Narrabri Solar Farm

Application Number: **03096** Commencement Date: **19/08/2025** Status: **Locked**

1. About the project

1.1 Project details

1.1.1 Project title *

Narrabri 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 *

01/02/2027

1.1.4 Estimated end date *

31/10/2058

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 photovoltaic (PV) solar facility with a capacity of approximately 140MW DC (discharge/connection capacity of 100MW AC) that would supply electricity to the national electricity market (NEM), and a BESS with an approximate capacity of 100MW with up to 4 hours (400MWh) of storage.

The Project Area is located at 479 Logans Lane, Narrabri, within the Narrabri Shire LGA, situated in the North West Slopes Region of NSW (see Att 1 Regional Context) and over 410 km north west of Sydney across five lots:

- Lot 102 DP754944
- Lot 495 DP754944
- Lot 7310 DP1135997

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 **314.2 ha.**
- 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 **212 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 **102.2 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 site preparation and earthworks:
    - Installation of the piles supporting the solar panels, which would be driven or screwed into the ground to a depth of 1.5 m – 2.5 m.
    - Construction of internal access tracks and access points and associated drainage.
    - Substation bench preparation.
    - Concrete or steel pile foundations for the inverter stations, substation and storage facilities.
    - Cable trenches up to 1,500 mm deep.
    - Establishment of temporary staff amenities and offices for construction.
    - Construction of perimeter security fencing and CCTV.

    - Topsoil under the footprint of the array area would remain in-situ during the construction of the solar farm. Topsoil salvaged from the construction of the access tracks and other works would be securely stored for use in site rehabilitation.
- **Stage 2 (Construction & Commissioning)** - this phase is expected to last approximately 18 months with a peak construction period of 12 months. The main construction activities would include:
    - Site establishment and preparation for construction - fencing, ground preparation, construction of the internal track system, upgrade of existing access points/intersections, preliminary civil works and drainage.
    - Installation of steel post and framing system for the solar panels.
    - Installation of underground cabling (trenching) and installation of inverter stations.
    - Installation of PV panels.
    - Construction of office building and control room.
    - Construction of the substation, switching yard and transmission connections to existing Transgrid HV overhead powerline.
    - Removal of temporary construction facilities and rehabilitation of disturbed areas.
    - Landscaping.
- **Stage 3 (Operation)** - it is anticipated that the Project would operate for approximately 30 years. Operation activities would include:
    - Routine visual inspections general maintenance and cleaning operations of the solar arrays as required.
    - Routine visual inspections general maintenance and cleaning operations of the substation as required.
    - Vegetation management, likely using sheep to control grass growth beneath the panels. Groundcover vegetation would be maintained over the site to minimise erosion, dust and weeds. Groundcover would be monitored and remediation (such as reseeding, soil protection or destocking) undertaken as required.
- Other activities would include:
    - Site security response (24 hr), if required.
    - Site operational response (24 hr), if required.
    - Replacement of equipment and infrastructure as required.
    - Maintenance of landscaping and screening plantings as required.
    - Pest, plant and animal control as required.
- **Stage 4 (Decommissioning)** - at the end of its operational life, the solar farm would be decommissioned. At this stage, the Project commits only to the objectives of this decommissioning plan which will describe how key project infrastructure will be removed and the methodology to return the site to a safe, stable and non-polluting state, capable of sustaining the pre solar farm agricultural land uses or other preferred land use.
    - The switching station is intended to remain. After construction, it will become the permanent asset of TransGrid. It will be the subject of a small subdivision to reflect TransGrid’s ownership of this asset and would not be decommissioned as part of this Project.
    - Certain other infrastructure may be retained by mutual agreement with the landowner at the time of decommissioning, as they may be of value to future onsite activities. This may include tracks, site fencing, vegetative buffers and ancillary buildings.
    - However, unless specifically requested by the landowner, all above ground infrastructure would be removed as part of decommissioning. In addition, all below ground cabling buried up to 500 mm below ground level would be removed.

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

Project Impacts

The Project will have direct and indirect impacts across a spectrum of area; those relevant to this referral include but are not limited to:

- Direct impact
    - loss of habitat
    - vehicle strikes
- Indirect impacts -
    - increased transport of weeds and pathogens from the site to adjacent vegetation
    - increased runoff from the site to adjacent vegetation
    - increased noise impacts
    - Increased dust impacts

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 DPHI (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

In August 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.

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.

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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.

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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	Tammy Vesely
Job title	Senior Project Manager
Phone	0452 151 752
Email	tammy.v@nghconsulting.com.au
Address	T3, Level 7, 348 Edward St, Brisbane City, 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	33649600064
Organisation name	NARRABRI SOLAR POWER 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 Hold Co 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 Narrabri Solar Power Pty Ltd as trustee for the Narrabri 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 joint 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.

Narrabri Solar Power Pty Ltd as trustee for the Narrabri 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. However the special purpose vehicle is part of ACE Power's Portfolio and all works will be undertaken to the highest environmental standards as is reflected in the proactive approach ACE Power takes with referring all of its projects under the EPBC Act.

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

Narrabri Solar Power 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	33649600064
Organisation name	NARRABRI SOLAR POWER 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	Tammy Vesely
Representative's job title	Senior Project Manager
Phone	0452 151 752
Email	tammy.v@nghconsulting.com.au
Address	T3, Level 7, 348 Edward St, Brisbane City, 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	33649600064
Organisation name	NARRABRI SOLAR POWER 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

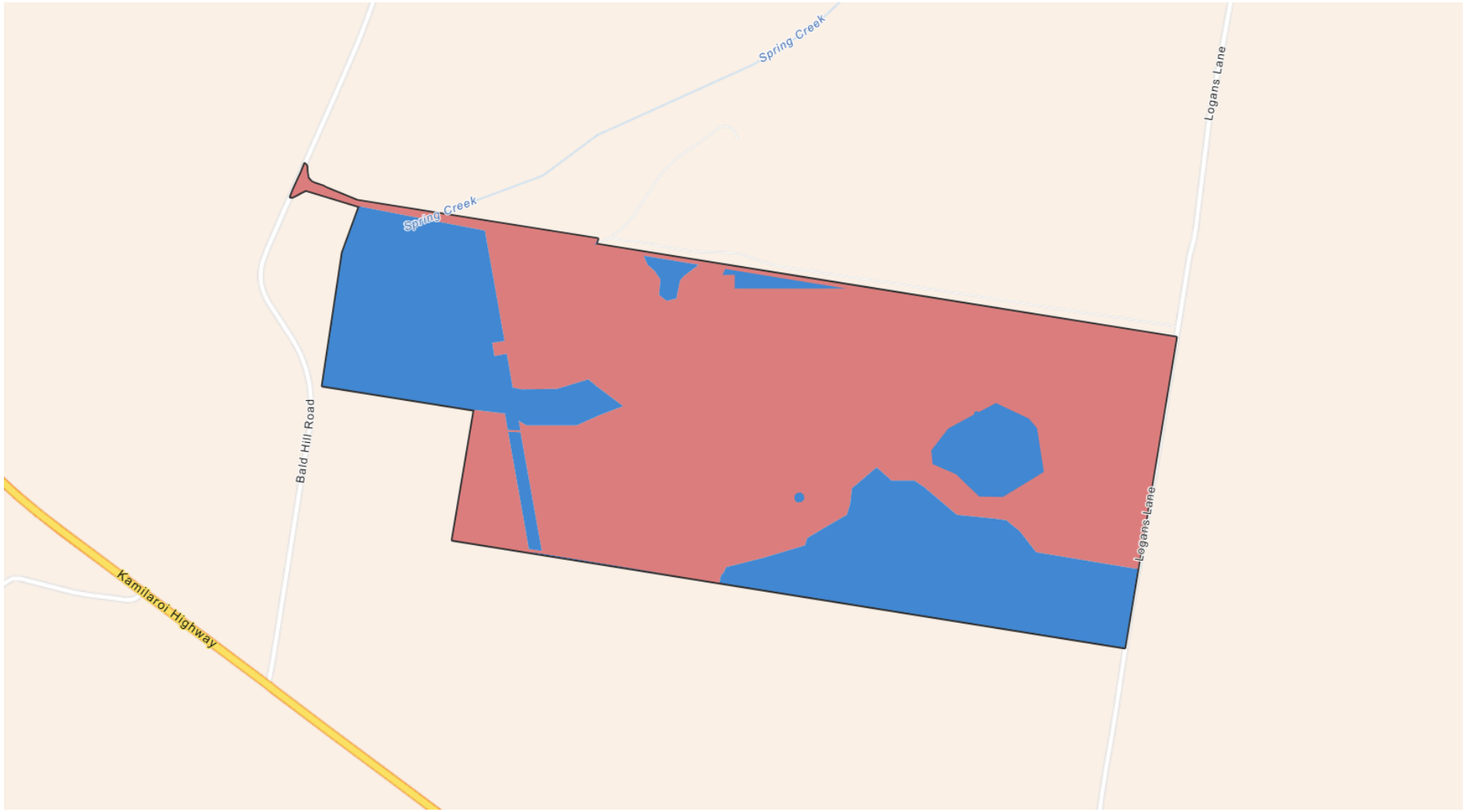
1.4 Payment details: Payment allocation

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: 314.51 Ha **Disturbance Footprint:** 214.52 Ha **Avoidance Area:** 102.75 Ha

2.2 Footprint details

2.2.1 What is the address of the proposed action? *

479 Logans Lane, Narrabri, NSW, 2390

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? *

Tenure

The Project is located across parts of the following lots, all of which are freehold land:

- Involved landowner and siting of the solar farm - Lot 102 DP754944
- Crown lands lot required for the access track - Lot 495 DP754944

The Project would utilise Crown Land and easements for access. Whilst access may be upgraded, no new infrastructure is proposed on the Crown Land and Easement. A license is being sought from Crown Lands to permit access via this lot and easement.

Refer to Att 4 Involved Lots

Zoning

The Project Area is zoned as Primary Production (RU1) as per the Narrabri Local Environmental Plan 2012.The objectives of this Zone are:

- To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.
- To encourage diversity in primary industry enterprises and systems appropriate for the area.
- To minimise the fragmentation and alienation of resource lands.
- To minimise conflict between land uses within this zone and land uses within adjoining zones.
- To allow for non-agricultural land uses that will not restrict the use of other land for agricultural purposes.

Pursuant to Section 2.36 of the State Environmental Planning Policy (Transport and Infrastructure) 2021 (TISEPP), electricity generating works are permitted with consent in a prescribed rural zone, including the RU1 zone. The TISEPP prevails over the LEP to the extent of any inconsistency and thus the developed is permissible with consent

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 zoned for primary production under the State Environmental Planning Policy and is currently used for grazing. Historical imagery from as far back as 1964 suggests that the land use for the Project Area has remained the same for the last 60 years. Prior to this date, it is likely that European land management practices cleared some of the native vegetation that would have been present. The presence of two dams in the Project Area suggest that some ground disturbing works happened in the past, although it is not known when.

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 zoned RU1 (Primary Production) and is predominantly surrounded by grazed agricultural land.

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 within the assessment area include biodiverse riparian lands, which are adjacent to, but not within, the proposed development footprint.

Wetlands
The hydrology of the site consists of a number of small, ephemeral streams (outside the proposed development footprint), which drain to the west into Black Gully and then into the Namoi River. The site also includes a number of wetland areas.

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
The proposed action has the potential to impact on one MNES specifically through potential impacts to the EPBC listed threatened species *Lepidium monoplocoides*.

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 generally flat with elevation ranging from 210 m to 220 m above sea level.

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 Brigalow Belt IBRA Bioregion, an eastern subhumid region of Australia. The climate varies from subhumid to hot and semi-arid. The Brigalow Belt South bioregion consists of a wide variety of landscapes derived from basalt and quartz soils.

Plant Community Type (PCT)

The following PCT were identified in the Project Area (Refer to Att 5 PCT):

- PCT 397 Poplar Box - White Cypress Pine shrub grass tall woodland of the Pilliga - Warialda region, Brigalow Belt South Bioregion
- PCT 78 River Red Gum riparian tall woodland / open forest wetland in the Nandewar Bioregion and Brigalow Belt South Bioregion
- PCT 88 Pilliga Box - White Cypress Pine - Buloke shrubby woodland in the Brigalow Belt South Bioregion
- PCT 53 Shallow freshwater wetland sedgeland in depressions on floodplains on inland alluvial plains and floodplains

PCT 53, 78, 88, 397 are not associated with any Threatened Ecological Community (TEC) listed under the EPBC Act within the BioNet Vegetation Classification database (NSW OEH 2018).

Surveys

Flora Surveys (Att 6 Survey Effort)

- January 2024 – two threatened plants were surveyed, namely:
  - Blue grass (*Dichanthium setosum*)
  - Cyperus *conicus*
- October 2024 - seven threatened plants were surveyed, namely:
  - Large-leafed *Monotaxis* (*Monotaxis* macrophylla)
  - Native Milkwort (*Polygala linariifolia*)
  - Mossgiel Daisy (*Brachyscome papilosa*)
  - Pine Donkey Orchid (*Diuris tricolor*)
  - Scant Pomaderris (*Pomaderris queenslandica*)
  - Spiny Peppercress (*Lepidium aschersonii*)
  - *Tylophora linearis*
  - Winged Peppercress (*Lepidium monoplocoides*)

Fauna Surveys (Att 6 Survey Effort)

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.

- September: diurnal field surveys
    - Bird transects and stag watches (Australian Bustard, Black-breasted Buzzard, Little Eagle, Grey-crowned Babbler, South-eastern Glossy Black-Cockatoo, Square-tailed Kite, Superb Parrot, White-bellied Sea Eagle)
- October: diurnal and nocturnal bird surveys, bat surveys,
    - Bird transects and stag watches (Australian Bustard, Black-breasted Buzzard, Little Eagle, Grey-crowned Babbler, South-eastern Glossy Black-Cockatoo, Square-tailed Kite, Superb Parrot, White-bellied Sea Eagle).
    - Bird transects and stag watches at suitable habitat for Australian Bustard (*Ardeotis australis*),Black-breasted Buzzard (*Hamirostra melanosternon*), Glossy Black-cockatoo (*Calyptorhynchos lathami*), Little Eagle (*Hieraaetus morphnoides*), Square-tailed Kite (*Lophoictinia isura*), Superb Parrot (*Polytelis swainsonii*), and White-belled Sea-eagle (*Haliaeetus leucogaster*).
    - Anabats deployed, 20 detector nights over two weeks, for detection of Eastern Cave Bat (*Vespadelus troughtoni*), Large-eared Pied Bat (*Chalinolobus dwyeri*). Bat calls were submitted for analysis to a specialist bat call analyst.
    - Nest boxes and camera traps deployed for Eastern Pygmy possum (*Cercartetus nanus*).
    - Roost searches for Grey-headed Flying-fox (*Pteropus poliocephalus*).
- January: nocturnal mammal surveys
    - Anabats deployed, 20 detector nights over two weeks, for detection of Eastern Cave Bat (*Vespadelus troughtoni*), Large-eared Pied Bat (*Chalinolobus dwyeri*).
    - Bat calls weresubmitted for analysis to a specialist bat call analyst.
    - Nest boxes and camera traps deployed for Eastern Pygmy possum.
    - Roost searches for Grey-headed Flying-fox (*Pteropus poliocephalus*).
    - Koala SAT surveys and spotlighting.
- February: nocturnal bird, mammal and reptile surveys
- Nocturnal birds with spotlighting and call playback for Barking Owl (*Ninox connivens*), Bush Stone-curlew (*Burhinus grallarius*), Masked Owl (Tyto novaehollandiae), Powerful Owl (*Ninoxstrenua*).
- Spotlighting and diurnal searches for Border Thick-tailed Gecko (*Uvidicolus sphyrurus*) and Grey Snake (*Hemiaspis damelii*).
- Spotlighting and trapping for Pale-headed Snake (*Hoplocephalus bitorquatus*).
- Spotlighting for Koala (*Phascolarctos cinereus*) and Squirrel Glider (*Petaurus norfolcensis*).

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

The total area of native vegetation within the Disturbance Footprint is 208.15 ha, with the total area of the solar array taking up 67.58 ha of this area (33%). (Refer to Att 7 Native Vegetation Extent).

The extent and condition of native vegetation cover was assessed within a 1500 m buffer around the Project Area (Refer to Att 8 BDAR, Section 2, Pages 5 - 6).

As indicated above the native vegetation was characterised into the following PCT (Refer to Att 5 PCT):

- PCT 397 Poplar Box - White Cypress Pine shrub grass tall woodland of the Pilliga - Warialda region, Brigalow Belt South Bioregion
- PCT 78 River Red Gum riparian tall woodland / open forest wetland in the Nandewar Bioregion and Brigalow Belt South Bioregion
- PCT 88 Pilliga Box - White Cypress Pine - Buloke shrubby woodland in the Brigalow Belt South Bioregion
- PCT 53 Shallow freshwater wetland sedgeland in depressions on floodplains on inland alluvial plains and floodplains

Neither PCT 53, 78, 88, 397 are associated with any TEC listed under the EPBC Act.

Soil Conditions
The Project Area is located within the Liverpool Plains and Pilliga Outwash IBRA subregions of the Brigalow Belt South Bioregion of NSW. The geology of the area is dominated by alluvial sands, silts and clays. Local soil conditions include primarily moderate to low fertility Sodosols associated with the sandier lithologies and higher fertility vertosols associated with the more clay dominated lithologies.

Lepidium monoplocoides habitat

Winged Peppercress (*Lepidium monoplocoides*) occurs on seasonally moist to waterlogged sites, on heavy fertile soils, with a mean annual rainfall of around 300-500 mm (OEH, 2019). Predominant vegetation is usually an open woodland dominated by *Allocasuarina luehmannii* (Bulloak) and/or eucalypts, particularly *Eucalyptus largiflorens* (Black Box) or *Eucalyptus populnea* (Poplar Box). The field layer of the surrounding woodland is dominated by tussock grasses.

The species is associated with wetland-grassland communities comprising *Eragrostis australasicus, Agrostis avenacea, Austrodanthonia duttoniana, Homopholis proluta, Myriophyllum crispatum, Utricularia dichotoma* and *Pycnosorus globosus*, on waterlogged grey-brown clay. Also recorded from a *Maireana pyramidata* shrubland.

Winged Peppercress flowers from late winter to spring, or August to October. The species is highly dependent on seasonal conditions, occurring in periodically flooded and waterlogged habitats and does not tolerate grazing disturbance (OEH, 2019). The number of plants at each site varies greatly with seasonal conditions, but sites tend to be small in area with local concentrations of the plant (OEH, 2019). *L. monoplocoides* has been recorded as uncommon to locally common with hundreds of plants at sites.

On site the *L. monoplocoides* habitat was associated with PCT 88 Pilliga Box - White Cypress Pine - Buloke as a derived grassland. This PCT is represented at the site by a derived native grassland dominated by a range of grass species, including *Chloris truncata, C. ventricosa, Eragrostis leptostachya, Sporobolus caroli* and *Enteropogon acicularis*. A diverse range of forbs is generally present, with various daisy species dominated at certain times. Common forb species include *Rhodanthe floribunda, Brachyscome lineariloba, Calocephalus citreus, Portulaca oleracea* and the endangered *Lepidium monoplocoides*. A sparse shrub layer dominated by low chenopods may be present and commonly includes *Sclerolaena tricuspis, Maireana coronata* and *Salsola australis*. Scattered individuals of the trees *Eucalyptus pilligaensis* across this community at the site.

The areas were *L. monoplocoides* was found present during targeted surveys are currently grazed by cattle. The species likely persists in the seedbank during dry periods and was found during periodic flooding in waterlogged habitat.

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 Kamilaroi 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 in June 2024. There were 75 Aboriginal sites, and no declared Aboriginal Places recorded within the search area. While no previously recorded Aboriginal sites or Aboriginal Places are located within the Project Area, a total of five registered AHIMS sites are located within 1.5 km 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 Narrabri Shire LGA or within the Project Area.
    - There are two previously recorded heritage sites listed under the NSW Heritage Act within the Narrabri Shire LGA. None of the sites are located within or adjacent to the Project Area.
    - There are 76 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 12 heritage sites located within the Narrabri 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 Project Area experiences low to moderate rainfall levels (i.e. mean annual = 649.4mm), with the hydrology of the area consisting of Spring Creek which is a fifth order Strahler stream that runs through the north-west corner of the Project Area. A second order Strahler stream along the southern side of the Project Area flows into Spring Creek, which drains to the west into the Namoi River (Refer Att 9 Surface Hydrology).

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.

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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. *

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
No	No	Banrock Station Wetland Complex
No	No	Riverland
No	No	The Coorong, and Lakes Alexandrina and Albert Wetland

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

No

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

There are no Ramsar Wetlands 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	Anomalopus mackayi	Five-clawed Worm-skink, Long-legged Worm-skink
No	No	Anthochaera phrygia	Regent Honeyeater
No	No	Aphelocephala leucopsis	Southern Whiteface
No	No	Botaurus poiciloptilus	Australasian Bittern
No	No	Cadellia pentastylis	Ooline
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	Chalinolobus dwyeri	Large-eared Pied Bat, Large Pied Bat
No	No	Climacteris picumnus victoriae	Brown Treecreeper (south-eastern)
No	No	Crinia sloanei	Sloane's Froglet
No	No	Dichanthium setosum	bluegrass
No	No	Falco hypoleucos	Grey Falcon

Direct impact	Indirect impact	Species	Common name
No	No	Gallinago hardwickii	Latham's Snipe, Japanese Snipe
No	No	Grantiella picta	Painted Honeyeater
No	No	Hemiaspis damelii	Grey Snake
No	No	Hirundapus caudacutus	White-throated Needletail
No	No	Lathamus discolor	Swift Parrot
No	No	Leipoa ocellata	Malleefowl
No	No	Lepidium aschersonii	Spiny Peppercress
Yes	Yes	Lepidium monoplocoides	Winged Pepper-cress
No	No	Lophochroa leadbeateri leadbeateri	Major Mitchell's Cockatoo (eastern), Eastern Major Mitchell's Cockatoo, Pink Cockatoo (eastern)
No	No	Maccullochella peelii	Murray Cod
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)
No	No	Polytelis swainsonii	Superb Parrot

Direct impact	Indirect impact	Species	Common name
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	Coolibah - Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions
No	No	Grey Box (Eucalyptus microcarpa) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia
No	No	Natural grasslands on basalt and fine-textured alluvial plains of northern New South Wales and southern Queensland
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. *

Lepidium monoplocoides habitat

- Winged Peppercress (*Lepidium monoplocoides*) occurs on seasonally moist to waterlogged sites, on heavy fertile soils, with a mean annual rainfall of around 300-500 mm (OEH, 2019). Predominant vegetation is usually an open woodland dominated by *Allocasuarina luehmannii* (Bulloak) and/or eucalypts, particularly *Eucalyptus largiflorens* (Black Box) or *Eucalyptus populnea* (Poplar Box). The field layer of the surrounding woodland is dominated by tussock grasses.
- The species is associated with wetland-grassland communities comprising *Eragrostis australasicus, Agrostis avenacea, Austrodanthonia duttoniana, Homopholis proluta, Myriophyllum crispatum, Utricularia dichotoma* and *Pycnosorus globosus*, on waterlogged grey-brown clay. Also recorded from a *Maireana pyramidata* shrubland.
- Winged Peppercress flowers from late winter to spring, or August to October. The species is highly dependent on seasonal conditions, occurring in periodically flooded and waterlogged habitats and does not tolerate grazing disturbance (OEH, 2019). The number of plants at each site varies greatly with seasonal conditions, but sites tend to be small in area with local concentrations of the plant (OEH, 2019). *L. monoplocoides* has been recorded as uncommon to locally common with hundreds of plants at sites.

Survey effort and findings

- A total effort of two people, over two days, across 16 hours traversed 100 m threatened flora transects across the Project Area in October 2024. Winged Peppercress (*Lepidium monoplocoides*), listed as Endangered under the EPBC Act, was the only threatened flora species present within the Project Area.
- Winged Peppercress were observed in the central and south-eastern portion of the Disturbance Footprint, within areas of PCT 88.
- *L. monoplocoides* habitat was associated with PCT 88 Pilliga Box - White Cypress Pine - Buloke as a derived grassland. This PCT is represented at the site by a derived native grassland dominated by a range of grass species, including *Chloris truncata, C. ventricosa, Eragrostis leptostachya, Sporobolus caroli* and *Enteropogon acicularis*. A diverse range of forbs is generally present, with various daisy species dominated at certain times. Common forb species include *Rhodanthe floribunda, Brachyscome lineariloba, Calocephalus citreus, Portulaca oleracea* and the endangered *Lepidium monoplocoides*. A sparse shrub layer dominated by low chenopods may be present and commonly includes *Sclerolaena tricuspis, Maireana coronata* and *Salsola australis*. Scattered individuals of the trees *Eucalyptus pilligaensis* across this community at the site.
- The areas where *L. monoplocoides* were present during targeted surveys are currently grazed by sheep.

Impacts to native vegetation

- The total area of native vegetation within the development footprint is 208.15 ha, with the total area of the solar array taking up 67.58 ha of this area (33%).
- The total area of the *L. monoplocoides* species polygon is 101.23 ha, with a total of 34.06 ha (34%) covered by the proposed solar array and associated infrastructure (Att 10 Lepidium Solar Overlay).
- There is also approximately 34 ha of *L. monoplocoides* habitat on the property, outside the proposed disturbance footprint. The application of the BAM C to the site, assumes complete removal of all *L. monoplocoides* habitat within the disturbance footprint. However, given the ecology

of the species it is proposed that a reduction in the area of impact for this species of 50% (50.62 ha).
- Outside of the seasonally wet periods the *L. monoplocoides* persists as seed within the soil seed bank.
- Impacts to immature and mature plants are restricted to the growing season, after seasonal flooding events. Germination following periods of inundation.

Impacts to non- native vegetation

- Areas dominated by exotic groundcover species within the Project Area are regularly grazed. Winged Peppercress does not tolerate grazing disturbance (OEH, 2019). Exotic areas of the Project Area are not considered preferred habitat nor are they part of critical habitat for the species. Especially if the areas are not seasonally moist to waterlogged.

Impacts on habitat connectivity

- There is limited habitat connectivity between the Project Area and the broader landscape, it is restricted to floodplain and alluvial plains and creek lines extending west of within and outside the Project Area. Up to 50.62 ha of suitable habitat in the south-eastern part of the site, which is part of a much larger patch would be impacted by the Proposed Action.
- 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.

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. *

Assessment of Significance for *Lepidium monoplocoides (*Winged Peppercress)

Winged Peppercress (*Leppidium* monoplocoides) is widespread in the semi-arid western plains regions of NSW. Previously recorded from Bourke, Cobar, Urana, Lake Cargelligo, Balranald, Wanganella and Deniliquin. Recorded more recently from the Hay Plain, south-eastern Riverina, and from near Pooncarie (OEH, 2019).

Occurs on seasonally moist to waterlogged sites, on heavy fertile soils, with a mean annual rainfall of around 300-500 mm. Predominant vegetation is usually an open woodland dominated by *Allocasuarina luehmannii* (Bulloak) and/or eucalypts, particularly *Eucalyptus largiflorens* (Black Box) or *Eucalyptus populnea* (Poplar Box). The field layer of the surrounding woodland is dominated by tussock grasses.

Recorded in a wetland-grassland community comprising *Eragrostis australasicus, Agrostis avenacea, Austrodanthonia duttoniana, Homopholis proluta, Myriophyllum crispatum, Utricularia dichotoma* and *Pycnosorus globosus*, on waterlogged grey-brown clay. *Lepidium monoplocoides* flowers from late winter to spring, or August to October (OEH, 2019).

The species is highly dependent on seasonal conditions. Occurs in periodically flooded and waterlogged habitats and does not tolerate grazing disturbance. The number of plants at each site varies greatly with seasonal conditions, but sites tend to be small in area with local concentrations of the plant. Has been recorded as uncommon to locally common with hundreds of plants at sites.

The Project Area is within the north-eastern range of the known habitat for the species in NSW. Winged Peppercress is known to be associated with grassy woodlands, PCT 88 and PCT 397 both of which were identified within the Project Area. Although an area of ~51.32 ha of habitat for the species will be impacted, an Assessment of Significance (AoS) concluded that significant impacts on this EPBC Act listed threatened species is **unlikely**.

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

The national recovery plan for the Winged Peppercress identifies 13 important populations (DSE, 2010). In New South Wales, the species is known from seven important population locations on the Hay Plain, including the Booberoi regeneration area/railway siding, Urana Nature Reserve, along the Cobb Highway south of Ivanhoe, Lake Cargelligo, Micabil and the Morundah property owned by the Department of Defence.

Total population size is estimated at <3,000 plants in New South Wales. However, it should be noted that population sizes fluctuate markedly in response to drying and wetting cycles, resulting in difficultly in obtaining an accurate total population size for the species. The species is more readily observable following significant rainfall, and virtually disappears in dry years, when only a small proportion of the total population may be visible above ground at any one time. The inconspicuous nature of the plant (except when seeding) may have also led to an under-estimation of population sizes. The magnitude of the soil seed store is also unknown but is likely to be large. None of the important populations for *Lepidium monoplocoides* occur within the Project Area. The partial removal of habitat within 102.64 ha of mapped habitat will be considered when planning for any management interventions. Direct impacts within the 102.64 ha of PCT 88 habitat will occur where structural posts and associated digging are conducted, and vehicle and foot traffic during the construction of the solar farm. Outside of seasonally wet periods, living plants are not likely to be present, and impacts would be reduced to the seedbank. Post-construction the indirect impacts will include shading from panels. The full extent of shading for Lepidium are unknown.

It is considered that the project is **unlikely** to lead to a long-term decrease in the size of a population given the ephemeral nature of the species and the considerable area of unoccupied habitat available within the broader area. In addition, the species is likely to persist at the site under operation of the solar array.

The action is unlikely to reduce the area of occupancy of the species

In the short term there will be a minor reduction of area of occupancy for the species however in the medium term, area of occupancy for the species is unlikely to be significantly impacted.

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

Unlikely as the species is likely to persist at the site under operation of the solar array and so the development is unlikely to result in fragmentation of the population locally.

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

Unlikely as habitat on site will largely be retained and there is considerable unoccupied habitat suitable for the species within the broader area

The action will not disrupt the breeding cycle of a population

Unlikely given the species is likely to persist at the site.

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

In the short term a minor reduction of overall habitat will occur however in the medium-term available habitat at the site may improve due to improved land management practices (i.e. weed control and reduction in cattle grazing) and therefore the overall impact on habitat for the species is unlikely to be to the extent that the species is likely to decline.

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

Unlikely due to improved management of invasive species at the site likely to result in a decrease in invasive species harmful to establishment of the species

Introduce disease that may cause the species to decline

Unlikely: no known diseases of the species are likely to be introduced or exacerbated by the project.

Interfere with the recovery of the species

The proposed solar farm does not include any actions that would translocate or introduce *Lepidium monoplocoides* 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. It is considered **unlikely** that the proposed action would interfere with the recovery of *L. monoplocoides.* Management and monitoring of the species at the site likely to improve the potential for recovery of the species locally.

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 proposed action has the potential to impact on one MNES, specifically the EPBC Act listed Threatened species *Lepidium monoplocoides* (Winged Peppercress).

- Approximately 51.32 ha of loss of habitat / individuals of *L. monoplocoides* will result from the proposed action.
    - Partial avoidance of approximately 36.34 ha of *L. monoplocoides* habitat areas in the south-east of the Project Area has been achieved.
- As it is intended that *L. monoplocoides* will persist between and possibly below the solar arrays, soil disturbance to areas between arrays will be avoided during construction, operation and decommissioning phases of the project. This would include avoiding any removal of topsoil or compaction by vehicles.

The Assessment of Significance that was completed for *L. monoplocoides* 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.

The removal of grazing impacts *may ha*ve a beneficial impact to the proliferation of the species assuming grazing is restricted during seasonal wetting events and enough time is allowed for the Lepidium to reach maturity and reproduce and return to dormancy

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.
- Mitigation and management measures for residual impacts (direct, indirect and prescribed) are listed below:
    - Mitigation of increased transport of weeds and pathogens from the site to adjacent vegetation will be ongoing and achieved through the implementation of vehicle hygiene/ washdown procedures for all vehicles entering the site.
    - Mitigation of increased runoff from the site to adjacent vegetation and impacts to hydrology will be achieved through the implementation of sediment control
    - Ongoing mitigation of prescribed impacts to hydrology
    - Mitigation of vehicle strikes will be achieved through the implementation of speed limits and education of staff and contractors of vehicle strike issues

Lepidium monoplocoides

An adaptative management strategy will be implemented for *L. monoplocoides* with biannual monitoring of the persistence and health of the population.

1. A reference site outside of the disturbance footprint would be established alongside monitoring sites within the disturbance footprint. This would allow for seasonal variability in the presence and density of the species to be taken into consideration.
2. Weed control measures and management of biomass through intermittent grazing, would be implemented based on the outcomes of the monitoring program. Grazing, or other biomass control, measures, would be implemented when total cover of the ground layer vegetation exceeds 50%.
3. It is proposed a reduction in credit liability be tied to the ongoing viability of the population at the site. The cover of *L. monoplocoides* within the Project Area at the time of the biodiversity assessment undertaken by Somerville Ecology as presented in Att 8 BDAR would be used as a baseline for the monitoring program. The aim would be to maintain cover of the species at the site of at least 50% of the baseline cover OR 75% of the measured cover at the selected reference site.

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).

A reduction in the final credit liability for *L. monoplocoides* is proposed due to the likelihood of the species persisting at the site during construction and operation of the project.

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, derived grassland PCT's, setbacks for adjoining agricultural 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 Regional context.pdf Regional context map	12/09/2025	No	High
#2.	Document	Att 2 Indicative Layout.pdf Indicative layout map	12/09/2025	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 Narrabri Genesis Project Trust Deed.pdf	01/11/2023	Yes	

2.2.5 Tenure of the action area relevant to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 4 Involved lots.pdf Involved lots map	12/09/2025	No	High

3.2.1 Flora and fauna within the affected area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 5 PCT.pdf Map showing plant community types	12/09/2025	No	High
#2.	Document	Att 6 Survey Effort.pdf Survey effort	12/09/2025	No	High

3.2.2 Vegetation within the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document				

Att 7 Native Veg Extent.pdf Extent of native vegetation			12/09/2025	No	High
#2.	Document	Att 8 BDAR.pdf Biodiversity Development Assessment Report	12/09/2025	No	High

3.4.1 Hydrology characteristics that apply to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 9 Surface Hydrology.pdf Surface hydrology map	12/09/2025	No	High

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

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 10 Lepidium Solar Overlay.pdf Overlay of Lepidium against the proposed solar panels	12/09/2025	No	High

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

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 8 BDAR.pdf Biodiversity Development Assessment Report	11/09/2025	No	High

5.2 Declarations

Completed Referring party's declaration

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

ABN/ACN	31124444622
Organisation name	NGH PTY LTD
Organisation address	2010 NSW
Representative's name	Tammy Vesely
Representative's job title	Senior Project Manager
Phone	0452 151 752
Email	tammy.v@nghconsulting.com.au
Address	T3, Level 7, 348 Edward St, Brisbane City, Qld 4000

- [x] Check this box to indicate you have read the referral form. *

- [x] Check this box to confirm these are the correct identification details. *

- [x] By checking this box, I, **Tammy Vesely 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. *

You may receive automated notifications that aim to assist you in tracking the progress of your project. You can opt out of these notifications by updating your communication preferences on your profile.

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	33649600064
Organisation name	NARRABRI SOLAR POWER 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. *

☑ Check this box to confirm these are the correct identification details. *

☑ I, **Andrew Johnson of NARRABRI SOLAR POWER 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. *

You may receive automated notifications that aim to assist you in tracking the progress of your project. You can opt out of these notifications by updating your communication preferences on your profile.

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.

- [x] Check this box to indicate you have read the referral form. *

- [x] Check this box to confirm these are the correct identification details. *

- [x] I, **Andrew Johnson of NARRABRI SOLAR POWER 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. *

You may receive automated notifications that aim to assist you in tracking the progress of your project. You can opt out of these notifications by updating your communication preferences on your profile.

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