**Consultation Information Sheet** January 2019

CARNARVON BASIN, NORTH-WEST AUSTRALIA

# NORTH RANKIN COMPLEX OPERATIONS

#### **Key Information**

- + Woodside is submitting a revised Environment Plan for the North Rankin Complex facility in accordance with the Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009 (Cth) (the regulations)
- The regulations require that Environment Plans for operating facilities be revised at least every five years.
- Woodside is seeking any interest or comments you may have to inform our decision making for the proposed activities and preparation of the Environment Plan.



### About the consultation

#### **Activity Overview**

The North Rankin Complex (NRC) is a single integrated facility comprised of two interconnected production platforms, North Rankin A (NRA) and North Rankin B (NRB), and associated subsea infrastructure, including two export trunklines (1TL and 2TL), which run between the NRC facility and the onshore Karratha Gas Plant (KGP).

Woodside is submitting a revised Environment Plan for the NRC facility in accordance with Commonwealth Environmental Regulations, which require Environment Plans for operating facilities to be revised at least every five years.

A revision to the NRC EP was last accepted by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) in April 2017. This revision was to incorporate changes relevant to the start-up and operation of the Persephone Project, which subsequently started in August 2017. The NRC EP was previously accepted by NOPSEMA in August 2014.

The NRC is operated by Woodside on behalf of the North West Shelf Project participants. The participants include Woodside Energy Ltd., BHP Billiton Petroleum (North West Shelf) Pty Ltd, BP Developments Australia Pty Ltd, Chevron Australia Pty Ltd, Japan Australia LNG (MIMI) Pty Ltd and Shell Development (Australia) Pty Ltd.

#### **Activity Location**

The NRC is located in Commonwealth waters about 135 km offshore from Dampier on the north-west coast of Western Australia in a water depth of about 125 metres.

The Operational Area for this EP includes:

- NRC and the area within a 500 m petroleum safety zone around the complex
- NRC subsea facilities including 1TL and 2TL (between the NRC facility and the State waters boundary) and an area within 1500 m around the infrastructure
- Persephone subsea facilities and an area within 1500 m around the infrastructure

The NRA and NRB platforms are located in Production Licence WA-1-L and the trunklines are located in Pipeline Licences WA-1-PL, WA-10-PL, TPL/15 and TPL/16.

#### **Operations**

The NRC currently produces dry gas and condensate from the North Rankin, Perseus and Persephone fields.

Gas and condensate from these reservoirs are processed on the facility and are then transported via two trunklines to the onshore Karratha Gas Plant.

The NRC is connected to the NWS Project's Goodwyn A facility, Angel facility and Okha floating production storage and offloading facility. Connection of these facilities to NRC is via subsea tie-in assemblies to the first and second trunklines for direct export of product to the Karratha Gas Plant.

Operation of the connected facilities and their associated subsea pipelines and infrastructure (other than 1TL and 2TL) are the subject of separate Environment Plans.

The NRC is a manned facility and is designed to export up to 66 kilotonnes (kT) per day of gas and 6 kT per day of condensate.

The facility is marked on nautical charts surrounded by a by a 500 m petroleum safety zone.

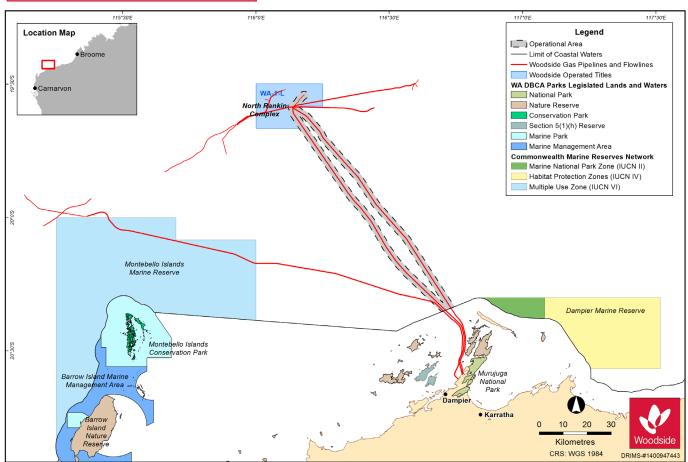


Figure 1. Location of the North Rankin Complex Operations.

## About the consultation

Table 1. Summary of facility details.

Location	135 km north west of Dampier, Western Australia
Facility type	Gas and condensate production facility Two fixed platforms, processing equipment and pipelines
No. of wells	<ul> <li>+ 22 wells that produce from the North Rankin reservoir</li> <li>+ Seven wells that produce from the Perseus reservoir</li> <li>+ Two wells that produce from the Persephone reservoir</li> </ul>
Estimated production capacity	66 kT per day of gas
Commissioned	6 kT per day of condensate
Water depth	NRA has been in operation since 1984. NRB has been in operations since 2013.
Facility coordinates	About 125 m
+ NRA	Latitude: 19° 35' 03.23" South Longitude 116° 08' 17.06' East
+ NRB	Latitude: 19° 35' 02.52" South Longitude 116° 08' 11.32' East

#### **Activity Details**

NRC operates 24 hours a day, 365 days a year. Activities undertaken at NRC include:

#### Production

Production involves receiving hydrocarbons from the reservoirs, processing and exporting to the Karratha Gas Plant via two subsea trunklines.

#### Inspection maintenance and repair activities

Routine inspection, maintenance and repair (IMR) of the NRC may be undertaken. Inspection and maintenance are carried out to ensure the integrity of the infrastructure and identify any problems before they pose a risk.

#### Production and major projects

Project activities may be required for the purposes of refurbishment, modification or major maintenance on the facility. If a project scope has the potential to result in significant change to the facility, or has potential environmental or social impacts, an assessment of whether an EP revision is required will be undertaken.

#### **Activity Vessels**

Platform support vessels are used to transfer materials and equipment to and from the facility. While in the field, vessels also backload materials and segregated waste for transportation back to the King Bay Supply Facility in Karratha, as well as carrying out standby duties including during helicopter

operations and working over the side activities. The current schedule is for a vessel to visit the facility once a week.

Subsea support vessels are required for IMR activities and may vary depending on operational requirements, vessel schedules capability and availability. Such activities will be conducted intermittently and over short durations in the immediate vicinity of subsea infrastructure and no additional exclusion zones will be in place during these activities.

### **Environmental** Management

Woodside has undertaken an environmental risk assessment for the proposed activities, considering timing, duration, location and potential environmental impacts arising from activities. As a result, a number of management measures will be implemented during the proposed activities to reduce the impacts and risks to as low as reasonably practicable and to an acceptable level.

Table 2 provides a summary of potential key risks and associated management measures for the operation of the NRC facility, which will be further detailed and developed in the activity Environment Plan.

#### **Environmental Approvals**

The revised NRC Operations EP will be submitted to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for acceptance in accordance with the Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009 (Cth).

Table 2. Summary of key risks and associated management measures identified for the NRC facility.

Potential Risk and/ or Impact	Mitigation and/or Management Measure
Physical presence of support vessels	+ Usage of navigational aids and practices as required by Maritime Regulations to minimise impact on other marine users.
Seabed disturbance	<ul> <li>Lifting and lifted equipment will be in a safe and serviceable condition to prevent dropped objects.</li> <li>Lifting operations will be safely performed to minimise potential for dropped objects.</li> </ul>
Routine marine discharges	+ All routine marine discharges (drainage water, produced water, cooling water and sewage/ grey water) will be managed according to legislative requirements and Woodside's Environmental Performance Standards where applicable.
Waste generation	<ul> <li>Waste generated on the facility will be managed in accordance with legislative requirements and Woodside's Waste Management Plan.</li> <li>Wastes will be managed and disposed of in a safe and environmentally responsible manner that prevents accidental loss to the environment.</li> <li>Wastes transported onshore will be sent to appropriate recycling or disposal facilities by a licensed waste contractor.</li> </ul>
Flaring	<ul> <li>Gas flaring will be managed to a level required for safe and reliable production.</li> <li>Unplanned flaring will be minimised where possible and managed in accordance with annual performance targets.</li> </ul>
Emissions from fuel combustion	<ul> <li>Procedures to keep emissions from combustion of fuel (e.g. power generation) in line with design specifications will be followed.</li> <li>Fuel gas is the preferred source of fuel. Emissions will be reported in accordance with regulatory requirements.</li> </ul>
Uncontrolled Hydrocarbon release	<ul> <li>Procedures to reduce the potential for uncontrolled hydrocarbon releases will be followed.</li> <li>Appropriate fuel transfer procedures and equipment will be used to prevent spills to the marine environment.</li> <li>Appropriate spill response plans, equipment and materials will be in place and maintained to manage any potential spills to the environment.</li> </ul>
Chemical use	+ Chemical use will be managed in accordance with Woodside's Chemical Selection and Approval Procedure.
Marine fauna interactions	+ Measures will be taken to protect marine fauna from vessel activities.
Introduction of invasive marine species	+ All vessels will be assessed and managed as appropriate to prevent the introduction of invasive marine species.

#### **Providing Feedback**

If you would like to comment on the proposed activities outlined in this fact sheet, or would like additional information, please contact Woodside before Thursday, 7 February 2019.

**Andrew Winter** Corporate Affairs Adviser Woodside Energy Ltd

**P**: (08) 9348 6115 E: feedback@woodside.com.au **Toll free:** 1800 442 977

Please note that stakeholder feedback will be communicated to NOPSEMA as required under legislation. Woodside will communicate any material changes to the proposed activity to affected stakeholders as they arise.









