

# WOODSIDE SOLAR FACILITY ENVIRONMENTAL REVIEW SUPPORTING DOCUMENT

## PROPOSAL OVERVIEW

Woodside is proposing to develop the Woodside Solar Facility (the Proposal) in the Maitland Strategic Industrial Area, located approximately 15 kilometres south-west of Karratha, in the Pilbara region of Western Australia.

Woodside acknowledges the Ngarluma People, the Traditional Owners and Native Title holders of the land on which the Proposal is planned to be developed.

The Proposal would generate electricity from a large-scale solar photovoltaic (PV) farm, and includes energy storage (battery) infrastructure. Woodside proposes to implement the Proposal in a phased approach. Woodside expects that the Proposal would initially supply up to 100 MW of renewable energy to industrial customers. The Proposal includes the potential to expand the facility up to 500 MW, as customer demand arises in the future.

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 North West Interconnected System (NWIS) is expected to reduce greenhouse emissions by 100 kt per annum, as well as reducing emissions of other pollutants, such as NO<sub>x</sub> and SO<sub>x</sub>.

As announced in November 2022, Woodside and the Ngarluma Aboriginal Corporation (NAC) have entered into a bilateral Indigenous Land Use Agreement and a modern benefits-sharing and relationship agreement relating to lands being investigated for the Proposal.

## ENVIRONMENTAL APPROVALS

Woodside referred the Proposal to the WA Environmental Protection Authority (EPA) under Part IV (Section 38) of the *Environmental Protection Act 1986 (WA) (EP Act)* in December 2021.

In February 2022, the EPA determined the Proposal required assessment and assigned an assessment level of 'Assess - Referral Information' with additional information required. The EPA determined the Proposal had the potential to impact on three Key Factors: Flora and Vegetation, Terrestrial Fauna and Social Surrounds.

Woodside has prepared an Environmental Review Supporting Document (ERSD) in accordance with the Western Australian Environmental Protection Authority (EPA) procedures, which is now available for public review.

The ERSD describes the Proposal, the likely environmental impacts and the proposed management measures. The scope of the ERSD is the infrastructure associated with the generation and storage of electricity from the Proposal, which if expanded up to 500 MW could result in a total disturbance of up to 919.8 hectares (ha).

The ERSD also satisfies the requirements for an accredited assessment under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) (EPBC Ref: 2022/09328) and includes assessment of potential significant impacts of the proposal to Matters of National Environmental Significance.

The closing date for public submissions on the ERSD is **17 March 2023**.

## 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 Proposal to customers for the initial phase is proposed to be delivered via the NWIS, through existing, upgraded, or new infrastructure; owned and operated by Horizon Power (subject to commercial arrangements and regulatory approvals).

Future phases will be subject to customer demand, location and available transmission capacity at the time.

## FURTHER INFORMATION

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**.

**Table 1. Key Information about the Proposal**

<b>Targeted key dates</b>	<ul style="list-style-type: none"><li>• Targeted key dates are subject to project approvals, regulatory approvals, commercial agreements and market demand.</li></ul>
<b>Solar farm infrastructure</b>	<ul style="list-style-type: none"><li>• The solar farm will be expanded in phases, as additional customer demand arises, to a maximum capacity of 500 MW.</li><li>• Initial generation capacity is expected to be up to 100 MW.</li><li>• 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.</li></ul>
<b>Supporting Infrastructure</b>	<ul style="list-style-type: none"><li>• Infrastructure installed to support the solar farm may include:<ul style="list-style-type: none"><li>• Battery storage</li><li>• Electrical substation</li><li>• Access road connecting to the North West Coastal Highway</li><li>• Maintenance facility/workshop</li><li>• Laydown areas</li><li>• Office and/or ablutions and crib facilities</li></ul></li></ul>
<b>Estimated duration</b>	<ul style="list-style-type: none"><li>• Further to submitting the Proposal for environmental approval, Woodside has continued to mature its understanding of the estimated construction period. Indicatively, each 50 MW of solar PV generation capacity will have a construction period of 6 – 9 months.</li><li>• Operating life of each phase is expected to be around 30 years.</li><li>• Ultimately, the Proposal is expected to generate electricity for up to 70 years.</li></ul>
<b>Location</b>	<ul style="list-style-type: none"><li>• 15 km south-west of Karratha in the Maitland Strategic Industrial Area (MSIA).</li><li>• 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.</li><li>• The area is part of the Karratha Station pastoral lease and is mostly used for grazing cattle.</li></ul>
<b>Potential disturbance</b>	<ul style="list-style-type: none"><li>• 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).</li><li>• 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.</li><li>• The Proposal will potentially disturb up to 919.8 ha of native vegetation.</li><li>• 10% of land within the Solar PV Farm DE is expected to remain in natural condition.</li><li>• Vegetation disturbance will only occur as expansion of each phase of the solar farm is sanctioned.</li></ul>
<b>Workforce</b>	<ul style="list-style-type: none"><li>• Further to submitting the Proposal for environmental approval, Woodside has continued to mature understanding of workforce requirements.</li><li>• The workforce for construction of the solar power plant is estimated to peak at 100 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.</li><li>• The solar farm will be remotely operated and it is expected that buildings on site will only be occupied when targeted work is being carried out.</li></ul>
<b>Indigenous Land Use Agreement (ILUA)</b>	<ul style="list-style-type: none"><li>• Further to submitting the Proposal for environmental approval, Woodside and the Ngarluma Aboriginal Corporation (NAC) have entered into a bilateral Indigenous Land Use Agreement and a modern benefits-sharing and relationship agreement relating to lands for the Proposal.</li></ul>

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

Key environmental factor	Outcome(s)
<b>Flora and vegetation</b>	<ul style="list-style-type: none"> <li>The Proposal will potentially disturb up to 919.8 ha of native vegetation within an expected total development envelope of approximately 1,100 ha.</li> <li>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.</li> </ul>
<b>Terrestrial fauna</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>
<b>Social surrounds</b>	<ul style="list-style-type: none"> <li>All areas will be surveyed with Ngarluma People for potential Aboriginal Heritage Sites before any development occurs in those areas.</li> <li>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.</li> <li>Access beyond/around the development envelope will not be restricted by the Proposal.</li> <li>The location and nature of the initial phase of the Proposal is such that it will be developed without disturbing any Aboriginal heritage sites.</li> </ul>

**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
<b>Air emissions</b>	<ul style="list-style-type: none"> <li>The Proposal will supply electricity with near zero operational emissions.</li> <li>Emissions will only arise from onsite vehicle use (e.g. for construction and maintenance).</li> <li>The Proposal will also enable customers to reduce other emissions, such as NOx and SOx.</li> </ul>
<b>Flora / fauna</b>	<ul style="list-style-type: none"> <li>There are no threatened ecological communities presented within the Proposal's development envelope.</li> <li>The Proposal contains two Priority Ecological Communities (PEC), with a ranking of Priority 1 and Priority 3 respectively. The clearing associated with the Proposal will disturb less than 1 per cent of these communities mapped extents. Clearing of the P1 ranked PEC will be limited to no more than 40 hectares to minimise the impact to this PEC.</li> <li>10% of land within the Solar PV Farm DE is expected to remain in natural condition.</li> <li>A section of old, large Acacia trees within the development envelope are to be wholly retained.</li> </ul>
<b>Visual amenity</b>	<ul style="list-style-type: none"> <li>Located away from residential and tourism areas, no visual amenity impacts are expected to be associated with the Proposal.</li> <li>Project images will be made available as project design progresses.</li> </ul>
<b>Social surrounds (Cultural Heritage)</b>	<ul style="list-style-type: none"> <li>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.</li> <li>Heritage surveys have been completed with NAC over land sufficient to install 50 MW of solar PV and associated supporting infrastructure.</li> <li>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.</li> </ul>

## Potential Risk and/or Impact

## Mitigation and/or Management Measure

### Water

- 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.

### Operations

- 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 the initial phase, and up to 200 kL/year for the future expansion phase.
- Minor drainage and contouring to manage erosion and overland flows may be required.

## SUBMITTING FEEDBACK

Woodside has prepared an ERSD in accordance with the Western Australian Environmental Protection Authority (EPA) procedures, which is now available for public review. The ERSD describes the Proposal, the likely environmental impacts and the proposed management measures. The closing date for public submissions on the ERSD is **17 March 2023**.

The EPA prefers submissions to be made electronically via the EPA's Consultation Hub at [consultation.epa.wa.gov.au](https://consultation.epa.wa.gov.au).

If you have any questions on how to make a submission, please contact EPA Services, Department of Water and Environmental Regulation on 6364 7000.

Copies of the ERSD may be downloaded from [www.epa.wa.gov.au](http://www.epa.wa.gov.au) or [www.woodside.com/sustainability/consultation-activities](http://www.woodside.com/sustainability/consultation-activities).

Copies of the ERSD will be available for examination at Karratha Public Library, Dampier Public Library, Roebourne Public Library and State and Battye libraries of Western Australia.

Hard copies and a CD version of the ERSD can also be obtained from Woodside:

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For translations in other languages and other accessibility needs, please contact the Woodside project team on 1800 442 977 or [feedback@woodside.com](mailto:feedback@woodside.com).



Artist impression: Proposed solar PV farm