Moonlight Range Wind Farm and Battery Energy Storage System (BESS)

Application Number: **02129** Commencement Date: **14/11/2023** Status: **Locked**

1. About the project

1.1 Project details

1.1.1 Project title *

Moonlight Range Wind Farm and Battery Energy Storage System (BESS)

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 *

01/01/2063

1.2 Proposed Action details

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

The proposed development is a wind farm and battery energy storage system (BESS) approximately 40 km west of the township of Rockhampton in the Rockhampton Regional Council. The Project Area is 21,790.9 hectares (ha) and the land on which the proposed development infrastructure will be located (the disturbance footprint) occupies 1,269 ha or 5.8% of the total Project Area. In order to facilitate the construction of a wind farm, including excavation and access roads, there is an unavoidable requirement for the clearing of vegetation. The key activities likely to impact ecological resources during construction include:

- Vegetation clearing for new access tracks, temporary construction compounds and laydown areas, borrow pits, water storage, concrete batching plants, wind turbine 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 Matters of National Environmental Significance (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.
- Construction traffic movements and plant operations (rock crushing and concrete batching plants) may result in collisions with fauna, acoustic disturbance, habitat destruction and localised air pollution, potentially impacting MNES. Further information on potential impacts resulting from the construction of the wind farm can be found in the Moonlight Range Wind Farm Ecological Impact Assessment Report (Att 7, s.6, pp.109)

The disturbance footprint is 1,269 ha and includes a permanent impact to 741 ha of remanent regrowth vegetation associated with clearing for infrastructure and 528ha of predominantly cleared agricultural land. Where such areas have not been avoided is in areas of vegetated ridges with wind resources required for the viability of the proposed development. These areas have only been included in the design

layout where necessary.

Land not occupied by infrastructure, approximately 20,521 ha, following the construction and rehabilitation period will continue to be used for rural and agricultural purposes.

The proposed development will consist of the following;

- Up to 97 Wind Turbine Generators (WTG);
- WTG foundations and hardstands;
- Access tracks, underground cabling and overhead transmission lines;
- Electrical infrastructure including internal electrical collector stations, a substation and grid connection infrastructure;
- Battery Energy Storage System (BESS);
- Concrete batching plants;
- Permanent Meteorological masts;
- Construction compound and laydown areas; and
- Central operational and maintenance facility.

WTGs; The final location of the turbines will be fixed within 100m of the proposed location following state development approval. However, the Project Area has been designed to accommodate the following maximum turbine dimensions so that potential impacts on environmental values can be properly considered;

Number of Turbines: Up to 97

Tip height: 280m

Rotor diameter: 182m

Turbine Hardstands: The WTG hardstand area has been designed to minimise disturbance. Each WTG hardstand, together with the blade laydown area will be generally 0.2975 ha, increasing to 0.3103 ha when the support crane pads are included. These hardstand areas also act as bushfire setback for the ongoing operation of the project. Typically, WTG towers will be setback 30-40m from vegetation to facilitate construction.

Access and infrastructure corridors; Access corridors have been designed to utilise the existing topography of the land, minimising the impact corridor to 46m wide in most areas (including cleared areas for construction and permanent infrastructure).

Electrical Connections Substations, Grid Connections and Battery Storage: Each WTG will be connected to the on-site internal electrical collector stations located within the Project Area via underground cabling infrastructure, laid in trenches approximately 1m wide, adjacent to access tracks. The overhead transmission lines will be installed within a 60m transmission corridor from the on-site electrical collector stations through to the main project switchyard.

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 Moonlight Range Wind Farm Ecological Assessment (ERM 2023) for the proposed development outlines the specific Commonwealth, State, and Local legislation, administering authority and the regulatory framework associated with the proposed development (Moonlight Range Wind Farm Ecological Impact Assessment Report, Att 7, s.3, p.g.12).

These include:

Commonwealth Legislation

- *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) - Given the scale of the project and recent decisions made by DEECCW, the Project is referred under the EPBC Act as a significant impact triggering a controlled action requiring further assessment and approval under the Act.
- EPBC Act Environmental Offsets Policy 2012 – This policy applies where a residual significant impact on an MNES is expected to occur from the proposed development. This policy provides guidance on the role of offsets and when a proposed offset is considered suitable.

State Legislation

- *Planning Act 2016* - A Development Permit for Material Change of Use, Operational Works and Reconfiguring a Lot will be required to facilitate the construction and operation of the Project.
- Planning Regulation 2017 – The Regulation outlines the assessment triggers, benchmarks and costs associated with the Project. These will be addressed as part of the Development Application to the State government as the primary assessment officer.
- State Development Assessment Provisions (SDAP), State Code 16: Native Vegetation clearing, State Code 23: Wind Farm Development – Assessment benchmarks for the Development Application to the State government.
- *Nature Conservation Act 1992* (NC Act) - The desktop assessment and subsequent ecology surveys have identified the presence of fauna and flora species that are threatened under the NC Act. Impacts to listed species will need to be considered at part of the Development Permit process, with additional approvals under the NC Act required, including the adoption of a Species Management Program for tampering with animal breeding places and Protected Plant Clearing Permits required if clearing protected plants.
- Vegetation Management Act 1999 (VM Act) - The desktop assessment and subsequent field surveys identified the presence of native vegetation, therefore requiring a Development Permit to clear vegetation to accommodate Project infrastructure. Environmental offsets will also apply where there are significant residual impacts to Matters of State Environmental Significance (MSES).
- *Biosecurity Act 2014* (and Regulation) - This Act provides for the management of biosecurity risks in Queensland. The Act provides measures to safeguard Queensland economy, environment, agricultural and tourism industries and way of life from pests, diseases and contaminants. Restricted matters are assigned a category (or categories) from 1 to 7, with each category placing restrictions on the dealings with the matter.
- Environmental Offsets Framework (Environmental Offsets Act 2014 and Regulation, 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 MSES. There is a guideline to assist in determining whether or not an SRI is likely.
- Fisheries Act 1994 (Fisheries Act) - Construction of a watercourse crossings for waterways identified under the Fisheries Act 1994 will trigger the need for a waterway barrier works approval.
- *Water Act 2000* (Water Act) - Assessment under the Water Act may be required, dependent on final turbine layout and access tracks, for clearing riparian vegetation and excavating or placing fill in waterbodies. It is anticipated that the application will be assessed for taking or interfering with water, dependent on Project water source.

Local Legislation

- Rockhampton Region Planning Scheme 2015 - The Development Application will need to consider the outcomes sought by the local planning instrument in demonstrating suitability of the site.

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. *

A Moonlight Range Wind Farm Community and Stakeholder Engagement Plan has been developed to guide how stakeholders and the community can participate during the development phase of the Project (Att 1).

Guided by the International Association of Public Participation (IAP2) Core Values and Public Participation spectrum, Greenleaf Renewables' engagement approach is tailored according to the audience's level of Project awareness, interest and influence, as well as renewable energy knowledge.

Public consultation undertaken in connection with the Moonlight Range Wind Farm to date, is summarised here:

- Extensive consultation has been undertaken with host landowners which commenced in early 2021. Initial Project introductory meetings were held with the Rockhampton Regional Council (RRC) in November 2022. The Greenleaf team then presented to planning staff at the Council in March 2023, providing a project overview and shared collateral to gauge appropriateness for the surrounding audiences, to seek feedback and discuss engagement intentions.
- RRC provided approval for Material Change of Use (MCU) exemption for the temporary met mast process (the approval has been attached to this EPBC referral (Att 3))
- Engagement with Council has been ongoing an active. Greenleaf introduced the Project to economic development groups Advance Rockhampton and Capricorn Enterprises in November 2023 and will continue to engage with these groups over the development cycle.
- The proponent is continuing to engage with the Darumbal People Aboriginal Corporation RNTBC (Darumbal), the registered native title holder, with the purpose to negotiate a Indigenous Land Use Agreement (ILUA) and Cultural Heritage Management Agreement (CHMA). An initial Project introductory meeting was held with Darumbal in November 2022, followed by a Board meeting in August 2023. Darumbal have provided a letter of support (attached with this EPBC referral (Att 2)) for the Project for lodgement of the Development Application.
- Greenleaf concluded negotiations and executed an Initial Cultural Heritage Agreement (ICHA) with Darumbal that outlined processes and procedures to protect Cultural Heritage as part of the pre-construction requirements for the temporary met mast. This follows the exemption from RRC (as described above).
- Greenleaf have established a dedicated project website and project telephone number for any members of the community that may have questions or comments about the proposed development.
- Broader community newsletters were distributed by hand to neighbouring community members in early November 2023 to those community members living within 10km of the proposed Moonlight Range Wind Farm (a copy of the Moonlight Range Wind Farm

Newsletter Nov 23 is attached with this EPBC referral (Att 4)).

- Community open sessions are scheduled for November 2023 and early December 2023 and will be repeated in 2024 and beyond, coupled with quarterly newsletter updates.
- Broadly speaking public consultation with key stakeholders has included face-to-face and online meetings, contact via email and phone and distribution of the Moonlight Range Wind Farm Newsletter Nov 23 (Att 4).

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

Referring party details

Name	Alex Preston
Job title	Senior Consultant
Phone	0407138441
Email	alex.preston@erm.com
Address	Level 9, 260 Queen Street, Brisbane QLD 4000

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	666952049
Organisation name	MOONLIGHT RANGE WIND FARM 3 PTY LTD
Organisation address	3142 VIC

Person proposing to take the action details

Name	Chris Righetti
Job title	Director
Phone	0439 809 609
Email	chris@greenleafrenewables.com.au
Address	PO Box 8180 Kooyong VIC 3144

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? *

Yes

1.3.2.16 Describe the nature of the trust arrangement in relation to the proposed action. *

Moonlight Range Wind Farm Trust 3 is a unit trust established in March 2023. Moonlight Range Wind Farm 3 Pty Ltd acts as the corporate trustee for the trust.

The ABN for Moonlight Range Farm Trust 3 is 89 465 583 160

The ACN for Moonlight Range Wind Farm 3 Pty Ltd is 666 952 049

Greenleaf Renewables Pty Ltd is the ultimate owner and beneficiary of the trust.

Refer to Att 5.

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. *

Moonlight Range Trust 3 is a project trust wholly owned by Greenleaf Renewables Pty Ltd (Greenleaf) ACN: 650 512 735. Greenleaf is a specialised renewable energy project development company, 100% owned by Australia Shareholders. The team combines over 28 years' experience in the renewable and energy industry, covering land access, permitting, technical development, commercial, and financing, with a core focus of the development of wind farm projects across eastern Australia. Greenleaf Renewables have no current or historical proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources.

Yes, Greenleaf Renewables Pty Ltd has a satisfactory record of responsible environment management.

For more information, refer to attachment Greenleaf Renewables Environmental Policy Att 6, pp.1-2.

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

Refer to the attached Greenleaf Renewables - Environmental Policy (Att 6).

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	666952049
Organisation name	MOONLIGHT RANGE WIND FARM 3 PTY LTD
Organisation address	3142 VIC

Proposed designated proponent details

Name	Chris Righetti
Job title	Director

Phone	0439 809 609
Email	chris@greenleafrenewables.com.au
Address	PO Box 8180 Kooyong VIC 3144

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	Alex Preston
Representative's job title	Senior Consultant
Phone	0407138441
Email	alex.preston@erm.com
Address	Level 9, 260 Queen Street, Brisbane QLD 4000

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	666952049
Organisation name	MOONLIGHT RANGE WIND FARM 3 PTY LTD
Organisation address	3142 VIC
Representative's name	Chris Righetti
Representative's job title	Director
Phone	0439 809 609
Email	chris@greenleafrenewables.com.au
Address	PO Box 8180 Kooyong VIC 3144

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

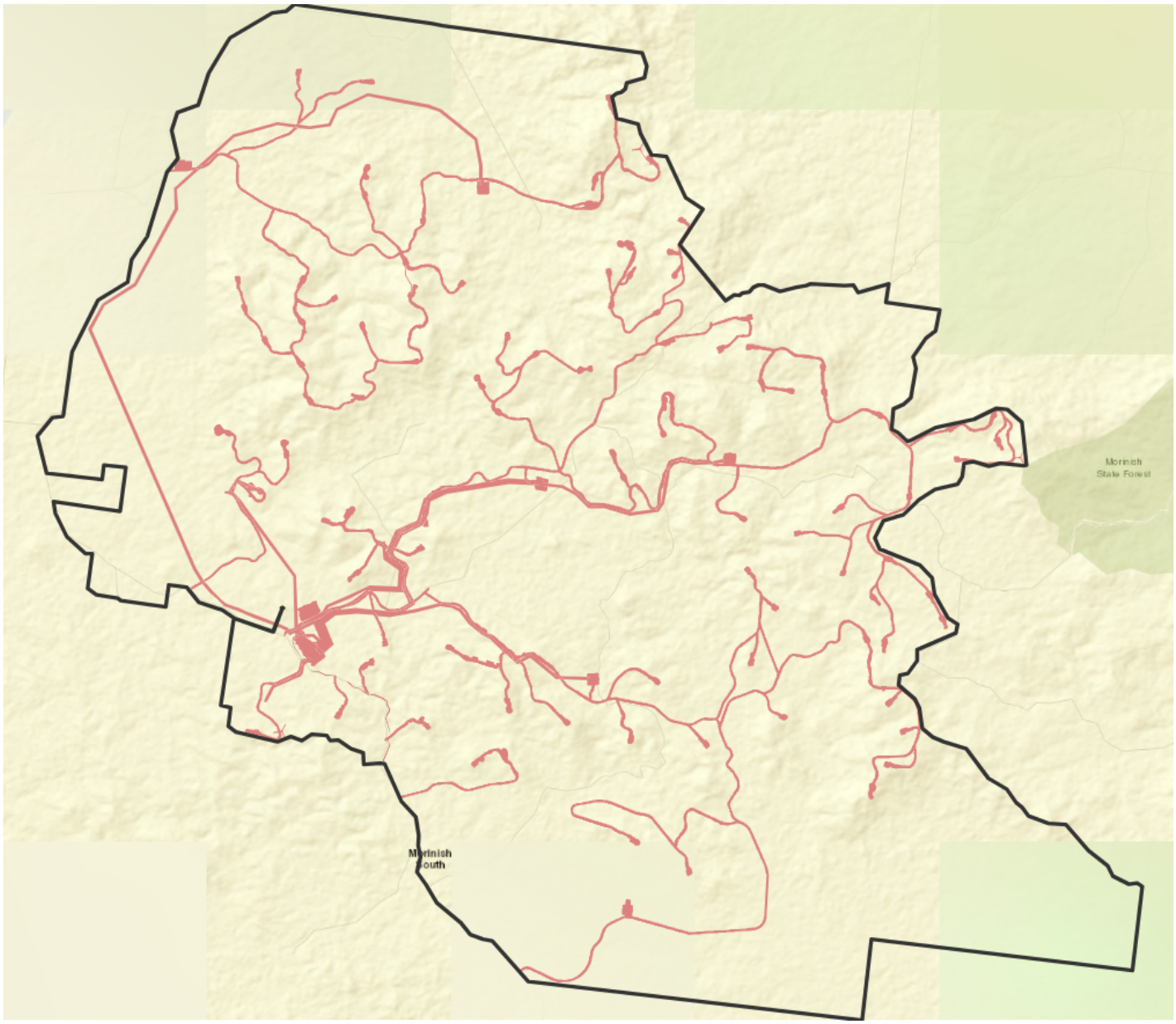
1.4 Payment details: Payment allocation

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


Morinish
State Forest
Morinish
South

2.2 Footprint details

2.2.1 What is the address of the proposed action? *

317 Connor Road, Morinish South QLD 4702

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 and its surrounds is predominantly rural, characterised by cattle grazing. The Project Area incorporates 6 individual landowners, which is made up of 22 freehold and 2 lands lease property lots. (Moonlight Range Wind Farm Ecological Assessment, Att 7, s.2 pp 6)

3. Existing environment

3.1 Physical description

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

The Project Area is located in the Brigalow Belt bioregion and includes a range of landscape features typical of the region, from defined mountainous terrain to large open woodlands and grassland flats on undulating plains and sloping hills.

The Project Area contains stream order 1-3 watercourses mapped under the *Vegetation Management Act 1999 QLD* (VM Act). Disturbance within these watercourses will be limited to linear infrastructure such as access tracks and electrical reticulation infrastructure.

A total of 10,229 ha or 47% of the Project Area is classified as non-remanent vegetation, with occasional regrowth and a distinct absence of trees, is impacted by clearing and cattle grazing. The majority of the Project Area is remanent or regrowth vegetation, with 6,348 ha (29%) remanent and 3,395 ha (15.6%) regrowth vegetation. The majority of remanent vegetation is located in Morinish State Forest and dominated by *Corymbia citriodora*.

The Project Area has been classified into nine vegetation communities and broad habitat types based on data gathered over five separate field survey events. Mapped vegetation communities and habitats represent potential habitat for a variety of taxon (Moonlight Range Wind Farm Ecological Assessment, Section 5.2). The mapped vegetation communities and broad habitat types are:

- Cleared land – land historically used for agriculture (predominantly cattle farming) with a distinct absence of trees;
- Agricultrual land – including cultivated alluvial plains and grassland with occasional presence of *Eucalyptus spp*., and *Corymbia eruthrophloia*. ;
- Ironbark woodland dominated by *Eucalyptus crebrea* associated with *Corymbia spp*. ;
- *Corymbia citiodora* mature open forest to woodland associated with *E. crebra* and *C. tessellaris*.;
- Riparian woodland consisting of *E. tereticornis*, *Casuarina sp*., *Melaleuca sp*.;
- Brigalow (*Acacia harpophylla*) dominant open woodland to forest;
- Dry rainforest associated with semi-evergreen vine thicket species;
- Rocky ridgelines and mountain tops; and
- Waterbodies and drainage features.

The habitats in the Project Area range greatly in value, with areas in higher terrain generally having a better ecological condition. Areas of lower terrain have been degraded due to cattle grazing, erosion, and the presence of introduced flora species. A summary of the broad habitat types, along with their vegetation community classifications, distribution across the project area, and attributes is provided in the Ecological Assessment (Moonlight Range Wind Farm Ecological Assessment, Att 7, Section 5.2, pp. 36).

No Protected Areas are located within the Project Area. The closest Protected Areas are:

- Goodedulla National Park is approximately 25km west of the Project Area; and
- Mount Etna Caves National Park is approximately 45 km north east of the Project Area.

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

Existing Uses

The proposed development is located within the Rural Zone under the Rockhampton Region Planning Scheme, with the predominant land use within the Project Area and the adjacent localities being cattle grazing and other related rural activities.

Proposed Use

The proposed development use is a renewable energy facility comprising up to 97 WTGs, concrete batching plants, electrical substations, underground electrical reticulation cabling, BESS, meteorological masts, transmission lines and related transport infrastructure (connected tracks and roads).

The total disturbance footprint is anticipated to be 1,296 ha in area, accounting for approximately 5.8 % of the total Project Area. Land not occupied by infrastructure following the construction and rehabilitation period will continue to be used for rural and agricultural purposes. It is anticipated that access tracks established as part of the construction of the proposed development will aid in ongoing agricultural and access 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 natural features and/or any other important or unique values specific 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 topography of the Project Area is defined by mountainous terrain that includes rocky outcropsat the highest altitudes and rock/muddy creeks at the lowest. Between these two extremities exist expanses of large open woodland and grassland flats on undulating plains and sloping hills.

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.

Five field investigations were conducted from December 2022 to October 2023. These involved a range of survey methods including vegetation assessments, habitat assessments and targeted flora and fauna surveys (including bird utilisation surveys (BUS)). The field investigations and methods are described in the Moonlight Range Ecological Assessment (Att 7, Section 4.3, pp. 17)

Five field surveys are as follows:

- Four ecologists from 12-16 December 2022, with a total of 190 person hours on ground. The survey involved targeted threatened and/or migratory species surveys (including BUS and bat surveys), vegetation (quaternary) and habitat assessments.
- Two ecologists from 6-10 February 2023, with a total of 100 person hours on ground. The survey involved new and repeat BUS surveys.
- Six ecologists from 17-22 April 2023 with a total of 360 person hours on ground. The survey involved targeted threatened and/or migratory species surveys (including BUS and bat surveys), vegetation (quaternary) and habitat assessments.
- Two ecologists from 31 July – 4 August 2023 with a total of 100 person hours on ground. The surveys included repeat BUS and habitat quality assessments.
- Two ERM ecologists undertook a five-day field assessment of the Project Area from 9th to the 13th October with a total of 100 person hours on the ground. The surveys involved targeted threatened and/or migratory species surveys (including BUSs), vegetation (quaternary) and habitat assessments.

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

The Project Area is within the Brigalow Belt bioregion. The topography of the Project Area is defined by mountainous terrain that include rocky outcrops at higher altitudes and alluvial systems such as creeks, drainage lines and plains. These areas contain large expanses of open woodland and grassland flats on undulating plains and sloping hills. Both these dominant vegetation types have been heavily impacted by historical land-use including however not limited to selective land clearing and cattle farming. Numerous ephemeral creeks and rivers intersect the Project Area, and the adjacent riparian zones of these waterways are typically impacted by weeds and sparse due to current and historic grazing practices. Additionally, permanent water reservoirs such as farm dams are typically degraded and erosive due to extensive cattle farming.

Vegetation communities across the Project Area vary in maturity, primarily due to different degrees and exposure to cattle and recent land management practices such as fire. According to state RE mapping (which was found to be generally consistent with on-ground conditions), approximately 10,229 ha (46 %) of the Project Area is non-remnant, largely cleared grassland or sparse woodland, while 11,596 ha (53 %) is remnant or regrowth woodland, forest, or dry rainforest. Broadly, the west, north and south portions of the Project Area are in a non-remnant state. Areas within the eastern portion of the Project Area are in a healthier ecological condition and have connectivity with Morinish State Forest.

The Project Area has been classified into nine broad habitat types. Broad habitat types have been defined based on vegetation community types and structural characteristics. These broad habitat types have then been considered as foraging, breeding, roosting, and dispersal habitat for listed threatened and/or migratory species that are known, likely or have the potential to occur within the Project Area.

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.

A Cultural Heritage Due Diligence Assessment (CHDDA) (Att 8) was undertaken in August, 2023. The CHDDA included searches of relevant Commonwealth, State and local heritage registers. The search results indicate there are no Commonwealth Heritage Places, National Heritage Places or World Heritage Properties located within or nearby the Project Area. There are also no heritage places listed on the Queensland Heritage Register or within Rockhampton Regional Council's Planning Scheme, within or nearby the Project Area.

The Cultural Heritage Due Diligence Assessment (CHDDA) is provided as an attached, however this document has not been published and is CONFIDENTIAL as part of this lodgement. It should not be made publicly available.

The desktop assessment found that while there are no non-Indigenous cultural heritage sites or values listed on heritage registers within the Project Area, there is potential for previously unrecorded non-Indigenous cultural heritage to be within the Project Area. This would likely be related to early mining and pastoral activities in the area.

A non-Indigenous Cultural Heritage Assessment will be undertaken for the Project.

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

The CHDDA (Att 8) included a desktop review of Aboriginal cultural heritage and assessment of the Project against the *Aboriginal Cultural Heritage Act* 2003 (ACHA 2003) Duty of Care Guidelines 2004.

A search of the Queensland Department of Treaty, Aboriginal and Torres Strait Islander Partnerships, Communities and the Arts (DTATSIPCA) (then Department of Seniors, Disability Services and Aboriginal and Torres Strait Islander Partnerships (DSDSATSIP)) Aboriginal and Torres Strait Islander Cultural Heritage Database and Register was conducted on 8 June 2023.

The search results show that:

- There are four recorded Aboriginal cultural heritage sites located at three locations within the Project Area.
- There is one Aboriginal Party associated with the Project Area: The Darumbal People.
- There is one Aboriginal Cultural Heritage Body for the Project Area: Darumbal Enterprises Pty Ltd.

The Cultural Heritage Management Plan is available to the Department upon request, once completed.

A search of the Queensland Native Mounted Police Database indicated there is one site recorded within the Project Area, and five sites within 10km of the Project Area.

A search of the Colonial Frontier Massacre Database indicated there are no sites recorded within the Project Area, however there are two recorded conflict sites within 10km of the Project Area.

The assessment against the ACHA 2003 Duty of Care Guidelines 2004 concluded proposed works for the Project Area have been assessed as Duty of Care Categories 2, 4 and 5. Where an activity is proposed under High Risk Category 4 and Category 5 there is generally a high risk that it could harm Aboriginal cultural heritage.

Greenleaf Renewables have commenced consultation and engagement with the Aboriginal Party with a view to developing a Cultural Heritage Management Agreement (CHMA). On finalisation of the CHMA, a cultural heritage assessment will be undertaken with the Aboriginal Party to identify any sites or places with Inidigenous heritage values and develop appropriate management measures. It should be noted that Greenleaf and Darumbal Enterprises Pty Ltd entered into an Initial Cultural Heritage Agreement (ICHA) to govern the

temporary met mast construction process. The field work conducted under the ICHA at the proposed met mast location and supporting access track access resulted in no Cultural Heritage finds. This field work was conducted and signed off by Darumabl Enterprises Pty Ltd in October 2023.

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 is situated adjacently to the Fitzroy River and is thus associated with the drainage features of this river. The main watercourses that intersect the Project Area are:

- Ten Mile Creek from the north;
- Templeton Creek and Back Creek from the west;
- Rosewood Creek from the west through to the south; and
- Coffey Creek, Scrub Creek and Spear Creek from the south.

These watercourses are stream orders 1-3. There are also several minor tributaries that drain from these numerus waterways. DNR provides mapping for ‘vegetation management watercourses and drainage features’ that are used when assessing MSES. Numerous dams also occur throughout the Project Area. These are generally of low quality and are heavily used and impacted by cattle.

There are no wetlands of international importance associated with the Project Area. There are also no high ecological value (HEV) waterways present in the Project Area, which includes, nor high ecological significance (HES) wetlands that occur within the Project Area.

Moonlight Range Ecological Assessment Report Att 7-Figure 5-16 shows the relevant drainage features mapped throughout the Project Area.

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 Sites within the Project Area or within the vicinity of the Project Area.

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 the vicinity of the Project Area.

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.

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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 not wetlands of international importance associated with the Project Area.

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	Bulbophyllum globuliforme
No	No	Cadellia pentastylis
No	No	Calidris ferruginea
No	No	Chalinolobus dwyeri
No	No	Charadrius leschenaultii
No	No	Cossinia australiana
Yes	Yes	Cycas megacarpa
Yes	Yes	Cycas ophiolitica
No	No	Dasyurus hallucatus
No	No	Delma torquata
No	No	Denisonia maculata
No	No	Dichanthium setosum
No	No	Egernia rugosa
No	No	Elseya albagula
No	No	Erythrotriorchis radiatus

Direct impact	Indirect impact	Species
No	No	Eucalyptus raveretiana
No	No	Falco hypoleucos
No	No	Furina dunmalli
Yes	Yes	Geophaps scripta scripta
No	No	Hemiaspis damelii
No	No	Hirundapus caudacutus
No	No	Leichhardtia brevifolia
No	No	Macroderma gigas
No	No	Neochmia ruficauda ruficauda
No	No	Nyctophilus corbeni
Yes	Yes	Petauroides volans
Yes	Yes	Petaurus australis australis
Yes	Yes	Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)
No	No	Pimelea leptospermoides
No	No	Poephila cincta cincta
No	No	Pteropus poliocephalus
No	No	Rheodytes leukops
No	No	Rostratula australis
No	No	Samadera bidwillii
No	No	Stagonopleura guttata
No	No	Turnix melanogaster

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
No	No	Semi-evergreen vine thickets of the Brigalow Belt (North and South) and Nandewar Bioregions
No	No	Weeping Myall Woodlands

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. *

In general, potential impacts 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 impacts are like 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 disturbance to MNES and MSES will be habitat loss and degradation, which arises from disturbance to native vegetation (predominantly by land clearing) that is regulated vegetation or habitat defined in this EAR. Direct disturbance to MNES and MSES is presented in Moonlight Range Ecological Assessment Report (Att 7, Section 8.1, pp.116-129).

The disturbance footprint of the proposed development (that is, the maximum area to be cleared) is 1,269ha and includes an impact to 741 ha of remnant and regrowth vegetation associated with the clearing for infrastructure. The disturbance footprint is 5.8% of the total Project Area. It is anticipated that rehabilitation opportunities post-construction will occur to reduce percentage of total disturbance required to facilitate construction.

The following protected matters have the potential to be subject to direct and/or indirect impacts from the proposed development:

***Cycas megacarpa* –**

0.65 ha of direct disturbance and 444.2 ha of potential habitat

The area of potential and known habitat to be cleared is up to 444.86 ha, this represents 9.7% of the total amount of habitat occupied by the species in the Project Area. Therefore, the proposed development is potentially likely to lead to a long-term decrease in the size of the population and a 9.7% clearance of the area of occupancy.

Greater glider (southern and central) (*Petuaroides volans*)

495.5 direct disturbance to breeding and foraging habitat

Potential foraging and breeding habitat for the greater glider has been mapped to occur within the Project Area. No evidence of the species was identified in the Project Area or immediate surrounds based on desktop analysis and field surveys, including targeted surveys for the species. However, its presence cannot be discounted based on available information

The removal of 495.5 ha of potential foraging and breeding habitat for the greater glider is equal to 2% of the potential foraging and breeding habitat available in the Project Area has the potential to constitute a significant impact to this matter.

Squatter pigeon (southern) (*Geophaps scripta scripta*)

1,084.2 ha of direct disturbance to breeding and foraging habitat

The total amount of habitat to be cleared is 1084.2 ha, or 6.6% of the total available habitat within the Project Area. Given the large amount of habitat clearing proposede, it is likely to represent a significant impact to habitat critical to the survival of the species.

Koala (*Phascolarctos cinereus*)

0.16 ha of breeding and foraging habitat 836.9 ha of potential breeding and foraging habitat

While potential foraging and breeding habitat for the koala has been mapped to occur within the Project Area, it is not regarded as habitat critical to the survival of the koala. Whilst no evidence of the species was identified within the Project Area or immediate surrounds based on desktop data and the 5 separate field surveys, including targeted surveys for the species it cannot be discounted.

The removal of 836.8 ha of potential foraging and breeding koala habitat within the disturbance footprint is equal to 6.8% of the potential foraging and breeding habitat available in the Project Area. The removal of potential foraging and breeding habitat may adversely affect habitat critical to the survival of the species.

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 MNES Significant Impact Assessment is located in the attached Moonlight Range Wind Farm Ecological Assessment Report (Att 7, Appendix D). This assessment has demonstrated the potential impacts to koala, greater glider (southern and central), squatter pigeon (southern), and *cycas megacarpa.*

Koala (*Phascolarctos cinereus*)

The total amount of habitat to be cleared is up to 837.1 ha, or 6.8% of the available potential breeding and foraging habitat within the Project Area. Removal of up to 837.1 ha may represent a potential significant impact to habitat critical to the survival of the species.

Greater glider (southern and central) (*Petauroides volans*)

The total amount of potential habitat to be cleared is up to 495.5 ha, or 6.6% of the total available potential habitat within the Project Area. Removal of up to 495.5 ha may represent a potential significant impact to habitat critical to the survival of the species.

Squatter Pigeon (southern) (*Geophaps scripta scripta*)

The total amount of habitat to be cleared is up to 1084.2 ha, or 6.6% of the total available habitat within the Project Area. Removal of up to 1084.2 ha is likely to represent a significant impact to habitat critical to the survival of the species. Criteria for identified as a significant impact is “adversely affect habitat critical to the survival of a species”

***Cycas megacarpa* (Endangered)**

Cycas megacarpa has a limited distribution and minimal area of occupancy. As a result, proposed impacts from the development may constitute a potential significant impact to this species with regard to the following criteria:

-Lead to a long-term decrease in the size of a population; and

-Reduce the area of occupancy of the species.

As mentioned previously, not all areas within the mapped potential habitat will be suitable for the species due to specific microhabitat requirements. It is proposed that additional field surveys be undertaken as the design progresses of the development footprint, and if additional individuals are located, the layout will be revised to avoid impacts. If avoidance cannot occur, individuals will be translocated or offset if required.

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. *

A detailed investigation into the risks and mitigation or avoidance measures was required within the MNES assessment. It is considered likely that the proposed development will have a potential significant impact on a protected matter under the EPBC Act and as such the proposed development is considered to be a controlled action.

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. *

Potential impacts of the proposed activities will be managed in a manner consistent with the management approaches for wind farm activities, and, where relevant, additional measures will be implemented.

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

The first element of impact mitigation will be determining turbine design and layout based on avoidance of vegetation and potential habitat mapped, as a result of the field investigation conducted. This will include minimising the impact to regulated vegetation and threatened species habitat. Noting that this process has already been undertaken as part of the design phase completed to date, and where possible further disturbance will be reduced as part of the future detailed design phase.

The second part of the impact mitigation effort will involve on the ground micro-siting at each location proposed for infrastructure. Such micro-siting will involve on the ground assessments of the potential infrastructure locations to determine if any ecological values, such as threatened species habitat that occur in that area will influence re-siting of infrastructure.

Loss of existing native vegetation:

Areas of remnant 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 will be developed implemented to ensure that clearing is undertaken in accordance with legislative standards and requirements.

Progressive restoration of access corridors will occur once construction has been completed, to reduce impact from 40 m down to a nominal 20 m.

Weed and pest control

A Biosecurity Plan will be developed and implemented for the proposed development. 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 national regulatory requirements.

Imported material able to transport and facilitate the spread of weed and seeds 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 will be produced in order to implement impact mitigation measures for the proposed development.

A Fauna management Plan will be produced in order to implement impact mitigation measures for the proposed development.

During vegetation clearing activities fauna management will be implemented that includes pre-clearing surveys, fauna spotter-catcher supervision and methods to reduce impacts as set out in a fauna management plan.

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 turbine 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 Bird and Bat Management Plan that considers the impacts that will occur to birds and mitigation measures to address these.

WTGs have been sited away 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 on site.

Impacts from turbine collision to bats and birds

A Bird and Bat Management Plan will be produced in order to implement impact mitigation measures for the proposed development.

Areas of bird habitat including known nests will be avoided in the design and then further avoided when micro siting occurs, where practicable.

The management and mitigation measures specific to ecological values identified as a result of this assessment are provided in the attachment Moonlight Range Ecological Impact Assessment Report (Att 7, s.7, pp.115).

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 the SIG 1.1 as part of Moonlight Range Ecological Impact Assessment Report (Att 7, s.8, pp.120). This assessment concluded that there was likely to be a significant residual impact to southern squatter pigeon (*Geophaps scripta scripta*).

The total amount of southern squatter pigeon habitat to be cleared is 1084.2 ha, or 6.6% of the total available habitat within the Project Area. Removal of 1084.2 ha is likely to represent a significant impact to habitat critical to the survival of the species. For more information on the significant impact assessment for southern squatter pigeon refer to Moonlight Range Ecological Impact Assessment Report (Att 7,Appendix D).

The habitat required to be offset for the southern squatter pigeon (Eucaluypt grassy woodlands and forests) will also have benefit and generally compensate for potential significant residual impact for other species with potential to occur including:

- Greater Glider (southern and central (*Petauroides Volans*);
- Koala (*Phascolarctos cinereus*).

The assessment concluded that there was potential for a significant residual impact to *Cycas megacarpa*. Additional field surveys will be undertaken of the development footprint as the design progresses, if additional individuals are located, the layout will be revised to avoid impacts where possible. If avoidance cannot occur, individuals will be translocated or offset, a process that will be documented in the Offset Management Strategy (OMS).

An OMS will be prepared, that specifically outlines the requirements to deliver and manage the offset, per the conditions of approvals for the proposed action, showing potential areas to offset the significant residual impacts to MNES (and MSES where relevant). 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.

There is a preference for offsets to be located within the Project Area, avoiding areas of Project infrastructure. Once an offset area has been selected, and adequate surveys undertaken to confirm species habitat and habitat quality, an Offsets Area Management Plan (OAMP) will be prepared for the implementation and ongoing management of the selected offset area/s.

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	No	Actitis hypoleucos
No	No	Apus pacificus
No	No	Calidris acuminata
No	No	Calidris ferruginea
No	No	Calidris melanotos
No	No	Charadrius leschenaultii
No	No	Crocodylus porosus
No	No	Cuculus optatus
No	No	Gallinago hardwickii
No	No	Hirundapus caudacutus
Yes	Yes	Monarcha melanopsis
No	No	Motacilla flava
Yes	Yes	Myiagra cyanoleuca
Yes	Yes	Rhipidura rufifrons
No	No	Symposiachrus trivirgatus

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, impacts 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 impacts are like 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 disturbance to MNES will be habitat loss and degradation, which arises from disturbance to native vegetation (predominantly by land clearing) that is regulated vegetation or habitat defined in the Moonlight Range Ecological Impact Assessment Report (Att 7, s.8, pp.120).

Impacts to two migratory species (Satin flycatcher, rufous fantail) include the following direct impacts:

Satin flycatcher (*Myiagra cyanoleuca*):

Up to 98.39 ha of direct disturbance

Given the nature of the infrastructure for the Project, it is not anticipated that the clearing of vegetation for the development of linear infrastructure for roads and hard stand locations is likely to constitute a substantial modification to the environment such that this species is isolated from access to important habitat within the Project Area. Clearing of satin flycatcher habitat is limited to 98.39 ha within the development footprint.

Rufous fantail (*Rhipidura rufifrons*):

Up to 31.14 ha of direct disturbance

The proposed development works will largely avoid areas of habitat for rufous fantail. The rufous fantail is a highly mobile species. The high level of disturbance (e.g., weeds and introduced predators) to the existing habitat within the Project Area means they are in all probability only utilised for movement by these species and not for breeding. There is a lack of preferred species in the tree canopy of eucalypt forests present, and an absence of wet sclerophyll forests for roosting and foraging habitat. General foraging and dispersal habitat exists as vine thickets/forest within the Project Area. Therefore, this proposed development is highly unlikely to destroy or isolate an area of important habitat for listed migratory bird species within the Project Area.

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. *

Refer to the Moonlight Range Ecological Impact Assessment Report (Att 7, s.8, pp.120) for further details on the impacts. A summary is provided below.

Satin flycatcher (*Myiagra cyanoleuca*)

The total amount of habitat to be cleared is up to 98.39 ha, or 4.1% of the total available habitat within the Project Area is unlikely to be considered a significant impact.

Rufous fantail (*Rhipidura rufifrons*)

The total amount of habitat to be cleared is up to 31.14 ha, or 2.7% of the total available habitat within the Project Area is unlikely to be considered a significant impact.

Black-faced monarch (*Monarcha melanopsis*)

The total amount of potential habitat to be cleared is up to 31.1 ha, or 3.5% of the total available potential habitat within the Project Area. Removal of 31.1 ha is unlikely to be considered a significant impact.

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. *

A detailed investigation into the risks and mitigation or avoidance measures was required within the MNES assessment. It is considered likely that the proposed development will have a potential significant impact on a protected matters under the EPBC Act and as such the proposed development is considered to be a controlled action.

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. *

Potential impacts of the proposed activities will be managed in a manner consistent with the management approaches for wind farm activities, and, where relevant, additional measures will be implemented.

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

The first element of impact mitigation will be determining turbine design and layout based on avoidance of vegetation and potential habitat mapped, as a result of the field investigation conducted. This will include minimising the impact to regulated vegetation and threatened species habitat. Noting that this process has already been undertaken as part of the design phase completed to date, and where possible further disturbance will be reduced as part of the future detailed design phase.

The second part of the impact mitigation effort will involve on the ground micro-siting at each location proposed for infrastructure. Such micro-siting will involve on the ground assessments of the potential infrastructure locations to determine if any ecological values, such as threatened species habitat that occur in that area will influence re-siting of infrastructure.

Loss of existing native vegetation:

Areas of remnant 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 will be developed implemented to ensure that clearing is undertaken in accordance with legislative standards and requirements.

Progressive restoration of access corridors will occur once construction has been completed, to reduce impact from 40 m down to a nominal 20 m.

Weed and pest control

A Biosecurity Plan will be developed and implemented for the proposed development. 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 national regulatory requirements.

Imported material able to transport weed 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 will be produced in order to implement impact mitigation measures for the proposed development.

A Fauna management Plan will be produced in order to implement impact mitigation measures for the proposed development.

During vegetation clearing activities fauna management will be implemented that includes pre-clearing surveys, fauna spotter-catcher supervision and methods to reduce impacts as set out in a fauna management plan.

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 turbine 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 Bird and Bat Management Plan that considers the impacts that will occur to birds and mitigation measures to address these.

WTGs have been sited away 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 on site.

Impacts from turbine collision to bats and birds

A Bird and Bat Management Plan will be produced in order to implement impact mitigation measures for the proposed development.

Areas of bird habitat including known nests will be avoided in the design and then further avoided when micro siting occurs, where practicable.

The management and mitigation measures specific to ecological values identified as a result of this assessment are provided in the attachment Moonlight Range Ecological Impact Assessment Report (Att 7, s.7, pp.115).

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

An assessment was undertaken for relevant listed species against the SIG 1.1 as part of Moonlight Range Ecological Impact Assessment Report (Att 7, s.8, pp.120). This assessment concluded that there was likely to be a significant residual impact to southern squatter pigeon (*Geophaps scripta scripta*).

The total amount of southern squatter pigeon habitat to be cleared is 1084.2 ha, or 6.6% of the total available habitat within the Project Area. Removal of 1084.2 ha is likely to represent a significant impact to habitat critical to the survival of the species. For more information on the significant impact assessment for southern squatter pigeon refer to Moonlight Range Ecological Impact Assessment Report (Att 7, Appendix D).

The habitat required to be offset for the southern squatter pigeon (Eucaluypt grassy woodlands and forests) will also have benefit and generally compensate for potential significant residual impact for other species with potential to occur including:

- Greater Glider (southern and central (*Petauroides Volans*);
- Koala (*Phascolarctos cinereus*).

The assessment concluded that there was potential for a significant residual impact to *Cycas megacarpa*. Additional field surveys will be undertaken of the development footprint as the design progresses, if additional individuals are located, the layout will be revised to avoid impacts where possible. If avoidance cannot occur, individuals will be translocated or offset, a process that will be documented in the Offset Management Strategy (OMS).

An OMS will be prepared, that specifically outlines the requirements to deliver and manage the offset, per the conditions of approvals for the proposed action, showing potential areas to offset the significant residual impacts to MNES (and MSES where relevant). 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.

There is a preference for offsets to be located within the Project Area, avoiding areas of Project infrastructure. Once an offset area has been selected, and adequate surveys undertaken to confirm species habitat and habitat quality, an Offsets Area Management Plan (OAMP) will be prepared for the implementation and ongoing management of the selected offset area/s.

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 development 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 proposed development is not within, nor does it impact on 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 development 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 development will not impact on a water resource in relation to large coal mining development or coal seam gas.

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 development is not located on Commonwealth land nor will it result in any direct or indirect impact 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 the vicinity of the Project Area.

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. *

1. Alternative proposed development location - The site identification process involves a combination of wind resource modelling, assessment of grid capacity, landholder engagement and environmental assessments in order to identify a potentially viable project. Following these assessments, no viable alternative location was identified in proximity to this Project.

2. Alternative proposed development layout options - The final layout has been designed to ensure minimal impact to potential habitat while presenting a viable wind farm project.

3. Do Nothing approach - The Project Area is currently used for seasonal farming and grazing. Although the 'do nothing' scenario would allow for continued use of the site for agricultural production, it will also lead to a missed opportunity to generate additional renewable energy and to reduce Australia's dependency on fossil fuels for energy generations and the consequential emissions of Greenhouse gases. Furthermore, the land use will not change as a result of the proposed development, with the land remaining compatible for agricultural and grazing purposes.

Further detail on the background to alternatives is provided in Section 2.2 of the Moonlight Range Ecology Assessment Report.

5. Lodgement

5.1 Attachments

1.2.7 Public consultation regarding the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 1-MRWF Communications and Community Engagement Plan.pdf Community and Stakeholder Engagement Plan	22/02/2023	No	High
#2.	Document	Att 2-Darumbal People - MRWF Letter of Support.pdf Darumbal People - MRWF Letter of Support	02/08/2023	Yes	High
#3.	Document	Att 3-Met Mast Exemption Approval - RRC.pdf Met Mast Exemption Approval	26/05/2023	No	High
#4.	Document	Att 4-Moonlight-Range-A4-Newsletter_NOV23.pdf Moonlight Range Wind Farm Newsletter	01/11/2023	No	High

1.3.2.16 (Person proposing to take the action) Nature of the trust arrangement in relation to the proposed action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 5-Trust Registration Documents (Moonlight Range Trust 3).pdf	31/03/2023	Yes	

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.	Document	Att 6-Greenleaf Renewables_Environmental Policy.pdf Greenleaf Renewables Environmental Policy	10/08/2022	No	High

3.1.1 Current condition of the project area's environment

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 7-MRWF_EAR_Impact Assessment Report_Final.pdf Ecological Impact Assessment	23/11/2023	No	High

3.3.1 Commonwealth heritage places overseas or other places that apply to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 8-Moonlight Range CHDDA_CONFIDENTIAL.pdf Cultural Heritage Due Diligence Assessment - CONFIDENTIAL	14/08/2023	Yes	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	Alex Preston
Representative's job title	Senior Consultant
Phone	0407138441
Email	alex.preston@erm.com
Address	Level 9, 260 Queen Street, Brisbane QLD 4000

☑ 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, **Alex Preston 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	666952049
Organisation name	MOONLIGHT RANGE WIND FARM 3 PTY LTD
Organisation address	3142 VIC
Representative's name	Chris Righetti
Representative's job title	Director

Phone	0439 809 609
Email	chris@greenleafrenewables.com.au
Address	PO Box 8180 Kooyong VIC 3144

☑ 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, **Chris Righetti of MOONLIGHT RANGE WIND FARM 3 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, **Chris Righetti of MOONLIGHT RANGE WIND FARM 3 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. *