Jadestone Energy

Invitation for Consultation
Stag Field Operations
and Future Activities

Invitation for Consultation

Jadestone Energy (Jadestone) is the operator of the existing Stag Field off the Pilbara coast. Jadestone is preparing two Environment Plans (EPs) for assessment by the Commonwealth regulatory authority, the National Offshore Petroleum Regulatory Authority (NOPSEMA).

The Environment Plans are for:

- ***Ongoing production and maintenance at the Stag Facility (Stag Operations); and***
- ***Plugging and abandonment of production wells and drilling new production wells at the Stag Facility as needed (Stag Drilling).***

Jadestone invites comments for its consideration during the period of the preparation of each EP.

Who is Jadestone Energy?

Jadestone is a leading upstream oil and gas company in the Asia Pacific region, with a focus on production and near-term development assets. The company is listed on the Alternative Investment Market of the London Stock Exchange (JSE). Contact details for Jadestone's Australian Operations are provided at the end of this document.

What is an Environment Plan?

The purpose of an Environment Plan (EP) is to identify the proposed petroleum activity's impacts on and risks to the environment. The EP also sets measures to reduce identified environmental impacts, potential risks due to the activity, and describe how and to what level of performance those measures will be implemented throughout the activity, including in the unlikely event of a significant unplanned event, e.g., hydrocarbon spill.

The NOPSEMA accepted Stag Operations EP must be revised and resubmitted every five years, or sooner if required.

Jadestone has revised and re-submitted the accepted Stag Operations EP in accordance with legislation (administrated by NOSPEMA). Jadestone continually updates the Stag Operations EP including consultation outcomes. The Stag Operations EP will not be accepted by NOPSEMA until they are satisfied that it meets the requirements of the legislation.

The Stag Operations EP covers activities associated with production; oil loading to a third-party tanker; the inspection, maintenance and repair of the wellhead platform; subsea export pipeline; wells; associated subsea infrastructure; and non-routine / unplanned activities and events should they arise.

Activities that will be subject to the future EP

The Stag Drilling EP is for the abandonment of existing wells before drilling new production wells from the facility, using a mobile offshore drilling unit (MODU) or drilling rig. The abandonment of existing wells and the drilling of new wells is required to maintain production. These activities occur approximately every two years (last drilled November 2022) and a five-year term drilling EP will be prepared in 2023.

Location

The Stag Field is located on the Northwest Shelf, approximately 60 km north-west of Dampier (Figure 1.). The permit area (WA-15-L) is in Commonwealth waters. The water depth at the Stag Field is 49 m. Location details are on Figure 1, including key features in the area.

The distance to Australian Marine Parks (AMPs) and other key features in the area is indicated in Table 1.

Table 1: Distance to AMPs and other key features

Regional Feature	Minimum distance from Wellheads
Montebello AMP	30 km
Dampier Archipelago	32 km
Dampier AMP	60 km
Closest Montebello Island	75 km

The Stag facility has been producing since 1998 with the required restricted zone in place. A Petroleum Safety Zone (PSZ) extends 500 m around the following Stag infrastructure:

- Wellhead platform (WHP)
- Catenary anchor leg mooring (CALM) buoy
- 2 km long carbon steel export oil pipeline

Pursuant to Section 616 of the Offshore Petroleum and Greenhouse Gas Storage Act 2006 (OPGGS Act) all vessels, other than those under the control of Jadestone or authorised by Jadestone, are prohibited from entering or being present in the PSZ.

A cautionary zone of 2.5 NM radius is maintained around the facilities, with the centre located 1.4 km due north of the WHP. The information has been noted on Admiralty Charts covering the region (#AUS 741 and AUS 57), and although vessels are requested to avoid navigating, anchoring and fishing within the cautionary zone, it is not an exclusion zone.

All current activities are contained within the PSZ, although vessel activities and offtakes may occur outside of the defined PSZ, but within the cautionary zone.

All planned activities such as drilling, including MODU activity, will be contained within the defined Operational Area in permit area WA-15-L.

In the unlikely event of a significant unplanned event, e.g., hydrocarbon spill, the values in the area (habitats and locations), having been identified in the EP, will be prioritised for prompt protection activities.

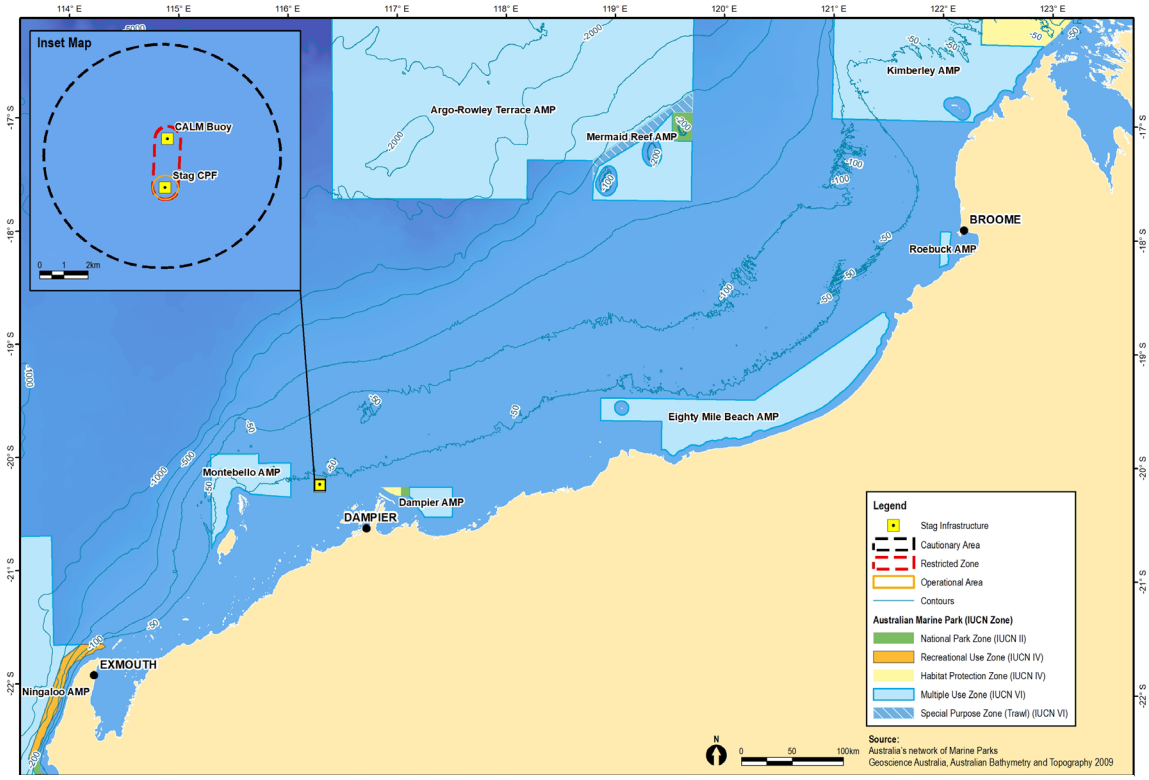

FIGURE 1: STAG LOCATION MAP

Why are you being engaged?

Jadestone has identified that you or your organisation is a 'relevant person' under the Offshore Petroleum and Greenhouse Gas (Environment) Regulations 2009 because of your functions, activities, or interests within the Environment that Might Be Affected (EMBA) for Stag. This is defined as the area that might be affected by planned events that will occur within a defined operational area or unplanned events that could extend beyond the defined operational area e.g., in the low likelihood of an unplanned hydrocarbon spill.

The NOPSEMA website includes a video about EMBAs and how they are determined.

www.nopsema.gov.au/news-and-resources/presentations-and-videos#Oil%20Spill%20Modelling

Figure 2 shows the Stag EMBA.

What do we do with information provided?

In line with Regulation 9(8) of the Commonwealth Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009, correspondence between Jadestone and you or your organisation must be provided to NOPSEMA. All comments are compiled into a report and are published in the publicly available EP, with names and contact details redacted.

There is, however, the opportunity for you to request that your correspondence not be published. That is, whilst the correspondence is still required to be provided to NOPSEMA, it will be provided in a separate report that is for NOPSEMA only and is not published.

Please notify Jadestone of any correspondence that we receive from you or your organisation that you wish to be confidential. That correspondence will be provided to NOPSEMA in a separate report, and not published on NOPSEMA's website.

All comments received by Jadestone will be carefully assessed to understand the potential impacts of the activity upon you or your organisation as a relevant person, that is your functions, activities, or interests. Jadestone's assessment will be provided to you and documented in the EP.

How do I find out more?

Further information on Jadestone's Stag facility is available on our website: https://www.jadestone-energy.com/assets/australia-portfolio/stag/

The EP has been published, minus any confidential material, on the NOPSEMA's website.

https://info.nopsema.gov.au/offshore_projects/19/show_public

What do Jadestone want to know?

Jadestone is committed to ongoing dialogue with all its stakeholders and welcomes your or your organisation's comments at any time.

Please let us know if you:

- have any comments on the activity and the potential impacts on you or your organisation's interests.
- require any further information.
- have any preference on how we contact you in the future.
- need anything further from us to assist you with comments you might wish to make.

Could you also help us make an informed decision about your requirement for ongoing consultation by letting us know if you do not wish to receive further updates for activities associated with the Stag Field.

What Happens next?

Jadestone will make reasonable efforts to consult with all parties that have been identified as potentially relevant persons.

Please be aware that it is a requirement of NOPSEMA that Jadestone documents no responses to this Invitation for Consultation, and consequently, if no response is received, Jadestone may make follow-up contact with you or your organisation several times to seek a response.

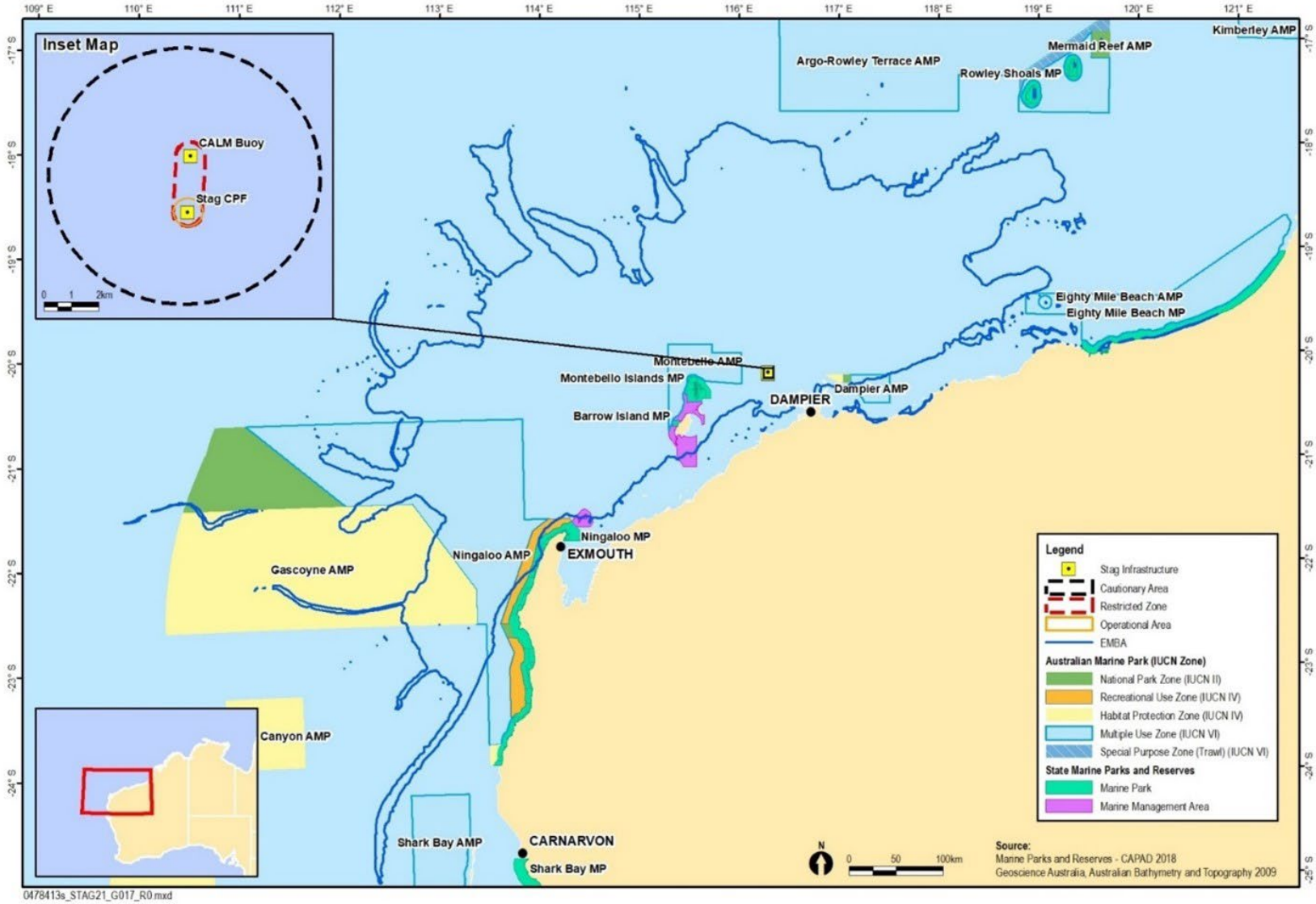

FIGURE 2: **STAG ENVIRONMENT THAT MAY BE AFFECTED (EMBA) IN THE EVENT OF A LOSS OF HYDROCARBONS**

Potential Risks and Management

A summary of potential risks to relevant persons who may have functions, activities or interests within the EMBA, that are common to all planned activities, is provided below. For each risk the associated management measures are summarised in Table 1.

TABLE 1: POTENTIAL RISKS AND MITIGATION/MANAGEMENT MEASURES COMMON TO BOTH ENVIRONMENT PLANS

Potential Risks	Mitigation and /or Management Measures
Light Emissions	- Potential impacts from lighting are assessed as occurring within 20 km of a vessel or facility based on the National Light Pollution Guidelines for Wildlife (Commonwealth of Australia 2019) - Facility and vessel navigation lights are compliant with the Navigation Act 2012.
Noise Emissions	- Vessels and helicopters comply with relevant parts of Environment Protection and Biodiversity Conservation (EPBC) Regulation (2000) Part 8 - Vessel and machinery are maintained in accordance with Flag State certification requirements. - All engines, compressors and machinery on the CPF and Mobile Offshore Drilling Rig (MODU) are maintained via a maintenance management system
Atmospheric Emissions	- Flag State Certificate and/or IAPP certifies measures are in place to manage air emissions. - All engines, compressors and machinery on the CPF and MODU are maintained via a maintenance management system
Liquid (operational) discharges	- Emissions and discharges of liquid waste to sea are in accordance with legislative requirements, the impact and risk assessment process indicates that discharges will not result in significant effects to marine fauna. - Waste Management Plan
Interaction with other users	- A pre-existing 500 m restricted zone is in place around the infrastructure and will remain in place for the duration of operations under the proposed EPs, including during the drilling activity as the MODU will be within the 500m restricted zone of the CPF. No fishing vessels are to enter this zone. - Marine notifications will be made to relevant stakeholders, describing the location of the activity and a 500 m petroleum safety zone is present to prevent the risk of collisions and marked on charts. - Commercial fishers are permitted to enter the wider 2.5 Nm cautionary zone and fish, transit or anchor for the duration of operations under the proposed EP, but not the 500m exclusion zone, as long as it is safe to do so. - Consultation is undertaken with all relevant persons
Physical Footprint	- Plans are in place for any future decommissioning including inspection and maintenance of all infrastructure. - Surveys of seabed undertaken prior to integrity, maintenance or repair work - Seabed disturbance limited to planned activities and defined locations

In addition to the risks outlined in Table 1, the risk of produced water discharge is specific to the Stag Operations EP activities (Table 2).

TABLE 2: POTENTIAL RISKS AND MITIGATION/MANAGEMENT MEASURES ASSOCIATED ONLY WITH STAG OPERATIONS EP

Potential Risks	Mitigation and /or Management Measures
Produced water discharges	- Beyond temporary perturbation to water quality, no environmental impacts due to the discharge of produced water are expected. - Produced water discharges are monitored and recorded with adaptive management processes in place if significant changes are identified

In addition to the risks outlined in Table 1, the risk of drilling discharges is specific to the Stag Drilling EP activities (Table 3).

TABLE 3: POTENTIAL RISKS AND MITIGATION/MANAGEMENT MEASURES ASSOCIATED ONLY WITH STAG DRILLING EP

Potential Risks	Mitigation and /or Management Measures
Drilling discharges	- Selection process for materials as part of NOPSEMA approval - Process for inventory control to minimise leftovers. - Cuttings management system in place to manage muds (no synthetic based muds planned for use)

Additional risks that are associated with events that are not expected to occur during normal activities are outlined in Table 4.

TABLE 4: POTENTIAL RISKS AND MITIGATION/MANAGEMENT MEASURES ASSOCIATED ONLY WITH UNPLANNED EVENTS

Potential Risks	Mitigation and /or Management Measures
Introduced Marine Species (IMS)	- IMS Management will meet legal requirements and reduce risks to As Low as Reasonably Practicable (ALARP) and Acceptable levels. - Vessels will be required to adhere to ballast water management, quarantine and biofouling requirements if required
Interaction with fauna	- Vessels operating within the restricted zone must not exceed a speed of five (5) knots. - Induction includes information on speed limits and requirements for interacting with marine fauna
Unplanned discharges	- No release of non-hazardous / hazardous solid wastes or non-hydrocarbon hazardous liquids to the marine environment - Limitations of flaring volumes - Integrity and maintenance requirements maintained. - Dropped object prevention. - Waste management plan implemented, and details included in induction materials. - Competent and trained personnel are inducted and have appropriate qualifications. - Spill kits available and incident response plans in place
Vessel/MODU collision	- Marine notifications will be made to relevant stakeholders, describing the location of the activity and a 500 m petroleum safety zone is present to prevent the risk of collisions. - Vessels operating within the restricted zone must not exceed a speed of five (5) knots. - Simultaneous Operations (SIMOPS) plan in place to interface between the Stag facility and MODU during drilling. - Navigation lights installed and checked
Hydrocarbon release	- NOPSEMA accepted Oil Pollution Emergency Plan (OPEP) and well operations management plan (WOMP) - Procedures in place on WHP and vessels to prevent hydrocarbon release to sea during operations. - Procedures in place on MODU to prevent hydrocarbon release to sea during drilling. - Maintenance and integrity checks and inspections - Appropriate vessel/MODU spill response plans, equipment and materials will be in place and maintained. - Appropriate refuelling procedures and equipment will be used to prevent spills to the marine environment

Providing Feedback

If you would like to comment on the proposed activities outlined in this fact sheet or would like additional information, please contact Jadestone.

Email: consult@jadestone-energy.com **Phone: 08 9486 6600**

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