Piambong Wind Farm

Application Number: **02178** Commencement Date: **18/12/2023** Status: **Locked**

1. About the project

1.1 Project details

1.1.1 Project title *

Piambong Wind Farm

1.1.2 Project industry type *

Energy Generation and Supply (renewable)

1.1.3 Project industry sub-type

Wind Farm

1.1.4 Estimated start date *

30/06/2025

1.1.4 Estimated end date *

01/01/2057

1.2 Proposed Action details

1.2.1 Provide an overview of the proposed action, including all proposed activities. *

Project description

The proposed action (the 'Project) is the construction, operation and decommissioning of a wind farm comprising up to 81 wind turbine generators (WTGs) with a capacity of approximately 551 megawatts (MW). The WTGs would be spaced at least 500 metres (m) from each other and would be connected via

cabling to one or more onsite collector substations. The substation(s) could connect to the NSW high voltage transmission network via a new transmission line extending approximately 4.5 km to the north of the northernmost turbine location.

The project area is approximately 9,000ha. Due to the early stage of design development, the disturbance footprint is not able to be accurately defined and is subject to ongoing design and refinement during the preparation of an EIS. For the purposes of the EPBC Act Referral, a preliminary and conservative disturbance footprint of approximately 1,935ha has been included. Given the conservative nature of the estimated disturbance, it should be noted that the disturbance footprint will be reduced as design progresses and further investigations are undertaken. All other areas within the project area would be avoided (i.e. avoidance area >7,000ha).

It is acknowledged that the Central West Orana (CWO) Renewable Energy Zone (REZ) network infrastructure project intends to construct new transmission infrastructure generally in the vicinity of the Project, and that this new infrastructure could present the Project with a number of alternative connection options. Due to the proposed timeline of the new infrastructure being developed, the proponent will be working with EnergyCo (and other relevant stakeholders) to maximise the likely future benefits from this rollout. However, in the meantime the Project proposes to connect to the existing 330 kilovolt (kV) transmission line to the north of the Project area.

The Project would also include a battery energy storage system (BESS) of up to 100 MW/200 MWh capacity, co-located with the proposed onsite substation(s).

The Project would include the following elements:

- WTGs with a tip height of up to 230 m and a hub height of up to 150 m
- A new transmission line to connect the Project to the National Electricity Market (NEM)
- BESS of up to 100 MW/200 MWh within the Project area
- Internal electrical network (potentially overhead but likely to be predominantly underground)
- One or more onsite substations
- New or upgraded access tracks to each WTG
- Operation and maintenance buildings, including carpark and driveway access
- Meteorological masts (met masts).

The indicative layout of the Project is shown in the attached Figure 1.

Project staging

Construction

Construction would commence in 2026, with a duration of up to three years.

Construction of the Project would require fixed or mobile concrete batching plants, project offices/buildings and multiple laydown areas. Some elements of the Project, such as the WTGs, would be prefabricated offsite and transported to the Project area for installation.

Indicative construction activities include:

- Site establishment and preparation:
    - Site surveying
    - Installation of environmental controls e.g. erosion and sediment, construction traffic management
    - Establish construction and operational compound sites, amenities, laydown areas and concrete batching plant
    - Vegetation clearing
    - Topsoil removal and soil compaction for access tracks
    - Investigation, protection and relocation of utilities as required.
- Earthworks

    - Construction of temporary and permanent access tracks including gravelling and drainage installation
    - Construction of turbine footings
    - Trenching for installation of underground cables
- Electrical works
    - Laydown cables and installation of cable route markers
    - Delivery, installation and electrical fit-out for the Project including for either overhead and underground inter-array cabling, onsite substation(s), operations and maintenance compound, battery enclosures, inverters, transformers
    - Installation of a new aboveground and/or underground transmission cable from the onsite collector substation(s) to the connection point
- WTG erection
    - Erection of towers and installation of nacelles and blades.
    - Electrical connection of the WTG to inter-array cabling
- Testing and site rehabilitation
    - Testing of electrical, communications, security systems and other associated facilities
    - Removal of construction equipment and rehabilitation of construction compounds/areas and temporary access tracks
    - Establish landscaping/screening vegetation around the operations and maintenance (O&M) compound and substation(s) as required
    - Removal of temporary environmental control measures.

Due to the early stage of design development, the disturbance footprint is not able to be accurately defined and is subject to ongoing design and refinement during the preparation of an EIS. For the purposes of the EPBC Act Referral, a preliminary and conservative disturbance footprint has been included. The conservative disturbance footprint includes a 100m buffer either side of the centreline of proposed roads (total buffer area is 200m wide), and a 70m buffer radius around proposed turbine locations. Given the conservative nature of these buffers, it should be noted that the disturbance footprint will be reduced as design progresses.

Indicative construction workforce

The Project is anticipated to take approximately 30 months to construct and would require a construction workforce of up to 400 people full-time equivalent (FTE). Temporary accommodation may be required for the workforce. The location of accommodation, if required, would be considered and assessed as part of the environmental impact statement (EIS), and in consultation with local councils.

Indicative hours of construction

Construction activities would be scheduled during standard construction hours as specified in the *Interim Construction Noise Guideline.* These indicative hours are:

- Monday to Friday 7:00 am to 6:00 pm
- Saturday 8:00 am to 1:00 pm
- No work on Sundays or public holidays.

The EIS would consider activities or instances where construction outside of these hours may be required.

Project operation

The Project would operate 24 hours a day, seven days a week once operational. Some elements of the Project may be taken offline from time to time for maintenance, though the broader wind farm would generally remain operational throughout its operational life (proposed to be approximately 30 years).

Relevant activities during the operational phase will include the day to day management of the physical infrastructure of the wind farm. The onsite operations and maintenance team would undertake periodic inspections of all turbines, replace broken or worn out parts, maintain roads and fences and manage

vegetation around the turbines, the BESS and the operations and maintenance facility.

The Project would facilitate around 12-15 FTE long-term service and maintenance jobs during operation.

Project decommissioning and rehabilitation

At the end of their operational life WTGs would be either refurbished or decommissioned. though refurbishment or decommissioning (including rehabilitation as appropriate) may occur earlier if the operator deems necessary.

During decommissioning all above-ground Project structures built will be removed and the site rehabilitated to its pre-existing land use, as far as practicable and in consultation with the landowner. If it is deemed viable to upgrade and re-power the Project with new equipment all appropriate stakeholder consultation process will be undertaken, and all necessary environmental approvals will be sought and aligned with relevant legislation at the time.

1.2.2 Is the project action part of a staged development or related to other actions or proposals in the region?

No

1.2.6 What Commonwealth or state legislation, planning frameworks or policy documents are relevant to the proposed action, and how are they relevant? *

Commonwealth or State legislation

Commonwealth legislation

EPBC Act 1999: The Project is being referred to the Australian Government Department of Climate Change, Energy, the Environment and Water (DCCEEW) for consideration of potential impacts to matters of national environmental significance (MNES). If the Project is deemed a controlled action (i.e., likely to cause a significant impact to one or more MNES) the Project would be subject to an impact assessment under Part 8 of the EPBC Act.

Native Title Act 1993: a search of the Native Title Register was conducted on 17 March 2023. No native title or claims were found to exist across the Project area.

NSW legislation

Environmental Planning and Assessment Act 1979 (EP&A Act): The Project is permissible with development consent under Part 4 of the EP&A Act and would be assessed as State Significant Development.

National Parks and Wildlife Act 1974: The potential impact on Aboriginal cultural heritage values would be assessed within an Aboriginal Cultural Heritage Assessment Report (ACHAR), as part of the EIS.

Aboriginal Land Rights Act 1983: The Project would be located in the Wiradjuri Local Aboriginal Land Council (LALC) area. The Wiradjuri LALC would be consulted as part of the ACHAR submitted alongside the EIS.

Water Management Act 2000: An aquifer interference approval may be required should the construction of the Project incept groundwater. The requirement for other licences and approvals under this act are ‘switched off’ by section 4.41 of the EP&A Act.

Protection of the Environment Operations Act 1997: The Project would require an Environment Protection Licence as a scheduled activity (electricity works (wind farms)).

Biodiversity Conservation Act 2016: A Biodiversity Development Assessment Report (BDAR) would be prepared as part of the EIS. The scoping report describes the biodiversity values present within the Project area and identifies potential impacts of the Project on these values. Biodiversity credits requirements would be calculated as per the Biodiversity Assessment Methodology.

Heritage Act 1977: No items of non-Aboriginal heritage significance were identified within the Project area. The closest non-Aboriginal heritage item is 2.5 km away.

The following State Environmental Planning Policies (SEPPs) are also relevant:

- SEPP (Planning Systems) 2021
- SEPP (Transport and Infrastructure) 2021
- SEPP (Resilience and Hazards) 2021
- SEPP (Biodiversity and Conservation) 2021

Planning frameworks or policy documents

NSW Transmission Infrastructure Strategy

The *NSW Transmission Infrastructure Strategy* sets out a plan to facilitate private sector investment in priority transmission infrastructure projects. The Strategy forms part of the government's broader plan to make energy more affordable, secure investment in new power stations and network infrastructure; and ensure new technologies deliver benefits for consumers. The objectives of the Project align with the driving principles and goals set out in the *NSW Transmission Infrastructure Strategy*.

NSW Electricity Strategy

To assist in promoting investment in renewable energy projects in NSW, the *NSW Electricity Strategy* sets out a plan to deliver three Renewable Energy Zones (REZs), including the CWO REZ. The establishment of the REZs would coordinate the development of new grid infrastructure in energy rich areas, efficiently connecting multiple generators in the same location.

The Project would be located inside the CWO REZ boundary. The Project would be capable of supporting the goals of the REZs generally, and the CWO REZ specifically.

NSW Climate Change Policy Framework

The *NSW Climate Change Policy Framework* outlines two aspirational long-term objectives, being:

- Achieve net-zero emissions by 2050
- Make NSW more resilient to climate change.

1. The Project is consistent with the above objectives of the *NSW Climate Change Policy Framework.* The Project would assist in achieving net-zero emissions by reducing state-wide reliance on fossil fuels as an energy source, thereby reducing NSW's greenhouse gas emissions. The Project would also assist in building NSW's resilience to climate change by providing a renewable energy source that could store energy in a BESS for usage during less windy conditions or periods of peak demand.

Central West and Orana Regional Plan 2036

The Plan recognises that the region has significant potential for growth in renewable energy industries, particularly for wind power generation, large-scale solar energy and bioenergy generation. Action 9.1 seeks to identify locations with renewable energy generation potential and access to the electricity network.

The Project would complement the Plan by providing energy generation infrastructure that would support investment in renewable energy and would improve the region's access to the electricity network.

1.2.7 Describe any public consultation that has been, is being or will be undertaken regarding the project area, including with Indigenous stakeholders. Attach any completed consultation documentations, if relevant. *

Consultation to date

Piambong Wind Farm is committed to continuing its meaningful and ongoing consultation with the community and relevant stakeholders throughout the development of the Project and the EIS. Engagement activities during the early planning stage of the Project and in preparation for the Scoping Report and EPBC Referral have focused on understanding community views of the Project, potential concerns and future engagement activities to be carried out in preparation of the EIS. A summary of the outcome of consultations undertaken is provided in Attachment B Piambong Wind Farm Scoping Report (Section 5.4).

More than 1,000 engagement activities have been undertaken since August 2021, including (but not limited to):

- Host landowner briefings and follow-up engagements
- Face-to-face community drop-in sessions on 2 and 3 June 2022, and 15 and 16 November 2023, in Mudgee and Gulgong
- Face-to-face community drop-in sessions at the Mudgee Small Farm Field Fays on 8 and 9 July 2022, and 7 and 8 July 2023
- Face-to-face community drop-in sessions at National Renewables in Agriculture Conference, Dubbo, 21 June 2023
- Face-to-face meetings with stakeholders to identify early concerns and matters requiring assessment
- Stakeholder briefings, including with Commonwealth, state and local government agencies and local Members of Parliament
- Media advertisements, including print advertisements in local newspapers to advertise the community drop-in sessions
- Phone calls and direct correspondence via letters and email
- Letter drops in 2022 to all properties within 3.4km of a proposed turbine location.
- Letter drops in 2023 to all properties within 5km of a proposed turbine location
- Letters sent via registered post to any houses missed during the above letter drops. Letters sent via Mid-Western Council to addresses where letters were either returned, did not have a postal address or it was likely the owners did not live at that address
- Newsletters sent in October and November 2023 as well as February 2024 to all stakeholders who registered to receive updates on either the website or in person at the drop-in sessions
- An online survey.

Future consultation

The next stage of community and stakeholder engagement will build on relationships established through early engagement activities and complement formal consultation required under planning regulations. The following community and stakeholder engagement activities will continue to occur during the preparation of the EIS:

- One-on-one meetings
- Stakeholder briefings
- Community information sessions
- Presentations and briefings
- Toll-free community information number
- Project email address
- Piambong Wind Farm website
- Communications materials (newsletters, letters, and factsheets)
- E-Newsletter

- Media and advertisements.

Indigenous consultation will be a key aspect of the upcoming stages of consultation for the Project. This will include specific consultation as part of the standard practice for the proposed Aboriginal heritage impact assessment, as well as more generic consultation on the project as a whole and its impact on Aboriginal values and culture in the region. This detail will be included and considered within the Project's social impact assessment which would be prepared in accordance with the NSW Social Impact Assessment Guideline, which specifically requires consultation with relevant Aboriginal stakeholders.

1.3.1 Identity: Referring party

Privacy Notice:

Personal information means information or an opinion about an identified individual, or an individual who is reasonably identifiable.

By completing and submitting this form, you consent to the collection of all personal information contained in this form. If you are providing the personal information of other individuals in this form, please ensure you have their consent before doing so.

The Department of Climate Change, Energy, the Environment and Water (the department) collects your personal information (as defined by the Privacy Act 1988) through this platform for the purposes of enabling the department to consider your submission and contact you in relation to your submission. If you fail to provide some or all of the personal information requested on this platform (name and email address), the department will be unable to contact you to seek further information (if required) and subsequently may impact the consideration given to your submission.

Personal information may be disclosed to other Australian government agencies, persons or organisations where necessary for the above purposes, provided the disclosure is consistent with relevant laws, in particular the Privacy Act 1988 (Privacy Act). Your personal information will be used and stored in accordance with the Australian Privacy Principles.

See our Privacy Policy to learn more about accessing or correcting personal information or making a complaint.

Alternatively, email us at privacy@awe.gov.au.

☑ **Confirm that you have read and understand this Privacy Notice ***

1.3.1.1 Is Referring party an organisation or business? *

Yes

Referring party organisation details

ABN/ACN 20093846925

Organisation name	AECOM AUSTRALIA PTY LTD
Organisation address	Level 4, 68 Northbourne Ave, Canberra ACT 2600

Referring party details

Name	Kate Every
Job title	Associate Director - Environment
Phone	0421 868 573
Email	kate.every@aecom.com
Address	Level 4 68 Northbourne Ave Canberra ACT 2601

1.3.2 Identity: Person proposing to take the action

1.3.2.1 Are the Person proposing to take the action details the same as the Referring party details? *

No

1.3.2.2 Is Person proposing to take the action an organisation or business? *

Yes

Person proposing to take the action organisation details

ABN/ACN	45657318299
Organisation name	PIAMBONG WIND FARM PTY LTD
Organisation address	312 St Kilda Rd, Southbank VIC 3006

Person proposing to take the action details

Name	Matt van der Merwe
Job title	Project Development Manager

Phone	1800719687
Email	info@piambongwindfarm.com.au
Address	312 St Kilda Rd, Southbank VIC 3006

1.3.2.14 Are you proposing the action as part of a Joint Venture? *

No

1.3.2.15 Are you proposing the action as part of a Trust? *

No

1.3.2.17 Describe the Person proposing the action's history of responsible environmental management including details of any proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against the Person proposing to take the action. *

As the largest wind energy company in the world, Vestas Pty Ltd, of which Piambong Wind Farm Pty Ltd is a subsidiary, has developed, designed, manufactured, constructed, and serviced wind farms in 88 countries. With 29,000 employees, Vestas Pty Ltd has installed almost 84,000 turbines, which accounts to 19% of the total worldwide installed capacity over the past 40 years. Vestas Pty Ltd has also recently been awarded the title of most sustainable company in the world in the 18th annual Global 100 ranking published by Corporate Knights.

Vestas Pty Ltd has been active in Australia since 2001, employing more than 800 staff in Australia and New Zealand. In Australia, Vestas Pty Ltd currently operates 59 wind farms, comprising 2,177 turbines total, representing about 49% of the installed capacity nationally. Vestas Pty Ltd is currently constructing seven wind farms within Australia.

Neither Vestas nor its subsidiaries (including Piambong Wind Farm Pty Ltd) have been the subject of any proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources. On the contrary, Vestas has always placed great importance on the diligent consideration of the impact, and responsible construction and operation, of all of its developments within Australia and across the globe. This includes the preparation of detailed environmental impact assessments for all projects, as well the implementation of suitable management measures and environmental monitoring programs during construction and operation.

1.3.2.18 If the person proposing to take the action is a corporation, provide details of the corporation's environmental policy and planning framework

Vestas' Safety, Quality, Health and Environment (SQHE) policy addresses the company's long-term commitment to sustainability, both through the products they manufacture and the activities they undertake. This includes the full integration of SQHE principles across all aspects of the business in an 'end to end' fashion and as a basis for continual improvement. This approach is supported by a strong internal

management culture focused on sustainable solutions, accountable leadership and empowerment of people within the organisation. This approach is backed up by Vestas' accreditation under ISO 14001 with respect to their internal environmental management systems.

Vestas was named the most sustainable company in the 18th annual ranking of the world's most sustainable corporations, published by Corporate Knights in 2022. The ranking is based on a detailed assessment of 6,914 companies, each with more than US$1 billion in revenue, where performance across a range of sustainability metrics is evaluated. The index revealed circularity and ambitious carbon emissions reduction goals as highly prevalent amongst high performers.

Vestas' Safety, Quality, Health and Environment policy documentation is included as Attachment A.

1.3.3 Identity: Proposed designated proponent

1.3.3.1 Are the Proposed designated proponent details the same as the Person proposing to take the action? *

Yes

Proposed designated proponent organisation details

ABN/ACN	45657318299
Organisation name	PIAMBONG WIND FARM PTY LTD
Organisation address	312 St Kilda Rd, Southbank VIC 3006

Proposed designated proponent details

Name	Matt van der Merwe
Job title	Project Development Manager
Phone	1800719687
Email	info@piambongwindfarm.com.au
Address	312 St Kilda Rd, Southbank VIC 3006

1.3.4 Identity: Summary of allocation

Confirmed Referring party's identity

The Referring party is the person preparing the information in this referral.

ABN/ACN	20093846925
Organisation name	AECOM AUSTRALIA PTY LTD
Organisation address	Level 4, 68 Northbourne Ave, Canberra ACT 2600
Representative's name	Kate Every
Representative's job title	Associate Director - Environment
Phone	0421 868 573
Email	kate.every@aecom.com
Address	Level 4 68 Northbourne Ave Canberra ACT 2601

Confirmed Person proposing to take the action's identity

The Person proposing to take the action is the individual, business, government agency or trustee that will be responsible for the proposed action.

ABN/ACN	45657318299
Organisation name	PIAMBONG WIND FARM PTY LTD
Organisation address	312 St Kilda Rd, Southbank VIC 3006
Representative's name	Matt van der Merwe
Representative's job title	Project Development Manager
Phone	1800719687
Email	info@piambongwindfarm.com.au
Address	312 St Kilda Rd, Southbank VIC 3006

Confirmed Proposed designated proponent's identity

The Person proposing to take the action is the individual or organisation proposed to be responsible for meeting the requirements of the EPBC Act during the assessment process, if the Minister decides that this project is a controlled action.

Same as Person proposing to take the action information.

1.4 Payment details: Payment exemption and fee waiver

1.4.1 Do you qualify for an exemption from fees under EPBC Regulation 5.23 (1) (a)? *

No

1.4.3 Have you applied for or been granted a waiver for full or partial fees under Regulation 5.21A? *

No

1.4.5 Are you going to apply for a waiver of full or partial fees under EPBC Regulation 5.21A?

No

1.4.7 Has the department issued you with a credit note? *

No

1.4.9 Would you like to add a purchase order number to your invoice? *

No

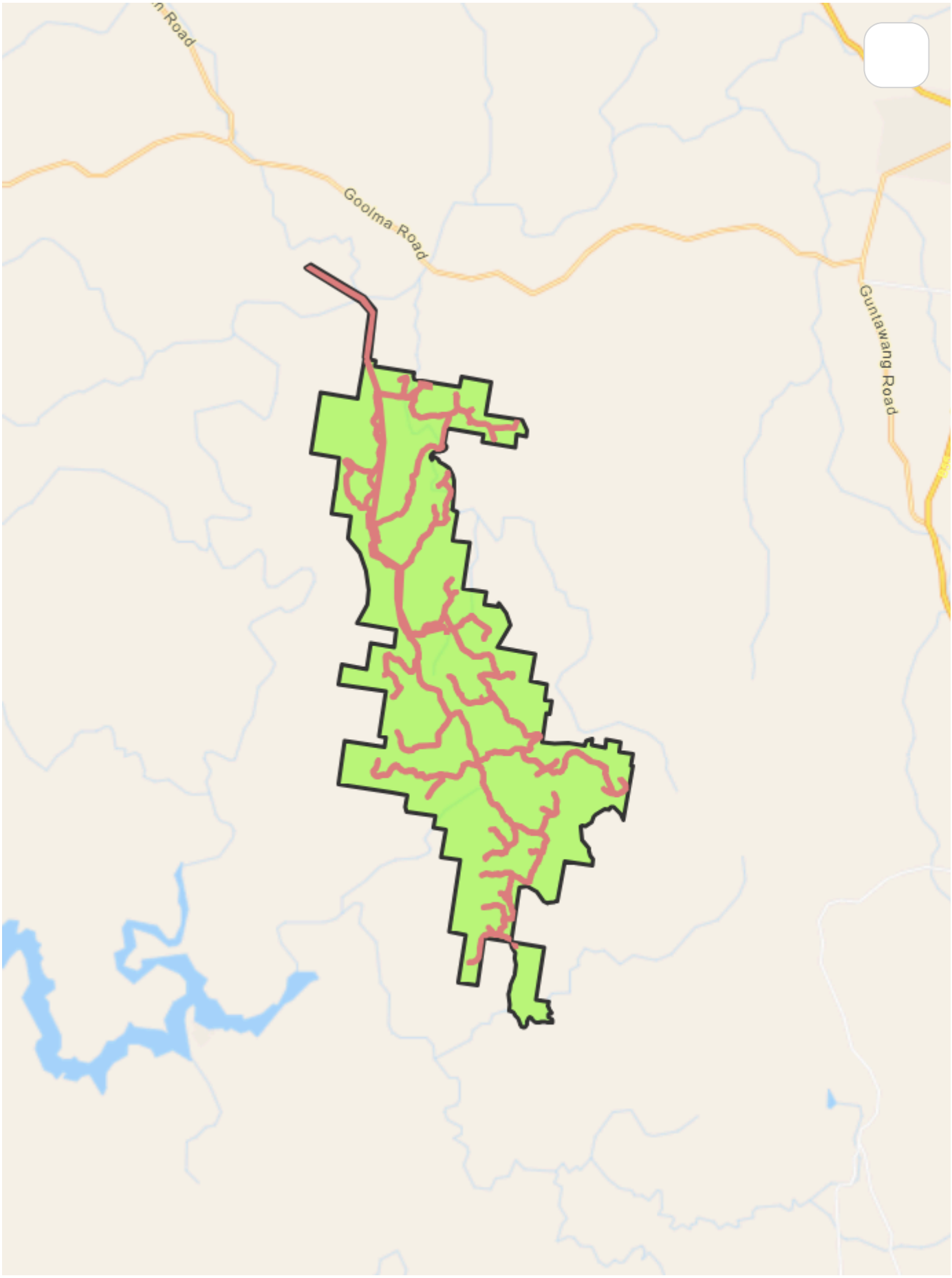
1.4 Payment details: Payment allocation

1.4.11 Who would you like to allocate as the entity responsible for payment? *

Referring party

2. Location

2.1 Project footprint



Project Area: 8910.33 Ha **Disturbance Footprint:** 1936.48 Ha

2.2 Footprint details

2.2.1 What is the address of the proposed action? *

Yarrabin Road, Piambong, NSW 2850 (32°32'05.8"S 149°21'32.2"E)

2.2.2 Where is the primary jurisdiction of the proposed action? *

New South Wales

2.2.3 Is there a secondary jurisdiction for this proposed action? *

No

2.2.5 What is the tenure of the action area relevant to the project area? *

The Project would be built on freehold land that is privately owned and would be leased to the Proponent for the duration of the development (construction through to decommissioning). The Project would be located at 32°32'05.8"S 149°21'32.2"E.

3. Existing environment

3.1 Physical description

3.1.1 Describe the current condition of the project area's environment.

The Project is located in the locality of Piambong, approximately 20 km northwest of Mudgee and 15 km southwest of Gulgong, NSW (the Project area). The Project area is generally a mix of open grazing paddocks with extensive vegetation clearing associated with historic agricultural land uses, grasslands, vegetated ridgelines and ephemeral and perennial creeks. The Project has been designed to selectively avoid these vegetated areas wherever feasible.

The Project area and the central west area of NSW generally are hilly, with broad, low valleys and ridgelines running predominately in a north-south direction. Areas of higher topography (up to around 700 m AHD) are present within the centre of the Project area, with valleys being around 450 m AHD.

The project would be restricted to small discrete areas within the overall project area – these being the turbine locations, transmission lines, internal and external access roads, substation(s), BESS and operations and maintenance facilities. The vast majority of the overall project area would not be affected by the project.

A large proportion of the Project area has been historically cleared of midstorey and canopy vegetation for agriculture, with some areas having been cultivated and sown with exotic pasture species. Despite this approximately 8,768.15 ha of native vegetation (of varying quality) remains within the Project area. This vegetation is generally confined to forested areas or areas that are less fertile or too steep and rocky to cultivate. Most plant community types within the project area have been preliminarily rated as either derived native grassland form or as being in low or moderate condition.

The Cudgegong River flows through Mudgee and Gulgong before emptying into Lake Burrendong. Approximately 16 creeks and gullies that connect to Cudgegong River are located within the Project area. The quality of these waterways is not currently known, though is expected to be largely degraded due to the long history of broadscale agriculture in the area.

The Project would be located near several local roads managed by Mid-Western Regional Council: Upper Piambong Road, Lower Piambong Road, Twelve Mile Road, and Yarrabin Road. A review of the condition of these roads and their suitability to support construction and operation of the Project will be undertaken as part of the EIS and in consultation with the Mid-Western Regional Council. It is however unlikely that Twelve Mile and Yarrabin roads would provide suitable access for construction vehicles, though this will be subject to further investigations during the EIS development. Two State roads, managed by Transport for NSW, may be used to access these local roads: Goolma Road is an east-west road approximately 3 km to the north of the Project, and Castlereagh Highway is a north-south road approximately 8 km east of the Project. It is anticipated that Project infrastructure would arrive at the Port of Newcastle. From these locations it would travel on the existing major highway network to the local area, where Goolma Road and the Castlereagh Highway could be used as the primary accesses to the local roads within the Project area.

3.1.2 Describe any existing or proposed uses for the project area.

The Project area is zoned as 'RU1 Primary Production' under the *Mid-Western Regional Local Environmental Plan 2012* and is generally comprised of broadacre properties used for grazing. Parts of the project area have been retained as forested - generally where soils are less productive or too steep for viable agricultural uses. The Project does not include any current mining activities. The Project overlaps with mining exploration leases EL9118, EL9526 and EL9568. There are also two other wind farms proposed within 15 km, to the south and southwest of the Project area.

3.1.3 Describe any outstanding natural features and/or any other important or unique values that applies to the project area.

There are no outstanding natural features and/or any other important or unique values of note that apply to the project area.

3.1.4 Describe the gradient (or depth range if action is to be taken in a marine area) relevant to the project area.

The Project area has undulating topography and mainly consists of a mix of open grazing land, vegetated ridgelines and ephemeral and perennial creeks. Gradients within the Project area vary from flat to steep (>20%).

3.2 Flora and fauna

3.2.1 Describe the flora and fauna within the affected area and attach any investigations of surveys if applicable.

Most of the Project area was identified to be comprised of grazed paddocks or derived native grasslands (DNGs). Dry woodland was found to be scattered throughout the Project area, comprising a mix of native canopy, shrub and understory species. However, the patches of dry woodland present within the Project area are generally fragmented and lacking old growth trees. This means that these patches would serve as low to moderate quality habitat for native fauna.

Aquatic habitats were also present within the Project area, including farm dams, ephemeral creeks and drainage lines. Farm dams that were well vegetated and had floating vegetation would be expected to provide moderate quality habitat for native fauna. Yarraman Creek, in the central part of the Project area, was determined to be a higher quality habitat for native fauna.

The Project is proposed in an area which is subject to a long (150 years+) history of disturbance, primarily for agricultural purposes. Other sources of disturbance include weeds and pests, including introduced feral animals (cats, dogs, pigs, foxes, rabbits etc.) and invasive plants such as serrated tussock. As such, the impact of the Project is expected to be less than if the Project was proposed in a relatively undisturbed area such as densely forested land or a conservation area.

A preliminary biodiversity assessment (Niche 2023) has been prepared for the Project (attached to this referral as Attachment B.B – Preliminary Biodiversity Assessment). The desktop assessments and field surveys undertaken as part of the preliminary biodiversity assessment identified the following biodiversity values relevant to the Project:

Three threatened ecological communities listed under the EPBC Act;

- White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highlands, NSW South Western Slopes, South East Corner and Riverina Bioregions listed as a Critically Endangered Ecological Community under the BC Act and EPBC Act, confirmed within the site during field surveys
- Natural Temperate Grassland of the South Eastern Highlands listed as a Critically Endangered Ecological Community under the EPBC Act, considered to potentially occur but is not likely based on desktop and field data. Note that this TEC was ruled out as being present on or near the site based on further field surveys
- Grey Box (*Eucalyptus microcarpa*) Grassy Woodlands and Derived Native Grasslands of South-Eastern Australia listed as an Endangered Ecological Community under the BC Act and EPBC Act, considered to potentially occur as PCTs aligned with the TEC have been confirmed on site.

Twenty six threatened species listed under the EPBC Act were deemed to have at least a moderate chance of occurring within the study area. The following were all assumed to be present due to potential habitat being available:

- *Ammobium craspedioides* (Yass Daisy)
- *Dichanthium setosum* (Bluegrass)
- *Euphrasia arguta* (Arguta)
- *Leucochrysum albicans var. tricolor* (Hoary Sunray)
- *Persoonia marginata* (Clandulla Geebung)
- *Prasophyllum petilum* (Tarengo Leek Orchid)
- *Prasophyllum sp. Wybong* (Prasophyllum sp. Wybong)
- *Swainsona recta* (Small Purple-pea)
- *Thesium australe* (Austral Toadflax)
- *Tylophora linearis* (Tylophora linearis)
- *Crinia sloanei* (Sloane's Froglet)
- *Anthochaera phrygia* (Regent Honeyeater)
- *Aphelocephala leucopsis* (Southern Whiteface)
- *Grantiella picta* (Painted Honeyeater)

- *Hirundapus caudacutus* (White-throated Needletail)
- *Neophema chrysostoma* (Blue-winged Parrot)
- *Lathamus discolor* (Swift Parrot)
- *Polytelis swainsonii* (Superb Parrot)
- *Calyptorhynchus lathami lathami (*South-eastern Glossy Black-Cockatoo)
- *Synemon plana* (Golden Sun Moth)
- *Phascolarctos cinereus* (Koala)
- *Pteropus poliocephalus* (Grey-headed Flying-fox)
- *Dasyurus maculatus maculatus* (Spotted-tailed Quoll)
- *Nyctophilus corbeni* (South-eastern Long-eared Bat)
- *Delma impar* (Striped Legless Lizard)
- *Maccullochella peelii* (Murray Cod)

The following were recorded during field surveys:

- *Chalinolobus dwyeri* (Large-eared Pied Bat).

3.2.2 Describe the vegetation (including the status of native vegetation and soil) within the project area.

A preliminary biodiversity assessment was undertaken as part of the early development the Project.

The Australian Soil Classification (ASC) identified that the dominant soils with the Project area are kurosols, sodosols, and rudosols (Attachment B Scoping Report). Kurosols are present throughout the Project area, and are characterised as being low in pH, or acidic, especially at the surface. They are also characterised as being sodic, meaning they have low water holding capacity, making soils susceptible to waterlogging on landscapes with poor drainage. Sodosols and rudosols are present particularly on the boundary of the Project area adjacent to watercourses. Sodosols also have high sodicity presenting risks around erosion, low permeability, and waterlogging. Rudosols are mostly found towards the southern extents of the Project area. Rudosols are characterised as being strongly acidic with low water holding capacity, however, given their coarse texture, infiltration rates can be high. Given that these soils are acidic and have low water holding capacity, they are likely to have low agricultural potential. Searches of the NSW Government eSPADE, Sharing and Enabling Environmental Data (SEED) and the Australian Soil Resource Information System (ASRIS) tools indicated that there is a low probability of acid sulphate soils occurring in the Project area and surrounds. A search of available soil salinity data did not indicate the presence of soil salinity within or nearby the Project and as such this would be unlikely to pose a risk.

Most of the Project area was identified to be comprised of grazed paddocks or derived native grasslands (DNGs). Dry woodland was found to be scattered throughout the Project area, comprising a mix of native canopy, shrub and understory species. However, the patches of dry woodland present within the Project area are generally fragmented and lacking old growth trees. The Project is proposed in an area which is subject to a long (150 years+) history of disturbance, primarily for agricultural purposes. Other sources of disturbance include weeds and invasive plants such as serrated tussock.

This assessment considered the amount and quality of native vegetation within the project area. The assessment determined that the native vegetation across the project areas aligned with a total of twenty-three plant community types (PCTs), in varying condition states. It should be noted however that the proposed development activities (and associated vegetation
clearing) would be restricted to small discrete locations
within the overall project area — these being the turbine locations, transmission lines, access roads, substa tion(s), BESS and the operations and maintenance facility. As such the vast majority of native vegetation within the overall project area would be unaffected. Noting this, the native vegetation types determined to be present within the project area, and their condition states, included the following :

- PCT 81 Western Grey Box - cypress pine shrub grass shrub tall woodland in the Brigalow Belt South Bioregion
  - EPBC Act listed (Inland Grey Box TEC), BC Act listed, moderate condition: 0.36 ha
- PCT 84 River Oak - Rough-barked Apple - red gum - box riparian tall woodland (wetland) of the Brigalow Belt South Bioregion and Nandewar Bioregion
  - Moderate condition: 2.84 ha
- PCT 186 Dwyers Red Gum - Black Cypress Pine - Currawang shrubby low woodland on rocky hills mainly in the NSW South Western Slopes Bioregion
  - BC Act listed, DNG: 0.03 ha, moderate condition: 113.43 ha
- PCT 266 White Box grassy woodland in the upper slopes sub-region of the NSW South Western Slopes Bioregion
  - EPBC Act listed (White Box-Yellow Box TEC), BC Act listed, DNG: 41.21 ha, low condition: 141.37 ha, moderate condition: 79.72 ha
- PCT 267 White Box - White Cypress Pine - Western Grey Box shrub/grass/forb woodland
  - EPBC Act listed (White Box-Yellow Box TEC), BC Act listed, DNG: 2.70 ha, moderate condition: 14.04 ha
- PCT 272 White Box - Black Cypress Pine - red gum +/- Mugga Ironbark shrubby woodland
  - DNG: 2.08 ha, low condition: 2.70 ha, moderate condition: 5.69 ha
- PCT 277 Blakelys Red Gum - Yellow Box grassy tall woodland
  - EPBC Act listed (White Box-Yellow Box TEC), BC Act listed, DNG: 793.88 ha, low condition: 1.05 ha, moderate condition: 89.67 ha
- PCT 278 Riparian Blakelys Red Gum - box - shrub - sedge - grass tall open forest
  - EPBC Act listed (White Box-Yellow Box TEC), BC Act listed, moderate condition: 6.77 ha
- PCT 279 Blakely's Red Gum - White Cypress Pine woodland on footslopes of hills in central part of the NSW South Western Slopes Bioregion
  - EPBC Act listed (White Box-Yellow Box TEC), BC Act listed, moderate condition: 1.63 ha
- PCT 281 Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats (CEEC)
  - EPBC Act listed (White Box-Yellow Box TEC), BC Act listed, DNG: 16.07 ha, low condition: 83.07 ha, moderate condition: 226.84 ha
- PCT 283 Apple Box - Blakelys Red Gum moist valley and foot slopes grass-forb open forest
  - EPBC Act listed (White Box-Yellow Box TEC), BC Act listed, moderate condition: 0.09 ha
- PCT 287 Long-leaved Box - Red Box - Red Stringybark mixed open forest on hills and hillslopes
  - Moderate condition: 356.98.77 ha
- PCT 331 Red Stringybark woodland on hillslopes
  - Moderate condition: 0.86 ha
- PCT 347 White Box - Blakelys Red Gum shrub/grass woodland on metamorphic hillslopes
  - EPBC Act listed (White Box-Yellow Box TEC), BC Act listed, DNG: 1.82 ha, moderate condition: 15.50 ha
- PCT 461 Tumbledown Gum woodland on hills
  - DNG: 3,760.22 ha, low condition: 1,820.46 ha, moderate condition: 643.02 ha
- PCT 477 Inland Scribbly Gum - Red Stringybark - Black Cypress Pine - Red Ironbark open forest on sandstone hills
  - Moderate condition: 0.42 ha
- PCT 478 Red Ironbark - Black Cypress Pine - stringybark +/- Narrow-leaved Wattle shrubby open forest on sandstone
  - Moderate condition: 0.43 ha
- PCT 511 Queensland Bluegrass - Redleg Grass - Rats Tail Grass - spear grass - panic grass derived grassland (CEEC)
  - EPBC (White Box-Yellow Box TEC) and BC Act listed, DNG: 3.76 ha
- PCT 1330 Yellow Box - Blakelys Red Gum grassy woodland (CEEC)

- EPBC (White Box-Yellow Box TEC) and BC Act listed, DNG: 143.60, Moderate condition: 384.91 ha.

Total native vegetation: 8,768.15 ha

Total non-native vegetation: 59.00 ha

Total vegetation: 8,827.15 ha

No threatened flora was observed during the field survey. Refer to Attachment B.B – Preliminary Biodiversity Assessment (Section 3.2 and Figure 4) for further information on vegetation observed during the field survey.

3.3 Heritage

3.3.1 Describe any Commonwealth heritage places overseas or other places recognised as having heritage values that apply to the project area.

The Project is not within or near any Commonwealth heritage places overseas.

3.3.2 Describe any Indigenous heritage values that apply to the project area.

The Project would be located on Wiradjuri Country, which has been, and continues to be, inhabited and actively managed by the Wiradjuri People for approximately the last 60,000 years. Wiradjuri People have a close connection to the Macquarie, Lachlan and Murrumbidgee Rivers and are often referred to as the people of the three rivers. The Goanna is the totem of the Wiradjuri nation; however, it was not identified by biodiversity searches to be present in the Project area.

The Wiradjuri nation is geographically the largest Aboriginal group in NSW. The closest LALC to the Project is the Mudgee LALC.

An AHIMS extensive search was done on 30 March 2022 and identified eleven recorded Aboriginal sites and items as having previously been identified within the Project area and an additional 24 sites surrounding the Project area as shown in the attached Figure 2. Note that the AHIMS database only identifies recorded Aboriginal Heritage places and items of significance, hence there may be more

Aboriginal heritage items or places of significance within the Project area that are not listed. The attached figure has previously been published in the NSW Scoping Report (refer to Link: NSW Major Projects Portal: Piambong Wind Farm).

3.4 Hydrology

3.4.1 Describe the hydrology characteristics that apply to the project area and attach any hydrological investigations or surveys if applicable. *

The Cudgegong River is the primary watercourse near the Project area, running parallel to the Project area's western boundary. The Cudgegong River flows through Mudgee and Gulgong before emptying into Lake Burrendong. A number of creeks and gullies that connect to Cudgegong River are located within the Project area, including:

- Baylys Creek
- Californian Gully
- Crowirs Creek
- Dog Trap Creek
- Dungarbin Gully
- Goat Island Creek
- Goolma Creek
- Gulf Creek
- Greens Gully
- Leaning Oak Creek
- Piambong Creek
- Rayners Creek
- Ruins Creek
- Staircase Creek
- Shawns Creek
- Yarraman Creek.

Hydrological features are shown in the attached Figure 3. Further information is available in Attachment B – Piambong Wind Farm Scoping Report (Section 6.8.7)

Multiple farm dams are located within the Project area. These dams appear to be fed and linked by ephemeral drainage lines that run through the Project area, eventually draining into Cudgegong River.

A review of the Mid-Western Regional flood planning map indicated that the Project area is not located on flood prone land.

4. Impacts and mitigation

4.1 Impact details

Potential Matters of National Environmental Significance (MNES) relevant to your proposed action area.

EPBC Act section	Controlling provision	Impacted	Reviewed
S12	World Heritage	No	Yes
S15B	National Heritage	No	Yes
S16	Ramsar Wetland	No	Yes
S18	Threatened Species and Ecological Communities	Yes	Yes
S20	Migratory Species	Yes	Yes
S21	Nuclear	No	Yes
S23	Commonwealth Marine Area	No	Yes
S24B	Great Barrier Reef	No	Yes
S24D	Water resource in relation to large coal mining development or coal seam gas	No	Yes
S26	Commonwealth Land	No	Yes
S27B	Commonwealth Heritage Places Overseas	No	Yes
S28	Commonwealth or Commonwealth Agency	No	Yes

4.1.1 World Heritage

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

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4.1.1.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.1.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The Project area is not within or near any areas of World Heritage.

4.1.2 National Heritage

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

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4.1.2.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.2.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The Project area is not within or near any areas of National Heritage.

4.1.3 Ramsar Wetland

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

Direct impact	Indirect impact	Ramsar wetland
No	No	Banrock Station Wetland Complex
No	No	Riverland
No	No	The Coorong, and Lakes Alexandrina and Albert Wetland
No	No	The Macquarie Marshes

4.1.3.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.3.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The closest RAMSAR site (The Macquarie Marshes) are located 200-300km downstream from the Project. Given the nature of the development, it is considered feasible to contain all hydrological impacts to the site boundary. Excavation requirements and native vegetation clearing, which may have direct and indirect impacts on local hydrology, would be a relatively minor percentage of the project site and are not anticipated to have any offsite hydrological impacts, including on any RAMSAR wetlands. These assumptions would be supported by detailed hydrological and ecological assessments as the project's assessment continues.

4.1.4 Threatened Species and Ecological Communities

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

Threatened species

Direct impact	Indirect impact	Species
No	No	Anthochaera phrygia
Yes	Yes	Aphelocephala leucopsis
No	No	Aprasia parapulchella
No	No	Botaurus poiciloptilus
No	No	Calidris acuminata
No	No	Calidris ferruginea
No	No	Callocephalon fimbriatum
Yes	Yes	Calyptorhynchus lathami lathami
Yes	Yes	Chalinolobus dwyeri
Yes	Yes	Climacteris picumnus victoriae
Yes	Yes	Crinia sloanei
Yes	Yes	Dasyurus maculatus maculatus (SE mainland population)
Yes	Yes	Delma impar
Yes	Yes	Dichanthium setosum
Yes	Yes	Euphrasia arguta
Yes	Yes	Falco hypoleucos
Yes	Yes	Galaxias rostratus
No	No	Gallinago hardwickii
Yes	Yes	Grantiella picta
Yes	Yes	Hirundapus caudacutus
No	No	Homoranthus darwinioides
Yes	Yes	Lathamus discolor
No	No	Leipoa ocellata
No	No	Lepidium aschersonii
Yes	Yes	Maccullochella macquariensis

Direct impact	Indirect impact	Species
Yes	Yes	Maccullochella peelii
Yes	Yes	Macquaria australasica
Yes	Yes	Melanodryas cucullata cucullata
Yes	Yes	Neophema chrysostoma
Yes	Yes	Nyctophilus corbeni
No	No	Ozothamnus tesselatus
Yes	Yes	Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)
Yes	Yes	Polytelis swainsonii
Yes	Yes	Prasophyllum petilum
Yes	Yes	Prasophyllum sp. Wybong (C.Phelps ORG 5269)
Yes	Yes	Pseudomys novaehollandiae
Yes	Yes	Pteropus poliocephalus
No	No	Pycnoptilus floccosus
No	No	Rostratula australis
Yes	Yes	Stagonopleura guttata
No	No	Swainsona murrayana
Yes	Yes	Swainsona recta
Yes	Yes	Thesium australe
Yes	Yes	Vincetoxicum forsteri

Ecological communities

Direct impact	Indirect impact	Ecological community
Yes	Yes	Grey Box (Eucalyptus microcarpa) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia
No	No	Natural Temperate Grassland of the South Eastern Highlands
Yes	Yes	White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland

4.1.4.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

Yes

4.1.4.2 Briefly describe why your action has a direct and/or indirect impact on these protected matters. *

Due to the early stage of design development, the disturbance footprint is not able to be accurately defined and is subject to ongoing design and refinement during the preparation of an EIS. For the purposes of the EPBC Act Referral, a preliminary and conservative disturbance footprint has been included. The conservative disturbance footprint includes a 100m buffer either side of the centreline of proposed roads (total buffer area is 200m wide), and a 70m buffer radius around proposed turbine locations. Given the conservative nature of these buffers, it should be noted that the disturbance footprint will be reduced as design progresses.

Given the conservative nature of the disturbance footprint buffers and early stage of design development, for the purposes of calculating realistic potential impacts on threatened species and ecological communities the following areas have been considered as potentially impacted. This is a worst-case scenario and is likely to be refined during design development, further reducing the Project's overall footprint:

- 100 m radius around each proposed turbine
- 4 m on each side of existing internal tracks (8 m total width)
- 5 m on each side of the centreline of proposed internal tracks (10 m total width)
- 30 m on either side of the proposed transmission line.

Based on the above, and without considering additional mitigation, it has been identified that native vegetation would be required to be cleared to construct and operate the project. Likely direct impacts associated with the Project include:

- Loss of 78.85 ha of critically endangered *White Box Yellow Box Blakely's Red Gum Woodland* subject to clearing within the site.
- Loss of 0.02 ha of endangered *Inland Grey Box Woodland*.
- Potential impacts to Commonwealth listed threatened flora species and Commonwealth listed fauna.

Likely indirect impacts include:

- Changed hydrology
- Sedimentation and erosion
- Weed invasion
- Habitat disturbance from noise and increased human activity
- Edge effects.

Refer to Attachment C - Impact Tables for TEC and species-by-species potential direct and indirect impacts

4.1.4.4 Do you consider this likely direct and/or indirect impact to be a Significant Impact? *

Yes

4.1.4.5 Describe why you consider this to be a Significant Impact. *

Vegetation clearing associated with the Project has the potential to:

- Reduce the extent and increase fragmentation of threatened ecological communities.
- Adversely affect habitat critical to the survival of potentially occurring threatened flora and fauna species.

Whilst the project has undertaken an extensive process of preliminary impact assessment to avoid, reduce or manage potential impacts, these impacts may still occur in the absence of the application of further avoidance or mitigation measures.

4.1.4.7 Do you think your proposed action is a controlled action? *

Yes

4.1.4.8 Please elaborate why you think your proposed action is a controlled action. *

The proposed development footprint within the Project area contains threatened ecological communities and habitat for potentially occurring threatened flora and fauna that are listed under the EPBC Act. These elements, **in the absence of avoidance and mitigation measures (as directed above)**, may be subject to a significant impact as a result of the Project.

4.1.4.10 Please describe any avoidance or mitigation measures proposed for this action and attach any supporting documentation for these avoidance and mitigation measures. *

The Project is founded on the proper implementation of the mitigation hierarchy. That is, the project would seek to avoid, minimise, mitigate, manage and then offset impacts, in that order. The proponent has already investigated and implemented numerous avoidance and minimisation measures at this early stage as part of the development of the project, which would continue to be developed through the design and assessment phase of the project. These are outlined below.

Threatened ecological communities

- Minimise clearing of PCTs conforming to a TEC through the redesign of key elements of the project, such as access tracks and turbine foundations
- Where clearing cannot be avoided, prioritising disturbance to occur firstly within areas not deemed to confirm to a PCT, and then within locations of existing cleared or disturbed variants of native vegetaiton (e.g. derived native grassland and low condition areas of PCTs).

- The adoption of partial clearing methods as a preference over full clearing where vegetation impacts cannot be otherwise reasonably avoided.

Threatened fauna:

- Undertaking preliminary targeted surveys to confirm presence/absence of candidate threatened fauna and their location
- Prirotising of disturbance to occur within exotic dominated or disturbed areas wherever practicable.
- Undertaking a hollow-bearing tree survey to record the location of all potential breeding habitats for hollow-dwelling threatened fauna species, including Superb Parrot and owls.
- Minimising the clearing of hollow-bearing trees wherever practicable as part of the design, and ensuring a setback is implemented to separate development from confirmed breeding hollows wherever possible.
- Minimising the clearing of winter and spring foraging habitats for Grey-headed Flying-fox wherever practicable.
- Identifying caves, scarps, cliffs, rock overhangs and disused mines within 100 m of the development layout.
- Where potential breeding habitats are identified for threatened microbats, undertaking targeted surveys using harp traps from mid-November to the end of January to confirm breeding individuals, in accordance with the 'species credit' threatened bats and their habitats: NSW survey guide for the Biodiversity Assessment Method (OEH 2018).
- Where breeding is confirmed in target microbat species, all proposed works are to be setback at least 100 m from breeding habitat.
- Targeted surveys for birds and bats to confirm utilisation of habitats within the Site and quantify any potential risk of turbine collision.
- Maintaining a maximum clearance between the rotor swept paths of turbines and adjacent tree canopy to minimise bird and bat collision risks.

Threatened flora:

- Undertaking targeted surveys within the Project footprint to confirm presence/ absence within potential habitat for candidate threatened flora species. Future surveys will be carried out in accordance with DPIE's (2020) survey guideline: *Surveying threatened plants and their habitats: NSW survey guide for the Biodiversity Assessment Method*.
- Avoidance of clearing within any confirmed threatened species habitats wherever practicable.

General measures:

- Undertaking targeted surveys within the Project footprint to confirm presence/ absence of candidate threatened flora and fauna species. Avoiding clearing any confirmed threatened species habitats where practicable.
- Predicting environmental impacts and refining the Project footprint to avoid, minimise, mitigate, manage or offset impacts
- Avoiding clearing of any TECs wherever possible
- Where clearing cannot be avoided, prioritising disturbance to occur firstly within areas not deemed to confirm to a PCT, and then within locations of existing cleared or disturbed variants of native vegetaiton (e.g. derived native grassland and low condition areas of PCTs).
- Minimising the clearing of hollow-bearing trees and other breeding habitats confirmed onsite
- Cleaning of plant and machinery prior to entry to the Site. Once present within the study area, machinery would generally stay at site until they are no longer required. If required to leave and return they would be cleaned prior to re-entering the Site.
- The enforcement of strict exclusion zones, particularly within areas of high biodiversity value i.e. TEC and/or high quality native vegetation
- Rapid rehabilitation of temporarily cleared areas with native plants endemic to the locality

- Placing any dead wood and dead trees removed as part of the Project within a suitable location nearby to compensate for any habitat removal
- Water carts would be used to suppress dust, particularly in dry times and during high winds
- Sediment and erosion control devices strategically placed to protect the receiving water bodies, particularly permanently flowing drainage lines
- Collision risk modelling and management including maintaining maximum clearance between the rotor swept path of turbines and adjacent tree canopies and avoiding or minimising interactions with any known or likely flight paths, where possible.

4.1.4.11 Please describe any proposed offsets and attach any supporting documentation relevant to these measures. *

Further assessment of Project impacts would be carried out in accordance with the NSW Biodiversity Assessment Method (BAM) and all residual Project impacts would be offset in accordance with the NSW Biodiversity Offset Scheme (BOS). Where matter protected under the EPBC Act require offsetting, these offsets would be obtained in accordance with the bilateral agreement between the Commonwealth and NSW, which requires that these offsets are obtained on a ‘like for like’ basis.

4.1.5 Migratory Species

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

Direct impact	Indirect impact	Species
No	Yes	Actitis hypoleucos
No	Yes	Apus pacificus
No	Yes	Calidris acuminata
No	Yes	Calidris ferruginea
No	Yes	Calidris melanotos
No	Yes	Gallinago hardwickii
Yes	Yes	Hirundapus caudacutus
No	Yes	Motacilla flava

Direct impact	Indirect impact	Species
No	Yes	Myiagra cyanoleuca
No	Yes	Rhipidura rufifrons

4.1.5.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

Yes

4.1.5.2 Briefly describe why your action has a direct and/or indirect impact on these protected matters. *

White-throated Needletail, listed as migratory and Vulnerable under the EPBC Act, has a moderate chance of occurring within the Project area. Direct impacts, such as vegetation clearing and associated loss of habitat due to the construction of the Project is unlikely to result in a significant impact to this species. However, there is potential for a significant indirect impact to the species as a result of wind turbine collision (note: wind turbine strike is a prescribed impact under the *Biodiversity Conservation Act 2016* (NSW)). A Significant Impact Assessment has been undertaken for White-throated Needletail and is provided in Attachment B.B - Preliminary Biodiversity Assessment (Appendix 2).

A potential indirect impact of wind turbine collision has been considered for all migratory species, with further assessment to be undertaken.

Refer to Attachment C - Impact Tables for species-by-species potential direct and indirect impacts.

4.1.5.4 Do you consider this likely direct and/or indirect impact to be a Significant Impact? *

Yes

4.1.5.5 Describe why you consider this to be a Significant Impact. *

Desktop assessment against the Commonwealth Significant Impact Criteria 1.1 (DOE 2013) indicates the Project has potential to disrupt the lifecycle (breeding, feeding, migration or resting behaviour) of an ecologically significant proportion of the population of White-throated Needletail, should this species be subject to wind turbine collision during operation of the project. Targeted surveys would be undertaken during the preparation of the EIS to confirm to what extent habitats within the Study area are utilised or traversed by this species and to inform a wind turbine collision risk assessment.

4.1.5.7 Do you think your proposed action is a controlled action? *

Yes

4.1.5.8 Please elaborate why you think your proposed action is a controlled action. *

The proposed development footprint within the Project area contains potential habitat and is within the known distribution for the White-throated Needletail, which is listed as a vulnerable and migratory species under the EPBC Act. The species is considered moderately likely to occur within the Project area and therefore the Project may result in significant direct impact from wind turbine collision, should it be confirmed as present at the site.

4.1.5.10 Please describe any avoidance or mitigation measures proposed for this action and attach any supporting documentation for these avoidance and mitigation measures. *

The Project is founded on the proper implementation of the mitigation hierarchy. That is, the project would seek to avoid, minimise, mitigate, manage and then offset impacts in that order. As such the proponent has investigated and implemented numerous avoidance and minimisation measures at this early stage of project development. These are outlined below:

- Collision risk modelling and management including maintaining maximum clearance between the rotor swept path of turbines and adjacent tree canopies and avoiding or minimising interactions with any known or likely flight paths, where possible.
- Undertake targeted surveys to confirm presence/absence of candidate threatened fauna.
- Targeted surveys carried out for birds and bats to inform the utilisation of habitats within the Study area and quantify any potential risk of turbine collision
- Maintain a maximum clearance between the rotor swept paths of turbines and adjacent tree canopy wherever possible to minimise bird and bat collision risks
- Where clearing cannot be avoided, prioritise disturbance within existing cleared or disturbed variants of the PCT (i.e. derived native grassland and low condition)
- Quarantining and cleaning of plant and machinery prior to entry to the Study area
- Cleaning of plant and machinery prior to entry to the Site. Once present within the study area, machinery would generally stay at site until they are no longer required. If required to leave and return they would be cleaned prior to re-entering the Site.
- The enforcement of strict exclusion zones, particularly within areas of high biodiversity value i.e. TEC and/or high quality native vegetation
- Rapid rehabilitation of temporarily cleared areas with native plants endemic to the locality
- Placing any dead wood and dead trees removed as part of the Project within a suitable location nearby to compensate for any habitat removal
- Water carts would be used to suppress dust, particularly in dry times and during high winds.

4.1.5.11 Please describe any proposed offsets and attach any supporting documentation relevant to these measures. *

Further assessment of Project impacts would be carried out in accordance with the NSW Biodiversity Assessment Method (BAM) and all residual Project impacts would be offset in accordance with the NSW Biodiversity Offset Scheme (BOS). Where matter protected under the EPBC Act require offsetting, these offsets would be obtained in accordance with the bilateral agreement between the Commonwealth and NSW, which requires that these offsets are obtained on a ‘like for like’ basis.

4.1.6 Nuclear

4.1.6.1 Is the proposed action likely to have any direct and/or indirect impact on this protected matter? *

No

4.1.6.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The Project is not a nuclear action.

4.1.7 Commonwealth Marine Area

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

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4.1.7.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.7.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The Project is not within or near any Commonwealth Marine Areas.

4.1.8 Great Barrier Reef

4.1.8.1 Is the proposed action likely to have any direct and/or indirect impact on this protected matter? *

No

4.1.8.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The Project is not within or near the Great Barrier Reef.

4.1.9 Water resource in relation to large coal mining development or coal seam gas

4.1.9.1 Is the proposed action likely to have any direct and/or indirect impact on this protected matter? *

No

4.1.9.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The Project is not a coal seam gas or large coal mining development.

4.1.10 Commonwealth Land

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

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4.1.10.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.10.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The Project is not within or near any Commonwealth land.

4.1.11 Commonwealth Heritage Places Overseas

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

—

4.1.11.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.11.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The Project is not within or near any Commonwealth heritage places overseas.

4.1.12 Commonwealth or Commonwealth Agency

4.1.12.1 Is the proposed action to be taken by the Commonwealth or a Commonwealth Agency? *

No

4.2 Impact summary

Conclusion on the likelihood of significant impacts

You have indicated that the proposed action will likely have a significant impact on the following Matters of National Environmental Significance:

- Threatened Species and Ecological Communities (S18)
- Migratory Species (S20)

Conclusion on the likelihood of unlikely significant impacts

You have indicated that the proposed action will unlikely have a significant impact on the following Matters of National Environmental Significance:

- World Heritage (S12)
- National Heritage (S15B)
- Ramsar Wetland (S16)
- Nuclear (S21)
- Commonwealth Marine Area (S23)
- Great Barrier Reef (S24B)
- Water resource in relation to large coal mining development or coal seam gas (S24D)
- Commonwealth Land (S26)
- Commonwealth Heritage Places Overseas (S27B)
- Commonwealth or Commonwealth Agency (S28)

4.3 Alternatives

4.3.1 Do you have any possible alternatives for your proposed action to be considered as part of your referral? *

No

4.3.8 Describe why alternatives for your proposed action were not possible. *

Do-Nothing scenario

The do-nothing scenario would involve no construction or operation of the Project, and therefore would have no additional environmental and social impact compared to the current situation.

However, the do-nothing scenario would not deliver a low-cost, renewable energy option to the NEM, and would not support the NSW and Commonwealth Government's renewable energy and emissions reduction targets, nor would it support ongoing electricity provision in the NEM once fossil-fuel powered generation ceases in 2038 or sooner.

Thus, the do-nothing scenario would not contribute to the Project objectives and as such would also fail to contribute to the *NSW Government's NSW Energy Strategy*, the *NSW Climate Change Policy Framework* or the *Central West and Orana Regional Plan, 2036*. For these reasons, the do-nothing scenario is not the preferred option.

Project refinement

Preliminary wind modelling has indicated that the Project area is a viable location for the development of a wind farm due to the nature of the landscape, including areas of undulating topography. The Project is also located in an area predominantly cleared for historic agricultural usage, and largely outside areas designated as bushfire prone land.

Landowners within the Project area have indicated support for the Project's location and its power generation benefits. The Project would be located within the CWO REZ, which has been designated by the NSW Government for the development of renewable energy projects such as this. This designation was one of several key factors in site selection for the Project, alongside suitable wind speed and a generally low requirement for clearing of native vegetation. These factors also constrain the Project area to its current boundary.

The Project was originally proposed to consist of up to 105 turbine locations, with a combined capacity of up to 714 megawatts (MW), as well as a battery energy storage system (BESS) and electrical transmission infrastructure to connect to the existing high voltage electricity transmission network. However, changes have been made to several key project parameters in order to reduce the social and environmental impacts of the Project. The Project is now proposed to comprise up to 81 turbines, with a combined capacity of up to 551 MW (the BESS and transmission connection has not changed). This has reduced the overall footprint of the Project significantly, avoiding the need to clear substantial areas of native vegetation and habitat for threatened species and ecological communities.

The number of turbines and their placement within the Project area is still subject to further investigation as part of the EIS. However, the timeline for development, the broad location of the project, and anticipated construction and operation activities are expected to remain the same or similar to the currently proposed preferred option.

5. Lodgement

5.1 Attachments

1.2.1 Overview of the proposed action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Figure 1 - Indicative Layout of the Project.pdf Indicative Layout of the Project	20/12/2023	No	High

1.2.7 Public consultation regarding the project area

	Type	Name	Date	Sensitivity	Confidence

#1.	Document	Attachment B - Piambong Wind Farm Scoping Report.pdf NSW Scoping Report	02/11/2023	No	High
#2.	Document	Attachment B.A - Scoping summary.pdf NSW Scoping Report Appendix A	03/11/2023	No	High
#3.	Document	Attachment B.B - Preliminary Biodiversity Assessment.pdf NSW Scoping Report Appendix B Preliminary Biodiversity Assessment	03/11/2023	No	High
#4.	Document	Attachment B.C - PLVIA.pdf NSW Scoping Report Appendix C Preliminary landscape and visual impact assessment	12/09/2023	No	High
#5.	Document	Attachment B.D - Preliminary Noise Impact Assessment.pdf NSW Scoping Report Appendix D Preliminary Noise Impact Assessment	06/11/2023	No	High
#6.	Document	Attachment B.E -SIA summary.pdf NSW Scoping Report Appendix E Social Impacts Assessment Summary	23/10/2023	No	High

1.3.2.18 (Person proposing to take the action) If the person proposing to take the action is a corporation, provide details of the corporation's environmental policy and planning framework

	Type	Name	Date	Sensitive	Confidence
#1.	Document	Attachment A - Policy and planning framework documentation.pdf Environmental policy and planning framework documentation	31/01/2023	No	High

3.2.1 Flora and fauna within the affected area

	Type	Name	Date	Sensitive	Confidence
#1.	Document	Attachment B.B - Preliminary Biodiversity Assessment.pdf NSW Scoping Report Appendix B Preliminary Biodiversity Assessment	02/11/2023	No	High

3.2.2 Vegetation within the project area

	Type	Name	Date	Sensitive	Confidence
#1.	Document	Attachment B.B - Preliminary Biodiversity Assessment.pdf NSW Scoping Report Appendix B Preliminary Biodiversity Assessment	02/11/2023	No	High

3.3.2 Indigenous heritage values that apply to the project area

	Type	Name	Date	Sensitive	Confidence
#1.	Document	Attachment B - Piambong Wind Farm Scoping Report.pdf NSW Scoping Report	01/11/2023		High

#2.	Document	Figure 2 - Recorded and known Aboriginal heritage items near the Project Area.pdf Recorded and known Aboriginal heritage items near the Project Area	20/12/2023	No	High
#3.	Link	NSW Major Projects Portal: Piambong Wind Farm https://majorprojects.planningportal.nsw.gov.au/..			High

3.4.1 Hydrology characteristics that apply to the project area

	Type	Name	Date	Sensitive	Confidence
#1.	Document	Attachment B - Piambong Wind Farm Scoping Report.pdf NSW Scoping Report	01/11/2023		High
#2.	Document	Figure 3 - Hydrogeological features present within and nearby Project Area.pdf Hydrogeological features present within and nearby Project Area	20/12/2023	No	High

4.1.4.2 (Threatened Species and Ecological Communities) Why your action has a direct and/or indirect impact on the identified protected matters

	Type	Name	Date	Sensitive	Confidence
#1.	Document	Attachment C - Impact Tables.pdf Potential impact tables for MNES	16/04/2024	No	Medium

4.1.5.2 (Migratory Species) Why your action has a direct and/or indirect impact on the identified protected matters

	Type	Name	Date	Sensitive	Confidence
#1.	Document	Attachment B.B - Preliminary Biodiversity Assessment.pdf NSW Scoping Report Appendix B Preliminary Biodiversity Assessment	02/11/2023	No	High
#2.	Document	Attachment C - Impact Tables.pdf Potential impact tables for MNES	15/04/2024	No	Medium

5.2 Declarations

Completed Referring party's declaration

The Referring party is the person preparing the information in this referral.

ABN/ACN	20093846925
Organisation name	AECOM AUSTRALIA PTY LTD

Organisation address	Level 4, 68 Northbourne Ave, Canberra ACT 2600
Representative's name	Kate Every
Representative's job title	Associate Director - Environment
Phone	0421 868 573
Email	kate.every@aecom.com
Address	Level 4 68 Northbourne Ave Canberra ACT 2601

☑ Check this box to indicate you have read the referral form. *

☑ I would like to receive notifications and track the referral progress through the EPBC portal. *

☑ By checking this box, I, **Kate Every of AECOM AUSTRALIA PTY LTD**, declare that to the best of my knowledge the information I have given on, or attached to this EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. *

☑ I would like to receive notifications and track the referral progress through the EPBC portal. *

Completed Person proposing to take the action's declaration

The Person proposing to take the action is the individual, business, government agency or trustee that will be responsible for the proposed action.

ABN/ACN	45657318299
Organisation name	PIAMBONG WIND FARM PTY LTD
Organisation address	312 St Kilda Rd, Southbank VIC 3006
Representative's name	Matt van der Merwe
Representative's job title	Project Development Manager
Phone	1800719687
Email	info@piambongwindfarm.com.au
Address	312 St Kilda Rd, Southbank VIC 3006

☑ Check this box to indicate you have read the referral form. *

☑ I would like to receive notifications and track the referral progress through the EPBC portal. *

☑ I, **Matt van der Merwe of PIAMBONG WIND FARM PTY LTD**, declare that to the best of my knowledge the information I have given on, or attached to the EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. I declare that I am not taking the action on behalf or for the benefit of any other person or entity. *

☑ I would like to receive notifications and track the referral progress through the EPBC portal. *

✔ Completed Proposed designated proponent's declaration

The Proposed designated proponent is the individual or organisation proposed to be responsible for meeting the requirements of the EPBC Act during the assessment process, if the Minister decides that this project is a controlled action.

Same as Person proposing to take the action information.

☑ Check this box to indicate you have read the referral form. *

☑ I would like to receive notifications and track the referral progress through the EPBC portal. *

☑ I, **Matt van der Merwe of PIAMBONG WIND FARM PTY LTD**, the Proposed designated proponent, consent to the designation of myself as the Proposed designated proponent for the purposes of the action described in this EPBC Act Referral. *

☑ I would like to receive notifications and track the referral progress through the EPBC portal. *