

Onshore Petroleum Activity – NT EPA Advice

ORIGIN ENERGY LIMITED – ENVIRONMENT MANAGEMENT PLAN (EMP) FOR THE BEETALOO BASIN KYALLA EP117 N2 CIVIL CONSTRUCTION

BACKGROUND

The Minister for Environment and Natural Resources has formally requested under section 29B of the *Northern Territory Environment Protection Authority Act 2012* (NT EPA Act) that the Northern Territory Environment Protection Authority (NT EPA) provide advice on all Environment Management Plans (EMPs) received under the Petroleum (Environment) Regulations 2016.

That advice must include a recommendation on whether the EMP should be approved or not, supported by a detailed justification that considers:

- whether the EMP is appropriate for the nature and scale of the regulated activity to which the EMP relates (Regulation 9(1)(b));
- whether the EMP demonstrates that the activity will be carried out in a manner by which the environmental impacts and environmental risks of the activity will be reduced to a level that is as low as reasonable practicable and acceptable (Regulation 9(1)(c));
- the principles of ecologically sustainable development (Regulation 9(2)(a)); and
- any relevant matters raised through the public submission process.

In providing that advice, the NT EPA Act provides that the NT EPA may also have regard to any other matters it considers relevant.

ACTIVITY

Interest holder	Origin Energy Limited
Petroleum interest(s)	Exploration Permit (EP) 117 N2
Environment Management Plan (EMP) title	Beetaloo Basin Kyalla EP117 N2 Civil Construction
EMP document reference	NT-2015-15-MP034, prepared by Origin Energy Limited
Regulated activity	Civil construction activities on EP117, to enable Origin Energy Limited's 2019/20 exploration petroleum well program and involving: the installation or upgrading of access tracks, camp pad and lease pad; use of approved gravel pits to provide material for improving stability and integrity of access tracks and lease pads; installation of fencing, gates and grids; establishing fire protection and subsequent rehabilitation.
Public consultation	Public consultation on the EMP was not required under the Petroleum (Environment) Regulations as the EMP does not propose drilling or hydraulic fracturing activities.

NT EPA ADVICE

1. Is the EMP appropriate for the nature and scale of the regulated activity (regulation 9(1)(b))

The civil construction program comprises activities, including land clearing of 6.6 hectares (ha) and groundwater extraction of approximately 20 megalitres (ML). Civil construction works are restricted to the 2019 dry season, which reduces the risk of soil erosion and minimises effects on surface water flow.

Information on the location and scale of the proposal is provided in the EMP. The existing environment has been adequately described through baseline surveys and suitably understood. There are no areas of high conservation, or habitat values, or cultural significance in the vicinity of regulated activity.

The impacts and risks of the regulated activity have been identified by the proponent and demonstrate that these impacts and risks should be reduced to an acceptable level through the proposed mitigation and management measures. Environmental performance standards and measurement criteria have been provided in the EMP.

The level of detail and the quality of information provided in the EMP is sufficient to inform the evaluation, assessment and management of environmental impacts and risks, and meets the approval criteria under Regulation 9 for the Minister's decision about approval of the environment management plan.

2. Principles of ecologically sustainable development (regulation 9(2)(a))

Conservation of biological diversity and ecological integrity

The EMP for the regulated activity has been informed by extensive baseline flora and fauna surveys undertaken between 2004 and 2018.

The EMP identifies 20 listed threatened species as likely to occur on EP117, based on availability of suitable habitat. Of these, three species were considered to have a 'medium' likelihood of occurrence (Table 1).

Table 1: Listed threatened species assessed as potentially occurring in the vicinity of the regulated activity

Common name	Scientific name	EPBC Act	TPWC Act
Gouldian Finch	<i>Erythrura gouldiae</i>	Endangered	Vulnerable
Grey Falcon	<i>Falco hypoleucos</i>		Vulnerable
Crested Shrike-tit	<i>Falcunculus frontatus</i>	Vulnerable	Near Threatened

The Grey Falcon occurs sparsely across the NT and is highly mobile. The Crested Shrike-tit occurs patchily and sparsely in savanna woodland in the Top End of the NT. Clearing of the relatively small area of vegetation (approximately 6.6 ha) has been assessed by DENR as unlikely to result in significant impacts to regional populations of these species.

The Gouldian Finch has specific requirements including suitable roost trees (e.g. *Eucalyptus leucophloia*) and appropriate sources of grass seed and water. The Department of Environment and Natural Resources (DENR) Flora and Fauna Division advises that it is unlikely that the proposal area provides suitable breeding habitat and that the clearing activities would pose no significant risk to this species.

The NT EPA considers that implementation of the EMP for the regulated activity will ensure the conservation of biological diversity and ecological integrity.

Integration of long-term and short-term economic, environmental, social and equitable considerations

The regulated activity is low impact and of short duration. It forms one component of broader gas exploration aimed to inform the Interest holder on the potential for gas production in the Beetaloo Basin. In EMPs for subsequent stages (if they proceed) the proponent will need to address cumulative impacts.

The EMP assesses the environmental risks and impacts associated with the regulated activity and outlines appropriate avoidance and mitigation measures. This includes the assessment and management of social risks and impacts, including the appropriate management of cultural heritage, fire and weeds.

Origin has undertaken stakeholder engagement with landholders and land managers, traditional owners, the Northern Land Council (NLC) and NT Government agencies, and has committed to local participation in education, training, employment and enterprise opportunities.

There are no conflicting economic, environmental, social or equitable considerations associated with the regulated activity.

Precautionary principle

The NT EPA considers there is no threat of serious or irreversible damage from the regulated activity.

The Interest holder's investigations into the physical, biological and cultural environment provide a satisfactory scientific basis to assess potential environmental impacts and risks, and to identify measures to avoid or minimise those impacts and risks.

The NT EPA is of the view that the precautionary principle has been considered in assessing the regulated activity and has not been triggered due to no threat of serious or irreversible damage existing and the presence of a satisfactory scientific basis to assess potential impacts and risks.

Principle of inter-generational equity

The potential environmental impacts and risks associated with the regulated activity can be adequately avoided or managed through the management measures and monitoring programs proposed in the EMP. The NT EPA considers the estimated greenhouse gas emissions of 550 tonnes of carbon dioxide equivalent associated with the activity are minimal in the context of annual Northern Territory and National emissions, and potential impacts on the environment not significant.

The NT EPA considers that environmental values will be protected in the short and long term and that the health, diversity and productivity of the environment will be maintained for the benefit of future generations.

Promotion of improved valuation, pricing and incentive mechanisms

The Interest holder would be required to prevent, manage, mitigate and make good any contamination or pollution arising from the regulated activity, including contamination of soils, groundwater and surface waters through accidental spills.

All stages of the regulated activity, including progressive rehabilitation of all disturbed areas to an acceptable standard would be at the cost of the Interest holder.

3. Relevant matters raised through public submissions

Public consultation on the EMP was not required under the Petroleum (Environment) Regulations as the EMP does not propose drilling or hydraulic fracturing activities.

4. Environmental impacts and risks reduced to a level that is as low as reasonably practicable (ALARP) and acceptable (regulation 9(1)(c))

The EMP demonstrates a systematic identification and assessment of environmental impacts and risks associated with the regulated activity. Through this assessment the Interest holder concludes that the environmental impacts and risks have been reduced to a level that is ALARP and acceptable.

The Interest holder has undertaken a process to avoid impacts on environmental values, informed by appropriate baseline studies.

The measures proposed to minimise the disturbance footprint and manage environmental impacts and risks arising from the activity are appropriate and consistent with the draft NT Code of Practice: Onshore Petroleum Activities. The EMP demonstrates how the requirements of the draft Code of Practice will be met, including:

- compliance with the NT Land Clearing Guidelines with respect to the protection of soils, natural waterways and flora and fauna
- Erosion and Sediment Control Plan, developed by a suitably qualified person in accordance with the International Erosion Control Association Best Practice Erosion and Sediment Control standard
- the protection of flora and fauna through site selection and minimising the project footprint
- the management of threatening processes through the development of a Weed Management Plan that meets the requirements of DENR, and a Bushfire Management Plan
- contaminant and spill management strategies such as spill kits, designated workshop areas, compacted hardstand surfaces and the installation of containment bunds around pads
- commitment to develop a site-specific rehabilitation plan for each disturbed area once a determination has been made to decommission an asset.

The extraction of less than 20 ML of groundwater will require a licence under the *Water Act 1992*, with any impacts of groundwater extraction to be considered by the Controller of Water Resources.

The regulated activity is covered by an Authority Certificate issued by the Aboriginal Areas Protection Authority in March 2019.

The NT EPA considers that all reasonably practicable measures will be used to control the environmental impacts and risks, considering the level of consequence and the resources involved to mitigate them.

The environmental impacts and risks will be reduced to an acceptable level, considering the principles of ecologically sustainable development as discussed above, sensitivity of the local environment, and relevant standards and the draft Code of Practice.

5. Other relevant matters

Regulation 9 requires that an environment management plan give a comprehensive description of the regulated activity, including provision of a detailed timetable for the activity. To meet this requirement, the NT EPA recommends that the Interest holder be required to submit a detailed timetable for the regulated activity to DENR prior to approval of the EMP. The timetable should address all aspects of the activity and include, but not be limited to: dates for the implementation of commitments and associated hold points, dates for receipt of water licences, land access, development of sub-management plans, and progress reporting. The NT EPA recommends that the timetable be updated each month.

CONCLUSION

The NT EPA considers that, subject to the recommended EMP approval conditions, the EMP:

- is appropriate for the nature and scale of the regulated activity
- demonstrates that the regulated activity can be carried out in a manner that environmental impacts and risks of the activity will be reduced to a level that is as low as reasonable practicable and acceptable.

In providing this advice the NT EPA has considered the principles of ecologically sustainable development.

RECOMMENDATION

The NT EPA recommends that should the EMP for Origin Energy Limited Beetaloo Basin Kyalla EP117 N2 Civil Construction be approved, the following conditions be considered:

Condition 1: The Interest holder must submit to DENR a timetable for the regulated activity prior to commencement of the activity and update the timetable each month.

Condition 2: The Interest holder must develop in consultation with DENR a rehabilitation plan for each disturbed area appropriate to the nature and scale of the activity. At a minimum, the plan should include:

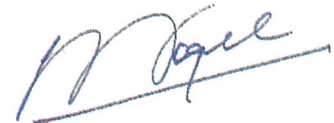
- i. final land use rehabilitation objectives and details of how rehabilitation objectives will be achieved
- ii. commitment to stakeholder engagement where relevant
- iii. implement progressive rehabilitation, with the borrow pits rehabilitated before the wet season, to avoid depressions, make them self-draining with topsoil and seeding for return of vegetation
- iv. continuation of rehabilitation and monitoring for three years after completion of activities or until demonstration that rehabilitation objectives have been met;
- v. monitoring and maintenance program for reinstated and rehabilitated areas, including rehabilitation criteria to be met
- vi. timetable for implementation.

Condition 3: The regulated activity be undertaken in compliance with relevant requirements of Part A.3 (Surface Activities) of the draft NT Code of Practice: Onshore Petroleum Activities 1 April 2019 (as amended from time to time). These include:

- i. The planning, design, locating and construction of petroleum infrastructure must have regard to the considerations of the Land Clearing Guidelines as published on the DENR

website and amended from time to time. Specific consideration must be given to the following:

- a. erosion and sediment controls
 - b. amenity
 - c. wildlife movement
 - d. biodiversity protection
 - e. water
 - f. weeds and
 - g. cultural heritage
- ii. Road corridor designs must minimise erosion of exposed road surfaces and drains, ensure that roads and pipeline surface water flow paths minimise erosion of all exposed surfaces and drains and comply with relevant guidelines such as the International Erosion Control Association Best Practice for Erosion and Sediment Control
 - iii. The Land Clearing Guidelines as published on the DENR website and amended from time to time must be complied with in relation to the protection of natural waterways as a result of land disturbance and ensure the following:
 - a. appropriate buffers are implemented around natural waterways
 - b. disturbance in the wet season is minimised
 - c. the number of crossing points is minimised
 - d. crossings are constructed at right angles to the waterway
 - e. erosion hazard, sedimentation and pollution of waterways is minimised through the appropriate design and implementation of best practice erosion and sediment control measures
 - iv. Land clearing for corridors, well pads and other operational areas must be kept to a minimum
 - v. Activities that involve wastewater or chemical storage must be carried out according to the wastewater management plan and spill management plan which are part of the EMP
 - vi. Progressive rehabilitation of significantly disturbed land, not required for the ongoing conduct of future activities, must commence as soon as practicable, but no longer than 12 months following cessation of the activity.



DR PAUL VOGEL AM MAICD
CHAIRMAN

NORTHERN TERRITORY ENVIRONMENT PROTECTION AUTHORITY

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