

Approval notice and statement of reasons

Petroleum (Environment) Regulations 2016 (NT) (Regulations)

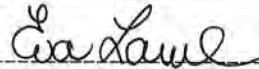
Interest holder	Origin Energy B2 Pty Ltd ABN 42 105 431 525
Petroleum interest/s	EP76
Environment management plan (EMP) title	Beetaloo Basin Velkerri Civil Construction EP76 S2
EMP document reference	Document number: NT-2050-15-MP-031 Revision 1.1 prepared by Origin Energy Limited dated 6 September 2019 NTEPA2019/0056-007~0001
DENR EMP assessment document reference	NTEPA2019/0056-007~0006
Regulated activity	Civil construction and ancillary activities on EP76 S2
Is the EMP a new plan submitted under reg 6 or a revision of a current plan submitted in accordance with reg 15?	New plan
Was the regulated activity referred ¹ for consideration whether an environmental impact statement or public environmental report was required?	Yes, in accordance with the <i>Environmental Assessment Act 1982</i>
Was an environmental impact statement or public environmental report required?	No NT EPA decision of 5 September 2019 NTEPA2019/0056-003~0001
Has an Authority Certificate under the <i>Northern Territory Aboriginal Sacred Sites Act 1984 (NT) (NTASSA)</i> been issued for the regulated activity?	Yes Authority Certificates C2019/039 NTEPA2019/0042-007~0036
Date an EMP compliant with reg 8 was first submitted under reg 6	3 July 2019
Dates within which the EMP was published for comment under reg 8A, if applicable	N/A
Date further information was required and submitted under reg 10, if applicable	Date of notice 13 August 2019; date submitted 16 August 2019 NTEPA2019/0056-004~0014
Date of resubmission notice under reg 11(2)(b), if applicable	N/A
Date EMP was resubmitted under reg 11(3), if applicable	N/A
Date a notice setting out a proposed timetable for consideration of the EMP was issued under reg 11(2A) if applicable	N/A
Proposed timetable given in notice under reg 11(2A) if applicable	Decision under regulation 11 by 1 October 2019
Where provided under s29B of the <i>Northern Territory Environment Protection Authority Act 2012 (NT) (NT EPA Act)</i> , the dates the Northern	Date of Minister's request for advice: 25 February 2019 Date of NT EPA Advice: 5 September 2019

¹ This means a referral under the *Environmental Assessment Act 1982 (NT)* or the *Environment Protection and Biodiversity Conservation Act 1994 (Cth) (EPBC Act)*.

Territory Environment Protection Authority (NT EPA) was requested to, and provided, advice on EMP NTEPA2019/0056-001~0001

Date of decision 26/9/2019

Decision maker


Signature

Hon Eva Dina Lawler MLA, Minister for
Environment and Natural Resources

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1. The EMP is approved. reg 11(2)(a)
2. The approval is subject to the following conditions: reg 12(2)

Condition 1: The interest holder must provide a report to the Department of Environment and Natural Resources (DENR) where there is a non-compliance of an approval condition within 48 hours of becoming aware of the non-compliance.

Condition 2: The interest holder must submit to DENR, an updated timetable for the regulated activity prior to the commencement of the activity and provide an updated timetable to DENR each month for the duration of the activity.

Condition 3: The interest holder must provide to DENR within 3 months of completion of regulated activity:

- i. high resolution satellite imagery of the civils disturbance area;
- ii. digital aerial photography or UAV imagery, ortho-rectified using ground control points measured using a differential GPS (DGPS) and spatial accuracy of approximately 1 – 2 metres; and
- iii. a spatial assessment report on the disturbance footprint for the approved regulated activity.

Condition 4: The interest holder must provide to DENR within 1 month of approval of this EMP, a geotechnical assessment report, developed by a suitably qualified geotechnical professional that:

- i. includes results of 60 cm soil cores, taken at three sites across the well pad area for analysis for particle size distribution;
- ii. assesses in-situ infiltration;
- iii. determines the amount of excavation and quantity of surface material that will be required to be stripped at the well pad to ensure a stable base;
- iv. determines stockpiling requirements of stripped material; and
- v. determines the amount of suitable gravel material required to build the well pad.

Condition 5: 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 within 3 months of commencement of the regulated activity. At a minimum, the plan should be based on the rehabilitation strategy described in the EMP and include:

- i. final land use rehabilitation objectives and details of how rehabilitation objectives will be achieved;

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- ii. commitment to stakeholder engagement where relevant;
- iii. implementation of progressive rehabilitation strategies, 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 demonstrated that rehabilitation objectives have been met;
- v. monitoring and maintenance program for reinstated and rehabilitated areas, including rehabilitation criteria to be met; and
- vi. a timetable for implementation.

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.

2 Material considered

1. The following material has been taken into account in making this decision:
 - a. Origin Beetaloo Basin Civil Construction EP76 S2 EMP, Revision 1.0, dated 16 August 2019
 - b. Origin Beetaloo Basin Civil Construction EP76 S2 EMP, Revision 1.1, dated 6 September 2019 (updated Appendix K)
 - c. The principles of ecologically sustainable development set out in reg 4 and the approval criteria.
 - d. The NT EPA decision and Statement of Reasons under the *Environmental Assessment Act 1982* relating to the regulated activity not requiring assessment.
 - e. The NT EPA advice provided at my request under s29B of the *Northern Territory Environment Protection Act 2012*.
 - f. The Authority Certificate issued under the *Northern Territory Aboriginal Sacred Sites Act 1989* and associated response provided by the Aboriginal Areas Protection Authority.
 - g. The Code of Practice: Onshore Petroleum Activities in the Northern Territory (Code) as set out in reg 4A.

3 Statement of reasons

1. The EMP meets the approval criterion in reg 9(1)(a), because it contains all the information required by Schedule 1 of the Regulations. reg 9(1)(a)
2. The EMP meets the approval criterion in reg 9(1)(b) for the following reasons: reg 9(1)(b)
 - a. The nature of the regulated activity is as follows:
 - i. A series of civil construction activities on EP76, required to enable Origin's 2019/20 exploration petroleum well program and involving: the installation of a camp pad and exploration lease pad, wet weather storage laydown yard, helipad, soil stockpile area; construction of a drilling sump, cellar and sediment basin on the cleared lease pad; extraction of gravel from existing gravel pits to provide material for the proposed works; installation of fencing, gates and grids; establishing fire protection and subsequent rehabilitation; routine maintenance and monitoring activities, minor ancillary works associated with the above activities. Gravel will be extracted from existing gravel pits to provide material for improving stability and integrity of the access tracks and lease pad.
 - ii. The program occurs at one well location (S2) on the Velkerri EP76 lease pad/site.
 - iii. The regulated activity does not include drilling, hydraulic fracturing or testing of a petroleum exploration well.
 - b. The scale of the regulated activity is as follows:
 - i. Civil construction across one well location Velkerri 76 S2, and comprises total land clearing of 7.4 hectares (ha). The regulated activity involves the installation of an exploration lease pad (4.5 ha), construction of a camp pad (1.2 ha), wet weather storage laydown yard (1.0 ha), helipad (0.5 ha), soils stockpile area (0.2 ha).

- ii. This regulated activity will use an estimated total of 20 megalitres (ML) of groundwater sourced from existing bores.
 - iii. The interest holder has estimated approximately 626 tonnes of carbon dioxide equivalent (tCO₂-e) greenhouse gas emissions from the regulated activity, comprising approximately 580 tCO₂-e generated from land clearing and 50 tCO₂-e generated from diesel combustion.
- c. The EMP contains an appropriate level of detail for the nature and scale of the activities proposed. The regulated activity is clearly described in the EMP. The description of the existing environment is informed by adequate baseline surveys from 2004 – 2018. The identification of environmental impacts and risks contains a sufficient level of detail to inform an assessment of the environmental impacts and risks. The EMP provides detail on environmental outcomes and performance standards, implementation strategy, personnel, emergency response plan, stakeholder engagement, legislative requirements, recording, monitoring, reporting and notifications to an appropriate level of quality and applicability.
- d. Having regard to the above, the information in the EMP is appropriate for the nature and scale of the regulated activity to which it relates.
3. The EMP meets the approval criterion in reg 9(1)(c) for the following reasons: reg 9(1)(c)
- a. I have considered reg 4(d) (which requires that I give fundamental consideration to the conservation of biological diversity and ecological integrity) as follows:
 - i. I believe the information I have regarding the existing biodiversity and ecosystems that are to be affected by the regulated activity; the effects that are likely; and the mitigation measures reasonably available, is sufficient.
 - ii. The regulated activity poses a low risk to the ecosystem within the Sturt Plateau bioregion. Given the relatively small area of impact (7.4 ha), and the very large area of similar habitat within the region, the regulated activity does not pose a significant risk to any regional populations of threatened species. Five threatened species were identified as having a 'medium' likelihood of occurrence within the regulated activity area. Due to the management strategies outlined in the EMP and the relatively small area of impact, it is unlikely that the regulated activity will pose a risk to the identified threatened species or exacerbate key threatening processes. Impacts and risks to flora, fauna, and ecosystems have been mitigated to an acceptable level through site selection and minimising the project footprint.
 - iii. The conservation of biological diversity and ecological integrity is vital to the achievement of ecologically sustainable development. Given the fundamental nature of this consideration, I have given central importance to the conservation of biodiversity and ecological integrity in weighing whether I am satisfied the approval criterion in reg 9(1)(c) has been met.
 - iv. If carried out in accordance with the EMP, the regulated activity is not considered to have an impact on the conservation of biological diversity. The EMP outlines measures to minimise impacts on affected environmental values. The potential impacts and risks of the civil construction activities identified in the EMP that relate to animal welfare, do not pose a significant risk to threatened species at a population level due to the low likelihood of threatened species inhabiting the area and implementation of control measures to avoid impacts to fauna. The EMP outlines measures to minimise impacts on flora and fauna, including site selection as a primary control in accordance with the Code. Site selection has involved consideration of cultural sites, ecological factors and sensitive receptors (e.g. adjacent patches

- of Lancewood and Bullwaddy), buffer zones and sub-surface geological features such as faults.
- v. Where relevant, management measures are consistent with the requirements of the Code and NT Land Clearing Guidelines.
 - vi. If carried out in accordance with the EMP, the regulated activity is not considered to have an impact on the conservation of ecological integrity.
- b. I have considered reg 4(a) (which concerns the integration of long-term and short-term economic, environmental, social and equitable considerations) as follows:
- i. The expression *environment* as defined in the *Petroleum Act 1984* relevantly includes the well-being of humans, structures made or modified by humans, amenity values of an area and economic, social and cultural conditions. The requirements under the Regulations include stakeholder engagement and a broad consideration of the environmental impacts and environmental risks of the regulated activity in question. In making that broad consideration, the long-term and short-term environmental impacts and environmental risks were identified and assessed in the EMP.
 - ii. The regulated activity forms one component of a broader onshore petroleum exploration program in the region. The EMP adequately assesses the environmental impacts and risks associated with the regulated activity and outlines appropriate avoidance and mitigation measures. This includes the assessment and management of social impacts and risks, including the appropriate management of cultural heritage. An Authority Certificate under the *Northern Territory Aboriginal Sacred Sites Act 1989* has been issued for the regulated activity. The interest holder has undertaken stakeholder engagement with landholders and land managers, traditional owners, the Northern Land Council (NLC) and NT Government agencies, in accordance with the provisions outlined in regulations 7 of the Regulations and section 41(6) of the *Aboriginal Land Rights (Northern Territory) Act 1976 (Cth)*. I received updated stakeholder engagement information provided in appendix K of the EMP on 6 September 2019 that demonstrated stakeholder engagement had been undertaken in accordance with Schedule 1 Part 3 regulation 9.
 - iii. The EMP has identified the quantity of groundwater extraction from this regulated activity (20 ML); cumulative groundwater extraction from EMPs either approved or under assessment is approximately 78 ML. The total volume of groundwater to be extracted is within the volume of groundwater the interest holder is permitted to extract under its water extraction licence granted under the *Water Act 1992* on 8 May 2019 (Licence No. GRF10285). This extraction licence has a Maximum Water Entitlement of 175 ML/year for three years. The water entitlement takes into account the requirements for related exploration activities on EP76 including camp requirements, and future petroleum well construction and hydraulic fracturing² activities. The granted water extraction licence is less than 0.01% of cumulative current groundwater extraction from the Gum Ridge Formation aquifer.
 - iv. The EMP is considered to have adequately assessed and integrated economic, social and environmental considerations.

² Hydraulic fracturing has the same meaning as 'hydraulic fracture stimulation' described in [the Code](#).

- v. I observe that in carrying out the regulated activity there is no particular contest between economic, social and environmental considerations that requires further mention.
- vi. Accordingly, I am satisfied that the concept of integration has been taken into account.
- c. I have considered reg 4(b) (which concerns the 'precautionary principle') as follows:
 - i. The regulated activity does not pose a threat of serious or irreversible environmental damage which warrants the application of the precautionary principle.
- d. I have considered reg 4(c) (which concerns the principle of intergenerational equity) as follows:
 - i. The environmental burdens of the regulated activity will not disproportionately affect particular stakeholders. The cumulative greenhouse gas emissions estimate from this regulated activity and previously approved EMPs for the Kyalla civil construction and hydraulic fracturing activities (EP117) are approximately 156,000 tCO₂-e. This represents less than 1% of annual Northern Territory emissions and 0.03% of annual Australian emissions reported for 2017.³ I consider the cumulative greenhouse gas emissions to be minimal in the context of Northern Territory and Australian emissions.
 - ii. Cumulative impacts of groundwater extraction have been assessed and will be regulated by a water extraction licence under the *Water Act 1992*.
 - iii. Cultural values will be protected through the application of an Authority Certificate issued to the interest holder under the *Northern Territory Aboriginal Sacred Sites Act 1989* and measures for reporting on discovery of archaeological sites.

Accordingly I do not believe that the carrying out of the regulated activity in accordance with the EMP would have an effect contrary to the principle of intergenerational equity.

- e. I have considered reg 4(e) (which concerns the promotion of improved valuation, pricing and incentive mechanisms) as follows:
 - i. In accordance with the 'polluter pays principle':
 - (1) The interest holder will cover the cost of remediation of the impacts of the regulated activity, as is set out in Section 4.8 of the EMP.
 - (2) If the interest holder fails to remediate the impacts, an environmental rehabilitation bond will be provided by the interest holder which is considered to be adequate to cover the resulting costs.
- f. No environmental report or statement has been required to be prepared in relation to the regulated activity. The NT EPA was not of the opinion that the regulated activity is capable of having a significant effect on the environment. reg 9(2)(b)
- g. The NT EPA has provided the following in relation to the regulated activity and the EMP:

³ NT and Australian GHG emissions in 2017 were approximately 16.5 million tonnes and 535 million tonnes, respectively, as reported in the DOEE (2019) *State and Territory Greenhouse Gas Inventories 2017*. <http://www.environment.gov.au/system/files/resources/917a98ab-85cd-45e4-ae7a-bcd1b914cfb2/files/state-territory-inventories-2017.pdf>

- i. In accordance with my request under s29B of the NT EPA Act, the NT EPA reviewed the EMP for the regulated activity against the approval criteria in regulations 9(1)(b), 9(1)(c) and 9(2)(a) of the Regulations and other matters the NT EPA considered relevant, and has provided advice about the EMP.
Relevantly:
 - (1) The NT EPA recommended that should the EMP be approved, it be subject to five conditions. The NT EPA's recommendations have informed the conditions of this approval.
 - (2) The NT EPA concluded that the EMP for the regulated activity, subject to the recommended approval conditions, is appropriate for the nature and scale of the regulated activity and demonstrates that the regulated activity can be carried out in a manner that environmental impacts and environmental risks of the activity will be reduced to a level that is as low as reasonably practical and acceptable.
- ii. The content of the NT EPA's advice and recommendations have been incorporated into the comments in this statement of reasons and the conditions in the Approval Notice.
- h. The existing environment along with its particular values and sensitivities is appropriately identified in Section 4 of the EMP. reg 9(1)(c)
- i. The anticipated environmental risks are appropriately identified in Section 7 and Appendix L of the EMP.
- j. I agree with the risk assessment set out in Section 7 and Appendix L of the EMP, and to the extent I do not agree I have imposed a condition or conditions to address the relevant risk or risks.
- k. The anticipated environmental impacts are appropriately identified in Section 7.5 of the EMP. As the regulated activity forms the first component of an exploration program, cumulative impacts for groundwater and greenhouse gas emissions have been identified and assessed. In EMPs for subsequent stages (if they proceed) the interest holder will need to continue to address cumulative effects.
- l. I am satisfied that the concerns and issues raised have been adequately mitigated and/or addressed in this EMP.
- m. There are no environmental impacts or environmental risks relating to the proposed regulated activity which I consider to be unacceptable.
- n. Overall, having regard to the above, I am satisfied that the EMP demonstrates that the regulated activity is to be carried out in manner by which the environmental impacts and environmental risks are reduced to a level that is:
 - i. as low as reasonably practicable; and
 - ii. acceptable.