Wurundjeri Country Level 3,
162 Collins Street
Melbourne VIC 3000

T – 02 9630 5658
E – info@niche-eh.com
ABN – 19 137 111 721

Niche-eh.com

Organization

Budgewoi Barray Pty Ltd

Jarban & Mugrebea

AGA Services

Cacatua Culture Consultants

George Flick Cultural Services

Girragirra Murun Aboriginal Corporation

Wingarra Wilay Aboriginal Corporation

Wanaruah Local Aboriginal Land Council

Marri Culture & Heritage

Lower Hunter Aboriginal Incorporated

Widescope Indigenous Group

One group, Corroboree Aboriginal Corporation, has requested that their registration not be disclosed to the LALC.

The notification letter was sent to all Aboriginal groups on 25 February 2026. A copy of the notification letter is attached.

Should you require any further information please do not hesitate to contact me on **0488 774 037** or **sriley@niche-eh.com** should you require any further information.

Yours sincerely,

Sam Riley

Heritage Consultant

Niche

E - sriley@niche-eh.com

T - 0488 774 037

Niche Environment and Heritage Pty Ltd

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ABN - 19 137 111 721

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12 March 2025

Wanaruah Local Aboriginal Land Council
PO Box 127
Muswellbrook NSW 2333
ceo@wanaruahlandcouncil.com.au

To whom it may concern,

Re: Transgrid Transposition Towers – Aboriginal Cultural Heritage Assessments (Niche ref: #9211)

I am writing to inform Wanaruah LALC, as per Section 4.1.6 of the *Aboriginal Cultural Heritage Consultation Requirements for Proponents* DECCW 2010, that the following Aboriginal groups and/or individuals have registered for the proposed transposition and vegetation clearing works located at Lot 7 DP 1279168 within the Upper Hunter Local Government Area in New South Wales as listed in Table 1.

Table 1: List of Registered Aboriginal Parties (RAPs)

Organization
Didge Ngunawal Clan
Ngagga Ngagga
Ungooroo Aboriginal Corporation
Amanda Hickey Cultural Services
A1 Indigenous Services
Gomery Cultural Consultants
Long Gully Cultural Services
Culturally Aware
Guugaburra Yiramiiland
Thomas Dahlstrom
Mura Gadi Aboriginal Corporation
Hunter Valley Aboriginal Corporation
Budgewoi Barray Pty Ltd

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Organization

Jarban & Mugrebea

AGA Services

Cacatua Culture Consultants

George Flick Cultural Services

Girragirra Murun Aboriginal Corporation

Wingarra Wilay Aboriginal Corporation

Wanaruah Local Aboriginal Land Council

Marri Culture & Heritage

Lower Hunter Aboriginal Incorporated

Widescope Indigenous Group

One group has requested that their registration not be disclosed.

The notification letter was sent to all Aboriginal groups on 25 February 2026. A copy of the notification letter is attached.

Should you require any further information please do not hesitate to contact me on **0488 774 037** or **sriley@niche-eh.com** should you require any further information.

Yours sincerely,

Sam Riley

Heritage Consultant

Niche

E - sriley@niche-eh.com

T - 0488 774 037

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ABN - 19 137 111 721

Niche-eh.com

From: [Sam Riley](#)
Bcc: [lilly.carroll](#); [Marilyn Carroll-Johnson](#); [Raiwyn Towney](#); [Ungooroo Admin](#); [amandahickey@live.com.au](#); [Carolyn .H](#); [David Horton](#); [Ethan3trewlynn@gmail.com](#); [Tracey Skene](#); [Stephen Carroll](#); [Thomas Dahlstrom](#); [Tiarna Bird](#); [Manager](#); [Matthew Syron](#); [Leslie Atkinson](#); [aga.services@hotmail.com](#); [cacatua4service@tpg.com.au](#); [Steven Flick](#); [Girra Murun](#); [Ray Moon](#); [Robert John Simpson](#); [Lower Hunter Aboriginal Incorporated](#); [Steven .Hickey](#); [Ceo](#)
Subject: 9211 Transgrid Transposition Towers ACHA - project information/methodology for RAP review
Date: Monday, 23 March 2026 3:46:00 PM
Attachments: [image001.png](#)
[9211_ACHA Methodology_D03_260323.pdf](#)

Good afternoon,

Thanks for your recent registration for the 9211 – Transgrid Transposition Towers Aboriginal Cultural Heritage Assessment (ACHA). Please see attached for further project information including the draft methodology which we are proposing to undertake. If you could please review this document it would be much appreciated.

We are asking for any comments to be provided by 5pm Monday 20th April 2026.

Thanks in advance for your further participation in the project and please reach out to my contact details below should you have any questions or comments.

Kind regards,

Samuel Riley BArch, MRes
Heritage Consultant

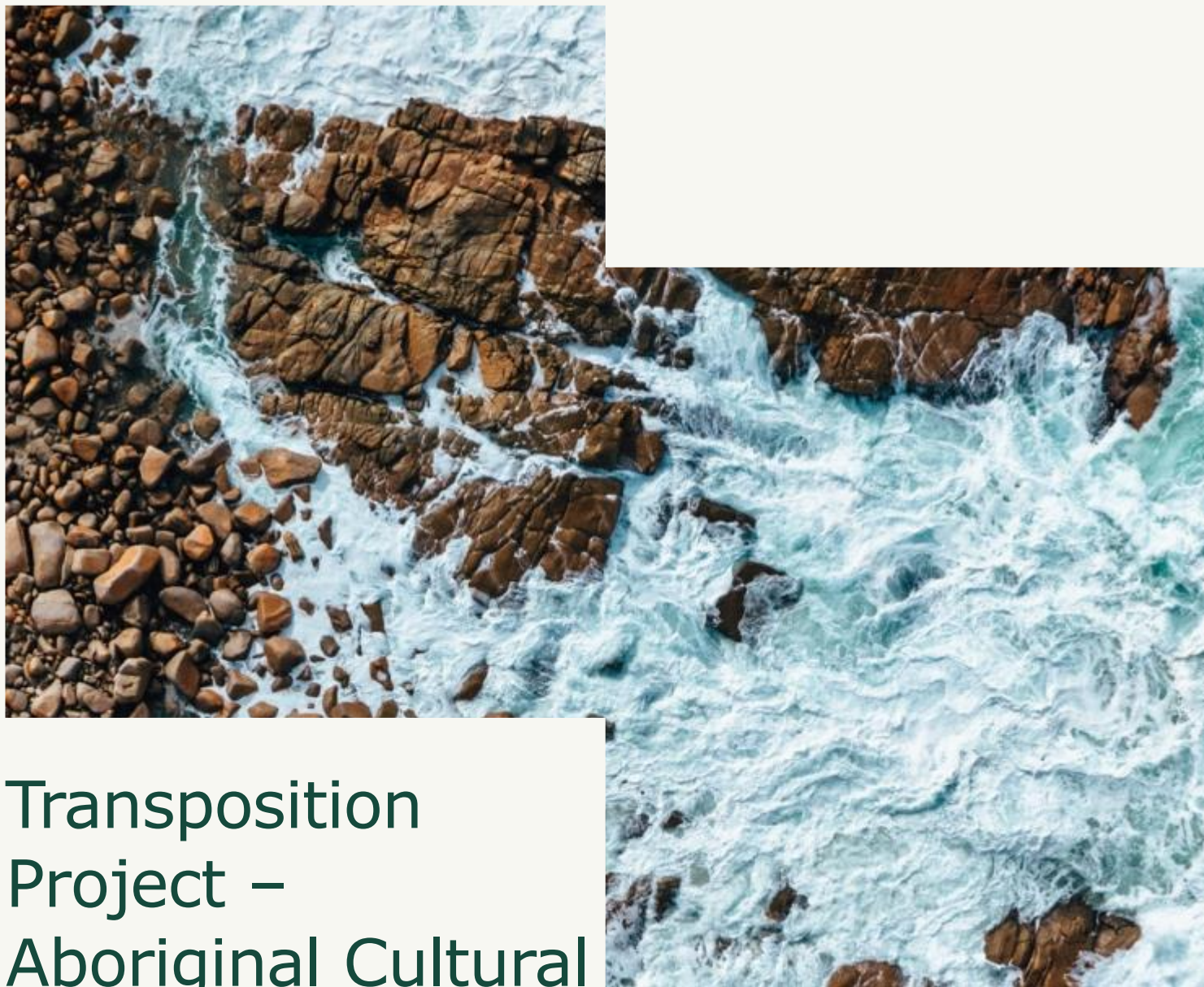
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Transposition Project – Aboriginal Cultural Heritage Assessment

Project Information and Proposed Assessment Methodology

Upper Hunter LGA

Prepared for Arup on behalf of Transgrid | 23/03/2026

Transposition Project – Aboriginal Cultural Heritage Assessment

Document control

Project number	Client	Project manager	LGA
9211	Arup on behalf of Transgrid	Ben Slack	Upper Hunter

Version	Author	Review	Status	Comments	Date
D01	Samuel Riley	Ben Slack	Draft		12 March 2026
D02	Samuel Riley		Draft	Client review	18 March 2026
D03	Samuel Riley		Draft	Client review	23 March 2026

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Important information about your report

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Report for the sole benefit of Niche's client: This Report has been prepared by Niche for you, as Niche's client, in accordance with our agreed purpose, scope, schedule and budget in accordance with our terms of engagement. Unless otherwise agreed in writing between us, the Report has been prepared for your benefit and no other party. Other parties should not and cannot rely upon the Report or the accuracy or completeness of any recommendation in it.

Limitations of the Report: The work was conducted, and the Report has been prepared, in response to the agreed purpose and scope, within respective time and budget constraints, and where applicable in reliance on certain data and information made available to Niche. The analyses, assessments, opinions, recommendations and conclusions presented in this Report are based on that purpose and scope, requirements, data or information, and may change if such requirements or data are inaccurate or incomplete. Niche is not required to update or vary the report to the extent it subsequently becomes aware of any inaccurate or incomplete information.

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Acknowledgement to Country

Niche would like to pay our respect to and acknowledge the Traditional Custodians of the land on which this project takes place. Niche recognises the contributions of the Aboriginal people who are participating in this Project and would like to pay our respects to the Elders past, present, and emerging.

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1 Introduction

1.1 Background

Niche Environment and Heritage (Niche) has been commissioned by Arup on behalf of Transgrid (the Proponent) to conduct an Aboriginal Cultural Heritage Assessment (ACHA) with Aboriginal community consultation for the proposed Transposition Project.

The Transposition Project involves installation of a transposition structure 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 significantly increase energy generation on 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).

One of the transposition sites (the Subject Area) is situated at a location where Aboriginal heritage objects have been recorded. The Subject Area is shown on Figure 1. Desktop assessment and an initial field survey have indicated that there is potential to harm Aboriginal objects. Given that Aboriginal objects and Aboriginal Places are protected under the *National Parks and Wildlife Act 1974* (NPW Act), an ACHA is required in order to investigate the presence of Aboriginal objects within the Subject Area, assess any potential harm to the heritage values associated with these objects, and provide recommendations for management measures to manage or prevent harm.

The ACHA will be undertaken in accordance with the following relevant requirements of various advisory documents and guidelines including:

- *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH 2011).
- *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW 2010b).
- *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (ACHCRP) (Part 6 National Parks and Wildlife Act, 1974) (DECCW 2010a).
- *Aboriginal Cultural Heritage: Standards and Guidelines Kit* (NSW National Parks and Wildlife Service 1997).
- *Ask First; A Guide to Respecting Indigenous Heritage Places and Values* (Australian Heritage Commission 2002).
- *Applying for an Aboriginal Heritage Impact Permit: Guide for applicants* (OEH 2011)
- *NPW Act* (1974).
- *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance* (Australia International Council on Monuments and Sites [ICOMOS] 2013).

1.2 Purpose of this document

This document outlines the draft ACHA methodology.

In accordance with Sections 4.2 and 4.3 of the ACHCRP (DECCW 2010a), Niche is providing this proposed ACHA methodology for your review as a Registered Aboriginal Party (RAP) for the Project as part of Aboriginal community consultation.¹

The objective of the consultation is to provide Aboriginal people the opportunity to contribute to the outcomes of the ACHA.

¹An overview of the roles and responsibilities of RAPs and Proponent is provided for reference in Appendix 1.

We welcome RAP input on the Aboriginal heritage and cultural values, including:

- The identification of any known Aboriginal objects or places within the Subject Area with archaeological or cultural significance to Aboriginal people.
- Whether there are any places of cultural value to Aboriginal people in the area of the Project. This may include places of social, spiritual, and cultural value, historic places with cultural significance, and potential places/areas of historic, social, spiritual and/or cultural significance. Any information as to specific gender protocols in relation to these sites would also result in changes to the survey method.
- Information about the cultural significance and values of the Aboriginal sites might affect, inform, or refine the methodology or assessment.
- Contribution to the development of cultural heritage management options that may include ways to mitigate harm and/or conserve known Aboriginal objects and/or places with an aim to consider how an association with identified Aboriginal heritage values can be continued.
- Comments on preferred methods for RAPs to be meaningfully engaged in the future management of identified Aboriginal objects and places.

RAPs are invited to comment on this proposed ACHA methodology and to provide comments regarding the Aboriginal heritage and cultural values within the Subject Area. A **28-day period of review** is available to all RAPs to provide comments.



 Subject area
 PlacePoint
Transport
 Major road

 Rail
Hydrography
 Perennial Stream
 Non Perennial Stream

 Waterbody
Protected Areas of NSW
 National Park
 State Forest


 0  8
 km
 GDA2020 MGA Zone 56



Figure 1
Location Map
 Arup TransGrid Transposition Towers Heritage - Northern Cluster ACHA

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

2 Proposed works

2.1 Description of the proposed works

The proposed works include:

- Installation of four new steel pole transmission structures around Structure 169 on Transgrid's existing transmission line 5A3/5A4 and associated conductor rearrangement works.
- Establishment of level construction benches to support the safe operation of elevated working platforms and cranes as part of structure assembly.
- Construction and upgrade of access tracks to the transposition locations.
- Vegetation clearing associated with widening the existing transmission line easement (from 70 metres to 120 metres).

These works will occur in what has been defined as the 'proposed impact area'. The Subject Area and the proposed impact area are shown in Figure 2.1.

2.2 Proposed works location

The Subject Area is situated in Lot 7 DP 1279168 within the suburb of Merriwa in the Upper Hunter LGA, approximately 18 km southwest of the Merriwa township.

It lies within the County of Brisbane and the Parish of Campbell and within the Wanaruah Local Aboriginal Land Council (LALC).

Drawn by: Andrea Sward Filer; C:\Users\Andrea Sward Filer\Documents\Projects\Transposition Towers\Transposition Towers_NSW_Northern_ACHA.aprx Last updated: 2/02/2026 7:16 PM



- Subject area
- Proposed impact area
- Transport
 - Minor road
- Hydrography
 - Strahler stream order
 - 1
 - 2
 - 4
- Administrative and Property Boundaries
 - Lot
 - Local Government Area



Figure 2.1
Subject Area - STR 169
Arup TransGrid Transposition Towers Heritage - Northern Cluster ACHA

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



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: Source: Esri, Vantor, 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: 2/02/2026

Drawn by: Andrea Sward Filer; C:\Users\Andrea Sward Filer\Documents\Projects\Transposition Towers\Transposition Towers_NSW_Northern_ACHA.aprx Last updated: 2/02/2026 7:16 PM



Figure 2.2

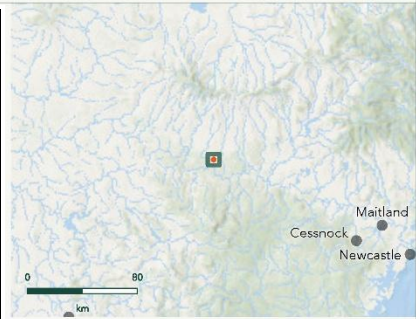
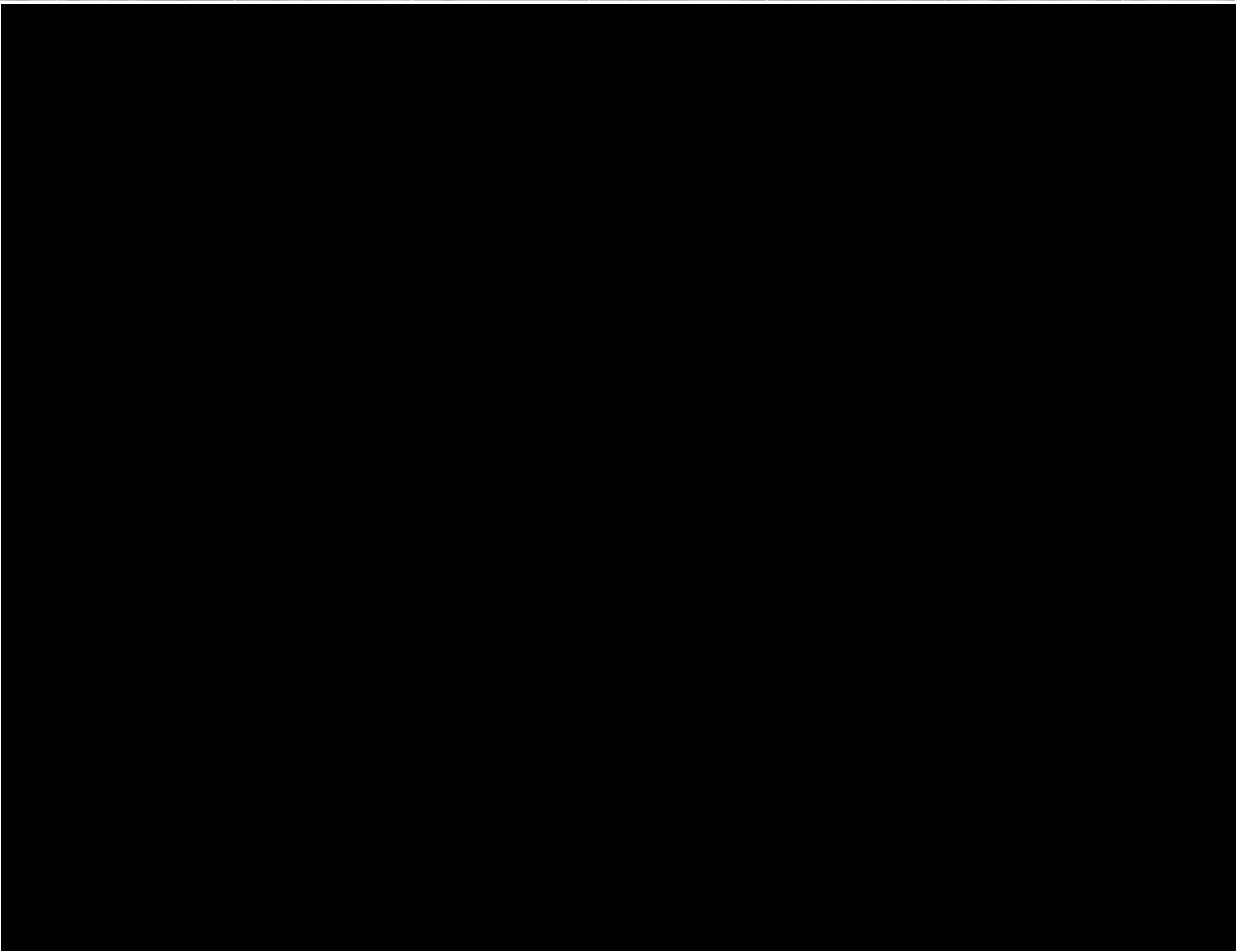
Soil landscapes and hydrology in the local area - STR 169
Arup TransGrid Transposition Towers Heritage - Northern Cluster ACHA

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



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: Source: Esri, Vantor, 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: 2/02/2026

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- Subject area
- Proposed impact area
- Transport
 - Minor road
- Hydrography
 - Strahler stream order
 - 1
 - 2
 - 4
- Administrative and Property Boundaries
 - Lot
 - Local Government Area
- AHIMS
 - Artefact



Figure 2.3
AHIMS Sites and Heritage Items - STR 169
Arup TransGrid Transposition Towers Heritage - Northern Cluster ACHA

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



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: 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/ State Heritage Register Curtilage: / Local Heritage Place: / Transparency Mask: / World Imagery: Source: Esri, Vantor, 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: 2/02/2026

3 ACHA Methodology

3.1 Overview

The preparation of an ACHA includes the following:

- Determination of the cultural significance of Aboriginal objects and/or places relevant to the Subject Area.
- Preparation of an impact assessment and provision of appropriate management recommendations for any identified Aboriginal objects during the process.
- Detailing the community consultation process and any Aboriginal cultural heritage values identified, in compliance with the ACHCRPs 2010.

The ACHA will be prepared in accordance with the following:

- NPW Act and National Parks and Wildlife Regulation 2019.
- Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (OEH 2011).
- ACHCRPs (DECCW 2010a).
- Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW (DECCW 2010b).
- The Burra Charter - The Australian National Committee of the International Council on Monuments and Sites (ICOMOS 2013).
- Engage Early (Commonwealth Government 2016).

3.2 Aboriginal community consultation

In accordance with the ACHCRPs (DECCW, 2010b), the consultation stages are as follows:

- Stage 1 - Notification of project proposal and registration of interest.
- Stage 2 - Presentation of information about the proposed project.
- Stage 3 - Gathering information about cultural significance.
- Stage 4 - Review of draft cultural heritage assessment report.

The notification of project proposal and registration of interest (Stage 1) has been completed on 11 March 2026.

This document has been prepared to address Stage 2 and Stage 3 consultation requirements, with further information and input from RAPs about cultural significance anticipated to be obtained during the field survey.

To complete consultation Stage 4, RAP representatives will be given the opportunity to review the draft ACHA once it is available.

In addition, any input or suggestions regarding the Subject Area, or the consultation process itself, throughout any stage of the consultation process are welcomed. The input points for this have been listed in Table 1, however, information will be accepted at any point during the project or prior to the finalisation of the ACHA report.

If at any time during the consultation process, you choose to share cultural information regarding sites or any other matter, please also advise how you would like any sensitive cultural information to be managed. These may include:

- Any restrictions on access and material.
- Any restrictions on communication of the material (confidentiality).
- Any restrictions on the location/storage of the material.
- Any cultural recommendations on handling the material.
- Any names and contact details of persons authorised within the relevant Aboriginal group to make decisions concerning the Aboriginal material and degree of authorisation.

- Any details of any consent given in accordance with customary law.
- Any access and use by the RAPs of the cultural information in the material.

3.2.1 Desktop assessment

Desktop assessment will include the following:

- Searches of the relevant heritage registers (AHIMS, Heritage NSW Heritage Inventory and Local Environmental Plan heritage schedules from the relevant LGA).
- Background research including previous Aboriginal and non-Aboriginal heritage studies and reports, historical development and use of the area, landscape analysis and settlement characterisation consistent with the relevant guidelines.
- Development of a model for the prediction of Aboriginal objects in the landscape consistent with the relevant guidelines; and
- Identification and prediction of areas of potential archaeological value.
- An AHIMS search has been undertaken. The search results are included in Appendix 2.

3.2.2 Field survey

A field survey will be undertaken to inspect the Subject Area for the presence of Aboriginal objects, Aboriginal cultural heritage sites, and Potential Archaeological Deposits (PADs) and to provide further information on the Aboriginal cultural heritage values of the Subject Areas. The survey method and all recordings will be conducted in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW, 2010a).

The field survey will involve a targeted pedestrian survey of the Subject Area and will be conducted by two Niche consultants. The number of RAP representatives invited to participate in the field survey program will be determined on the basis of discussions with the client and RAPs during the methodology review period. Specific details regarding the field survey, including the starting time and meeting location, will be provided closer to the date. The field survey is expected to occur in April 2026.

Previously recorded sites within the Subject Area will be reidentified and recorded. Any newly identified Aboriginal objects, or Aboriginal cultural heritage sites will be recorded in detail. Site recording will include photography of Aboriginal objects, sites, landscape features and disturbance, Global Positioning System (GPS) recording of site boundaries, concise written details of site features, size, position in the landscape, and condition, as well as documentation of any knowledge about the places, objects, or stories provided by the RAPs. Areas within the Subject Area that are determined to be PADs –areas that have the potential for containing subsurface Aboriginal objects–will be identified, recorded, and mapped using handheld GPS devices. The field survey is required to compile an inventory of observed and likely Aboriginal objects or sites, which will determine the potential for any subsurface artefacts to be present.

During the survey, Niche will undertake the following:

- Recording all transects on proformas, relevant information includes the GPS coordinates of the start and finish of each transect, landform type, existing environment, and level of disturbance.
- Photographic recording of all landforms, disturbance types and surface features relevant to each transect.
- Flagging and recording the location of artefacts and features using a handheld non-differential GPS unit.
- Photographic recording of the location and surroundings of flagged artefacts and features.
- Recording every identified archaeological site on proformas, including details such as a written description, photographic recording, a sketch of the context of the recorded site and extent using a handheld non-differential GPS unit.

3.2.3 ACHA predictive model

The predictive model for the Subject Area is based on the combined archaeological, environmental and cultural information compiled during background research for the ACHA. Archaeological work undertaken in the wider Merriwa region demonstrates that open artefact scatters, isolated finds, and occasional higher-density sites occur commonly across comparable landforms. Two Aboriginal Heritage Information Management System (AHIMS). Registered open artefact sites in proximity to the Subject Area indicate that Aboriginal cultural material has been deposited in the local landscape, and that similar low-density artefact distributions may extend into the Subject Area.

The environmental characteristics of the Wappinguy soil landscape contribute significantly to archaeological potential. Rolling low hills, sandstone benches, drainage depressions and colluvial soils present landforms that Aboriginal people are known to have used for movement, resource gathering and short-term occupation. Materials suitable for stone tool production—including quartz and silcrete—occur naturally in the Narrabeen and Pilliga geological units underlying the Subject Area. Landforms near drainage lines, in particular, offer conditions conducive to both past occupation and the preservation of subsurface archaeological deposits. Although past land-use disturbance related to the transmission line has impacted some areas, intact pockets of soil are likely to remain in undisturbed and vegetated micro-landforms.

If artefacts are present, they are expected to comprise flaked stone items such as flakes, flaked pieces and occasional cores, made predominantly from quartz, silcrete or mudstone. These materials reflect the raw material availability of the local geology and align with artefact types documented in comparable studies across the region. Background scatter across the landscape is also anticipated, representing repeated short-term use rather than intensive occupation

3.2.4 Seeking RAP feedback on Cultural values

RAPs are in the best position to provide information on Aboriginal social/cultural heritage values of a given area. Consultation with RAPs regarding the cultural heritage values of objects and places during the ACHA process will be undertaken as outlined in Section 3.2 and will include:

- a request for any initial comments regarding the Aboriginal cultural heritage values of the Subject Area and the provision of this information package to all RAPs for comment.
- discussion with RAPs on cultural heritage values throughout the process until the end of the draft ACHA review period; and
- provision of the draft ACHA to all RAPs for comment prior to finalisation.

3.3 Indicative timeframe

Indicative timeframes for the ACHA are outlined in Table 1.

Table 1: Indicative timeframe

Activity	Timeframe
Provision of comments on the proposed methodology (this document)	Within 28 days of delivery of this document (Monday 20 th April 2026)
Archaeological survey	April 2026 (to be confirmed)
Provision of the draft ACHA report (including proposed management and mitigation measures), to RAPs for review	Within 4 weeks of the completion of the archaeological field survey
Provision of comments on the draft ACHA report	Within 28 days of delivery of the draft report
Collation of cultural significance information	Ongoing throughout the process until the end of the draft ACHA report review period
Finalisation of the ACHA report in consideration of comments received	Generally, within one week of the draft report comment deadline

4 Next steps

4.1 RAP participation

To be considered for participating in the field survey, representatives are required to provide the following information by **5pm Monday 20th April 2026** :

- Current insurances (certificate of currency and workers' compensation insurance).
- Name and contact details of the nominated individual.

In accordance with Section 3.4 of the ACHCRPs, the decision on who and how many RAP representatives participate in the survey is decided by the proponent and will be based on a range of considerations including skills, relevant experience, and providing necessary certificates of currency.

The number of participants will be commensurate with the scope of the proposed activity.

Once we have finalised numbers for participation in the field survey, we will organise logistics, including confirming time and meeting place.

4.2 Contact details

To provide information for the ACHA, or discuss the Project, please contact:

Samuel Riley

Niche

T- 0488 774 037

E- sriley@niche-eh.com

References

Department of Environment Climate Change and Water (DECCW). 2010a. *Aboriginal Cultural Heritage Consultation Requirements for Proponents*.

Department of Environment Climate Change and Water (DECCW). 2010b. *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW*.

Office of Environment and Heritage (OEH). 2011. *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in New South Wales*.

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.

Appendix 1 – Roles, responsibilities and functions (DECCW,2010a)

5 Roles, responsibilities and functions

For the consultation process to be effective, all parties must appreciate and respect each other's perspective and understand each other's interests, roles and responsibilities.

5.1 Department of Environment, Climate Change and Water

The Director General of DECCW is the decision-maker who decides whether to grant or refuse an AHIP application. If an AHIP is issued, conditions are usually attached and DECCW is responsible for ensuring the AHIP holder complies with those conditions. When considering an application under Part 6 of the NPW Act, the Director General will review the information provided by proponents in line with its internal policies and procedures to assess potential or actual harm to Aboriginal objects or places (DECCW, 2009).

The Environment Protection and Regulation Group (EPRG) of DECCW is responsible for administering the regulatory functions under Part 6 of the NPW Act. A map and list of DECCW EPRG regional offices is in Appendix A.

DECCW expects proponents and Aboriginal people should:

- be aware that Part 6 of the NPW Act establishes the Director General or delegate of DECCW as the decision-maker
- recognise that the Director General's (or delegates) decisions may not be consistent with the views of the Aboriginal community and/or the proponent. However, DECCW will take into account all relevant information it receives as part of its decision-making process.

Further information about the structure of DECCW, and the roles and responsibilities of various groups and the services provided, such as EPRG, Culture and Heritage Division (CHD), and Parks and Wildlife Group (PWG) can be found at: www.environment.nsw.gov.au/whoware/planorgs.htm

5.2 Registered Aboriginal parties

The interests and obligations of Aboriginal people relate to the protection of Aboriginal cultural heritage. It is only Aboriginal people who can determine who is accepted by their community as being authorised to speak for Country and its associated cultural heritage. Where there is a dispute about who speaks for Country, it is appropriate for Aboriginal people, not DECCW or the proponent, to resolve this dispute in a timely manner to enable effective consultation to proceed.

It is expected that DECCW, proponents and service providers that act on their behalf should:

- display a meaningful appreciation, understanding and respect for the belief system, spiritual connection and sense of belonging that Aboriginal people have to their land, people and environment, which includes plants, animals, waterways, sacred sites and other places of cultural significance and importance
- uphold and respect the traditional rights, obligations and responsibilities of Aboriginal people who hold cultural knowledge in accordance with traditional lore and custom, particularly as these relate to the cultural business of men and women
- encourage active participation of culturally experienced and appropriate Aboriginal people who hold cultural knowledge in the consultation process
- encourage opportunities for the effective transfer of cultural knowledge from older to younger generations in accordance with traditional lore and custom through the consultation process
- have an awareness and understanding of how colonisation has impacted the Aboriginal people of Australia

- have an understanding and respect for the lore and customs, cultural practices, responsibilities and obligations that Aboriginal people have toward the continued care and conservation of Aboriginal *objects* and *places*.

Aboriginal people should:

- have an awareness and understanding of the commercial environment and constraints in which proponents operate
- develop and display an awareness and understanding of the opportunities to input into regulatory processes to contribute to decision making by proponents and government authorities.

5.2.1 NSW Aboriginal Land Council and Local Aboriginal Land Councils

The NSW Aboriginal Land Council (NSWALC) and Local Aboriginal Land Councils (LALCs) have statutory functions relevant to the protection of Aboriginal culture and heritage under the *NSW Aboriginal Land Rights Act 1983*. These requirements do not extend the role of NSWALC and LALCs in the significance assessment process. That is, these requirements do not provide NSWALC and/or LALCs any additional or specific decision-making role in the assessment of significance of Aboriginal object(s) and/or place(s) that are subject to an AHIP application under Part 6 of the NPW Act.

LALCs may choose to register an interest to be involved in the consultation process, or may assist registered Aboriginal parties to participate in the consultation process established by these requirements. In order to ensure effective consultation and the subsequent informed heritage assessment, LALCs are encouraged to identify and make contact with Aboriginal people who hold cultural knowledge in their area.

For further information on LALCs and the role they can play in these requirements, see DECCW's *Fact sheet 4: Local Aboriginal Land Councils*.

5.3 Proponents

Proponents operate within a commercial environment which includes:

- financial and management issues, priorities and deadlines
- the need to obtain broad community support and acceptance in order to secure any necessary approval/consent/licence/permit to operate
- the desire for clearer processes and certainty of outcomes
- the need for suitable access to land for the purpose of their development project
- a need to work efficiently within the project's time, quality and cost planning and management parameters
- the need for culturally appropriate assessment findings relevant to their project.

Under these requirements, proponents should:

- bring the registered Aboriginal parties or their nominated representatives together and be responsible for ensuring appropriate administration and management of the consultation process
- consider the cultural perspectives, views, knowledge and advice of the registered Aboriginal parties involved in the consultation process in assessing cultural significance and developing any heritage management outcomes for Aboriginal object(s) and/or place(s)
- provide evidence to DECCW of consultation by including information relevant to the cultural perspectives, views, knowledge and advice provided by the registered Aboriginal parties
- accurately record and clearly articulate all consultation findings in the final cultural heritage assessment report

- provide copies of their cultural heritage assessment report to the registered Aboriginal parties who have been consulted
- submit an application to DECCW for an AHIP in a timely manner and with all required information.

Appendix 2 – AHIMS Searches

**** 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



Contact us

info@niche-eh.com
niche-eh.com

NSW Office

Sydney: Dharug Country
02 9630 5658
L3, 93 George St
Parramatta NSW 2150

QLD Office

Brisbane:
Turrbal and Jagera Country
07 2104 8594 Ground Floor,
Suite 3 North Tower
527 Gregory Terrace
Fortitude Valley QLD 4006

VIC Office

Melbourne:
Wurundjeri Country
0488 224 036
Level 3, 162 Collins Street
Melbourne VIC 3000

Our Expertise



Natural capital
and offsetting



Ecology



Heritage
management



Environmental
planning, approvals
and management



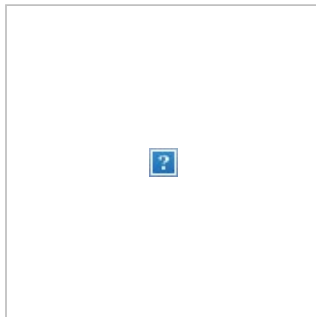
Spatial Services

From: [Amanda Hickey](#)
To: [Sam Riley](#)
Subject: Re: 9211 Transgrid Transposition Towers ACHA - project information/methodology for RAP review
Date: Wednesday, 8 April 2026 11:55:55 AM
Attachments: [image001.png](#)
[Inviro Logo \(180 x 60 px\).svg](#)

Hi Sam,

I have read through & support the ACHA methodology.

Have a great day,
Amanda Hickey



From: Sam Riley <sriley@niche-eh.com>
Date: Monday, 23 March 2026 at 15:59
To:
Subject: 9211 Transgrid Transposition Towers ACHA - project information/methodology for RAP review

Good afternoon,

Thanks for your recent registration for the 9211 - Transgrid Transposition Towers Aboriginal Cultural Heritage Assessment (ACHA). Please see attached for further project information including the draft methodology which we are proposing to undertake. If you could please review this document it would be much appreciated.

We are asking for any comments to be provided by 5pm Monday 20th April 2026.

Thanks in advance for your further participation in the project and please reach out to my contact details below should you have any questions or comments.

Kind regards,

Samuel Riley BArch, MRes
Heritage Consultant

T - 0488 774 037
E - sriley@niche-eh.com

NSW - Central Coast
Awabakal and Worimi Country
02 9630 5658

From: [Ethan Trewlynn](#)
To: [Sam Riley](#)
Subject: Re: 9211 Transgrid Transposition Towers ACHA - project information/methodology for RAP review
Date: Wednesday, 25 March 2026 11:44:37 AM
Attachments: [image001.png](#)
[image001.png](#)

Hi Samuel,

I have read the information and methodology for this project and I'm in support as it is up to standards.

Kind regards,

Ethan

On Mon, 23 Mar 2026, 3:58 pm Sam Riley, <sriley@niche-eh.com> wrote:

Good afternoon,

Thanks for your recent registration for the 9211 - Transgrid Transposition Towers Aboriginal Cultural Heritage Assessment (ACHA). Please see attached for further project information including the draft methodology which we are proposing to undertake. If you could please review this document it would be much appreciated.

We are asking for any comments to be provided by 5pm Monday 20th April 2026.

Thanks in advance for your further participation in the project and please reach out to my contact details below should you have any questions or comments.

Kind regards,

Samuel Riley BArch, MRes
Heritage Consultant

T - 0488 774 037

E - sriley@niche-eh.com

NSW - Central Coast
Awabakal and Worimi Country

02 9630 5658

From: [Carolyn .H](#)
To: [Sam Riley](#)
Subject: Re: 9211 Transgrid Transposition Towers ACHA - project information/methodology for RAP review
Date: Tuesday, 14 April 2026 10:22:14 PM
Attachments: [image001.png](#)
[Outlook-qiurp1nr.png](#)
[Outlook-a4bcdia4.png](#)
[A1.WC.2027.pdf](#)
[A1.PL.2027.pdf](#)



Contact: Carolyn Hickey
Mobile: 0411650057
Email: Cazadirect@live.com
Address: 73 Russell St, Emu Plains, NSW 2750
ABN: 20 616 970 327

Good day, Sam,

Thank you for providing the Project Information and Proposed Assessment Methodology for the 9211 Transgrid Transposition Towers. I have reviewed the document and am pleased to express my full support for both the information and the methodology outlined.

I would appreciate being included in all meetings, reports, sharing of cultural information, and fieldwork related to this project.

I have attached A1 Indigenous Services Insurances.

Please do not publish this email

I consent to my details being shared with OEH and the LALC. If you need to reach me, please use the contact information provided above.

Kind regards,
Carolyn Hickey

A1 Indigenous Services is a 100% Indigenous-owned Australian company offering a range of services to the construction industry. Our mission is to commit to an innovative approach for a better future for Indigenous employment and community, while improving ways to close the gap in Aboriginal participation in the construction industry. We are dedicated to building strength in Aboriginal communities and our Indigenous labour force.



A1 Indigenous Services is a member of the NSW Indigenous Chamber of Commerce (NSWICC). A business or enterprise carrying the NSWICC Assured logo has met national policy requirements as upheld by FACCI, ensuring that it is identified as a First Nations business owner or entrepreneur and that it demonstrates compliance with government and industry regulators.



From: Sam Riley <sriley@niche-eh.com>

Sent: Monday, 23 March 2026 3:58 PM

Subject: 9211 Transgrid Transposition Towers ACHA - project information/methodology for RAP review

Good afternoon,

Thanks for your recent registration for the 9211 - Transgrid Transposition Towers Aboriginal Cultural Heritage Assessment (ACHA). Please see attached for further project information including the draft methodology which we are proposing to undertake. If you could please review this document it would be much appreciated.

We are asking for any comments to be provided by 5pm Monday 20th April 2026.

Thanks in advance for your further participation in the project and please reach out to my contact details below should you have any questions or comments.

Kind regards,

Samuel Riley BArch, MRes
Heritage Consultant

T - 0488 774 037
E - sriley@niche-eh.com

NSW - Central Coast
Awabakal and Worimi Country
02 9630 5658

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From: [Sam Riley](#)
Bcc: ["David Horton"](#); ["Ceo"](#); ["Manager"](#); ["Ungooroo Admin"](#)
Subject: 9211 Transgrid Transposition Works Survey Invitation
Date: Wednesday, 15 April 2026 11:22:00 AM
Attachments: [9211_Fieldwork invitation_20260415.pdf](#)
[image001.png](#)

Good afternoon,

I wanted to send through a formal invitation for a representative to join us on a survey that we are planning at Merriwa, NSW. It is for the proposed transposition and vegetation works located at Lot 7 DP 1279168 within the Upper Hunter Local Government Area. It is a half-day survey running approx. 12:30pm-4:00pm on Tuesday 28/04. We would love to confirm with you would be able to join us. If you could please confirm by next Friday (24/04) who may be able to attend and their phone number it would be much appreciated!

Please reach out if you had any questions,

Thanks,

Samuel Riley BArch, MRes
Heritage Consultant

T - 0488 774 037
E - sriley@niche-eh.com

NSW - Central Coast
Awabakal and Worimi Country
02 9630 5658

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15 April 2026

Re: Transposition Project ACHA - Site invitation (Niche ref #9211)

Thank you for your involvement to date in the Aboriginal Cultural Heritage Assessment (ACHA) being undertaken for the proposed Transposition project situated near Merriwa.

A half-day survey is proposed for Tuesday 28 April 2026 and we would like to invite one representative from your organisation to attend.

This assessment is being undertaken for Arup on behalf of Transgrid (the 'Proponent').

PPE requirements and safety

Niche considers Health, Safety & Environment (HSE) to be essential in our project work and asks for your cooperation in ensuring a safe work site for yourself and your workmates. As per Niche HSE Policy, we will be running a Safe Work Methods Statement (SWMS) and sign-on sheet and ask that any representatives with existing medical conditions please bring any necessary medication with them to the site.

Please ensure that the field officer nominated for the work is of sufficient good health and fitness for the physical work required, that they bring both their own food and water to the site, and that they wear full PPE. Any representative not wearing appropriate PPE will not be engaged for the day's fieldwork.

In line with Niche Work Health and Safety (WHS) policies, all field personnel must be:

- Covered by valid workers compensation (businesses) and public liability insurance (businesses and individuals). These must be provided and receipt acknowledged before fieldwork.
- Fit for duty, being physically fit, in good health.
- Wearing appropriate PPE for the conditions (wide-brimmed hat, long-sleeved hi-vis shirt, long pants and safety boots).

Meeting location and details

The meeting location is Merriwa Library at 34-40 Vennacher St at 12:30pm (please park at the location marked in red in Figure 1). Please note that personal cars will be left at this location for the duration of the survey and RAPs will carpool with Niche and Transgrid staff to and from the site.

Payment details

Niche will be responsible for processing any invoices for work completed as part of the cultural survey. Please address invoices to:

Niche Environment and Heritage
Suite 501, Level 5, 33 Argyle St Parramatta NSW 2150
consultation@niche-eh.com
Attn: Samuel Riley

Niche Environment and Heritage Pty Ltd

NSW Office - Sydney
Dharug Country
02 9630 5658
L3, 93 George St
Parramatta NSW 2150

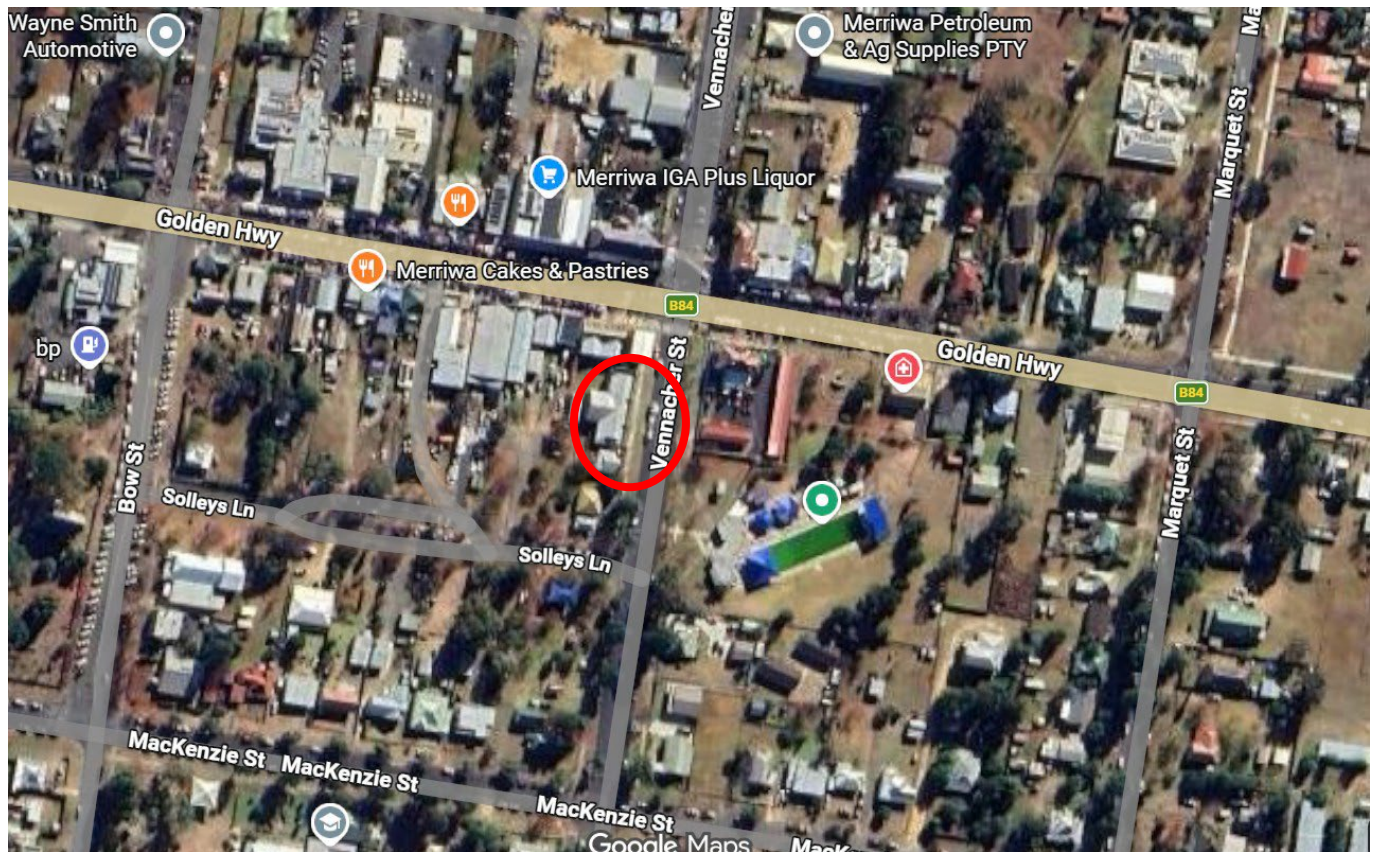
QLD Office - Brisbane
Turrbal and Jagera Country
Ground Floor, Suite 3 North Tower 527
Gregory Terrace
Fortitude Valley QLD 4006

VIC Office - Melbourne
Wurundjeri Country Level 3,
162 Collins Street
Melbourne VIC 3000

T - 02 9630 5658
E - info@niche-eh.com
ABN - 19 137 111 721

Niche-eh.com

Figure 1: Meeting and parking location (red circle)



If there are changes in the weather and fieldwork is cancelled, then RAPs will be contacted the day/evening before to notify them of the change in schedule. Please ensure that contact details provided to Niche are up to date to ensure timely communication.

If you can please confirm the name and mobile phone number of your nominated representative before 5pm Friday 24 April 2026 it would be much appreciated.

Yours sincerely,

Samuel Riley
Heritage Consultant
Niche
E - sriley@niche-eh.com
T - 0488 774 037

Niche Environment and Heritage Pty Ltd

NSW Office - Sydney
Dharug Country
02 9630 5658
L3, 93 George St
Parramatta NSW 2150

QLD Office - Brisbane
Turrbal and Jagera Country
Ground Floor, Suite 3 North Tower 527
Gregory Terrace
Fortitude Valley QLD 4006

VIC Office - Melbourne
Wurundjeri Country Level 3,
162 Collins Street
Melbourne VIC 3000

T - 02 9630 5658
E - info@niche-eh.com
ABN - 19 137 111 721

Niche-eh.com

From: [Admin](#)
To: [Sam Riley](#)
Subject: FW: 9211 Transgrid Transposition Works Survey Invitation
Date: Thursday, 16 April 2026 12:10:10 PM
Attachments: [image001.png](#)
[C2_signature_thumbnail_outlook-otvareuc_a830e1b6-3621-4843-88bc-9a8757646022.png](#)
[C2_signature_outlook-facebook_54fd1432-d6c1-487c-8a7b-c014143ccc41.png](#)
[C2_signature_outlook-linkedin_f625669b-fb6c-484a-860b-453749fd6650.png](#)
[C2_signature_outlook-instagram_071741b8-b673-49c9-a98a-a711d31a2faa.png](#)
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[C2_signature_outlook-hlg5x5xt_3b91fa1e-bd1b-4fb2-9602-88feb35cc61f.png](#)
[C2_signature_sn_registered_art_64546453-624e-4bd3-8173-e94bd367da1f.png](#)
[9211_Fieldwork_invitation_20260415.pdf](#)

Good morning

Thank you for the email.

Alan Paget will be attending. His mobile number is 0401 562 685.

Kind regards

Estelle



Admin |

Ungooroo Aboriginal Corporation

T 02 6571 5111

M

E admin@ungooroo.com.au

W <https://www.ungooroo.com.au>

A Shop 1 - 6, 157 – 159 John St Singleton NSW 2330

From: Sam Riley <sriley@niche-eh.com>
Sent: 15 April 2026 15:43
Subject: 9211 Transgrid Transposition Works Survey Invitation

Good afternoon,

I wanted to send through a formal invitation for a representative to join us on a survey that we are planning at Merriwa, NSW. It is for the proposed transposition and vegetation works located at Lot 7 DP 1279168 within the Upper Hunter Local Government Area. It is a half-day survey running approx. 12:30pm-4:00pm on Tuesday 28/04. We would love to confirm with you would be able to join us. If you could please confirm by next Friday (24/04) who may be able to attend and their phone number it would be much appreciated!

Please reach out if you had any questions,

Thanks,

Samuel Riley BArch, MRes
Heritage Consultant

T - 0488 774 037

E - sriley@niche-eh.com

NSW - Central Coast
Awabakal and Worimi Country

02 9630 5658

Niche-eh.com



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From: [David Horton](#)
To: [Sam Riley](#)
Subject: Re: 9211 Transgrid Transposition Works Survey Invitation
Date: Wednesday, 15 April 2026 4:09:39 PM
Attachments: [image001.png](#)
[image001.png](#)

Hi sam,its dave horton leanne not available i might do it ok.

On Wed, 15 Apr 2026, 3:43 pm Sam Riley, <sriley@niche-eh.com> wrote:

Good afternoon,

I wanted to send through a formal invitation for a representative to join us on a survey that we are planning at Merriwa, NSW. It is for the proposed transposition and vegetation works located at Lot 7 DP 1279168 within the Upper Hunter Local Government Area. It is a half-day survey running approx. 12:30pm-4:00pm on Tuesday 28/04. We would love to confirm with you would be able to join us. If you could please confirm by next Friday (24/04) who may be able to attend and their phone number it would be much appreciated!

Please reach out if you had any questions,

Thanks,

Samuel Riley BArch, MRes
Heritage Consultant

T - 0488 774 037

E - sriley@niche-eh.com

NSW - Central Coast
Awabakal and Worimi Country

02 9630 5658

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From: [Ceo](#)
To: [Sam Riley](#)
Subject: RE: 9211 Transgrid Transposition Works Survey Invitation
Date: Thursday, 16 April 2026 6:54:30 AM
Attachments: [image001.png](#)

Hi Sam

We will be sending someone; will confirm who later in the week next week.

Dee

From: Sam Riley <sriley@niche-eh.com>
Sent: Wednesday, 15 April 2026 3:43 PM
Subject: 9211 Transgrid Transposition Works Survey Invitation

Good afternoon,

I wanted to send through a formal invitation for a representative to join us on a survey that we are planning at Merriwa, NSW. It is for the proposed transposition and vegetation works located at Lot 7 DP 1279168 within the Upper Hunter Local Government Area. It is a half-day survey running approx. 12:30pm-4:00pm on Tuesday 28/04. We would love to confirm with you would be able to join us. If you could please confirm by next Friday (24/04) who may be able to attend and their phone number it would be much appreciated!

Please reach out if you had any questions,

Thanks,

Samuel Riley BArch, MRes
Heritage Consultant

T - 0488 774 037
E - sriley@niche-eh.com

NSW - Central Coast
Awabakal and Worimi Country
02 9630 5658

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From: [Manager](#)
To: [Sam Riley](#)
Subject: Re: 9211 Transgrid Transposition Works Survey Invitation
Date: Thursday, 16 April 2026 11:14:40 AM
Attachments: [image001.png](#)
[Outlook-t03pcnm.png](#)
[HVAC Certificate of Currency PL 2025 2026.pdf](#)
[HVAC Workers Insurance Certificate of Currency 2026.pdf](#)

Good Morning Sam,

Thank you for the invitation to participate in the survey on the 28th. Leanne Kirkman will attend for HVAC. I have attached our insurances for your records.

Much appreciated.

Regards,

Kylie Pascoe | CEO



Hunter Valley Aboriginal Corporation

Ph: (02) 6543 4822

M: 0439 918 992

35 Maitland Street, Muswellbrook NSW

E: ceo@hvabcorp.org.au

From: Sam Riley <sriley@niche-eh.com>
Sent: Wednesday, 15 April 2026 3:43 PM
Subject: 9211 Transgrid Transposition Works Survey Invitation

Good afternoon,

I wanted to send through a formal invitation for a representative to join us on a survey that we are planning at Merriwa, NSW. It is for the proposed transposition and vegetation works located at Lot 7 DP 1279168 within the Upper Hunter Local Government Area. It is a half-day survey running approx. 12:30pm-4:00pm on Tuesday 28/04. We would love to confirm with you would be able to join us. If you could please confirm by next Friday (24/04) who may be able to attend and their phone number it would be much appreciated!

Please reach out if you had any questions,

Thanks,

Samuel Riley BArch, MRes
Heritage Consultant

T - 0488 774 037

E - sriley@niche-eh.com

NSW - Central Coast

Awabakal and Worimi Country
02 9630 5658

From: [Sam Riley](#)
Bcc: [lilly.carroll](#); [Marilyn Carroll-Johnson](#); [Raiwyn Towney](#); [Ungooroo Admin](#); [amandahickey@live.com.au](#); [Carolyn .H](#); [David Horton](#); [Ethan3trewlynn@gmail.com](#); [Tracey Skene](#); [Stephen Carroll](#); [Thomas Dahlstrom](#); [Tiarna Bird](#); [Manager](#); [Matthew Syron](#); [Leslie Atkinson](#); [aga.services@hotmail.com](#); [cacatua4service@tpg.com.au](#); [Steven Flick](#); [Girra Murun](#); [Ray Moon](#); [Robert John Simpson](#); [Lower Hunter Aboriginal Incorporated](#); [Steven .Hickey](#); [Ceo](#)
Subject: 9211 Structure 169 ACHA - Stage 4 RAP review
Date: Friday, 17 July 2026 11:01:00 AM
Attachments: [9211 Transgrid Transposition Towers ACHA_D05_20260717.pdf](#)
[image001.png](#)
[9211 Transgrid Transposition Towers AR_D04_20260717.pdf](#)

Good afternoon,

Please find attached the draft Aboriginal Cultural Heritage Assessment report (ACHA) for the proposed works at Structure 169 near Merriwa, NSW.

As per Section 4.4 of the Aboriginal Cultural Heritage Consultation Requirements for Proponents (ACHCRPs) could any comments and feedback on the draft ACHA please be supplied in writing by Friday 14 August 2026.

If anybody would like a chat about the project, please don't hesitate to contact us.

Thanks,

Samuel Riley BArch, MRes
Heritage Consultant

T - 0488 774 037
E - sriley@niche-eh.com

NSW - Central Coast
Awabakal and Worimi Country
02 9630 5658

Niche-eh.com



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From: [Robert John Simpson](#)
To: [Sam Riley](#)
Subject: Re: 9211 Structure 169 ACHA - Stage 4 RAP review
Date: Sunday, 19 July 2026 11:30:35 PM
Attachments: [image001.png](#)

Hi Sam

Thank you for your email and positive engagement and consultation with Marri Culture and Heritage seeking Aboriginal Cultural Heritage input and Aboriginal Cultural Heritage Assessment & Reports.(ACHAR) - Marri Culture & Heritage would like to register our interest for further consultation as a RAP.

Regards

Robbie Simpson

On Fri, 17 Jul 2026 at 3:12 pm, Sam Riley <sriley@niche-eh.com> wrote:

Good afternoon,

Please find attached the draft Aboriginal Cultural Heritage Assessment report (ACHA) for the proposed works at Structure 169 near Merriwa, NSW.

As per Section 4.4 of the Aboriginal Cultural Heritage Consultation Requirements for Proponents (ACHCRPs) could any comments and feedback on the draft ACHA please be supplied in writing by Friday 14 August 2026.

If anybody would like a chat about the project, please don't hesitate to contact us.

Thanks,

Samuel Riley BArch, MRes
Heritage Consultant

T - 0488 774 037

E - sriley@niche-eh.com

NSW - Central Coast
Awabakal and Worimi Country

From: [Carolyn.H](#)
To: [Sam Riley](#)
Subject: Re: 9211 Structure 169 ACHA - Stage 4 RAP review
Date: Friday, 17 July 2026 8:57:08 PM
Attachments: [image001.png](#)
[image.png](#)
[image.png](#)
[image.png](#)
[image.png](#)



Contact: Carolyn Hickey
Mobile: 0411650057
Email: Cazadirect@live.com
Address: 73 Russell St, Emu Plains, NSW 2750
ABN: 20 616 970 327

Hi Samuel,

Thank you for sending the draft Aboriginal Cultural Heritage Assessment for Merriwa, NSW. I have carefully reviewed the document and fully support the findings and information presented in the assessment.

Thank you again, and I hope you have a great weekend.

Kind regards,
Carolyn Hickey

A1 Indigenous Services is a 100% Indigenous-owned Australian company offering a range of services to the construction industry. Our mission is to commit to an innovative approach for a better future for Indigenous employment and community, while improving ways to close the gap in Aboriginal participation in the construction industry. We are dedicated to building strength in Aboriginal communities and our Indigenous labour force.



A1 Indigenous Services is a member of the NSW Indigenous Chamber of Commerce (NSWICC). A business or enterprise carrying the NSWICC Assured logo has met national policy requirements as upheld by FACCI, ensuring that it is identified as a First Nations business owner or entrepreneur and that it demonstrates compliance with government and industry regulators.



From: Sam Riley <sriley@niche-eh.com>
Sent: Friday, 17 July 2026 3:12 PM
Subject: 9211 Structure 169 ACHA - Stage 4 RAP review

Good afternoon,

Please find attached the draft Aboriginal Cultural Heritage Assessment report (ACHA) for the proposed works at Structure 169 near Merriwa, NSW.

As per Section 4.4 of the Aboriginal Cultural Heritage Consultation Requirements for Proponents (ACHCRPs) could any comments and feedback on the draft ACHA please be supplied in writing by Friday 14 August 2026.

If anybody would like a chat about the project, please don't hesitate to contact us.

Thanks,

Samuel Riley BArch, MRes
Heritage Consultant

T - 0488 774 037
E - sriley@niche-eh.com

NSW - Central Coast
Awabakal and Worimi Country
02 9630 5658

[Niche-eh.com](https://www.niche-eh.com)



Creating a
sustainable future.

From: [Ethan Trewlynn](#)
To: [Sam Riley](#)
Subject: Re: 9211 Structure 169 ACHA - Stage 4 RAP review
Date: Monday, 20 July 2026 2:45:05 PM
Attachments: [image001.png](#)
[image001.png](#)

Hi Sam,

I have read everything and I'm happy with it.

Kind regards,

Ethan

On Fri, 17 July 2026, 3:12 pm Sam Riley, <sriley@niche-eh.com> wrote:

Good afternoon,

Please find attached the draft Aboriginal Cultural Heritage Assessment report (ACHA) for the proposed works at Structure 169 near Merriwa, NSW.

As per Section 4.4 of the Aboriginal Cultural Heritage Consultation Requirements for Proponents (ACHCRPs) could any comments and feedback on the draft ACHA please be supplied in writing by Friday 14 August 2026.

If anybody would like a chat about the project, please don't hesitate to contact us.

Thanks,

Samuel Riley BArch, MRes
Heritage Consultant

T - 0488 774 037

E - sriley@niche-eh.com

NSW - Central Coast
Awabakal and Worimi Country

02 9630 5658

Niche-eh.com



Creating a
sustainable future.

Date of correspondence	Time of correspondence	Individual contacted:	Organisation contacted:	Form of contact	Contacted by:	Organisation represented	Nature of consultation	Notes
30/01/2026	8:41 AM		Hunter Local Land Servis	Email	Samuel Riley	Niche	Stage 1 Agency Letters	Good morning, Niche Environment and Heritage (Niche) has been engaged by Transgrid (hereafter referred to as 'the Proponent') to assist in the preparation of an Aboriginal Cultural Heritage Assessment including Aboriginal community consultation for proposed transposition and vegetation clearing works at Lot 7 DP 1279168 located in the Upper Hunter Council Local Government Area. If you know of any interested Aboriginal people who hold cultural knowledge relevant to, or who have a right or interest in determining the cultural heritage significance of Aboriginal object(s) and/or place(s) in the Subject Area, please provide their details by 5pm on Friday 13 February 2026. Please see the attached letter for further details. Many thanks,
30/01/2026	8:41 AM		Wanaruah LALC	Email	Samuel Riley	Niche	Stage 1 Agency Letters	Good morning, Niche Environment and Heritage (Niche) has been engaged by Transgrid (hereafter referred to as 'the Proponent') to assist in the preparation of an Aboriginal Cultural Heritage Assessment including Aboriginal community consultation for proposed transposition and vegetation clearing works at Lot 7 DP 1279168 located in the Upper Hunter Council Local Government Area. If you know of any interested Aboriginal people who hold cultural knowledge relevant to, or who have a right or interest in determining the cultural heritage significance of Aboriginal object(s) and/or place(s) in the Subject Area, please provide their details by 5pm on Friday 13 February 2026. Please see the attached letter for further details. Many thanks,
30/01/2026	8:41 AM		NTSCorp	Email	Samuel Riley	Niche	Stage 1 Agency Letters	Good morning, Niche Environment and Heritage (Niche) has been engaged by Transgrid (hereafter referred to as 'the Proponent') to assist in the preparation of an Aboriginal Cultural Heritage Assessment including Aboriginal community consultation for proposed transposition and vegetation clearing works at Lot 7 DP 1279168 located in the Upper Hunter Council Local Government Area. If you know of any interested Aboriginal people who hold cultural knowledge relevant to, or who have a right or interest in determining the cultural heritage significance of Aboriginal object(s) and/or place(s) in the Subject Area, please provide their details by 5pm on Friday 13 February 2026. Please see the attached letter for further details. Many thanks,
30/01/2026	8:41 AM		ORALRA	Email	Samuel Riley	Niche	Stage 1 Agency Letters	Good morning, Niche Environment and Heritage (Niche) has been engaged by Transgrid (hereafter referred to as 'the Proponent') to assist in the preparation of an Aboriginal Cultural Heritage Assessment including Aboriginal community consultation for proposed transposition and vegetation clearing works at Lot 7 DP 1279168 located in the Upper Hunter Council Local Government Area. If you know of any interested Aboriginal people who hold cultural knowledge relevant to, or who have a right or interest in determining the cultural heritage significance of Aboriginal object(s) and/or place(s) in the Subject Area, please provide their details by 5pm on Friday 13 February 2026. Please see the attached letter for further details. Many thanks,
30/01/2026	8:41 AM		Upper Hunter Shire Coun	Email	Samuel Riley	Niche	Stage 1 Agency Letters	Good morning, Niche Environment and Heritage (Niche) has been engaged by Transgrid (hereafter referred to as 'the Proponent') to assist in the preparation of an Aboriginal Cultural Heritage Assessment including Aboriginal community consultation for proposed transposition and vegetation clearing works at Lot 7 DP 1279168 located in the Upper Hunter Council Local Government Area. If you know of any interested Aboriginal people who hold cultural knowledge relevant to, or who have a right or interest in determining the cultural heritage significance of Aboriginal object(s) and/or place(s) in the Subject Area, please provide their details by 5pm on Friday 13 February 2026. Please see the attached letter for further details. Many thanks,
30/01/2026	8:41 AM		Heritage NSW	Email	Samuel Riley	Niche	Stage 1 Agency Letters	Good morning, Niche Environment and Heritage (Niche) has been engaged by Transgrid (hereafter referred to as 'the Proponent') to assist in the preparation of an Aboriginal Cultural Heritage Assessment including Aboriginal community consultation for proposed transposition and vegetation clearing works at Lot 7 DP 1279168 located in the Upper Hunter Council Local Government Area. If you know of any interested Aboriginal people who hold cultural knowledge relevant to, or who have a right or interest in determining the cultural heritage significance of Aboriginal object(s) and/or place(s) in the Subject Area, please provide their details by 5pm on Friday 13 February 2026. Please see the attached letter for further details. Many thanks,

30/01/2026	8:44 AM		National Native Title Trib	Email	Samuel Riley	Niche	Stage 1 Agency Letters	To whom it may concern, I hope this email finds you well. See attached a request for Spatial Search of Tribunal Registers form for the Transgrid Transposition Towers ACHA (Niche ref #9211).
30/01/2026	9:09 AM	Samuel Riley	Niche	Email	CEO	Wanaruah LALC	Stage 1 Agency Responses	Sam Please note the Ceo email is the correct email to send this to. We would like to register our interest. Thank you
30/01/2026	1:19 PM	Samuel Riley	Niche	Email	Jacqueline Myhill	Hunter Local Land Services	Stage 1 Agency Responses	Hi Hunter Local Land Services do not have a list of all of the relevant Aboriginal Traditional Custodians that are within your project area. Could you please contact the relevant Local Aboriginal Land Council (LALC) for the list of Aboriginal Traditional Custodians that have interest within the project site area. See following link to LALC contact details: https://alc.org.au/land_council/ Also, please check the National Native Title Tribunal and search for Registered Native Title Claims for your area, to view list of Claims please access the following link: http://www.nntt.gov.au/searchRegApps/NativeTitleRegisters/Pages/Search-Register-of-Native-Title-Claims.aspx For further questions please contact Toby Whaleboat on details below.
2/02/2026	10:29 AM	Samuel Riley	Niche	Email		ORALRA	Stage 1 Agency Responses	Dear Samuel, Please find attached the response from the Office of the Registrar, ALRA to your email of 07 January 2026 regarding the proposed transposition and vegetation clearing works at Lot 7 DP 1279168 located in the Upper Hunter Council Local Government Area, NSW. If you have any further questions, please respond by return email.
2/02/2026	2:19 PM	Samuel Riley	Niche	Email	Barry Gunther	Heritage NSW	Stage 1 Agency Responses	Hi Samuel, Please find attached the Heritage NSW Aboriginal stakeholder list for Lot 7 DP 1279168 Transgrid Transposition Towers. regards Barry Gunther Aboriginal Senior Assessment Officer Heritage NSW Department of Climate Change,
25/02/2026	3:58 PM		All potential stakeholders	Email and Post	Samuel Riley	Niche	Stage 1 RAP Letters	Provision of RAP EOJ letters to all identified potential stakeholders
25/02/2026	4:04 PM	Samuel Riley	Niche	Email	Lilly Carroll	Didge Ngunawal Clan	Stage 1 RAP Responses	Hi Sam Can u plz register us on the transgrid transposition works project Kind regards Paul Boyd & Lilly Carroll
25/02/2026	4:05 PM	Samuel Riley	Niche	Email	Marilyn Carroll-Johnson	Corroboree Aboriginal Corporation	Stage 1 RAP Responses	Hi Sam 9211 Transgrid Transposition Works: Register in full capacity and non disclosure to LALC. Kind regards Marilyn Carroll-Johnson
25/02/2026	4:12 PM	Samuel Riley	Niche	Email	Raiwyn Towney	Ngagga Ngagga	Stage 1 RAP Responses	Ngagga Ngagga as a Registered Aboriginal Party (RAP) Good Afternoon, I would like to formally register my interest in having our group recognised as an individual Registered Aboriginal Party (RAP). The name of our RAP is Ngagga Ngagga. Our representatives, Greg Kennedy and Raymond Hampton, bring extensive experience in cultural heritage surveys and excavations. Their work includes major projects such as: •Wirlipjong Coal Mine (Peabody) extension •Blair West Mine (Glencore) underground extension •Bake Lyell Pumped Hydro project •EnergyCo REZ project •As well as various other smaller heritage projects across their respective regions Ngagga Ngagga is committed to participating in all aspects of projects, regardless of size. For your reference, I have attached our insurance and public liability documentation in PDF format. Our current rates are as follows: •\$150.00 per hour, charged in half-day or full-day blocks •Half-day (0–4 hours): \$600.00 •Full-day (4–8 hours): \$1200.00 Could you please confirm receipt of this email and provide verification of our registration? Thank you for your time and consideration. Kind regards, Raiwyn Towney Ngagga Ngagga
25/02/2026	4:19 PM	Samuel Riley	Niche	Email	Admin	Ungooroo Aboriginal Corporation	Stage 1 RAP Responses	Good afternoon We would like to register our interest in the above-mentioned project please. Thank you

25/02/2026	4:37 PM	Samuel Riley	Niche	Email	Amanda Hickey	Amanda Hickey Cultural Services	Stage 1 RAP Responses	Hi Sam, Amanda Hickey Cultural Services would like to register an interest in this project. Have a great day, Amanda Hickey Good afternoon Sam, Hope you're having a great day! Thank you for your email. I would like to formally express my interest in being involved in all levels of consultation for this project. This includes attending meetings, preparing reports, sharing cultural information, and participating in available fieldwork. A bit about myself: I am a Traditional Owner with over 25 years of experience in preserving Aboriginal cultural heritage. My extensive cultural knowledge is essential in determining the significance of Aboriginal objects and values within the project area. I have attached A1 Indigenous Services Insurances. Please do not publish this email I agree to my details being shared with OEH and the LALC. Please feel free to contact me using the details provided above. Kind regards,
25/02/2026	4:48 PM	Samuel Riley	Niche	Email	Carolyn Hickey	A1 Indigenous Services	Stage 1 RAP Responses	Hi Sam,its dave horton gomery cultural consultants,like to regester for project please myself and part
25/02/2026	5:24 PM	Samuel Riley	Niche	Email	Dave Horton	Gomery Cultural Consultants	Stage 1 RAP Responses	Hi Sam,
25/02/2026	5:32 PM	Samuel Riley	Niche	Email	Ethan Trewlynn	Long Gully Cultural Services	Stage 1 RAP Responses	I would like to register Long Gully Cultural Services for this project. Kind regards,
25/02/2026	6:02 PM	Samuel Riley	Niche	Email	Tracey Skene	Culturally Aware	Stage 1 RAP Responses	Good evening Sam Culturally Aware would like to put their EOI in for this project and familiar with the Cultural Landscape and surroundings of this area Tracey Amanda Hickey Hi Sam,
25/02/2026	9:11 PM	Samuel Riley	Niche	Email	Stephen Carroll	Guugaburra Yiramilan	Stage 1 RAP Responses	We Guugaburra Yiramilan as descendants of Wonnarua traditional Aboriginal bloodlines would like to register our interest for further consultation and engagement ACHA proposed transposition and vegetation works located at Lot 7 DP 1279168 within the Upper Hunter Local Government Area. Regards Stephen Carroll
25/02/2026	10:02 PM	Samuel Riley	Niche	Email	Thomas Dahlstrom		Stage 1 RAP Responses	Hi Sam Thank you for your email. Can you please register me as an individual RAP for this. Kind regards
26/02/2026	7:02 AM	Samuel Riley	Niche	Email	Tiarna Bird	Mura Gadi Aboriginal Corporation	Stage 1 RAP Responses	Goodmorning, I would like to register interest thanks! Tiarna Bird Director
26/02/2026	9:33 AM	Samuel Riley	Niche	Email	Kylie Pascoe	Hunter Valley Aboriginal Corporation	Stage 1 RAP Responses	Good Morning Sam, Thank you for the opportunity to register for the Transgrid Transposition Towers ACHA. Please accept this email to confirm the registration. Our details are as below. Much Appreciated
26/02/2026	16:26	Samuel Riley	Niche	Email	Matthew Syron	Budgewoi Barray	Stage 1 RAP Responses	My name is Matt Syron and I would like to register my interest in this upcoming project. I am a descendant of the Pambalong clan of the Worrimai/Birripai people. I hold not only cultural knowledge of this area, I have a strong family and spiritual connection. My family has remained in this area unbroken. Dozens of my family members and I have enlisted to the defense force in Newcastle since WW1 till the present. I share this information to provide proof of my skillset and Cultural Connection. I am fit for work, reliable, hardworking and I am prepared to work in any conditions. Budgewoi Barray Pty Ltd is my business and we specialize in Cultural Emersion, Culture and Heritage surveys, Land Management, Mentoring in schools and DCI's. I would like any pertinent information on this project sent to me please and also suggest a face to face meeting with all RAOs whom have registered to make sure the correct knowledge holders are engaged for these works. Murrung(thankyou) for this opportunity and should you choose to work with me I will not let you down. Please don't hesitate to call me to discuss further. I look forward to working with you.

27/02/2026	11:06 AM	Samuel Riley	Niche	Email	Les Atkinson	Jarban & Mugrebea	Stage 1 RAP Responses	Yamma Sam hope all is well , Les Atkinson from jarban &Mugrebe Yes i would like to lodge An EOI in this project I hold knowledge of identifying places and objects of the area I would also like to place an EOI in in all aspects of field work surveying , test excavations and salvage works i hold all relevant COCs of insurances copies may be forwarded on request ; if you require any further information please do not hesitate to call Les
2/03/2026	11:41 AM	Samuel Riley	Niche	Email	Ashley Sampson	AGA Services	Stage 1 RAP Responses	Samual, AGA Services wish to express an interest in being involved in the Transgrid Transposition Works that was listed in the email supplied. Our staff are very skilled in all aspects of Aboriginal Heritage Culture works, We are also fully insured and registered with all governing body. If you require any more information please do not hesitate to contact me: Manager: Ashley Sampson 0401958051 email: ashley.sampson0197@gmail.com Admin: Donna 0403765019 email: classic_black_sampson@hotmail.com Thank you
2/03/2026	11:49 AM	Samuel Riley	Niche	Email	George Sampson	Cacatua General Services	Stage 1 RAP Responses	Samual, Cacatua General Services wish to express an interest in being involved in the Transgrid Transposition Works that was listed in the email supplied. Our staff are experienced in all aspects of Aboriginal Heritage Culture works, We are also fully insured and registered with all governing body. If you require any more information please do not hesitate to contact me: Manager: George Sampson 0434 877 016 email: cacatua4service@tpg.com.au 2IC: Sue Cutmore 0423 696 446 Admin: Donna/ Patricia 0403765019 email: classic_black_sampson@hotmail.com Thank you
3/03/2026	9:34 PM	Samuel Riley	Niche	Email	Robert Simpson	Marri Culture and Heritage	Stage 1 RAP Responses	Hi Sam Thank you for your email and positive engagement and consultation with Marri Culture and Heritage seeking Aboriginal Cultural Heritage input and Aboriginal Cultural Heritage Assessment & Reports.(ACHAR) - Marri Culture & Heritage would like to register our interest for further consultation as a RAP. Regards
6/03/2026	9:46 AM	Samuel Riley	Niche	Email	Steven Flick	George Flick Cultural Services	Stage 1 RAP Responses	I would like to take part thanks. George flick
6/03/2026	4:34 PM	Samuel Riley	Niche	Email	Diana Astin	Girragirra Murun	Stage 1 RAP Responses	Good afternoon, Sam, would you please register Girragirra Murun as a RAP for this project. RAP- Malcolm Briggs girragirramurun@yahoo.com 0484120690 Kind Regards Diana Astin
6/03/2026	4:50 PM	Samuel Riley	Niche	Email	Mel Chown	Wingarra Wilay	Stage 1 RAP Responses	Good afternoon, Sam, would you please register Wingarra Wilay as a RAP for this project our details are: RAP- Ray Moon wingarrawilay@yahoo.com 0433510072 Kind Regards Mel Chown for Ray Moon
9/03/2026	3:33 PM	Samuel Riley	Niche	Email	David Ahoy	Lower Hunter Aboriginal Incorporated	Stage 1 RAP Responses	Hi On behalf of LHAI, I would like to register an Interest in the 9211 Transgrid Transposition Works project. --- Thank You David Ahoy Sites Manager
10/03/2026	8:59 PM	Samuel Riley	Niche	Email	Donna Hickey	Widescope Indigenous Group	Stage 1 RAP Responses	Hi Sam, Thank you for reaching out and sharing the details of the upcoming transposition and vegetation works. Please register Steven Hickey's interest in the project we appreciate you including us in the process and sending through the invitation for the Aboriginal Cultural Heritage Assessment. Kind Regards Widescope Indigenous Group Donna Hickey
12/03/2026	9:25 AM		Heritage NSW	Email	Samuel Riley	Niche	Stage 1 Notification to HeritageNSW and LALC	Good morning, Please see attached for copies of the notification of our RAP list for the Structure 169 Transposition Works ACHA. A copy of the potential stakeholder letter is also provided for your reference. ---

12/03/2026	9:25 AM		Wanaruah LALC	Email	Samuel Riley	Niche	Stage 1 Notification to HeritageNSW and LALC	Good morning, Please see attached for copies of the notification of our RAP list for the Structure 169 Transposition Works ACHA. A copy of the potential stakeholder letter is also provided for your reference.
23/03/2026	3:57 PM		All RAPs	Email	Samuel Riley	Niche	Stage 3 Assessment Methodology	Provision of Stg 2/3 Assessment methodology with a closing date for comments of 20th April 2026
25/03/2026	11:44 AM	Samuel Riley	Niche	Email	Ethan Trewlynn	Long Gully Cultural Services	Stage 3 Assessment Methodology	Hi Samuel, I have read the information and methodology for this project and I'm in support as it is up to standards. Kind regards,
8/04/2026	11:56 AM	Samuel Riley	Niche	Email	Amanda Hickey	Amanda Hickey Cultural Services	Stage 3 Assessment Methodology	Hi Sam, I have read through & support the ACHA methodology. Have a great day,
14/04/2026	10:22 PM	Samuel Riley	Niche	Email	Carolyn Hickey	A1 Indigenous Services	Stage 3 Assessment Methodology	Good day, Sam, Thank you for providing the Project Information and Proposed Assessment Methodology for the 9211 Transgrid Transposition Towers. I have reviewed the document and am pleased to express my full support for both the information and the methodology outlined. I would appreciate being included in all meetings, reports, sharing of cultural information, and fieldwork related to this project.
15/04/2026	3:44 PM		Wanaruah LALC, HVAC, &	Email	Samuel Riley	Niche	Survey Logistics	Good afternoon, I wanted to send through a formal invitation for a representative to join us on a survey that we are planning at Merriwa, NSW. It is for the proposed transposition and vegetation works located at Lot 7 DP 1279168 within the Upper Hunter Local Government Area. It is a half-day survey running approx. 12:30pm-4:00pm on Tuesday 28/04. We would love to confirm with you would be able to join us. If you could please confirm by next Friday (24/04) who may be able to attend and their phone number it would be much appreciated! Please reach out if you had any questions,
15/04/2026	4:09 PM	Samuel Riley	Niche	Email	David Horton	Gomery Cultural Consultants	Survey Logistics	Hi sam,Its dave horton leanne not available i might do it ok.
16/04/2026	6:54 AM	Samuel Riley	Niche	Email	CEO	Wanaruah LALC	Survey Logistics	Hi Sam
								We will be sending someone; will confirm who later in the week next week.
16/04/2026	11:15 AM	Samuel Riley	Niche	Email	Kylie Pascoe	HVAC	Survey Logistics	Good Morning Sam, Thank you for the invitation to participate in the survey on the 28th. Leanne Kirkman will attend for HVAC. I have attached our insurances for your records. Much appreciated.
16/04/2026	12:10 PM	Samuel Riley	Niche	Email	Admin	Ungooroo Aboriginal Corporation	Survey Logistics	Good morning Thank you for the email. Alan Paget will be attending. His mobile number is 0401 562 685. Kind regards
17-Jul-26	3:13 PM		All RAPs	Email	Samuel Riley	Niche	Stage 4 Draft Report	Good afternoon, Please find attached the draft Aboriginal Cultural Heritage Assessment report (ACHA) for the proposed works at Structure 169 near Merriwa, NSW. As per Section 4.4 of the Aboriginal Cultural Heritage Consultation Requirements for Proponents (ACHCRPs) could any comments and feedback on the draft ACHA please be supplied in writing by Friday 14 August 2026. If anybody would like a chat about the project, please don't hesitate to contact us.
17/07/2026	8:57 PM	Samuel Riley	Niche	Email	Carolyn Hickey	A1 Indigenous Services	Stage 4 Draft Report	Thanks, Hi Samuel, Thank you for sending the draft Aboriginal Cultural Heritage Assessment for Merriwa, NSW. I have carefully reviewed the document and fully support the findings and information presented in the assessment. Thank you again, and I hope you have a great weekend.
19/07/2026	11:30 PM	Samuel Riley	Niche	Email	Robbie Simpson	Marri Culture and Heritage	Stage 4 Draft Report	Kind regards, Hi Sam Thank you for your email and positive engagement and consultation with Marri Culture and Heritage seeking Aboriginal Cultural Heritage input and Aboriginal Cultural Heritage Assessment & Reports.(ACHAR) - Marri Culture & Heritage would like to register our interest for further consultation as a RAP. Regards

20/07/2026	2:45 PM	Samuel Riley	Niche	Email	Ethan Trewlynn	Long Gully Cultural Services	Stage 4 Draft Report	Hi Sam, I have read everything and I'm happy with it. Kind regards, Eh
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Contact us

info@niche-eh.com
niche-eh.com

NSW office

Sydney: Gadigal Country
02 9630 5658
Level 3, 31 Alfred Street
Sydney NSW 2000

QLD office

Brisbane: Turrbal and Jagera Country
07 2104 8594
Level 6, 200 Adelaide Street
Brisbane QLD 4000

VIC office

Melbourne: Wurundjeri Country
0488 224 036
Level 3, 162 Collins Street
Melbourne VIC 3000

Our expertise



Natural capital
and offsetting



Ecology



Heritage
management



Spatial Services

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>i.e. during construction and/or post construction?</i>	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? <i>These may be WaterNSW endorsed current recommended practices (CRPs) and or equally effective other practices)</i>	The following safeguards would be implemented to prevent or mitigate 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 <i>Managing Urban Stormwater: Soil and Construction Volume 1</i> (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 (e.g. 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

NorBE assessment – is there likely to be a neutral or beneficial effect on water quality?

	stormwater drains, waterways or migrating off-site. Pathogens and biological pollutants - 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 <i>Environment Operations Act 1997</i> (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 activity 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.