

PROPOSED SOLAR POWER FACILITY ENVIRONMENT REFERRAL

PROPOSAL OVERVIEW

Woodside is proposing to develop a solar photovoltaic (PV) power facility, approximately 15 km southwest of Karratha, Western Australia. This will generate electricity from a large-scale solar PV farm, complemented by a battery energy storage system and other associated infrastructure (the Proposal). The Proposal will supply renewable energy for use by customers connected to the North West Interconnected System (NWIS). Initially, customers may include the Woodside-operated Pluto LNG Facility and the proposed Perdaman Urea Plant.

Woodside acknowledges the Ngarluma People, the Traditional Owners and Native Title holders of the land on which the Proposal is planned to be developed. Woodside has been engaging with the Ngarluma Aboriginal Corporation (NAC) regarding the development of a solar farm and other power generation facilities at this location since 2019.

Subject to various factors, such as a customer’s existing electricity source and demand profile, every 100 MW of renewable electricity supplied to customers connected to the NWIS is expected to reduce greenhouse emissions by 100 kt per annum, as well as reducing emissions of other pollutants, such as NOx and SOx.

TRANSMISSION

The Proposal pertains only to infrastructure associated with the generation of electricity from solar PV, including a battery storage system. Transmission to deliver the power from the solar power facility to customers is proposed to be delivered via

Woodside is referring the Proposal to the WA Environmental Protection Authority (EPA) under Part IV (Section 38) of the *Environmental Protection Act 1986* (WA) (EP Act), as a proposal that has potential to have a significant impact on one or more environment factors. The preliminary key environmental factors relevant to the Proposal include flora and vegetation, terrestrial fauna, and social surrounds.

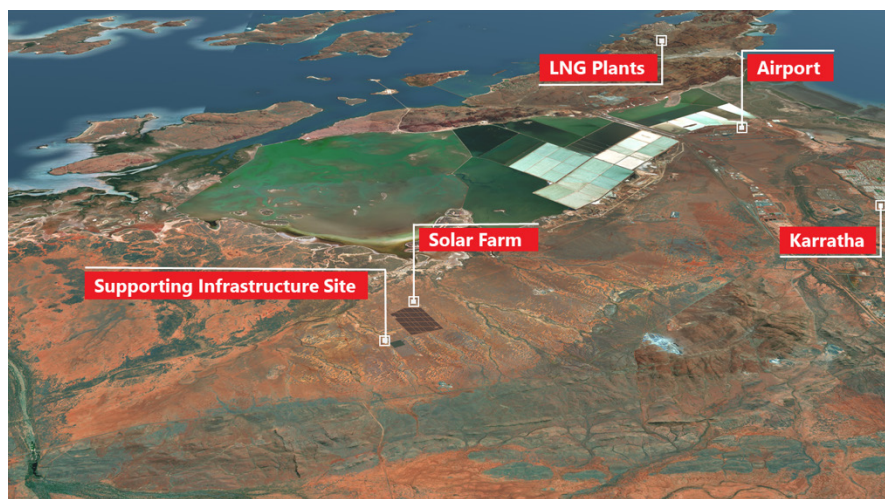
Woodside is also referring the Proposal to the Commonwealth Department of Agriculture, Water and the Environment (DAWE) under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) as a proposal that has potential to impact matters of national environmental significance (MNES). The proposal contains land that provides habitat for listed migratory bird species.

For key information about the Proposal, refer **Table 1**.

For a summary of outcomes for key environmental factors for the Proposal, refer **Table 2**.

For a summary of key risks and/or impacts and management measures for the Proposal, refer **Table 3**.

the NWIS, through existing, upgraded, or new infrastructure; owned and operated by Horizon Power (subject to commercial arrangements and regulatory approvals).



Indicative Landscape Overview

Table 1. Key Information about the Proposal

Targeted key dates	<ul style="list-style-type: none">• First construction is targeted in 2022.• Start-up is targeted in 2023.
Solar farm infrastructure	<ul style="list-style-type: none">• The solar farm will be expanded in phases, as additional customer demand arises, to a maximum capacity of 500 MW.• Initial generation capacity is expected to be up to 100 MW.• The size of each solar panel is yet to be determined but is expected to be approximately 1 m by 2 m attached to mounting structures positioned 0.5 – 4 m above ground.
Supporting Infrastructure	<ul style="list-style-type: none">• Infrastructure installed to support the solar farm may include:<ul style="list-style-type: none">• Battery storage• Electrical substation• Access road connecting to the North West Coastal Highway• Maintenance facility/workshop• Laydown areas• Office and/or ablutions and crib facilities
Estimated duration	<ul style="list-style-type: none">• Indicatively, each 50 MW of solar PV generation capacity will have a construction period of 6 – 9 months.• Operating life of each phase is expected to be around 30 years.• Ultimately, the Proposal is expected to generate electricity for up to 70 years.
Location	<ul style="list-style-type: none">• 15 km south-west of Karratha in the Maitland Strategic Industrial Area (MSIA).• The solar farm is proposed to be developed within the 'Buffer Area', east of the MSIA and supporting infrastructure may be located within the MSIA.• The area is part of the Karratha Station pastoral lease and is mostly used for grazing cattle.
Potential disturbance	<ul style="list-style-type: none">• The total development envelope for the Proposal is expected to be approximately 1,100 ha - consisting of the solar farm (-950 ha) and supporting infrastructure (-150 ha).• The development envelope is surrounded by pastoral land to the west, pastoral land to the east, the Dampier Bunbury Natural Gas Pipeline (DBNGP) corridor and Dampier Salt to the north, and North West Coastal Highway to the south.• The Proposal will potentially disturb up to 880 ha of native vegetation.• At least 10% of the area leased for expansion of the solar farm is expected to be set aside for retention of nature corridors (such as along drainage lines) and for the protection of heritage features.• Vegetation disturbance will only occur as expansion of each phase of the solar farm is commercially sanctioned.
Workforce	<ul style="list-style-type: none">• The workforce for construction of the solar power plant is estimated to peak at 50 and expected to average 20 - 50 personnel. This will comprise a mix of local labour and fly-in fly-out (FIFO) specialist labour who will reside off-site in permanent and temporary accommodation in Karratha and Dampier.• The solar farm will be remotely operated and the buildings on site will only be occupied when targeted work is being carried out.
Indigenous Land Use Agreement (ILUA)	<ul style="list-style-type: none">• Woodside and NAC (on behalf of the Ngarluma People) are finalising negotiations of an Indigenous Land Use Agreement (ILUA) in respect to the Proposal.• Authorisation of the Ngarluma People will be required to execute and register the agreement with the National Native Title Tribunal.

Table 2. Summary of outcomes for key environmental factors for the Proposal

Key environmental factor	Outcome(s)
Flora and vegetation	<ul style="list-style-type: none"> The Proposal will potentially disturb up to 880 ha of native vegetation within an expected total development envelope of approximately 1,100 ha. The Proposal is unlikely to cause a significant reduction in the extent or distribution of priority ecological communities (PECs) or priority species on the Roebourne Plains or result in PECs or priority species becoming threatened.
Potential impacts to Matters of National Environment Significance	<ul style="list-style-type: none"> The Proposal will impact up to 850 ha of Tussock Grassland on Cracking Clays. This clearing represents approximately 0.2% of the remnant vegetation of similar type.
Terrestrial fauna	<ul style="list-style-type: none"> Based on the location and small area of impact and the application of mitigation measures, no significant direct or indirect impacts to habitat for other conservation significant species are expected as a result of the Proposal.
Social surrounds	<ul style="list-style-type: none"> All areas will be surveyed with Ngarluma People for potential Aboriginal Heritage Sites before any development occurs in those areas. Access by Traditional Owners to titles held by Woodside within the development envelope during the operations phase will be supported, subject to safety, security and operational requirements. Access beyond/around the development envelope will not be restricted by the Proposal. The location and nature of the initial phase of the Proposal is such that it will be developed without disturbing any Aboriginal heritage sites.

Table 3. Summary of key risks and/or impacts and management measures for the Proposal

Potential Risk and/or Impact	Mitigation and/or Management Measure
Air emissions	<ul style="list-style-type: none"> The Proposal will supply electricity with near zero operational emissions. Emissions will only arise from onsite vehicle use (e.g. for construction and maintenance). The utilisation of battery storage is complementary to solar PV and will enable additional emissions reductions. The Proposal will also enable customers to reduce other emissions, such as NOx and Sox.
Flora / fauna	<ul style="list-style-type: none"> There are no threatened ecological communities presented within the Proposal's development envelope. The Proposal is in an area of low biological diversity that has been subject to cattle grazing for many decades. Environmental corridors/buffer zones will be established to preserve no less than 10% of flora within the development envelope, focussing on that of most significance. A section of old, large Acacia trees within the development envelope are to be wholly retained.
Visual amenity	<ul style="list-style-type: none"> Located away from residential and tourism areas, no visual amenity impacts are expected to be associated with the Proposal. Project images will be provided to key stakeholders as project design progresses.
Social surrounds (Cultural Heritage)	<ul style="list-style-type: none"> A Social Surrounds (Cultural Heritage) Management Plan has been developed with input from Traditional Owners and we will continue to work with Traditional Owners with respect to cultural heritage management. Heritage surveys have been completed with NAC over land sufficient to install 50 MW of solar PV and associated supporting infrastructure. Future expansion of the solar farm will not commence until heritage surveys are complete. Given the flexibility of the solar PV, no Aboriginal Heritage sites are expected to be disturbed in order to construct and operate the Proposal.

Potential Risk and/or Impact	Mitigation and/or Management Measure
Water	<ul style="list-style-type: none"> No extraction or discharge of water from/into the surrounding environment will result from the Proposal. Woodside will seek to minimise impacts to large trees or significant drainage lines present on the site.
Construction	<ul style="list-style-type: none"> No bulk earthworks will be required, with solar panels to be installed along the existing topography. Dust generated from construction will be managed as required (e.g. through dust suppression measures such as water spraying).
Operations	<ul style="list-style-type: none"> Ongoing maintenance comprising of inspections, cleaning of solar panels and maintenance of grounds will be conducted as needed. Solar panels will be cleaned with freshwater supplied via a tanker and stored onsite. Water consumption for solar panel washing is estimated at approximately 30 kilolitres per year (kL/year) for each 100 MW of installed solar PV capacity. Minor drainage and contouring to manage erosion and overland flows may be required.

AT A GLANCE

- The Proposal will supply electricity with near zero emissions.
- No bulk earthworks will be required, with solar panels to be installed along the existing topography.
- There are no threatened ecological communities presented within the Proposal's development envelope.
- The Proposal is unlikely to result in PECs or priority species becoming threatened.
- The location and nature of the initial phase of the Proposal is such that it will be developed without disturbing any Aboriginal sites.



Artist impression: Proposed solar PV farm

Interested in knowing more or would like to provide feedback?

Details of key environmental factors and a summary assessment of the other environmental factors will be addressed in the Environmental Referral targeted for submission in Q4 2021.

Woodside's intent is to minimise environmental and social impacts associated with the Proposal. We welcome your interest and feedback to inform our decision-making in support of progressing this opportunity.

If you are seeking additional information on the Proposal or would like to comment, please contact Woodside.

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