Captains Mountain Wind Farm

Application Number: **02763** Commencement Date: **30/01/2025** Status: **Locked**

1. About the project

1.1 Project details

1.1.1 Project title *

Captains Mountain 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 *

01/01/2026

1.1.4 Estimated end date *

31/12/2058

1.2 Proposed Action details

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

Captains Mountain Wind Farm Pty Ltd proposes to construct, operate and ultimately decommission the Captains Mountain Wind Farm (the Proposed Action). The Proposed Action consists of up to 35 Wind Turbine Generators (WTG) and associated infrastructure with a total capacity of approximately up to 252 megawatts (MW). The Proposed Action aims to support Queensland's renewable energy targets and supply clean energy to the National Energy Market (NEM).

The Project Area for the Proposed Action is located approximately 15 kilometres (km) southwest of the town of Millmerran in the Toowoomba Regional Council Local Government Area, in Queensland. It is 4,285.2 hectares (ha) in size and consists of 17 lots plus road reserve areas.

The Project Area is within the Rural Zone under the Toowoomba Regional Planning Scheme, with the predominant land use within the Project Area and the adjacent locality being cattle grazing, animal husbandry and related rural activities. The Proposed Action consists of up to 35 WTGs and associated ancillary infrastructure within the bounds of the Project Area, including:

- Up to 35 WTGS, each up to 252 metres (m) tip height and with a rotor diameter of up to 172 m;
- WTG foundations and hardstand areas;
- Access tracks, underground cabling and overhead transmission lines;
- Electrical connections, substations and grid connection;
- An optional Battery Energy Storage System (BESS);
- Permanent meteorological (met) masts;
- Construction compound and laydown areas;
- Concrete batching plant; and
- Operation and maintenance facility.

A summary of the key activities likely to impact ecological values during construction, operation and decommissioning are provided below. Refer to the MNES Impact Assessment **(Att A, Section 5, Table 5-2, pp. 58-63)** for further detail on potential impacts.

Construction: Construction of the Proposed Action will require fixed or mobile batching plants, project offices and laydown areas. Subject to all required approvals being obtained, construction is anticipated to commence in Q1-Q2 2026 and is expected to take approximately 24 months. The construction of the Proposed Action is expected to involve the following:

- Site establishment;
- Delivery of construction materials including concrete and gravel;
- Investigation, protection and relocation of utilities as required;
- Vegetation clearing for new access tracks, temporary construction compounds, laydown areas, borrow pits, water storage, concrete batching plants, WTG pads, trenches for power and instrumentation cables, electrical substation and overhead powerlines, and associated earthworks. The clearing of vegetation may result in a direct impact to MNES through the removal of habitat, direct impacts on flora and fauna, and the disruption of ecological processes;
- Excavating trenches requires the clearing of vegetation and disruption of soil structure, which may impact vegetation and geological stability and acoustic disturbance, potentially impacting MNES; and
- Construction traffic movements and plant operations (rock crushing and concrete batching plans) may result in collisions with fauna, acoustic disturbance, habitat destruction and localised air pollution, potentially impacting MNES.

Site Access:

Access to the Project Area is proposed to be Gore Highway and a network of internal access tracks within the Project Area. The onsite access track layout will be designed to utilise existing farm tracks where practicable and will consider the topography of the land to reduce the need for vegetation clearance and minimise the amount of land required for access. To the extent possible, the access tracks will avoid steep areas to reduce potential erosion. It is likely that approximately 60 km of access track will be required within

the Project Area. The access tracks will be approximately 6 m in width (excluding cut and fill requirements) for light vehicles, which may be expanded to approximately 12 m to accommodate heavy vehicles, crane and delivery vehicles requirements during construction or where curves necessitate a wider access track. Any road upgrades required to accommodate the final selected route will be confirmed and assessed as the design of the Proposed Action progresses. It is noted that impacts associated with the transport route are anticipated to be located in two locations at intersections that require upgrade to allow transport of WTG components. These locations are:

1. Gore Highway and Milmerran-Inglewood Road; and
2. Gore Highway and Saleyard Road.

Impacts will be limited to the removal/pruning of isolated trees within the road reserve, and thus, such impacts are not anticipated to contribute to the assessment of significance. This explains the minor discrepancies between the Project Area and Disturbance Footprint values provided in this Section, compared to the shapefiles uploaded to the portal (within Step 2). This is the result of vehicular turning circles that extend into public road areas outside the Project Area boundary. Therefore, in order meet the portal requirements where the footprint must be within the boundary, this Project Area has been extended to include the areas within the public roads but no impacts to MNES are anticipated in the road reserves.

Operation and Maintenance: The Proposed Action will operate 24 hours a day, seven days a week. Some elements of the Proposed Action may be taken offline from time to time for maintenance, though the wind farm will generally remain operational throughout its operational life (approximately 30-35 years). Operation and maintenance of the Proposed Action is expected to include:

- Operation of the WTGS for an estimated 30-35 years, resulting in potential bird and bat collision risks; and
- Routine management and servicing of WTGs, access tracks, electrical installations, and infrastructure as required, resulting in potential impacts of vehicle mortality and incidents, habitat disturbance (albeit, on a considerably smaller scale than construction phase activities), disturbance and potential hazardous materials exposure.

Decommissioning and Rehabilitation: At the end of their operational life, the WTGs and associated will be either refurbished or replaced (subject to all required approvals being obtained) or decommissioned. The decommissioning and rehabilitation of the Proposed Action is expected to involve:

- Dismantling and removal of the WTGs and all above ground infrastructure not required for ongoing agricultural uses within the Project Area;
- Removal of the electrical reticulation where it does not part of permanent network infrastructure;
- Responsible disposal/recycling/reuse of infrastructure removed from site according to the waste hierarchy; and
- Rehabilitation of all disturbed land in accordance with good practice at the time and where not required for ongoing grazing or agricultural uses.

Proposed Action Design: The infrastructure has been refined through an iterative process including environmental, wind resource, constructability, landholder, traditional owner, and transmission network considerations. The design refinement process focussed on the avoidance and minimisation of environmental impacts through the various stages of layout planning and the coordination of these aspects with engineering design and wind resource restrictions.

The Disturbance Area is the area of land within the Project Area that would be directly impacted by the construction and operation of the Proposed Action and would include all infrastructure, including WTGs, cabling, access tracks and temporary facilities, proposed as part of the Proposed Action. The Disturbance Area is approximately 436.1 ha.

To enable the flexibility required to microsite the Proposed Action infrastructure to reflect ongoing detailed design and the outcomes of further assessments, a conservative Proposed Action corridor has been considered which will include a buffer of 100 m surrounding the Disturbance Area. The final Disturbance Area will remain within the Proposed Action Corridor.

The balance of the Project Area outside of the final Disturbance Area will not be directly impacted by the Proposed Action and will continue to be used for ongoing rural and agricultural purposes.

The Disturbance Area has a maximum area of up to 436.1 ha. The anticipated Disturbance Area will be refined through the detailed design phase, WTG model selection and geotechnical investigations. It is noted that existing land management practices will be largely unaffected by the Proposed Action as the host properties are able to continue to undertake agricultural activities throughout the life of the Proposed Action.

Access to the Proposed Action will be via established state-controlled road haulage routes, with road works potentially required along the local roads, to be defined in the detailed design and engineering phase.

Preliminary Investigations not part of Proposed Action: The Proposed Acton does not include any geotechnical investigations and physical survey works (Preliminary Investigations). The Preliminary Investigations are required to be completed in advance of the Proposed Action to enable the design of the Proposed Action to progress and so are excluded from being part of the Proposed Action, as the subject of this Referral. The Preliminary Investigations include the following:

- Geotechnical investigations including test pits and bore holes; and
- Physical survey works including the installation of survey pegs to mark out areas of the Project Area.

To ensure that the Preliminary Investigations do not have any impacts on any MNES protected by the EPBC Act, they will be carried out:

- In existing cleared areas of the Project Area, with vehicle access provided via existing access tracks, and locations set back a minimum of 40 m from all watercourses; and
- In accordance with the Aboriginal Cultural Heritage Act 2003: Duty of Care Guidelines.

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? *

The MNES Impact Assessment for the Proposed Action outlines the specific Commonwealth legislation, and the regulatory framework associated with the Proposed Action **(Att. A, Section 2, Table 2-1, pp.12)**. Additionally, the State and local legislation, administering authority and the regulatory framework has been identified below. The regulatory framework includes:

Commonwealth Legislation:

- *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) – The Proposed Action is being referred under the EPBC Act on the basis that it is likely to be a controlled action requiring further assessment and approval under the EPBC Act. The *EPBC Act Environmental Offsets Policy 2012* applies to controlled actions which will have a residual significant impact on a MNES and provides guidance on offset requirements.

State Legislation:

- *Planning Act 2016* (Queensland (QLD)) – Development Permits will be required to authorise the Proposed Action. This includes development permits authorising a Material Change of Use, Operational Works and Reconfiguring a Lot. These applications will be assessed in accordance the *Planning Regulation 2017* (QLD) including the requirements under:
    - *State Code 16: Native vegetation clearing; and*
    - *State Code 23: Wind farm development.*
- *Nature Conservation Act 1992* (QLD) (NC Act) – The MNES Impact Assessment and subsequent ecology surveys have identified the presence of flora and fauna species that are threatened under the NC Act. Impacts to listed threatened species under the NC Act will be assessed as part of the Development Permit process. All additional approvals required under the NC Act will also be obtained, including the adoption of a Species Management Program for tampering with animal breeding places.
- *Vegetation Management Act 1999* (QLD) (VM Act) - The MNES Impact Assessment and subsequent field surveys identified the presence of native vegetation, therefore requiring a Development Permit to clear vegetation to accommodate Proposed Action infrastructure.
- *Biosecurity Act 2014* (QLD) (Biosecurity Act) and *Biosecurity Regulation 2016* (QLD)) - The Biosecurity Act provides for the management of biosecurity risks in Queensland. The Biosecurity Act provides measures to safeguard QLD economy, environment, agricultural and tourism industries and way of life from pests, diseases and contaminants.
- Environmental Offsets Framework (*Environmental Offsets Act 2014* (QLD), *Environmental Offsets Regulation 2014* (QLD) and, *Environmental Offsets Policy Version 1.7*) - An environmental offset condition may be imposed under various State assessment frameworks for an activity that will or is likely to have a significant residual impact (SRI) on a Matters of State Environmental Significance (MSES). There is a guideline to assist in determining whether or not an SRI is likely.
- *Fisheries Act 1994* (QLD) (Fisheries Act) - Construction of a watercourse crossings for waterways identified under the Fisheries Act will trigger the need for a waterway barrier works approval.
- *Water Act 2000* (QLD) (Water Act) - Assessment under the Water Act may be required, dependent on final WTG layout and access tracks, for clearing riparian vegetation and excavating or placing fill in watercourses.

Local Legislation:

- Toowoomba Regional Planning Scheme, Version 28 – The Development Application will need to consider the outcomes sought by the local planning instrument in demonstrating suitability of the Project Area.

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. *

The Proponent has been engaging with local communities, landowners, Proposed Action neighbours and indigenous groups continuously since December 2020. Engagement activities have included, but not limited to:

- Face to face meetings with landholders and the local community;
- Proposed Action updates issued through phone calls, website and newsletters;
- Meetings with the Local Council;
- Presence and sponsorship of community events including Millmerran Show;
- Community Drop-In Sessions;
- Sponsorship of local community clubs including Millmerran Show Society, Millmerran & District Historical Society Inc., Millmerran Scouts Group, Millmerran Pony Club and Millmerran State School; and
- Face to face meetings with Indigenous Parties.

As the Proposed Action progresses, the Proponent is committed to continuous engagement with local communities, landowners, Proposed Action neighbours and indigenous groups ensures the Proposed Action aligns with regional interests and values.

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.

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1.3.1.1 Is Referring party an organisation or business? *

Yes

Referring party organisation details

ABN/ACN	12002773248
Organisation name	ENVIRONMENTAL RESOURCES MANAGEMENT AUSTRALIA PTY LIMITED
Organisation address	Level 14, 207 Kent Street, Sydney, NSW 2000

Referring party details

Name	Michael Rookwood
Job title	Associate Partner
Phone	+61730078478
Email	michael.rookwood@erm.com
Address	GPO Box 2892 Brisbane QLD 4001

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	11648096691
Organisation name	CAPTAINS MOUNTAIN WIND FARM PTY LTD
Organisation address	Level 4, 312 St Kilda Rd, Southbank VIC 3006

Person proposing to take the action details

Name	Robert Plumb
Job title	Project Development Manager
Phone	+61427307696
Email	robpl@vestas.com
Address	Level 4, 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. *

Captains Mountain Wind Farm Pty Ltd is a wholly owned subsidiary of Vestas Development A/S (Vestas).

Vestas is the renewable energy industry's global partner for sustainable energy solutions. It designs, manufactures, installs, and services WTGs across the globe. Vestas Development A/S is the division of Vestas responsible for developing wind farm projects.

Vestas has developed, designed, manufactured, constructed, and serviced wind farms in 88 countries. With 29,000 employees, Vestas has installed over 88,000 WTGs, which accounts to 19% of the total worldwide installed capacity over the past 40 years. For the third year in a row, Vestas has been recognised as the most sustainable company in the entire energy industry in the Corporate Knights Global 100 ranking and remains among the top three companies across all sectors in the world.

Vestas has been active in Australia since 2001, employing more than 800 staff in Australia and New Zealand. In Australia, Vestas currently has 7 gigawatts (GW) of wind farms under service. Vestas is currently constructing eight wind farms within Australia, with three wind farms completed in 2023.

No previous Referrals have been submitted by Captains Mountain Wind Farm Pty Ltd. However, other companies currently or previously owned by Vestas have previously referred the following actions to date:

- Abercrombie Wind Farm (2024/09988);
- Piambong Wind Farm (2024/09793);
- Winterbourne Wind Farm (2020/8734); and
- Lotus Creek Wind Farm (2020/8867).

Neither Vestas nor its subsidiaries (including Captains Mountain 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.

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 Development A/S as the parent company, does not have an existing environmental policy and/or planning framework.

However, as a subsidiary of Vestas Wind Systems AS, Vestas Development AS, and therefore Captains Mountain Wind Farm Pty Ltd, operates under Vestas Safety, Quality, Health and Environment (SQHE) policy. Vestas' 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.

Please refer to Vestas' Safety, Quality, Health and Environment policy for further details: https://www.vestas.com/content/dam/vestas-com/global/en/sustainability/policies/Vestas-SQHE%20Policy_2024.pdf.coredownload.inline.pdf

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	11648096691
Organisation name	CAPTAINS MOUNTAIN WIND FARM PTY LTD
Organisation address	Level 4, 312 St Kilda Rd, Southbank VIC 3006

Proposed designated proponent details

Name	Robert Plumb
Job title	Project Development Manager
Phone	+61427307696
Email	robpl@vestas.com
Address	Level 4, 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	12002773248
Organisation name	ENVIRONMENTAL RESOURCES MANAGEMENT AUSTRALIA PTY LIMITED
Organisation address	Level 14, 207 Kent Street, Sydney, NSW 2000
Representative's name	Michael Rookwood
Representative's job title	Associate Partner
Phone	+61730078478
Email	michael.rookwood@erm.com
Address	GPO Box 2892 Brisbane QLD 4001

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	11648096691
Organisation name	CAPTAINS MOUNTAIN WIND FARM PTY LTD
Organisation address	Level 4, 312 St Kilda Rd, Southbank VIC 3006
Representative's name	Robert Plumb
Representative's job title	Project Development Manager
Phone	+61427307696
Email	robpl@vestas.com
Address	Level 4, 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

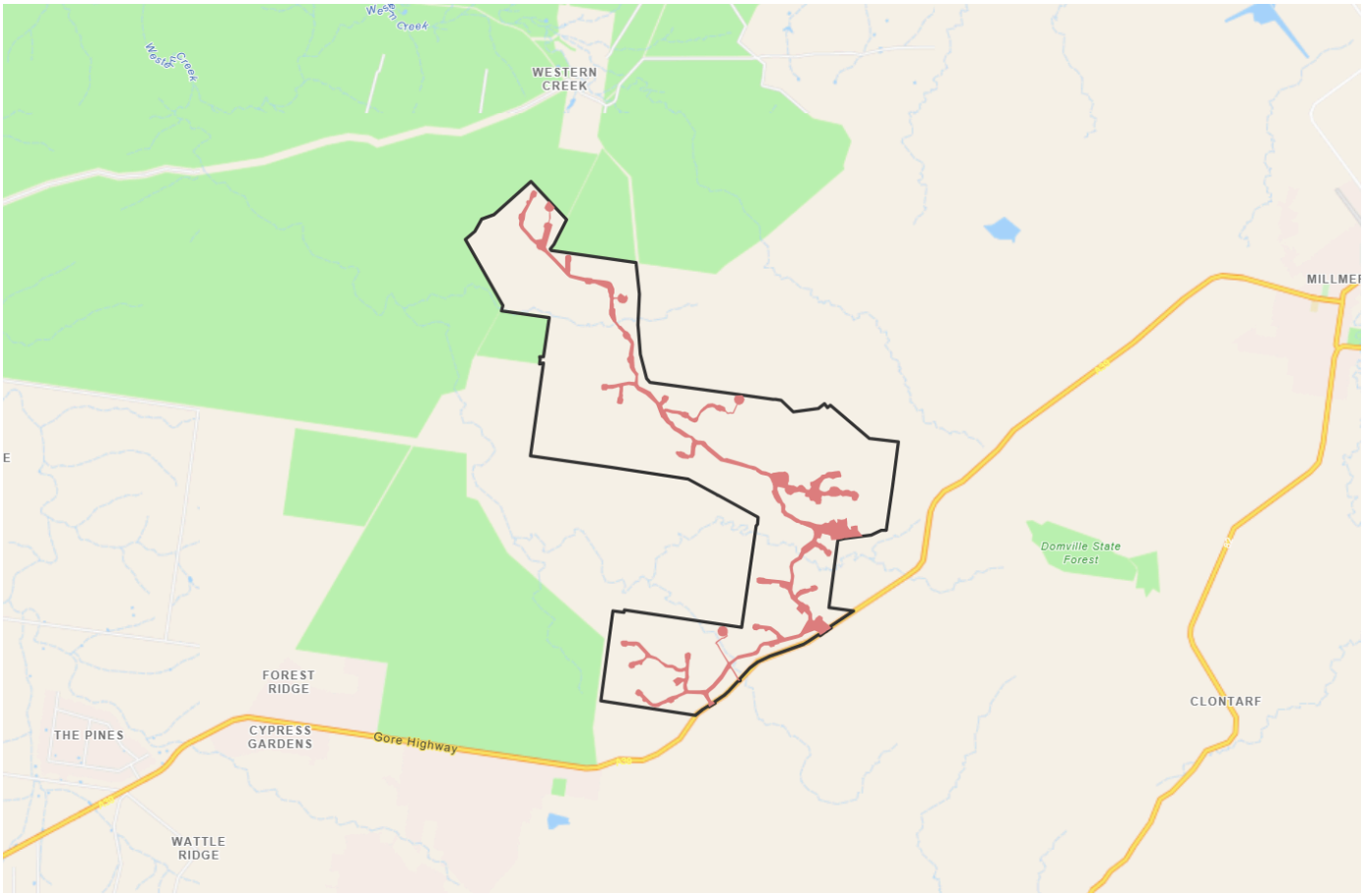
1.4 Payment details: Payment allocation

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

Person proposing to take the action

2. Location

2.1 Project footprint



Project Area: 4293.40 Ha **Disturbance Footprint:** 436.63 Ha

2.2 Footprint details

2.2.1 What is the address of the proposed action? *

9426 Gore Highway, Captains Mountain, 4357 1107 Nine Mile Road, Western Creek, 4357 548

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

Queensland

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 existing land use within the Project Area is cattle grazing and associated rural dwellings. The Project Area incorporates landholdings by six landholders, made up of 17 freehold lots. The Project Area also encompasses part of the local road reserve which is crown land.

3. Existing environment

3.1 Physical description

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

The proposed Project Area is located approximately 15 km north-east of the town of Millmerran in the Toowoomba Regional Local Government Area.

The existing land use within the Project Area is primarily agriculture associated with grazing land for cattle, with largely cleared areas associated with cattle grazing areas dominating the landscape.

The ecological features observed within the Project Area are typical of the region and are dominated by grasslands and cultivated agricultural land. The areas that are most heavily used for grazing are associated with alluvial flats and near permanent water sources (farm dams), and in some instances, in close proximity to waterways. The existing cattle grazing land use includes tracks, fences, dams, yards, modified pastures, and other infrastructure spread across the landscape.

The majority of remnant and regrowth vegetation is located either on undulating hills and ridges or associated with waterways and drainage lines. Dominant species associated with remnant and regrowth vegetation on undulating hills and ridges include *Eucalyptus crebra* and *Eucalyptus populnea*, with understorey species including *Callitris glaucophylla*, *Allocasuarina luehmannii*, and *Allocasuarina littoralis* notably featured in some areas. Remnant vegetation communities fringing drainage lines and waterways are dominated by *Eucalyptus tereticornis*, *Eucalyptus melliodora* and *Eucalyptus moluccana*. Some small patches of remnant and regrowth *Acacia harpophylla* (Brigalow) are also uncommonly represented throughout the Project Area.

The vegetation within the Project Area has been classified into six vegetation communities and broad habitat types (BHTs). The BHTs in the Project Area are mostly in low to moderate condition, with signs of disturbance and degradation due to cattle grazing, erosion, and the presence of introduced flora species. The dominant BHT across the Project Area is grassland and cleared agricultural land, which accounts for more than half of the Project Area, 2,693.8 ha or 62.9%. For further information, refer to **Att A, Section 4.1, pp. 32-39.**

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

Existing Uses

The Proposed Action occurs within the Toowoomba Regional Council Local Government Area and is zoned as Rural under the Toowoomba Regional Planning Scheme. Cattle grazing is the dominant land use in the Project Area, with largely cleared areas associated with cattle grazing areas dominating the landscape. The existing cattle grazing land use includes tracks, fences, dams, yards, modified pastures, and other infrastructure spread across the landscape.

Proposed Use

The Proposed Action use is a renewable energy facility comprising of up to 35 WTGs, WTG foundations and hardstands, access tracks, underground cabling, overhead transmission lines, electrical connections, substations and grid connections, BESS, met masts, construction compound and laydown areas, concrete batching, operation and maintenance facility. The total disturbance area is anticipated to be a maximum under worst case scenario of up to 436.1 ha or 10.2% of the total Project Area. Throughout the duration of the construction and operation phases of the Proposed Action, the properties will continue be able to be utilised for rural and agricultural purposes and it is anticipated that the access tracks established during construction of the Proposed Action will also be used for continued agricultural activities.

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 other important or unique values relevant under the EPBC Act.

There are no conservation areas within the Project Area. Western Creek State Forest is located on the northern and western boundary of the Project Area.

Notwithstanding, the Proponent recognises the importance of the cultural heritage values that may be present within the Project Area and is working in consultation with traditional owners to assess and mitigate any associated impacts.

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 topography of the Project Area is characterised by flat alluvial plains to undulating slopes of grassland. Elevated areas are located in the east of the Project Area, associated with Captains Mountain. Across the Project Area the landscape features vary in geology, from basaltic uplands to Brigalow uplands/ironbark bulloak sodosols. The topography of the Project Area varies from 400 m to 550 m Australian Height Datum (AHD).

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.

Eight field studies, including bird utilisation surveys (BUS) in both the pre-wet season and post-wet season, were undertaken within the Project Area from March 2021 through to July 2023. A summary of the field survey undertaken is provided below.

- Three ecologists undertook a five-day BUS (post-wet season) within in the Project Area from 1 March to 6 March 2021, comprising 150 person hours. This survey also involved habitat assessments as well as some targeted threatened species surveys including bat echolocation.
- Three ecologists and one botanist undertook a five-day ecological survey (post-wet season) within the Project Area from 19 April to 23 April 2021, comprising 200 person hours. The focus of this survey involved vegetation and habitat assessments (Regional Ecosystem (RE) and Threatened Ecological Community (TEC) ground-truthing and validation), habitat assessments, targeted threatened species surveys, BUS and bat echolocation.
- Two ecologists undertook a five-day ecological survey (pre-wet season) within the Project Area from 20 September to 24 September 2021, comprising 100 person hours. This survey also involved habitat assessments, TEC verification, targeted threatened species surveys and BUS.
- Two ecologists undertook a six-day BUS (wet season) and echolocation and harp trapping for bats in the Project Area from 13 December to 18 December 2021, comprising 120 person hours.
- Two ecologists undertook a five-day BUS (post-wet season) as well as Biocondition Assessments (Eyre et al. 2015) (informing Modelled Habitat Quality Assessments (MHQAs)) in the Project Area from 21 March to 25 March 2022, comprising 100 person hours.
- Two ecologists undertook a five-day BUS in the Project Area from 11 July to 15 July 2022, comprising 100 person hours.
- Two ecologists undertook a five-day BUS in the Project Area from 16 January to 20 January 2023, comprising 100 person hours.
- Two ecologists undertook a five-day BUS in the Project Area from 10 July to 14 July 2023, comprising 100 person hours.

Field studies are further described in **Att. A, Section 3.3, pp. 14-17.**

Flora

The Protected Matters Search Tool (PMST) results **(Att. A, Appendix C)** identified the potential occurrence of 12 EPBC Act listed flora species within the Project Area, based on the likelihood of occurrence assessment using desktop and field data, one species, Belson's panic (*Homopholis belsonii*) (Vulnerable), was assumed as known to occur within the Project Area due to the presence of a record in the southern portion of the Project Area.

Fauna

The PMST results **(Att. A, Appendix C)** identified the potential occurrence of 32 EPBC Act listed fauna species within the Project Area, through analysis of habitat suitability based on field data and historical records in database searches, two EPBC Act listed fauna species were considered known to occur within the Project Area.

- Koala (*Phascolarctos cinereus*) (Endangered) – **Att. A, Section 4.2.2.1, pp. 44-47**; and
- South-eastern glossy black-cockatoo (*Calyptorhynchus lathami lathami*) (Vulnerable) – **Att. A, Section 4.2.2.2, pp. 48-49**.

Two additional EPBC Act listed fauna species were considered likely to occur, due to presence of general habitat for these species within the Project Area and recent records in the 10 km buffer of the Project Area (referred to as the Locality).

- White-throated needletail (*Hirundapus caudacutus*) (Vulnerable and Migratory) – **Att. A, Section 4.2.2.3, pp. 50**; and
- Diamond firetail (*Stagonopleura guttata*) (Vulnerable) – **Att. A, Section 4.2.2.3, pp. 50-51**.

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

The Proposed Action is located within the Brigalow Belt bioregion of Queensland as defined by the Interim Biographic Regionalisation for Australia framework, within the Border Rivers catchment. The Project Area has been classified into six BHTs, defined based on vegetation community type and structure. These habitat types have then been considered for as respective foraging, breeding, denning, dispersal and movement functions for listed threatened and/or migratory species that are known, likely or have the potential to occur in the Project Area. Ground-truthed habitat mapping has been informed by these six BHTs, and subsequently used to identify areas of habitat for listed threatened species **(Att. A, Section 4.1.1, Table 4-2, pp. 33-38)**.

The mapped vegetation communities and BHTs are:

- Grassland and cultivated agricultural land;
- Brigalow woodland;
- Eucalypt woodland and open forest dominated by *Eucalyptus crebra* with a grassy understorey;
- Eucalypt woodland and open forest dominated by *Eucalyptus crebra* (understorey dominated by *Allocasuarina* spp.);
- Riparian woodland and open forest dominated by *Eucalyptus populnea* often associated with stream channels; and
- Waterbodies and drainage features (predominantly farm dams).

These BHTs are mapped on **Att. A, Section 4.1.1, Figure 4-1, pp. 39.**

The vegetation in the Project Area is mostly in a low to moderate condition, with signs of disturbance and degradation due to cattle grazing, erosion and the presence of introduced flora species.

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.

There are no Commonwealth Heritage Places in or within 10 km of the Project Area.

A Historic Heritage Assessment was undertaken in July 2024. The Assessment included searches of relevant Commonwealth, State, and local heritage registers. The search results confirmed no registered historic heritage sites were identified within the Project Area.

The extent of research and surveys previously undertaken in the Project Area is unknown. Accordingly, an historic aerial imagery analysis of the Project Area was undertaken which confirmed widespread significant ground disturbance over a prolonged period. This suggests that the Project Area is unlikely to contain previously unidentified historic heritage of significance. If there are historic heritage resources identified, these are likely to be insubstantial, common features of a pastoral landscape, evidence of ephemeral camp sites and/or removed from their original context so would not provide notable new information about the early history of the Project Area or the local area.

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

A search of the Department of Treaty, Aboriginal and Torres Strait Islander Partnerships, Communities and the Arts (DTATSIPCA) was undertaken on 12 July 2024 which identified the Aboriginal Parties for part of the Project Area are the Bigambul People Part A (QCD2016/012 DET) and Bigambul People Part B (QCD2017/003 DET).

Another part of the Project Area has not been claimed by any Aboriginal Parties. Accordingly (as defined by Part 4 of the *Aboriginal Cultural Heritage Act 2003*), in September 2022, Captains Mountain Wind Farm Pty Ltd put out an advertisement in a local newspaper seeking interest in the unclaimed area from Aboriginal Parties. Both the Bigambul Native Title Aboriginal Corporation (BNTAC) and the Kambuwal Aboriginal Corporation expressed their interest in the unclaimed part of the Project Area and have been confirmed as endorsed parties for this part of the Project Area.

A Duty of Care Assessment was completed by ERM as part of the Cultural Heritage Due Diligence Assessment (CHDDA). This included a search of the DTATSIPCA database and register. This search was undertaken on 5 July 2024. The search returned nine registered Aboriginal cultural heritage sites within the Project Area, three registered Aboriginal cultural heritage sites within a 500 m buffer, 12 registered Aboriginal cultural heritage sites withing a 2,000 m buffer and nine registered Aboriginal cultural heritage sites within a 10 km buffer of the Project Area.

Separate Cultural Heritage Management Plans (CHMPs) are currently being negotiated with native title holders the Bigumbul and Kambuwal people to ensure that Harm to Aboriginal Cultural Heritage within the CHMP Area is avoided, or if avoidance is not possible, minimised, so that the Proposed Action is conducted in a manner that is compliant with the Cultural Heritage Duty of Care and enable the maintenance and development of a genuine, enduring and mutually beneficial relationship between the Proposed Action and Traditional Owners of the land.

It is noted that the MNES Impact Assessment **(Att. A)** does not assess cultural heritage values. Vestas are currently in consultation with the Traditional Owners to ensure that cultural heritage values are identified and incorporated into the Proposed Action.

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 Project Area occurs within the Macintyre and Weir River Basin, which is part of the Border Rivers Catchment. The proposed Project Area has numerous watercourses and non-perennial creeks which intersect at various points along the Project Area. The most notable watercourses that pass through are Bora Creek, Nine Mile Creek, Paddy Creek, and Sandy Creek. To the west of the Project Area is Western Creek.

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. *

There are no World Heritage Areas within or within 10 km of the Project Area. As such, the Proposed Action will not have direct or indirect impacts on any World Heritage Areas.

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. *

There are no National Heritage Places within the Project Area or within 10 km of the Project Area. As such, the Proposed Action will not have direct or indirect impacts on any National Heritage Places.

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

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. *

There are no Ramsar Wetlands within or within close proximity to the Project Area. As such, the Proposed Action will not have direct or indirect impacts on any Ramsar Wetlands.

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	Common name
No	No	Anomalopus mackayi	Five-clawed Worm-skink, Long-legged Worm-skink
Yes	Yes	Anthochaera phrygia	Regent Honeyeater
No	No	Aphelocephala leucopsis	Southern Whiteface
No	No	Cadellia pentastylis	Ooline
No	No	Calidris acuminata	Sharp-tailed Sandpiper
No	No	Calidris ferruginea	Curlew Sandpiper
Yes	Yes	Calyptorhynchus lathami lathami	South-eastern Glossy Black-Cockatoo
No	No	Chalinolobus dwyeri	Large-eared Pied Bat, Large Pied Bat
No	No	Climacteris picumnus victoriae	Brown Treecreeper (south-eastern)
No	No	Dasyurus hallucatus	Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu]
No	No	Dasyurus maculatus maculatus (SE mainland population)	Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population)
No	No	Delma torquata	Adorned Delma, Collared Delma
No	No	Dichanthium setosum	bluegrass
No	No	Egernia rugosa	Yakka Skink
Yes	Yes	Erythrotriorchis radiatus	Red Goshawk
No	No	Falco hypoleucos	Grey Falcon
No	No	Furina dunmalli	Dunmall's Snake
Yes	Yes	Gallinago hardwickii	Latham's Snipe, Japanese Snipe
No	No	Geophaps scripta scripta	Squatter Pigeon (southern)
Yes	Yes	Grantiella picta	Painted Honeyeater

Direct impact	Indirect impact	Species	Common name
No	No	Hemiaspis damelii	Grey Snake
No	Yes	Hirundapus caudacutus	White-throated Needletail
Yes	No	Homopholis belsonii	Belson's Panic
No	No	Hypochrysops piceatus	Bulloak Jewel Butterfly
Yes	Yes	Lathamus discolor	Swift Parrot
No	No	Lepidium monoplocoides	Winged Pepper-cress
No	No	Leuzea australis	Austral Cornflower, Native Thistle
No	No	Maccullochella peelii	Murray Cod
No	No	Neophema chrysostoma	Blue-winged Parrot
No	No	Nyctophilus corbeni	Corben's Long-eared Bat, South-eastern Long-eared Bat
No	No	Petauroides volans	Greater Glider (southern and central)
No	No	Petaurus australis australis	Yellow-bellied Glider (south-eastern)
Yes	Yes	Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)	Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory)
No	No	Picris evae	Hawkweed
Yes	Yes	Rostratula australis	Australian Painted Snipe
Yes	Yes	Stagonopleura guttata	Diamond Firetail
No	No	Thesium australe	Austral Toadflax, Toadflax
No	No	Vincetoxicum forsteri	

Ecological communities

Direct impact	Indirect impact	Ecological community
No	No	Brigalow (Acacia harpophylla dominant and co-dominant)
No	No	Coolibah - Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions
No	No	Poplar Box Grassy Woodland on Alluvial Plains

Direct impact	Indirect impact	Ecological community
No	No	Weeping Myall Woodlands
No	No	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. *

The Proposed Action has the potential to impact a number of fauna species listed under the EPBC Act that occur in the Project Area, during both construction and operation. No TECs were identified as occurring or having the potential to occur, within the Project Area.

In general, potential impacts from the construction phase relate to habitat loss and disturbance for listed species. Operational impacts are largely limited to possible bird and bat collisions with operational WTGs. Decommissioning phase impacts are similar to those that might occur during the construction phase but likely to be of a much lower magnitude as there is no additional vegetation clearing anticipated during the decommissioning phase.

Direct impact to MNES would be through habitat loss and degradation, which is typically from disturbance to native vegetation that is regulated vegetation or habitat as defined in the MNES Impact Assessment **(Att. A)**. Direct disturbance to MNES is considered in the MNES Impact Assessment **(Att. A, Section 5, Table 5-2, pp. 61-63)**.

The Disturbance Area of the Proposed Action (maximum area to be impacted) is up to 436.1 ha, or 10.2% of the total Project Area. Through detailed design and micrositing, it is anticipated that the Disturbance Area will be reduced, although all disturbance will remain within the assessed Proposed Action Corridor. Following construction, it is anticipated that a significant portion (up to 50%) of the initially cleared Disturbance Area which is not required for ongoing operation will undergo progressive restoration using grass species. As construction progresses, natural regeneration and/or rehabilitation will occur in areas that were disturbed for construction and not required for operation.

No TECs were considered to have the potential to occur within the Project Area.

The following known and likely threatened species have the potential to be subject to direct and/or indirect impacts from the Proposed Action. The potentially impacted areas noted below may overlap. This information is found in **Att. A, Section 7.1, Table 7-1, pp. 70-77.**

Koala (*Phascolarctos cinereus*)

Up to 59.9 ha of disturbance to breeding and foraging habitat and up to 75.0 ha of disturbance to dispersal habitat within the Project Area.

Koala is known to occur within the Project Area, based on the presence of scat and scratch marks detected during field surveys, and is listed as Endangered under the EPBC Act.

A total of up to 59.9 ha of koala breeding and foraging habitat (3.9% of total breeding and foraging habitat within the Project Area) and up to 75.0 ha of koala dispersal habitat (13.9% of total dispersal habitat within the Project Area) is proposed to be disturbed during the construction phase of the Proposed Action.

Mitigation measures such as pre-clearance surveys will ensure that impacts are further avoided to the species where possible. Disturbance associated with linear infrastructure will also ensure that dispersal ability for koala is not affected. As such, the impact to up to 75.0 ha of dispersal habitat is unlikely to result in a significant impact to the species.

However, koala habitat within the Disturbance Area has been concluded to be habitat critical to the survival of the species as it provides foraging and breeding functions. It is estimated that a total impact to up to 59.9 ha of koala foraging and breeding habitat is likely to result in a significant impact to the species due to adversely impacting habitat critical to the survival the species.

South-eastern Glossy Black-cockatoo (*Calyptorhynchus lathami lathami*)

Up to 7.7 ha of disturbance to potential habitat.

The south-eastern glossy black-cockatoo is listed as listed as Vulnerable under the EPBC Act and is considered known to occur within the Project Area due to the occurrence of a 2011 record within the Project Area. However, no individuals were observed during the field survey effort. Therefore, it is considered

unlikely that the habitat within the Project Area supports an important population of this species.

The design of the Proposed Action has resulted in the habitat for this species being largely avoided, with only up to 7.7 ha (1.1%) of the available potential habitat being impacted. Therefore, it is considered unlikely that the Proposed Action will have a significant impact on the south-eastern glossy black-cockatoo.

White-throated Needletail (*Hirundapus caudacutus*)

Impact is aerial only.

The white-throated needletail is listed as Vulnerable and Migratory under the EPBC Act and is considered as likely to occur within the Project Area, based on recent records within the Locality (no individuals were observed during field surveys).

The minimum threshold for an ecologically significant impact to a population for white-throated needletail is 10 individuals (Department of Environment (DoE), 2015). As no individuals were observed during field surveys, no collision risk modelling (CRM) could be applied to the species. However, records are present within the Locality surrounding the Project Area at low densities with few non-historic records being present potentially be attributed to species occurring at low densities in area.

Therefore, it is considered unlikely that the Proposed Action will have a significant impact on the white-throated needletail.

Diamond Firetail (*Stagonopleura guttata*)

Up to 59.9 ha of disturbance to potential habitat.

Diamond firetail is listed as Vulnerable under the EPBC Act and is considered as likely to occur within the Project Area. Four records occur within 20 km of the Project Area, however the species was not directly observed during the survey effort.

The Proposed Action has been designed to largely avoid habitat for this species with only up to 59.9 ha (3.9% of the potential available habitat within the Project Area), conservatively mapped being impacted. This habitat is considered to have the potential to be habitat critical to the survival of the species and the species Conservation Advice states that habitat critical to the survival should not be adversely impacted (DCCEEW, 2023b). The Proposed Action is unlikely to adversely impact critical habitat, due to availability of potential habitat in the Project Area that will be avoided by impacts, the high mobility of the species to move to areas of retained habitat, and presence of larger expanses of potential habitat in the Locality.

Therefore, it has been considered that the Proposed Action is unlikely to significantly impact the diamond firetail.

Belson’s Panic (*Homopholis belsonii*)

Up to 6.8 ha of disturbance to Belson's panic habitat.

Belson’s panic is listed as Vulnerable under the EPBC Act and is considered known to occur within the Project Area. Although a recent record of the species is present within the Project Area (southern end), no individuals were recorded during the survey effort. Therefore, it is considered unlikely that the Project Area supports an important population of the species.

The Proposed Action has been designed to largely avoid habitat for this species with only up to 6.8 ha (2.5%) of the habitat available within the Project Area (conservatively mapped) being impacted.

Based on the avoidance, mitigation and management measures put in place, it has been considered unlikely that the Proposed Action will significantly impact Belson’s panic.

Potential occurring Species:

In addition, the following potentially occurring threatened species have the potential to be impacted:

- Australian painted snipe (*Rostratula australis*) – up to 0.4 ha of disturbance to potential habitat;
- Painted honeyeater (*Grantiella picta*) – up to 53.8 ha of disturbance to potential habitat;
- Red goshawk (*Erythrotriorchis radiatus*) – up to 6.1 ha of disturbance to potential habitat;
- Regent honeyeater (*Anthochaera phrygia*) – up to 53.8 ha of disturbance to potential habitat;
- Latham's snipe (*Gallinago hardwickii*) - up to 0.4 ha of disturbance to potential habitat; and
- Swift parrot (*Lathamus discolor*) – up to 59.9 ha of disturbance to potential habitat.

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. *

A full Significant Impact Assessment has been undertaken as part of the MNES Impact Assessment **(Att. A, Appendix E).** This assessment has demonstrated the impacts to the following species have the potential to be significant.

Koala (*Phascolarctos cinereus*)

A total of up to 59.9 ha of koala breeding and foraging habitat (3.9% of this habitat within the Project Area) and up to 75.0 ha of koala dispersal habitat (13.9% of this habitat within the Project Area) is projected to be disturbed during the construction phase of the Proposed Action.

Mitigation measures such as pre-clearance surveys will ensure that impacts are further avoided to the species where possible. Disturbance associated with linear infrastructure will also ensure that dispersal ability for koala is not affected and thus the impact to up to 75.0 ha of dispersal habitat is unlikely to be a significant impact to the species.

However, koala habitat within the Disturbance Area has been concluded to be habitat critical to the survival of the species as it provides foraging and breeding functions. It is therefore estimated that a total impact to up to 59.9 ha of koala foraging and breeding habitat, is likely to have a significant impact on the species.

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. *

An assessment was undertaken for relevant listed species against SIG 1.1 as part of the MNES Impact Assessment **(Att. A, Appendix E).** This assessment consulted that there is likely to be a significant impact to the following:

- Up to 59.9 ha of koala breeding and foraging habitat.

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 Proposed Action will seek to achieve an environmental outcome where impacts to MNES are avoided and minimised as much as practicable during the construction and operation of the Proposed Action.

Avoidance

The Proposed Action scale has been reduced from an initial plan including up to 80 WTGs to the current Disturbance Area of up to 35 WTGs. This change has significantly lowered the extent of impact of native vegetation and habitat for threatened species.

The current Proposed Action Disturbance Area has been developed with consideration given to engineering issues, including maximum safe slope for workplace health and safety, operation requirements, landholder requirements, minimising environmental disturbance and ongoing site management requirements (bushfire setbacks). The Disturbance Area will undergo significant further design refinement through the micrositing and detailed design process, with the intent that the current Disturbance Area is the worst-case impact area.

The key component of the vegetation management strategy is avoidance through layout design. The avoidance strategy will occur in two phases. The first phase occurred as part of the development of the Proposed Action layout and is based on ensuring the layout avoids and/or minimises impact to vegetation and potential habitat mapped as a result of the field investigations conducted, and subsequent constraints identified. In addition, a corridor assessment approach was adopted to ensure a conservative Proposed Action Corridor of 100 m surrounding the Disturbance Area was assessed to enable micrositing as part of the second design stage. The second design phase will occur as part of the detailed design pre-construction stage. It will include pre-clearance surveys which includes on the ground micro-siting at each location proposed for infrastructure. The pre-clearance surveys will assess the localised environmental values, including threatened species breeding habitat and protected plants to determine if micro-siting can be used to further avoid key values where detailed engineering permits.

Several more avoidance measures have been implemented, including, but not limited to, the following:

- Avoidance of vegetation patches by locating infrastructure outside of these areas where possible;
- Clearly delineate approved vegetation clearance areas/ work zones to prevent over-clearing; and
- WTGs will maximise the use of areas that are less vegetated, to avoid and minimise clearing of mature trees. This can be achieved across many parts of the Project Area given the open nature and scattered trees of the landscape with low density of larger patches of remnant vegetation. This is included in the micro siting pre-clearance phase.

Mitigation

Potential impacts due to the proposed activities will be managed in accordance with detailed controls to be documented in management plans consistent with best practice management approaches for contemporary wind farm activities in Australia.

At each location of proposed infrastructure, following detailed design and prior to construction, detailed site-specific pre-clearance surveys will be conducted to inform micro-siting and further avoidance of ecological values as part of the final design of the Proposed Action. Impact and disturbance mitigation will follow a two-stage process.

The first element of impact mitigation has been carried out as part of the Proposed Action design and layout which is based on avoidance of vegetation and key potential habitat as mapped during the detailed field investigation conducted. This includes minimising the impact to regulated vegetation and threatened species habitat.

The second part of the impact mitigation effort will occur as part of detailed design and involve on the ground micro-siting at each location proposed for infrastructure. Wherever practicable, micro-siting will be carried out to reflect pre-clearance surveys and ongoing assessments.

Further, it is noted that the Operational Footprint will reduce impacts through mitigation measures such as rehabilitation of vegetation and subsequently will likely reduce impacts to the koala. The Operational Footprint is up to 96.04 ha or 2.2% of the total Project Area, compared to the Disturbance Area which is up to 436.1 ha or 10.2% of the Project Area.

Loss of Existing Native Vegetation:

- Areas of remanent and regrowth vegetation to be avoided at the design and micro-siting stages, where practicable.
- Areas of threatened flora and fauna habitat will be avoided at design and micro-siting stages, where practicable.
- A Vegetation Management Plan (VMP) will be developed and implemented to ensure that clearing is undertaken in accordance with legislative standards and requirements.
- Progressive restoration of access corridors once construction has been completed will occur to reduce impacts.

Weed and Pest Control

- A Biosecurity Management Plan (BMP) will be developed and implemented for the Proposed Action. This will include measures such as vehicle clean downs, weed hygiene declaration and obligations to stick to access tracks throughout the Project Area.
- Weed management and control methods will depend upon the location, weed species identified, the degree of the infestation, relevant landholder agreement or conduct and compensation agreements provisions, and local, State and Commonwealth regulatory requirements.
- Imported material able to transport weed and seed will require a weed hygiene declaration and be assessed to ensure they are free of contamination, disease and invasive weeds.
- Weeds of National Significance (WONS) and invasive species will be identified and monitored in the Project Area. Appropriate weed monitoring will occur to ensure new weed species are identified, recorded and managed appropriately.

Mortality or Injury to Native Fauna

- A Bird and Bat Management Plan (BBMP) will be developed as part of the assessments phase, in order to implement impact mitigation measures for the Proposed Action.
- A Fauna Management Plan (FMP) will be produced in order to implement impact mitigation measures for the Proposed Action.
- During vegetation clearing activities fauna management will be implemented that includes pre-clearance surveys, fauna spotter-catcher supervision and methods to reduce impacts as set out in a FMP.
- No driving will occur in unauthorised areas, and in other areas will be carried out at safe speeds adopted to the road conditions.
- Injured, sick or dead fauna will be recorded and reported during construction. This can be carried out by a fauna spotter-catcher.

Impacts from WTG Collision to Bats and Birds will be Monitored

- Areas of bird habitat including known nests will be avoided in the design and then further avoided when micro-siting occurs, where practicable.
- Development of a BBMP that considers the impacts that will occur to birds and mitigation measures to address these.
- WTGs have been sited from key bird and bat habitats (waterways and drainage lines) where practicable. Micro-siting will also aim to avoid large remnant trees where possible, and any large nests identified in the Project Area.

Further details of the management and mitigation measures specific to the Proposed Action are contained in the MNES Impact Assessment **(Att. A, Section 6, Table 6-1, pp. 64-69).**

An assessment was undertaken for relevant listed species against SIG 1.1 as part of the MNES Impact Assessment **(Att. A, Appendix E).** This assessment concluded that there is likely to be significant impacts to up to 59.9 ha of koala breeding and foraging habitat.

Where significant impacts to MNES cannot be avoided, the Proponent is committed to offsetting these impacts. An Offset Management Strategy (OMS) will be prepared that specifically outlines the requirements to deliver and manage appropriate land-based offsets, in accordance with the conditions of approval for the Proposed Action. The Proposed Action will also offset the 'actual' area of habitat impacted that will be further defined at the detailed design phase. This incentivises the minimisation of impacts to habitats so as to reduce the offset requirement and ecological burden on MNES. The Disturbance Area for species with significant impacts, as described in the MNES Impact Assessment at **Att. A, Appendix E**, are outlined in **Att. A, Section 7, Table 7-1, pp. 70-77**. Offset requirements for these species will be calculated in accordance with the *EPBC Act Environmental Offsets Policy.*

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

An assessment was undertaken for relevant listed species against SIG 1.1 as part of the MNES Impact Assessment **(Att. A, Appendix E).** This assessment concluded that there is likely to be significant impacts to up to 59.9 ha of koala breeding and foraging habitat.

Where significant impacts to MNES cannot be avoided, the Proponent is committed to offsetting these impacts. An OMS will be prepared that specifically outlines the requirements to deliver and manage appropriate land-based offsets, in accordance with the conditions of approval for the Proposed Action. The Proposed Action will also offset the 'actual' area of habitat impacted that will be further defined at the detailed design phase. This incentivises the minimisation of impacts to habitats so as to reduce the offset requirement and ecological burden on MNES. The disturbance area for species with significant impacts, as described in the MNES Impact Assessment at **Att. A, Appendix E**, are outlined in **Att. A, Section 7, Table 7-1, pp. 70-77**. Offset requirements for these species will be calculated in accordance with the *EPBC Act Environmental Offsets Policy.*

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	Common name
No	No	Actitis hypoleucos	Common Sandpiper
No	Yes	Apus pacificus	Fork-tailed Swift
No	No	Calidris acuminata	Sharp-tailed Sandpiper
No	No	Calidris ferruginea	Curlew Sandpiper
No	No	Calidris melanotos	Pectoral Sandpiper
No	No	Cuculus optatus	Oriental Cuckoo, Horsfield's Cuckoo
Yes	Yes	Gallinago hardwickii	Latham's Snipe, Japanese Snipe
No	Yes	Hirundapus caudacutus	White-throated Needletail
No	No	Motacilla flava	Yellow Wagtail

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. *

In general, potential impacts as a result of the Proposed Action from the construction phase relate to habitat loss and disturbance. Operational impacts are largely limited to possible bird and bat collisions with operational WTGs. Decommissioning phase impacts are similar to those that might occur during the construction phase but likely to be of much lower magnitude as there is no additional vegetation clearing during the decommissioning phase.

Direct impact to MNES will be habitat loss and degradation, which is typically from disturbance to native vegetation (predominantly by land clearing) that is regulated vegetation or habitat. Direct disturbance to MNES is considered in the MNES Impact Assessment **(Att. A, Section 5, Table 5-1, pp. 58-59).**

As per the MNES Impact Assessment **(Att. A, Section 4.2.2.3, pp. 50),** one listed Migratory species (which is also listed as Vulnerable) is considered likely to occur within the Project Area: the white-throated needletail.

White-throated Needletail (*Hirundapus caudacutus*)

Impact is aerial only.

The white-throated needletail is listed as Vulnerable and Migratory under the EPBC Act and is considered likely to occur within the Project Area, based on recent records within the Locality (although no individuals were observed during field surveys).

The minimum threshold for an ecologically significant impact to a population for white-throated needletail is 10 individuals (DoE, 2015). As no individuals were observed during field surveys, no CRM could be applied to the species. However, records are present within the Locality surrounding the Project Area at low densities with few non-historic records being present potentially be attributed to species occurring at low densities in area.

Therefore, it is considered unlikely that the Proposed Action will have a significant impact on the white-throated needletail.

Potentially occurring Species

Additionally, two listed migratory species have the potential to occur within the Project Area **(Att. A, Section 4.2.3, Table 4-7, pp. 54):**

- Fork-tailed swift (*Apus pacificus*) – aerial impact only; and
- Latham's snipe (*Gallinago hardwickii*) – up to 0.4 ha disturbance to potential habitat.

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

No

4.1.5.6 Describe why you do not consider this to be a Significant Impact. *

A full Significant Impact Assessment has been undertaken as part of the MNES Impact Assessment **(Att. A, Appendix E).** This assessment has demonstrated the impacts to migratory species is unlikely to be significant.

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

No

4.1.5.9 Please elaborate why you do not think your proposed action is a controlled action. *

Impacts to white-throated needletail are aerial only. A Significant Impact Assessment was undertaken which demonstrated the impacts to migratory species are unlikely to be significant **(Att. A, Appendix E)**.

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 following avoidance and mitigation measures will be considered in managing the impact from the Proposed Action:

- Injured, sick or dead fauna will be recorded and reported during construction. This can be carried out by a fauna spotter-catcher.
- Impacts from WTG collision to bats and birds will be monitored.
- Areas of bird habitat including known nests will be avoided in the design and then further avoided when micro-siting occurs, where practicable.
- Development of a BBMP during the assessments phase, that considers the impacts that will occur to birds and mitigation measures to address these.
- WTGs have been sited from key bird and bat habitats (waterways and drainage lines) where practicable. Micro-siting will also aim to avoid large remnant trees where possible, and any large nests identified in the Project Area.

Full details on management and mitigation measures for the Proposed Action are found in in the MNES Impact Assessment at **Att. A, Section 6, Table 6-1, pp. 64-69.**

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

No applicable offsets proposed for migratory species.

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 Proposed Action 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.

—

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 Proposed Action is located inland and is not within, nor does it impact, a Commonwealth Marine Area.

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 Proposed Action is located over 400 km from the Great Barrier Reef. As such, the Proposed Action will not result in any direct or indirect impacts to 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 Proposed Action will not impact on a water resource in relation to large coal mining development or coal seam gas. As such, there will be no water resource impacts in relation to such development associated with the Proposed Action.

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 Proposed Action is not located on Commonwealth Land. As such, it will not result in any direct or indirect impacts to 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.

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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. *

There are no Commonwealth Heritage Places Overseas within or surrounding the Project Area. As such, the Proposed Action is unlikely to have any direct or indirect impacts on 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)

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)
- Migratory Species (S20)
- 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. *

The alternative to using renewables is continuing to use fossil fuels including coal and natural gas. The dependency on these energy sources will result in continued Greenhouse gas emissions and contribute to the harmful effects of climate change. The State of Queensland has now legislated emissions reduction targets in the Clean Economy Jobs Act 2024, and the continued use of fossil fuels in electricity generation is not compatible with these targets.

Alternative renewable energy sources such as solar farms would meet the needs for renewable generation capacity. However, solar farms require more land area per megawatt per hour (MWh) of electricity generated compared to wind farms and can only generate during daylight hours. The Captains Mountain area is recognized as having high wind resources and is relatively sparsely populated. In addition, alternative technologies are not part of Vestas core business.

The Proponent has selected the Project Area through a site scouting process that has identified the area as having good wind resource based on wind mapping, met mast monitoring along with a generally lesser quality of environmentally significant areas than other potential areas.

Also, the potential availability of a direct connection point to the NEM via existing transmission infrastructure within the Project Area.

Proximity to the public road network and existing internal access tracks.

The current land use of cattle grazing is highly compatible with cooperation and coexistence with the Proposed Action, with minimal impact on cattle farming operations and the potential for any infrastructure installed for the Proposed Action to be utilised during operations period for day-to-day operations of the existing land use.

The Proposed Action design has been refined on several occasions through an iterative process including environmental, wind resource, cultural heritage, constructability, landowner and engineering considerations. The design refinement process focused on the avoidance and minimisation of environmental impacts through the various stages of layout planning. The current layout was determined from the constraints the initial layout identified via the preliminary impact assessments. Key layout refinements have been made to minimise environmental impacts, while having consideration for wind resource, topographic and other amenity impacts.

No Development Option

The No Development scenario would not deliver a low-cost, renewable energy option to the NEM, and would not support the Queensland and Australian Governments' renewable energy and emissions reduction targets. The Proposed Action is expected to reduce up to 509,00 million tonnes of CO2 emissions by powering up to 127,000 average Queensland homes annually. Thus, the No Development scenario would not contribute to the Proposed Action objectives and as such was not considered further.

5. Lodgement

5.1 Attachments

1.2.1 Overview of the proposed action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att A_MNES Impact Assessment Report_100225.pdf MNES Impact Assessment Report Prepared by ERM	09/02/2025	No	High

1.2.6 Commonwealth or state legislation, planning frameworks or policy documents that are relevant to the proposed action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att A_MNES Impact Assessment Report_100225.pdf MNES Impact Assessment Report Prepared by ERM	09/02/2025	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	Sensitivity	Confidence
#1.	Link	Vestas Safety, Quality, Health and Environment Policy https://www.vestas.com/content/dam/vestas-com/gl..			High

3.1.1 Current condition of the project area's environment

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att A_MNES Impact Assessment Report_100225.pdf MNES Impact Assessment Report Prepared by ERM	09/02/2025	No	High

3.2.1 Flora and fauna within the affected area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att A_MNES Impact Assessment Report_100225.pdf MNES Impact Assessment Report Prepared by ERM	09/02/2025	No	High

3.2.2 Vegetation within the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att A_MNES Impact Assessment Report_100225.pdf	09/02/2025	No	High

MNES Impact Assessment Report
Prepared by ERM

3.3.2 Indigenous heritage values that apply to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att A_MNES Impact Assessment Report_100225.pdf MNES Impact Assessment Report Prepared by ERM	09/02/2025	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	Sensitivity	Confidence
#1.	Document	Att A_MNES Impact Assessment Report_100225.pdf MNES Impact Assessment Report Prepared by ERM	09/02/2025	No	High

4.1.4.5 (Threatened Species and Ecological Communities) Why you consider the direct and/or indirect impact to be a Significant Impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att A_MNES Impact Assessment Report_100225.pdf MNES Impact Assessment Report Prepared by ERM	09/02/2025	No	High

4.1.4.8 (Threatened Species and Ecological Communities) Why you think your proposed action is a controlled action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att A_MNES Impact Assessment Report_100225.pdf MNES Impact Assessment Report Prepared by ERM	09/02/2025	No	High

4.1.4.10 (Threatened Species and Ecological Communities) Avoidance or mitigation measures proposed for this action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att A_MNES Impact Assessment Report_100225.pdf MNES Impact Assessment Report Prepared by ERM	09/02/2025	No	High

4.1.4.11 (Threatened Species and Ecological Communities) Proposed offsets relevant to avoidance or mitigation measures

	Type	Name	Date	Sensitivity	Confidence

#1.	Document	Att A_MNES Impact Assessment Report_100225.pdf MNES Impact Assessment Report Prepared by ERM	09/02/2025	No	High

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

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att A_MNES Impact Assessment Report_100225.pdf MNES Impact Assessment Report Prepared by ERM	09/02/2025	No	High

4.1.5.6 (Migratory Species) Why you do not consider the direct and/or indirect impact to be a Significant Impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att A_MNES Impact Assessment Report_100225.pdf MNES Impact Assessment Report Prepared by ERM	09/02/2025	No	High

4.1.5.9 (Migratory Species) Why you do not think your proposed action is a controlled action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att A_MNES Impact Assessment Report_100225.pdf MNES Impact Assessment Report Prepared by ERM	09/02/2025	No	High

4.1.5.10 (Migratory Species) Avoidance or mitigation measures proposed for this action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att A_MNES Impact Assessment Report_100225.pdf MNES Impact Assessment Report Prepared by ERM	09/02/2025	No	High

5.2 Declarations

Completed Referring party's declaration

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

ABN/ACN	12002773248
Organisation name	ENVIRONMENTAL RESOURCES MANAGEMENT AUSTRALIA PTY LIMITED
Organisation address	Level 14, 207 Kent Street, Sydney, NSW 2000
Representative's name	Michael Rookwood
Representative's job title	Associate Partner
Phone	+61730078478
Email	michael.rookwood@erm.com
Address	GPO Box 2892 Brisbane QLD 4001

☑ 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, **Michael Rookwood of ENVIRONMENTAL RESOURCES MANAGEMENT AUSTRALIA PTY LIMITED**, 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	11648096691
Organisation name	CAPTAINS MOUNTAIN WIND FARM PTY LTD
Organisation address	Level 4, 312 St Kilda Rd, Southbank VIC 3006
Representative's name	Robert Plumb

Representative's job title	Project Development Manager
Phone	+61427307696
Email	robpl@vestas.com
Address	Level 4, 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, **Robert Plumb of CAPTAINS MOUNTAIN 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, **Robert Plumb of CAPTAINS MOUNTAIN 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. *