Forbes Solar Farm

Application Number: **02806** Commencement Date: **06/03/2025** Status: **Locked**

1. About the project

1.1 Project details

1.1.1 Project title *

Forbes Solar Farm

1.1.2 Project industry type *

Energy Generation and Supply (renewable)

1.1.3 Project industry sub-type

Solar Farm

1.1.4 Estimated start date *

01/10/2026

1.1.4 Estimated end date *

30/09/2057

1.2 Proposed Action details

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

The Proposed Action is the construction, operation and decommissioning of a circa 141 megawatt (MW) Direct Current (DC) solar farm with up to four hours (480 MWh) of storage. Comprising solar photovoltaic modules, trackers, piles, inverters, transformers, access roads, cabling (above and below ground), onsite substation and associated operational facilities. The solar farm will connect into the national electricity network (132 kV substation) via an onsite substation.

The Project Area is located at 207 Hoopers Road, 11.6 km from the township of Forbes (Att 1 Site Map), within the Forbes Shire Council local government area (LGA) and approximately 378 km west of Sydney across three lots:

- Lot 94 DP750173
- Lot 95 DP750173
- Lot 29 DP750173

There are three terms associated with the Proposed Action include **Project Area**, **Disturbance Footprint** and **Avoidance Area** which are defined and expanded on below.

- The Project Area is approximately **270.25 ha in size.**
- The Disturbance Footprint is the area wholly within the Project Area that is directly or indirectly impacted by the Proposed Action. The Disturbance Footprint is currently indicative and is subject to the consideration of constraints identified through further detailed assessment and consultation. The total area of the indicative Disturbance Footprint is approximately **222.73 ha**
- The Avoidance Area refers to any area within the Project Area that does not intersect with the Disturbance Footprint and is not to be cleared or disturbed during the course of the Proposed Action. The total area of the indicative Avoidance Footprint is the difference between the Project Area and the Disturbance Footprint which is approximately **47.52 ha.**
- The area calculations of the Project Area, Disturbance Footprint and Avoidance Area differ very marginally from the areas calculated by the EPBC Act Business Portal itself under Section 2. This discrepancy is due to the difference between GIS software and is experienced on all referrals submitted by the referrer.

Cadastre surveys have not been undertaken to date, and the areas provided above are approximate in nature.

Project Lifecycle

Planned activities associated with the Project are listed below:

- **Stage 1 (Site establishment)** - this would include the establishment of site access and associated road treatments required to facilitate the traffic movements required for the construction phase with access facilited from Hoopers Road. Road upgrades, such as the Daroobalgie Road and Hoopers Road intersection, required throughout the transport route would also be undertaken during this time. During this phase light vehicle movements onto site may occur and early delineation of the site such as marking no go zones and compound area marking could be undertaken. Screen planting is likely to commence as early as possible ahead of construction.
- **Stage 2 (Construction & Commissioning)** - the construction phase would begin following the road upgrades and is expected to take approximately 12 - 18 months. Site establishment would take approximately 1.5 months, with the installation of the solar farm between 9 - 11 months. During peak construction there would be approximately 100 workers onsite. Commissioning will take approximately 3 - 4 months
- **Stage 3 (Operation)** - it is anticipated that the Project would operate for about 30 years. The solar farm would be operational 24/7 with energy production from the solar farm and battery charging and discharging occurring during the day and battery charging and discharging (potentially) at night. Battery discharge timing and duration would be determined by demands on the grid. Much of the site operations would be operated remotely, but emergency response, inspections and regular

maintained would be carried out. Approximately three full-time employees would work on the site during operation.

- **Stage 4 (Decommissioning)** - an upgrade of the BESS could be undertaken and consequently the project will either need to request an extension or lodge a new development application. Alternatively, the solar farm would be dismantled and repurposed where possible.
    - Batteries can be refurbished (overseas by the manufacturer) or recycled domestically for reprocessing. The shipping containers, cabling, transformers and switch gear are largely able to be reused or recycled. Some integrated plastic components may degrade over time to the point where they are not suitable for reuse, but these elements are minor. Gasses from the air conditioning and fire suppression systems can be captured and reused.
    - The objective of decommissioning is to maximise recycling options and return the disturbed area to a safe, non-polluting and stable state. The broader area would remain suitable for continued agricultural or other land use options.

An indicative infrastructure layout is provided in Att 2 Indicative Layout.

Project Impacts

The Project will have direct and indirect impacts. The construction and operational phases have the potential to impact biodiversity values at the site that cannot be avoided via impact minimisation and avoidance measures. These would occur through residual direct impacts such as habitat clearance and associated noise and disturbance, and ongoing existence of infrastructure which may create barriers to movement.

Direct impacts during the pre-construction and construction phases will results from activities including but not limited to vegetation clearing, and construction of internal access roads. Direct impacts include the following:

- Clearing for construction
    - reduction in community extent and integrity
    - clearing for construction: habitat loss, trampling, loss of individuals
- Habitat loss
    - including loss of hollow bearing trees and fallen timber
    - displacement of resident fauna
- Injury or mortality of fauna

Indirect impacts that contribute to key threatening processes from the proposal include soil and water contamination, invasion of key emerging weeds, creation of barriers to fauna movement, or the generation of excessive dust, light or noise:

- accidental clearing or impacts to vegetation can occur where clearing boundaries are not delineated, or where machinery or materials are stockpiled within driplines of trees.
- edge effects can occur where works and/or development occur in close proximity to vegetation, and can include shading, invasion by exotic species, and increase in edge ratios as a result of clearing patches.
- increased risk of starvation, exposure and loss of shade or shelter through vegetation removal and edge effects, potential exists for sheltering locations to be impacted.
- reduced viability of adjacent habitat due to vehicle traffic.
- transport of weeds and pathogens from the site to adjacent vegetation.
- cumulative loss of breeding habitat and competition for remaining resources.
- inhibition of nitrogen fixation and increased soil salinity as increased soil salinity has the potential to occur as a result of vegetation removal impacting groundwater, bringing salt to surface.
- increase in predatory and pest animal species populations.
- increased sediment load within waterways and soil movement have potential to occur as a result of construction works.

- increased risk of fire.

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? *

Key NSW Planning Policy and Framework

Planning Systems State Environmental Planning Policy 2021 ***Environmental Planning and Assessment Act 1979 (EP&A Act).:***

Clause 20 of Schedule 1 of the SEPP SRD states that the following is considered a SSD: Development for the purpose of electricity generating works or heat or their co-generation (using any energy source, including gas, coal, biofuel, distillate, waste, hydro, wave, solar or wind power) that: (a) has a capital investment value of more than $30 million, or (b) has a capital investment value of more than $10 million and is located in an environmentally sensitive area of State significance.' The Project would have a capital investment cost estimate of more than $30 million. Therefore, the Project is classified as "State Significant Development" under division 4.7 of the EP&A Act. The Minister for Planning and Public Spaces is the consent authority for SSD, and SSD applications are assessed by DPE (unless specific conditions occur e.g., where 50 or more people have objected to the application, the local council has objected to the application; and/or the applicant has disclosed a reportable political donation, whereby the Independent Planning Commission (IPC) would be the consent authority.

Commonwealth Approval under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act):

The Proposed Action has the potential to impact upon matters of National Environmental Significance (MNES) including threatened species. The MNES Significant Impact Guidelines are utilised to help determine if the Proposed Action is likely to have a significant impact upon MNES.

Under Part 3 of the EPBC Act, approval from the Australian Government Minster for the Environment is required for:

- An action that is likely to have a significant impact on MNES.
- An action taken by a person on Commonwealth land that is likely to have significant impact on the environment.
- An action taken by any person outside of Commonwealth land that is likely to have significant impact of the environment on Commonwealth land.
- An action taken by a Commonwealth agency anywhere in the world that is likely to have a significant impact on the environment.

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. *

Community /Stakeholder Engagement

Scoping Phase

At the start of 2024, engagement with the community and key stakeholders was initiated as part of the initial stages of a NSW SSD planning application, called a Scoping Report. The Scoping Phase involved a rigorous community and stakeholder engagement process gathering as much information from the community as possible. Information was gathered via phone calls, letter mailouts, email, an online survey, face-to-face meetings and a community information session.

EIS Phase

Community consultation for the EIS Phase recommenced in August 2024 where the PPA continued discussions with stakeholders including near neighbours, targeted stakeholders and the broader community. Other stakeholder engagement during this phase included:

- Community information drop-in sessions for neighbours, members of the broader community and identified stakeholders to learn more about the project, and provide their feedback.
- In person briefings / interviews
- Ongoing liaison via email, phone calls and meetings continued throughout the engagement period.

Engagement with Indigenous Stakeholders

Consultation with Aboriginal stakeholders was undertaken in accordance with Section 60 of the National Parks and Wildlife Amendment (Aboriginal Objects and Aboriginal Places) Regulation 2019 and following the process outlined in the Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (ACHCRP). The guide outlines a four-stage process of consultation as follows:

- Stage 1 – Notification of the project proposal and registration of interest.
- Stage 2 – Presentation of information about the proposed project.
- Stage 3 – Gathering information about cultural significance.
- Stage 4 – Review of draft cultural heritage assessment report.

Stage 1

Letters outlining the development proposal and the need to carry out an Aboriginal Cultural Heritage Assessment (ACHA) were sent to statutory authorities including Heritage NSW, as identified under the ACHCRP on 24 June 2024. An advertisement was placed in the local newspaper, the Forbes Advocate, on 24 June 2024 seeking registrations of interest from Aboriginal people and organisations (RAPS). A further series of letters was sent to other organisations identified by Heritage NSW in correspondence with NGH on 02 July

Stage 2

On 17 August 2024, an Assessment Methodology was sent to the registered RAPs. This document provided the necessary background, a summary of previous archaeological surveys, and the proposed heritage assessment methodology. The document invited comments regarding the proposed methodology and sought any information regarding known Aboriginal cultural significance values associated with the Project Area and/or any Aboriginal objects contained therein.

Stage 3

The *Assessment Methodology* outlined in Stage 2 included a written request to provide any information that may be relevant to the cultural heritage assessment of the Proposal Area. It was noted that sensitive information would be treated as confidential and not shared if requested. Cultural information pertaining to the area was received in response to the methodology and in instances that any such information was approved by the RAP for inclusion in the this report it was incorporated into the cultural context information of the ACHA. In any instances when information was asked to be kept confidential and not shared this

information has been held as confidential. The survey fieldwork was organised, and in line with the ACHCRP, the Proponent chose to invite three Aboriginal community representatives from two of the registered Aboriginal groups. The survey fieldwork was carried out over three days from the 9th to the 11th of October 2024.

Stage 4

The initial draft version of the ACHA for the proposal was forwarded to the RAPs inviting comment on the results, the significance assessment and the recommendations post completion of the testing program.

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.

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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	31124444622
Organisation name	NGH PTY LTD
Organisation address	2010 NSW

Referring party details

Name	Maddison Shaw
Job title	Senior Project Manager
Phone	0439964333
Email	maddison.s@nghconsulting.com.au
Address	Suite 9.01, Level 9, 28 Foveaux Street Surry Hills, New South Wales, 2010

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	649598676
Organisation name	FORBES SOLAR FARM PTY LTD
Organisation address	2095 NSW

Person proposing to take the action details

Name	Andrew Johnson
Job title	Development Manager
Phone	0422470841
Email	ajohnson@acepower.com.au
Address	Suite 402, 39 East Esplanade, Manly, NSW, 2095

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

Yes

Joint Venture Name	Business Address	ABN/ACN	Responsible Person	Email
ACE Genesis HoldCo Pty Ltd	Suite 402, 39 East Esplanade, Manly, NSW, 2095	671647466	Andrew Johnson	ajohnson@acepower.com.au
Osaka Gas Energy Australia Pty Ltd	Level 22, 108 St Georges Terrace, Perth, WA 6000	49093246381	Manus Higgins	m.higgins@ogaust.com.au

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. *

The Project is being developed jointly by ACE Genesis HoldCo and Osaka Gas Energy Australia under the Forbes Solar Farm Pty Ltd as trustee for the Forbes Genesis Project Trust (Att 3 Trust Deed).

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. *

To date, neither party under the join venture have been subject to any proceedings under Commonwealth, State, or Territory law concerning the protection of the environment or the conservation and sustainable use of natural resources. The company continues to implement industry-leading environmental standards, including comprehensive environmental impact assessments, habitat rehabilitation measures, and strict compliance with environmental laws, ensuring minimal impact on local ecosystems and communities.

Forbes Solar Farm Pty Ltd, as trustee for the Forbes Genesis Project Trust has been set up as a special purpose vehicle for the development of the Project and therefore has no history to date.

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

Forbes Solar Farm Pty Ltd does not have a corporate environmental policy or framework, however all works will be undertaken to the highest environmental standards. This is reflected in the proactive approach by ACE Power takes with referring all of its projects under the EPBC Act, as well as the "avoidance" design principles which are followed at every site where the project has been designed in such a way as to avoid impacts on MNES as much as possible.

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	649598676
Organisation name	FORBES SOLAR FARM PTY LTD
Organisation address	2095 NSW

Proposed designated proponent details

Name	Andrew Johnson
Job title	Development Manager
Phone	0422470841
Email	ajohnson@acepower.com.au
Address	Suite 402, 39 East Esplanade, Manly, NSW, 2095

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	31124444622
Organisation name	NGH PTY LTD
Organisation address	2010 NSW
Representative's name	Maddison Shaw
Representative's job title	Senior Project Manager
Phone	0439964333
Email	maddison.s@nghconsulting.com.au
Address	Suite 9.01, Level 9, 28 Foveaux Street Surry Hills, New South Wales, 2010

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	649598676
Organisation name	FORBES SOLAR FARM PTY LTD
Organisation address	2095 NSW
Representative's name	Andrew Johnson
Representative's job title	Development Manager
Phone	0422470841
Email	ajohnson@acepower.com.au
Address	Suite 402, 39 East Esplanade, Manly, NSW, 2095

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

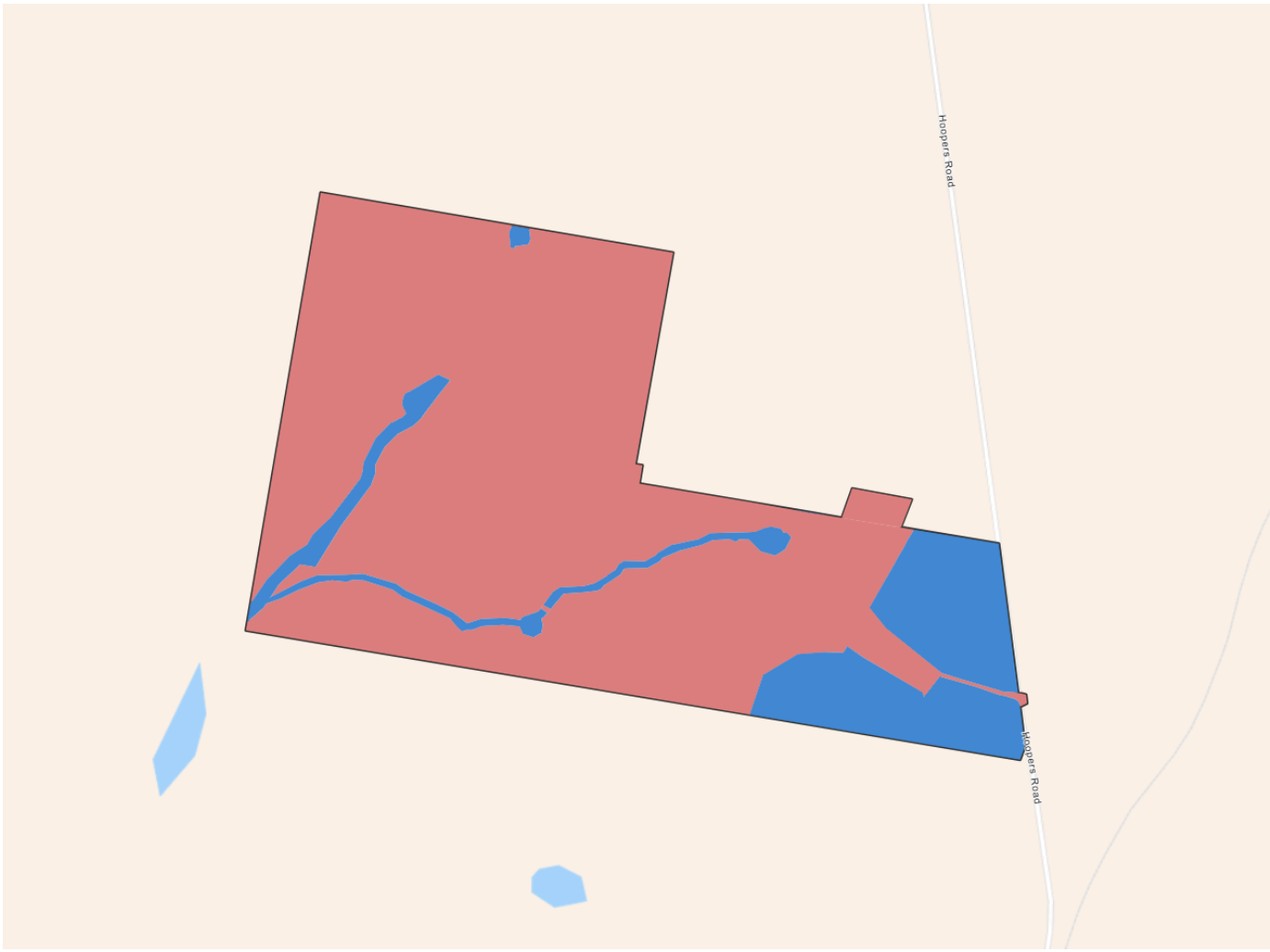
1.4 Payment details: Payment allocation

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: 270.35 Ha **Disturbance Footprint:** 236.83 Ha **Avoidance Area:** 47.44 Ha

2.2 Footprint details

2.2.1 What is the address of the proposed action? *

207 Hoopers Road, Forbes, NSW, 2870

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

New South Wales

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

No

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

The Project is located across Lots 94, 95 and 29 DP750173, all of which are freehold land. The proposed access intersection at Hoopers Road to the Project Area and at Daroobalgie Road form part of the existing road easement under the Forbes Shire Council.

The Project Area is zoned as Primary Production (RU1) as per the *Forbes Local Environmental Plan 2013.* The objectives of this Zone are:

- *To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.*
    - The Project Area has highly manageable soil and water resources. By improving soil nutrient balance, planting appropriate pasture as ground cover and actively improving soil health, it is expected that the commitment to maintain soil capability after decommissioning would be met.
- *To encourage diversity in primary industry enterprises and systems appropriate for the area.*
    - The Proposed Action would be highly reversible with no adverse impact on land capability or primary industry enterprises after decommissioning.
- *To minimise the fragmentation and alienation of resource lands.*
    - No fragmentation or alienation would result of the Proposed Action
- *To minimise the conflict between land uses within this zone and with adjoining zones.*
    - Adjoining zones are also zoned as RU1 and the Land Use Conflict Risk Assessment demonstrates a low impact on adjacent land use activities
- *To provide opportunities for intensive and extensive agriculture in appropriate locations consistent with the environmental capability of the land.*
    - There is opportunity to co-locate energy generation with ongoing sheep grazing enterprises.

3. Existing environment

3.1 Physical description

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

Current Use

- The Project Area is divided into several fenced paddocks that have been historically cleared for agricultural uses (i.e. cropping with non-native grasses) and is currently used for grazing sheep. This is consistent with the zoning of the land as RU1 (Primary Production). As a result of these practices, the Project Area is dominated by non-native vegetation (i.e. exotic grasslands).

Current Condition

- The Project Area is predominantly flat with no significant hills, karsts, caves, crevices, cliffs, rocks or rocky outcrops.
- The Project Area is not located on flood prone land.
- The Project Area sits within the Lachlan River catchment.
- There are no groundwater bores located on the Project Area.
- There is no mapped key fish habitat or aquatic groundwater dependant ecosystems.
- Several ephemeral streams are located within the Project Area which are predominately 1st and 2nd order streams. Streams were predominately dry during site visits with small remnant pools present following rain events. The streams were eroded and their extent differed from existing waterway mapping (refer to Att 4).
- Several man-made dams are also located to facilitate stock watering within the Project Area. Associated vegetation is limited to a mix of exotic forbs and rushes and the dams were noted as mostly dry during survey periods. Two patches of native, open woodland is present on the eastern portion of the Project Area which are subject to grazing practices
- Open woodland is also present along Hoopers Road.
- A total of 120 hollow bearing trees (HBT) were identified within the Project Area. A total of five HBTs, could not be avoided and they are expected to be removed (Att 5).

Native Vegetation and Connectivity

- The majority of the Project Area is dominated by non-native vegetation (Att 6). The site has a long history of agricultural use for sheep grazing and has been extensively cropped with non-native grasses and other crops in recent years, as evidenced by recent aerial imagery and verification from site visits.
- The extent of native vegetation within the Project Area is 16.8 ha across three vegetation zones. Vegetation zones commensurate with Plant Community Types include:
    - PCT 76 Western Grey Box tall grassy woodland on alluvial loam and clay soils in the NSW South Western Slopes and Riverina Bioregions - 10.82 ha of the Project Area
    - PCT 76 Western Grey Box tall grassy woodland on alluvial loam and clay soils in the NSW South Western Slopes and Riverina Bioregions (derived native grasslands) - 4.48 ha of the Project Area
    - PCT 277 Blakely's Red Gum - Yellow Box grassy tall woodland of the NSW South Western Slopes Bioregion - 1.50 ha of the Project Area.
- There is minimal habitat connectivity between the eastern and western portion of the Project Area.
- Roadside vegetation along Hoopers Road on the eastern boundary of the Project Area provides some connectivity through continuous canopy cover.
- Groundcover along ephemeral creek lines provide some connectivity towards canopy outside the Project Area.

Major events impacting current condition

- There is no evidence that the Project Areas has suffered recent effects from bushfire, flood or other major events.

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

The Project Area is located within the Central West Region of NSW, in the Forbes Shire Council LGA and is zoned Primary Production (RU1) under the Forbes Local Environmental Plan 2013. The Project Area sits outside of the Central-West Orana Renewable Energy Zone (REZ) and is not part of any other identified REZ.

The Central West region of New South Wales is comprised of eleven LGAs spanning across 63,000 sq km. The economy in the Central West region is varied, with agriculture, mining, and tourism being key contributors to the economic output and employment market of the area. The Central West possesses significant mineral deposits of coal, gold, copper and high-grade nickel, cobalt and lithium, along with a strong agribusiness and food manufacturing services industry.

Agriculture is the predominant land use in the Central West, with 71% of the land being grazed and 17% of the land being cropped in broad acres (Regional Profile - Local Land Services, n.d.). The area is characterised by productive cropping systems supported by even winter and summer rainfall. The industry remains highly dependent on wheat, representing 72% of total cereal production.

Additionally, the region is seeing growth in horticulture, including fruit production, and an expanding viticulture sector. Livestock farming also plays a significant role, complemented by substantial cattle farming and other commercial livestock.

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

Areas of Outstanding Biodiversity Value

Areas of outstanding biodiversity value are special areas with irreplaceable biodiversity values that are important to the whole of New South Wales, Australia or globally. No areas of outstanding biodiversity value occur within the Project Area.

Wetlands

All predicted wetlands of international importance are located over 500 km away from the Project Area. The nearest wetland is Lake Forbes (i.e. approximately 6 km south) and Gum Swamp Wildlife Refuge (i.e. approximately 10 km southwest).

Geological Features

There are no caves, karsts, or cliffs, rocks or other geological features of significance within the Project Area.

Matter of National Environmental Significance

An EPBC Act Protected Matters Report was generated on 20/12/2024 to identify Matters of National Environmental Significance (MNES) that have the potential to occur within 10 km of the Project Area. Those relevant to this referral include:

- Four Wetlands of International Importance (Ramsar)
    - The closest Ramsar Wetland of International Importance is the Hattah-kulkyne lakes (i.e. approximately 500 – 600 km downstream with no apparent connectivity between them and the Project Area)
- Four Threatened Ecological Communities including:
    - Grey Box (*Eucalytpus macrocarpa*) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia, Endangered under the EPBC Act.
    - Poplar Box Grassy Woodland on Alluvial Plains, Endangered under the EPBC Act.
    - Weeping Myall Woodlands, Endangered under the EPBC Act.
    - White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland, Critically Endangered under the EPBC Act.
- 41 Threatened species of which two were considered likely to utilise habitat found within the Disturbance Footprint
    - Brown Treecreeper (eastern subspecies) (*Climacteris picumnus victoriae*) listed as Vulnerable under the EPBC Act
    - Superb Parrot (*Polytelis swinsonii*) listed as Vulnerable under the EPBC Act. This is the only species that was observed on site
- Brown Treecreeper was assessed as unlikely to be impacted due to the absence of suitable habitat features to be impacted, lack of detection on site and limited scale of proposed impacts.
- Nine Migratory species were identified with the potential to occur however none of these species are considered likely to utilise habitat found within the Disturbance Footprint.

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

The Project Area is located in slightly undulating land, overall elevation increases from west to east.

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.

The Project Area falls entirely within the NSW South Western Slopes IBRA Bioregion extending from Albury to Dunedoo and across the Calarie Plains Mitchell Landscapes.

Plant Community Type (PCT)

Low and poor condition areas within the Project Area have been highly modified and subject to clearing and grazing regimes, resulting in the presence of the groundcover stratum only, often with an absence of trees and tall shrubs. As key indicator species in the upper stratum are required for classifying the PCT, notes were taken in the field of adjoining tree species, especially those with similar landscape attributes, to assist in PCT assignment. Notwithstanding these limitations, two PCTs were identified with the Project Area Subject Land, PCT 76 and PCT 277. Both PCTs are present as woodlands, and PCT 76 is also present as derived native grassland. (Refer to Att 7).

- **PCT 76** is known to be associated with the EPBC Act listed Endangered Ecological Community (EEC) known as Grey Box (*Eucalyptus microcarpa*) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia.
    - Two vegetation zones of PCT 76 occur within the Project Area and were assessed against the listing criteria as per the listing advice (DEWHA, 2010) and the guideline to identify the community (DSEWPC, 2010). The analysis concluded that these vegetation zones **do not conform** to the EPBC Act listed TEC due to perennial native grasses cover being less than 10% and/or the non-grass weed ground cover being >30%.
- **PCT 277** is known to be associated with the EPBC Act listed CEEC known as White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland.
    - The approved conservation advice for the EPBC Act listed Box Gum Woodland (DCCEEW, 2023) indicates that the NSW South Western Slopes is part of the distribution range of the community. The ecological community can occur in various states (e.g., low modification, derived grasslands, canopy only), but sites without a predominantly native ground cover are not part of the EPBC Act listed TEC.
    - The patch of PCT 277 within the Project Area **does not meet** the EPBC Act listed TEC because the vegetation zone does not meet all key diagnostic characteristics.

Hollow-bearing Trees (HBT)

A total of 120 HBT were recorded within the Project Area, of which five are proposed to be impacted by the development (Att 5). These five trees are part of a broader group of up to 20 scattered trees that will be removed. Of the 20 trees to be impacted across all zones, four are either dead stags, non-native species, or widely cultivated natives. Most observed hollows were small to medium in size, with a single large hollow recorded in a dead stag. The base of these trees generally supported exotic-dominated groundcover or bare soil, as they are frequently used by livestock for shade. The most likely PCT associated with these trees is PCT 76. Threatened species habitat values are considered consistent with those returned by the BAM Calculator for PCT 76.

Flora Surveys (Att 8)

- September 2024 - five threatened plants were surveyed, namely:
    - Mossgiel Daisy (*Brachyscome papilosa*)
    - Pine Donkey Orchid (*Diuris tricolor*)
    - Sandhill Spider Orchid (*Caladenia arenaria*)
    - Slender Darling-pea (*Swainsona murrayana*)
    - Small Purple-pea (*Swainsona recta*)
- October 2024 - three threatened plants, namely:
    - Mossgiel Daisy (*Brachyscome papilosa*)
    - Pine Donkey Orchid (*Diuris tricolor*)
    - Small Purple-pea (*Swainsona recta*)
- November 2024 - four threatened plants were surveyed, namely:

- Spear Grass (*Austrostipa wakoolica*)
- Silky Swainson-pea (*Swainsona sericea*)
- Spike-rush (*Eleocharis obicis*)
- Spiny Peppercress (*Lepidium aschersonii*)

Fauna Surveys

Searches for threatened fauna species records were undertaken using BioNet (NSW Government, 2024) and the Commonwealth Protected Matters Search Tool (PMST) (DCCEEW, 2024) within a 10 km locality surrounding the Project Area.

A habitat constraints assessment was undertaken to identify habitat features which may provide potential habitat for any threatened fauna species. Habitat features such as hollow-bearing trees, fallen logs, waterways /dams and nest trees were recorded to indicate the potential presence of specific threatened fauna.

Four surveys were undertaken for threatened fauna (Att 11).

- August 2024: diurnal and nocturnal field surveys:
  - Diurnal surveys for habitat assessment for frogs at four dams within the Disturbance Footprint.
  - Nocturnal birds with call playback for Barking Owl (*Ninox connivens*), Bush Stone-curlew (*Burhinus grallarius*) and Masked Owl (*Tyto novaehollandiae*).
  - Nocturnal aural-visual surveys for Sloane's Toadlet (*Crinia sloanei*).
  - Nocturnal mammal surveys with spotlighting for Koala (*Phascolarctos cinereus*) and Squirrel Glider (*Petaurus norfolcensis*).
- September 2024: diurnal bird and Koala surveys:
  - Direct bird observations with binoculars at suitable habitat for Glossy Black-cockatoo (*Calyptorhynchos lathami*), Little Eagle (*Hieraaetus morphnoides*), Pink Cockatoo (*Lophochroa leadbeaeri*), Square-tailed Kite (*Lophoictinia isura*), Superb Parrot (*Polytelis swainsonii*), and White-belled Sea-eagle (*Haliaeetus leucogaster*).
  - Koala (*Phascolarctos cinereus*) surveys included standard SATs as per the BAM guideline for Koala (DPE, 2022) and surveys at each potential Koala use tree within the Project Area.
- November 2024: diurnal search for Grey-headed Flying-fox (*Pteropus poliocephalus*) in woodland areas in the eastern part of the Project Area.
- December 2024: eight ANABAT recorders were set up at selected dams to record microchiropteran bats (i.e., microbat) echolocation calls for four nights. Bat calls were submitted for analysis to a specialist bat call analyst.

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

Native Vegetation within the Project Area and surrounds

Native vegetation extent refers to areas of vegetation assessed under the NSW Biodiversity Assessment Method (BAM). The majority of the Project Area, as previously mentioned is dominated by non-native vegetation (Refer to Att 6). The site has a long history of agricultural use for sheep grazing and has been extensively cropped with non-native grasses and other crops in recent years, as evidenced by recent aerial imagery and verification from site visits.

Native vegetation was considered within the Project Area and the surrounds (i.e. with a 1,500 m radius). Vegetation was determined through:

- Vegetation stratification and field survey in the Project Area
- NSW State Vegetation Mapping for the area surrounding the Project Area.

Native vegetation in the Project Area amounts to approximately 17 ha.

Non-Native Vegetation

Non-native vegetation areas in the Project Area include exotic grasslands, cleared land and man-made farm dams. Exotic grassland is land dominated by exotic species and areas primarily used for cropping and grazing. Cleared land consisted of access roads and bare ground. Exotic grassland is land confirmed to be Category 1 – Exempt Land based on a land category assessment (LCA). Cleared areas and exotic grassland (i.e., Category 1 land) provide very little in terms of native fauna habitat. These areas provide suitable foraging habitat for raptors, parrots, cockatoos and macropods, and introduced species such as cats, foxes and rabbits. The majority of the Project Area has been classified as Category 1 land.

Soil Conditions

The underlying geology of the Project Area includes Ordovician and Silurian sediments and minor volcanics. No mapped acid sulfate soil areas or records were identified 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.

No Commonwealth Heritage places overlay the Project Area.

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

The Project Area is located within a broader area identified as part of the Wiradjuri language group. This is an assemblage of many small clans and bands speaking several similar dialects.

AHIMS

An extensive search of the AHIMS database was undertaken over an area of approximately 400 km2 centred on the Project Area in July 2024. There were 48 Aboriginal sites, and no declared Aboriginal Places recorded within the search area. There are no AHIMS sites recorded within the Project Area and the nearest previously registered AHIMS site is approximately 920 m to the south of the Project Area.

Other Searches

Other heritage register searches were undertaken to identify any items or places with a focus on the Project Site and surrounding landscape. The following resources were used as part of this assessment:

- The NSW State Heritage Inventory (SHI), this search includes items on the State Heritage Register and items listed by state agencies and local Government, to identify any items currently listed within or adjacent to the Project Area. The results of the NSW SHI database search indicated the following:
    - There are no Aboriginal Places recorded in the Forbes Shire LGA.
    - There are four previously recorded heritage sites listed under the *NSW Heritage Act* within the Forbes Shire LGA. None of the sites are located within or adjacent to the Project Area.
    - There are 161 previously recorded heritage sites listed by the Local and State Agencies within the Forbes Shire LGA. None are located within or adjacent to the Project Area.
- The Australian Heritage Database includes items on the National and Commonwealth Heritage Lists, to identify any items that are currently listed within or adjacent to the Project Area.
    - There are 27 heritage sites located within the Forbes Shire LGA. None of these sites are located within or in proximity to the Project Area.

No other known previously recorded heritage sites are located within or adjacent to the Project Area.

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 NSW South Western Slopes Bioregion is an extensive area of approximately 8,681,126 ha extending from Albury in its southern most extent up north to Dunedoo. The Murray, Murrumbidgee, Lachlan and Macquarie River catchments flow across the bioregion. Tenn separate catchment areas were defined covering, and contributing to the Project Area.

The Project Area contains several man-made dams and several first and second order ephemeral streams which would only contain flowing water during and shortly after rainfall events (Att 4). The existing ephemeral creek lines will be retained within the Development Footprint. Therefore, no prescribed biodiversity impact will occur to habitat connectivity.

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	No	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.

—

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. *

No World Heritage Areas have been identified in the Project Area or within 10 km of the Project.

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. *

No National Heritage Places are present in the Project Area nor within 10 km of the Project.

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
Yes		Banrock Station Wetland Complex
Yes		Hattah-Kulkyne Lakes
Yes		Riverland
Yes		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 located within 10 km of 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	Common name
No	No	Androcalva procumbens	
No	No	Anthochaera phrygia	Regent Honeyeater
No	No	Aphelocephala leucopsis	Southern Whiteface
No	No	Aprasia parapulchella	Pink-tailed Worm-lizard, Pink-tailed Legless Lizard
No	No	Austrostipa metatoris	
No	No	Austrostipa wakoolica	
No	No	Botaurus poiciloptilus	Australasian Bittern
No	No	Calidris acuminata	Sharp-tailed Sandpiper
No	No	Calidris ferruginea	Curlew Sandpiper
No	No	Calyptorhynchus lathami lathami	South-eastern Glossy Black-Cockatoo
No	No	Climacteris picumnus victoriae	Brown Treecreeper (south-eastern)
No	No	Crinia sloanei	Sloane's Froglet
No	No	Dasyurus maculatus maculatus (SE mainland population)	Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population)
No	No	Falco hypoleucos	Grey Falcon
No	No	Gallinago hardwickii	Latham's Snipe, Japanese Snipe
No	No	Grantiella picta	Painted Honeyeater
No	No	Hirundapus caudacutus	White-throated Needletail
No	No	Lathamus discolor	Swift Parrot
No	No	Leipoa ocellata	Malleefowl
No	No	Lepidium aschersonii	Spiny Peppercress
No	No	Lepidium monoplocoides	Winged Pepper-cress

Direct impact	Indirect impact	Species	Common name
No	No	Lophochroa leadbeateri leadbeateri	Major Mitchell's Cockatoo (eastern), Eastern Major Mitchell's Cockatoo
No	No	Maccullochella peelii	Murray Cod
No	No	Macquaria australasica	Macquarie Perch
No	No	Melanodryas cucullata cucullata	South-eastern Hooded Robin, Hooded Robin (south-eastern)
No	No	Neophema chrysostoma	Blue-winged Parrot
No	No	Nyctophilus corbeni	Corben's Long-eared Bat, South-eastern Long-eared Bat
No	No	Pedionomus torquatus	Plains-wanderer
No	No	Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)	Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory)
Yes	Yes	Polytelis swainsonii	Superb Parrot
No	No	Pteropus poliocephalus	Grey-headed Flying-fox
No	No	Rostratula australis	Australian Painted Snipe
No	No	Stagonopleura guttata	Diamond Firetail
No	No	Swainsona murrayana	Slender Darling-pea, Slender Swainson, Murray Swainson-pea
No	No	Thesium australe	Austral Toadflax, Toadflax
No	No	Vincetoxicum forsteri	

Ecological communities

Direct impact	Indirect impact	Ecological community
No	No	Grey Box (Eucalyptus microcarpa) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia
No	No	Poplar Box Grassy Woodland on Alluvial Plains
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. *

Survey effort and findings

A total of four site visits were undertaken for threatened fauna. In September of 2024, diurnal bird and surveys were undertaken and only Superb Parrot (*Polytelis swainsonii*), listed as Vulnerable under the EPBC Act was present.

- Superb Parrots were observed in the eastern portion of the Project Area and once in the south-western corner of the Project Area.
- Twelve individuals were recorded foraging in the Project Area and up to twenty individuals were seen flying over the Project Area at different times.
- One individual was observed foraging on exotic grasslands adjacent to the access track within the Project Area.
- A breeding pair was observed flying over and off the Project Area and outside of the Disturbance Footprint.
- No individuals were recorded entering or exiting hollows in hollow-bearing trees within the Project Area.

Impacts to native vegetation

Approximately 0.06 ha of Superb Parrot (*Polytelis swainsonii*) breeding habitat will be directly impacted within the Disturbance Footprint. No breeding individuals were recorded within this area (Att 12 and 13). While the identified breeding habitat does not contain HBT, it falls within the buffer area defined under the BAM species polygon and is therefore considered breeding habitat for offsetting purposes. Importantly, all HBT located in proximity to recorded individuals have been avoided by the Proposed Action. Five HBT within the Disturbance Footprint will be removed as part of the proposed works; however, all of these trees were assessed during targeted surveys and are not considered to support breeding by the Superb Parrot.

In addition to the 0.06 ha of breeding habitat, approximately 2.3 ha of native foraging habitat will be impacted, comprising 0.22 ha of woodland and 2.08 ha of derived native grassland. The derived native grassland is in relatively low condition, with a Vegetation Integrity (VI) score of 25.8. This 2.3 ha is considered sub optimal foraging habitat and any impacts are unlikely to have a significant impact on the species.

Impacts to non- native vegetation

Although it is known that the Superb Parrot forages in agricultural lands and non-native grounds (e.g., exotic street trees), these food resources are not considered preferred habitat nor are they part of critical habitat for the species (DAWE, 2021). None of the known exotic grass species known to be included in the Superb Parrot diet occurs within the Project Area or surrounds. It is likely that the bird forages on exotic grassland opportunistically, but that these foraging resources would not represent primary food resources for this threatened bird.

Impacts on habitat connectivity

There is limited habitat connectivity between the Project Area and the broader landscape, it is restricted to scattered trees, remnant woodlands and creek lines. Up to 0.22 ha of remnant woodland in the eastern part of the site, which is part of a much larger patch would be impacted by the Proposed Action.

Vehicle strikes

Superb Parrots were observed flying over and feeding on exotic grasslands near the existing access road off Hoopers Road. Given that vehicle collision is a known threat to Superb Parrots (DAWE, 2021), safeguards and mitigation measures such as vehicle speed limits will be implemented to avoid triggering vehicle strike prescribed impact.

An assessment of significance (AoS) was undertaken for this species which concluded that **no significant impacts are likely** to occur as result of the Proposed Action.

*__PLEASE NOTE__ Att 10 and Att 11 contain sensitive information relating to specific locations of detected threatened species and can be considered as part of the final submission, however, is not to be published for public view.

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

No

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

One Assessment of Significance (AoS) was undertaken for EPBC Act listed Matters of National Environmental Significance (MNES) . The AoS for Superb Parrot concluded that significant impacts on this EPBC Act listed threatened species is unlikely.

- The Superb Parrot is known to be associated with grassy woodlands, PCT 76 and PCT 277 both of which were identified within the Project Area. Additionally, scattered trees were recorded, some of which have hollows which could be utilised by the species (though no Superb Parrot was found using HBT during survey efforts.
- Up to twenty individuals were observed flying over the Project Area and twelve were observed foraging in trees and exotic grassland.

The action is unlikely to lead to a long-term decrease in the size of an important population of a species

Three key biodiversity areas (KBA) for the Superb Parrot are recognised in Australia, the Barmanh-Millewa KBA (Victoria), Murrumbidgee Red Gums KBA (on Murrumbidgee River west from Wagga Wagga) and the South-west Slopes of NSW KBA (extending from Wagga Wagga to Orange, NSW). The Project Area is located in the South-west Slopes of NSW key biodiversity area and all agricultural land with scattered large trees are considered potential habitat for Superb Parrot (DAWE, 2021). HBTs within the Subject Land have the potential to constitute breeding habitat for the species, and where surveys did not categorically show that the species was absent, breeding habitat has been determined as present. The extent of this breeding habitat to be impacted is 0.06 ha. In addition, 2.30 ha of potential native foraging habitat for the species will be impacted, of which the majority is in a low condition derived grassland state and would be considered sub optimal in comparison to available surrounding vegetation. The loss of five hollow-bearing trees, none of which supported detected Superb Parrots, and 2.30 ha of suboptimal foraging habitat is considered **unlikely** to result in a long-term decrease in the size of an important population of the Superb Parrot.

The action is unlikely to reduce the area of occupancy of an important population

The national recovery plan for Superb Parrot does not identify important populations (DAWE, 2021), it indicates that the species should be considered as one population when planning for any management interventions. The removal of up to five hollow bearing trees which are not used by Superb Parrot as breeding habitat will not affect breeding ecology of the species. Solar panels will be located on exotic grasslands, which provide substandard foraging resources for the species. Given that grassy woodlands will be retained within the Project Area and that additional remnant woodlands occur in the broader locality, foraging resources for the species will continue to occur in the broader landscape. Therefore, it is considered that the proposed action **will not reduce** the area of occupancy of an important population of the species.

The action is unlikely to fragment an existing important population into two or more populations

The proposed removal of up to five hollow bearing trees in an otherwise exotic grassland zone and **will not result** in fragmentation of a population of the species.

The action is unlikely to adversely affect habitat critical to the survival of a species

The national recovery plan for Superb Parrot (DAWE, 2021) indicates that habitat critical to the survival of the species is divided into their breeding habitat, foraging habitat, and habitat for long-term maintenance of the species. The proposed action will affect 0.06 ha of breeding habitat for the species, and 2.3 ha of foraging habitat for the species. While individuals were recorded in the vicinity, the affected breeding habitat does not contain hollow-bearing trees and the foraging habitat is considered to be of suboptimal quality. The five hollow bearing trees to be removed by the proposal were surveyed for breeding and no breeding was detected. Given the limited extent and condition of the impacted habitat, the proposal **is not expected** to result in a significant impact on the Superb Parrot or contribute to a long-term decline in the size of an important population.

The action will not disrupt the breeding cycle of an important population

The Disturbance Footprint will result in clearing of scattered trees and impacts on exotic grasslands. Up to five scattered trees are hollow bearing trees requiring removal, but surveys indicated that Superb Parrot do not use those trees. 0.06 ha of woodland has been retained as breeding habitat. While the identified breeding habitat does not contain hollow-bearing trees, it falls within the buffer area defined under the BAM species polygon and is therefore considered breeding habitat for offsetting purposes. Importantly, all hollow-bearing trees located in proximity to recorded individuals of the species have been avoided by the proposal. Therefore, it is considered **unlikely** that the proposed action will disrupt the breeding cycle of the Superb Parrot.

The action will not modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline

The Disturbance Footprint will result in clearing of scattered trees, up to five of which are hollow bearing trees, and impacts on native and exotic grasslands. Only 0.06 ha breeding habitat occurs within the Disturbance Footprint for the Superb Parrot. Additionally, 2.3 ha of sub optimal foraging habitat occurs. It is **considered unlikely** that the proposal will modify, destroy, remove or isolate or decrease the availability of habitat or the quality of habitat that would influence the species to decline.

The action will not result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat

A major threat to Superb Parrot is loss and degradation of habitat. Presence of invasive species such as Rabbits (*Oryctolagus cuniculus*) contribute to further degrade remnant habitat due to grazing preventing regeneration of nest trees. Rabbits are present in the Project Area.

Linear development (e.g., roads) have the potential to favour movement of fauna, including invasive species. It is not considered that the proposed activity would further facilitate use of access roads by invasive species such that they would impact on already substandard foraging resources for the Superb Parrot.

Introduce disease that may cause the species to decline

Superb Parrots are susceptible to psittacine beak and feather disease, a highly infectious viral disease among parrots. The disease can cause long-term immunological suppression, as well as feather and beak abnormalities. It can be spread by food sharing through the bird's crop, fresh or dried excrement and feather and skin particles.

The proposed solar farm does not include any actions that would translocate or introduce parrots into the Project Area. Hygiene protocols will be included in the Construction Environmental Management Plan to prevent the possibility of introducing contaminated Personal Protective Equipment (PPE), construction equipment or machinery. Therefore, it is **considered unlikely** that the proposed action would introduce disease that may cause the Superb Parrot to decline.

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

No

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

The Assessment of Significance that was completed for the Superb Parrot indicates that the proposed action is **unlikely to result in significant impacts on the species.**

Sufficient survey effort has contributed to this conclusion and no additional studies or investigation is required.

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. *

Impacts that cannot be avoided must be mitigated; presented below is a list of mitigation measures that will be used to address residual impacts.

Summary of mitigations for residual direct impacts:

- Offsets under the NSW Biodiversity Offsets Scheme.
- The displacement or injury of threatened fauna can be mitigated through restricting clearing of hollow bearing trees to the outside of the breeding season of target species and through conducting pre-clearance surveys.
- Unexpected finds procedure during clearing phase for habitat loss including removal of hollow bearing trees.
- Nest box installation to replace hollows lost in the Project Area.

Summary of mitigations for indirect impacts:

- Inadvertent impacts of adjacent habitat or vegetation can be mitigated through clear physical demarcation of the boundary between areas to be retained (e.g., No-Go-Zones) and areas slated for clearing, and through inducting all staff prior to construction
- Edge effects can be mitigated through control of weeds.
- Transport of weeds and pathogens can be mitigated by a basic soil and clearing separation system and implementation of a hygiene protocol for vehicles and equipment.
- Rubbish dumping during the construction phase can be mitigated through standard high quality construction practices including maintaining a clean site and depositing rubbish at suitable facilities.
- Mobilisation of sediments can be mitigated through application of standard erosion and sediment control practices.
- Fauna mortality from vehicle strikes can be mitigated through restricting vehicle speeds and confining vehicle movement to the Development Footprint, formed track and the daytime.

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

The requirement to settle EPBC offset obligations will be undertaken in accordance NSW offset rules and consistent with the endorsed NSW-Commonwealth Bilateral Agreement. That is, offset obligations for these entities can be met under the Biodiversity Offset Scheme (BOS).

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	No	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	Gallinago hardwickii	Latham's Snipe, Japanese Snipe
No	No	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? *

No

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

The proposed action is not likely to have a direct or indirect impact on any migratory species, as there are no records of migratory species within the Project Area.

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 controlling provision is not present in the Project Area.

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 controlling provision is not present in the Project 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 controlling provision is not present in the Project Area.

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 controlling provision is not present in the Project Area.

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 controlling provision is not present in the Project Area.

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. *

The controlling provision is not present in 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:

None

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)
- Threatened Species and Ecological Communities (S18)
- 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 location and scale of the Proposed Action has been influenced by:

- Land available from the involved landowner
- Constraints within the Project Area that have been identified and designed against to avoid significant impacts.
- The Proposed Action has been responsive to those identified constraint and the PPA has correspondingly scaled back the capacity of the Project to take into account setbacks for ephemeral waterways, woodland PCT's, setbacks for adjoining cropping land and permanent dams to ensure water supply for livestock as Agrivoltaics in the form of grazing sheep is intended to continue during the operational phase.
- Demand for new renewable electricity generation to meet generation targets
- Commercial investment and viability considerations
- Transmission grid capacity.

The proposed scale of the solar farm successfully responds to the constraints and opportunities inherent in these factors.

The design of the Project is the result of an iterative process and has been adapted progressively as information regarding site constraints, and the potential impacts and risks associated with the development of the Project have become available. Constraints related to cultural heritage, electricity network easements, visual impact and biodiversity values and agricultural values in particular have been considered in developing the proposed layout.

Based on biodiversity, heritage, Agricultural considerations and other studies carried out for the EIS, the proposed layout achieves the objective of efficient electricity production while avoiding and minimising environmental impacts. The Development site's evaluation in terms of the *Large-Scale Solar Energy Guideline for State Significant Development* (DPIE, 2018) is described in below.

The size of the solar farm and therefore the associated capacity has been reduced to facilitate avoidance of on-site constraints including:

- Strahler orders
- woodland PCTs
- cropping setbacks
- dam setbacks to facilitate continued stock watering.

5. Lodgement

5.1 Attachments

1.2.1 Overview of the proposed action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 1 Site Map.pdf Site Map	29/05/2025	No	High
#2.	Document	Att 2 Development Footprint.pdf Development Footprint	25/02/2025	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 3 Forbes Genesis Project Trust Deed.pdf	01/11/2023	Yes	

3.1.1 Current condition of the project area's environment

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 4 Strahler Orders.png Strahler Orders	03/03/2025	No	High
#2.	Document	Att 5 Hollow Bearing Trees.pdf Hollow bearing trees in the Project Site and Disturbance Footprint	03/03/2025	No	High
#3.	Document	Att 6 Native Vegetation.pdf Native vegetation extent mapping within 1500m of the Project Area	07/05/2025	No	High

3.2.1 Flora and fauna within the affected area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 14 Forbes Solar Farm BDAR Draft V2.0_NOT FOR PUBLIC RELEASE.pdf Forbes Solar Farm Biodiversity Development Assessment Report Draft V2.0	31/07/2025	Yes	High
#2.	Document	Att 5 Hollow Bearing Trees.pdf Hollow bearing trees in the Project Site and Disturbance Footprint	02/03/2025		High
#3.	Document	Att 6 Native Vegetation.pdf Native vegetation extent mapping within 1500m of the Project Area	06/05/2025	No	High
#4.	Document	Att 7 Plant Community Types.pdf Plant Community Types	03/03/2025	No	High
#5.	Document	Att 8 Flora survey effort.pdf Flora survey effort in the Project Area	30/05/2025	No	High
#6.	Document				

Att 9 Fauna survey effort.pdf Fauna survey effort across the Project Area	30/05/2025	No	High

3.4.1 Hydrology characteristics that apply to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 4 Strahler Orders.png Strahler Orders	02/03/2025		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 10 Superb Parrot Habitat_UNREDACTED.pdf Superb Parrot Habitat_UNREDACTED	25/07/2025	Yes	High
#2.	Document	Att 11 Superb Parrot Detections_UNREDACTED.pdf Superb Parrot Detections_UNREDACTED	25/07/2025	Yes	High
#3.	Document	Att 12 Superb Parrot habitat.pdf Generalised 1km Superb Parrot habitat	25/07/2025	No	High
#4.	Document	Att 13 Superb Parrot Detections.pdf Generalised 1km Superb Parrot detections	25/07/2025	No	High
#5.	Document	Att 14 Forbes Solar Farm BDAR Draft V2.0_NOT FOR PUBLIC RELEASE.pdf Forbes Solar Farm Biodiversity Development Assessment Report Draft V2.0	01/08/2025	Yes	High

5.2 Declarations

Completed Referring party's declaration

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

ABN/ACN	31124444622
Organisation name	NGH PTY LTD
Organisation address	2010 NSW
Representative's name	Maddison Shaw
Representative's job title	Senior Project Manager
Phone	0439964333
Email	maddison.s@nghconsulting.com.au
Address	Suite 9.01, Level 9, 28 Foveaux Street Surry Hills, New South Wales, 2010

☑ 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, **Maddison Shaw of NGH PTY LTD**, declare that to the best of my knowledge the information I have given on, or attached to this EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. *

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

Completed Person proposing to take the action's declaration

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

ABN/ACN	649598676
Organisation name	FORBES SOLAR FARM PTY LTD
Organisation address	2095 NSW
Representative's name	Andrew Johnson

Representative's job title	Development Manager
Phone	0422470841
Email	ajohnson@acepower.com.au
Address	Suite 402, 39 East Esplanade, Manly, NSW, 2095

☑ 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, **Andrew Johnson of FORBES SOLAR 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, **Andrew Johnson of FORBES SOLAR 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. *