



Application for Licence Amendment

Part V Division 3 of the *Environmental Protection Act 1986*

Licence Number	L8553/2011/1
Licence Holder	Woodside Energy Global Pty Ltd
ACN	006 918 832
File Number	INS-0001795
Premises	Macedon Gas Project Part of Lot 500 on Deposited Plan 69197 TALANDJI WA 6710
Date of Report	20 August 2025
Decision	Revised licence granted

MANAGER, HEAVY INDUSTRIES

an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

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1. Decision summary

Licence L8553/2011/1 is held by Woodside Energy Global Pty Ltd (Licence Holder) for the Macedon Gas Project (the Premises), located 15km southwest of Onslow.

This Amendment Report documents the assessment of potential risks to the environment and public health from proposed changes to the emissions and discharges during the operation of the Premises. As a result of this assessment, Revised Licence L8553/2011/1 has been granted.

The Revised Licence issued as a result of this amendment supersedes the existing Licence granted in relation to the Premises. The Revised Licence has been granted in a new format with existing conditions being transferred, but not reassessed, to the new format.

2. Scope of assessment

2.1 Regulatory framework

In completing the assessment documented in this Amendment Report, the department has considered and given due regard to its Regulatory Framework and relevant policy documents which are available at <https://dwer.wa.gov.au/regulatory-documents>.

2.2 Application summary

On 26 May 2025, the Licence Holder submitted an application to the department to amend Licence L8553/2011/1 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). The application seeks an amendment to the Licence to authorise the operation of a wet gas compressor. Construction and commissioning of the infrastructure was completed under works approval W6746/2022/1.

The application also seeks the following amendments relating to air emissions monitoring:

- Alter the specified averaging period from 60 minutes to 30 minutes; and
- Include US EPA Method 18 as an alternative method for the sampling of volatile organic compounds (VOCs).

2.2.1 Background

The premises processes gas from the Macedon Gas Field (4 wells within production licence WA-45-L) to produce domestic gas supply. The gas field, which is located 100km west of Onslow, is connected via a subsea pipeline to the onshore gas treatment and compression plant at Ashburton North (15km southwest of Onslow). The sales gas pipeline connects the onshore facility to the Dampier to Bunbury Natural Gas (DBNG) Pipeline. Compression of gas is required to maintain production and compensate for a decline in reservoir pressure.

2.2.2 Works approval W6746/2022/1

Construction of the plant was authorised under works approval W4865/2011/1. Initial plant design included 3 x Mars 100 wet gas compressor turbines intended to support operations as reservoir pressure declines. Originally intended for use in future operations (upon declining reservoir pressure), the wet compressors were never installed.

In October 2022 the Licence Holder applied for a works approval (W6746/2022/1) to construct a single Taurus front-end compressor to replace the 3 Mars compressors included in the original plant design. No change to the approved design capacity of the premises results from the design change.

Construction of the Taurus compressor turbine was completed in July 2024. An environmental compliance report was submitted by the Licence Holder shortly after to demonstrate that the

authorised works had been completed in accordance with the conditions of the works approval. The department reviewed the report and was generally satisfied that the works had been completed in accordance with the design, construction and installation requirements specified in the works approval.

Commissioning activities for the Taurus compressor were undertaken between August and December 2024 and an Environmental Commissioning Report subsequently submitted in January 2025. Following a review of the report, the department concluded that it satisfactorily demonstrated compliance with the conditions outlined in the works approval.

2.3 Part IV of the EP Act

The proposal to construct and operate the subsea pipeline, onshore gas treatment and compression plant, and sales gas pipeline has been assessed under Part IV of the EP Act. Ministerial Statement (MS) 844 was approved in October 2010.

In relation to the gas treatment plant, the MS outlines the requirement for operations resulting in air emissions to meet best practice guidelines, for greenhouse gas (GHG) emission abatement and reporting and improvement as well as the rehabilitation of land post decommissioning. In addition, the MS outlines several requirements in relation to the construction and maintenance of the pipeline.

Advice provided by EPA Services during the assessment of the works approval (W6746/2022/1) identified that while the addition of the single Taurus 70 front-end compressor in place of three Solar Mars 100 Wet Gas compressors is not significantly different to the approved proposal, conditions of MS 844 required an updated Air Emissions Best Practice Report (AEBPR) be submitted.

On 19 June 2023, the EPA approved the updated AEBPR, concluding that the proponent had demonstrated best practice for plant equipment in relation to the Works Approval application.

3. Risk assessment

The risks associated with the emissions and discharges from the operation of the wet gas compressor were assessed under works approval W6746/2022/1 in accordance with the *Guidance Statement Risk Assessment* (DER 2017). Key emissions identified during the assessment relate to:

- increase point source emissions to air associated with the operation of the Taurus front-end compressor;
- noise impacts;
- light emissions; and
- contamination resulting from loss of containment of hazardous materials such as oils, lubricants, contaminated stormwater, etc.

No changes to the risk profile of the premises have been identified through review of the construction compliance and commissioning documentation or the licence amendment application.

3.1 Noise emissions

In its assessment of works approval W6746/2022/1, the delegated officer considered whether revised inlet compressor design would impact noise emissions previously predicted from the premises. Based on the information provided at the time of the assessment, it was expected that compliance with the assigned noise levels specified in the *Environmental Protection (Noise) Regulations 1997* (Noise Regulations) would be marginally achieved at the closest receiver as

a result of the change, but otherwise achieved with a higher margin at other receivers.

Commissioning of the Taurus turbine was undertaken in accordance with the *Macedon LPO Project Environmental Commissioning Plan* as required by condition 6 of works approval W6746/2022/1. Included in the commissioning plan was a commitment by the Licence Holder to undertake noise monitoring to verify noise emissions from the installed turbine and impact on sensitive receptors. Both far field monitoring (i.e. monitoring at sensitive receptor locations including Old Onslow, Five Mile Pool and Wheatstone Village) and near field monitoring (i.e. monitoring at locations within the plant boundary) was undertaken.

The results of noise monitoring was subject to technical review by the department's Environmental Noise Regulation Branch. The review determined that the monitoring undertaken and subsequent data analysis, could not sufficiently verify noise emissions from the premises and demonstrate compliance with the assigned noise levels specified in the Noise Regulations. This was based on the following observations:

- The results of noise monitoring undertaken at far-field locations was not subject to sufficient detailed analysis. For example:
 - the data analysis did not consider the set-up of monitoring equipment (e.g. logging period, parameters, etc.) and implications of this on the data;
 - weather conditions experienced during the monitoring period were not considered; and
 - tabulated data was provided for an entire time period (e.g. 0700 to 1900 (day) or 2200 to 0700 (night)) and therefore likely to include noise from many unwanted noise sources.
- Based on the original noise modelling study, noise impacts from the Macedon Gas Plant are likely to be low at receiver locations such as Five Mile Pool and therefore are likely difficult to be characterised by direct noise measurement.
- The fact that noise levels at Five Mile Pool were reported to be lower post-commissioning than pre-construction is counter-intuitive and suggests that flaws exist in the analysis of the data.
- Noise monitoring recorded on the premises was limited to areas in and around the installed compressor and did not include an assessment of 'before' and 'after' emissions. Therefore, the data collected is not able to be used to assess the impacts of the new compressor or the whole premises, either at the premises or at distant receivers.

Although the distance to the nearest noise receptors (3,900 meters) suggests that impacts to these receptors are unlikely, further validation is necessary. While the delegated officer considers that further monitoring at far-field receptors is not necessary, to better quantify noise levels from the premises and demonstrate compliance with assigned noise levels, the Licence Holder is required to update the 2010 noise model (HAS 2010) to reflect the current 'as built' conditions. This updated model should incorporate all significant noise sources now that the plant is fully operational. The output of the revised model will be used to assess the potential for noise impacts at any surrounding area or receptor near the premises.

4. Decision

The regulatory controls for the operational phase of the Taurus compressor turbine were previously considered and determined through works approval W6746/2022/1. The delegated officer has reviewed the construction compliance and commissioning documentation relating to the compressor and is satisfied the works have been constructed in accordance with W6746/2022/1. Accordingly, the existing licence (L8553/2011/1) has been amended to include the necessary authorisation for operation of the new infrastructure.

In determining the licence conditions, the delegated officer has had regard for the regulatory controls recommended through works approvals and W4865/2011/1 and W6746/2022/1. The department's assessment of emissions and discharges arising from operation of the Taurus compressor turbine indicated that existing controls on the licence are sufficient for ensuring an acceptable level of risk. It was recommended that annual stack monitoring requirements of the existing licence are applied to the new infrastructure. Conditions have been updated accordingly.

Noise emissions

As outlined in section 3.1, while the delegated officer considers that the likelihood of noise impacting sensitive receptors is low, further validation of noise emissions is required to confirm that the operation of the premises complies with the assigned noise levels outlined in the Noise Regulations. The Licence Holder is required to submit an updated noise model to the department demonstrating compliance in all areas surrounding the premises.

Additional amendments

Amendments to conditions relating to air quality monitoring requested by the Licence Holder have been considered. Acknowledging that emissions from gas turbines are generally stable during normal operations, and the overall risk of air emissions from the premises, the reduced sample duration is considered suitable. Conditions relating to stack testing have been updated accordingly.

The proposed test method for VOCs is considered a standard method for this type of pollutant and therefore has been included on the licence. The required sample time for measuring VOCs is specified to align with the test method.

Review of prescribed categories

In amending the licence the delegated officer has also reviewed prescribed categories that are relevant to the activities undertaken on the premises.

Licence and associated works approvals granted for the premises were previously granted for Category 10 and Category 34 activities as described in Schedule 1 of the *Environmental Protection Regulations 1987*:

Category 10 - Oil or gas production from wells: premises, whether on land or offshore, on which crude oil, natural gas or condensate is extracted from below the surface of the land or seabed, as the case requires, and is treated or separated to produced stabilised crude oil, purified natural gas or liquefied hydrocarbon gases.

Category 34 – Oil or gas refining: premises on which crude oil, condensate or gas is refined or processed.

The prescribed premises defined in the current licence (Schedule 1 of Licence L8553/2011/1) is limited to the gas processing infrastructure at the Macedon Gas Plant site and does not include the gas gathering infrastructure such as extraction/production wells or flowlines (wells are located 100km offshore within Commonwealth waters). On review of the application of Category 10, the delegated officer determined that for Category 10 to apply, the premises must be one on which both of the following occurs:

- the extraction of crude oil, natural gas or condensate (collectively “gas”); and
- the treatment or separation of that gas.

Noting that no extraction occurs on the premises, the delegated officer has determined that Category 10 does not apply and therefore has removed this category from the licence.

5. Consultation

The Licence Holder was provided with a draft amendment on 7 July 2025 and the Licence

Holder provided comment on 8 August 2025. A summary of the Licence Holder’s comments on the risk assessment and draft licence is provided in Appendix 1.

6. Conclusion

Based on the assessment in this Amendment Report, the delegated officer has determined that a Revised Licence will be granted, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

6.1 Summary of amendments

Table 1 provides a summary of the proposed amendments and will act as record of implemented changes. All proposed changes have been incorporated into the Revised Licence as part of the amendment process.

Table 1: Summary of licence amendments

Condition no.	Proposed amendments
Prescribed premises categories	Category 10 removed (refer to section 4) Licence Holder updated to align with new business name (no change to ACN) Description of premises updated noting that premises comprises only part of Lot 500.
2 and 3	Wet gas sales compressor (A10) included as an authorised discharge point and associated emission limit included. Particulates and sulfur dioxide included in the authorised emissions noting that these are common combustion emissions associated with these emission sources and have been previously assessed through Licence L8553/2011/1 and Works Approval W6746/2022/1
4 - 7	Inclusion of requirement to update the noise model for the premises and submit to the department. Where noise levels are predicted to exceed the assigned noise levels, the Licence Holder is required to prepare and submit a plan to implement measures to prevent non-compliance.
12 (Table 4)	Conditions amended as follows: <ul style="list-style-type: none"> Averaging period changed from 60 minutes to 30 minutes for Nox and CO; and USEPA Method 18 included as an alternative method for measuring VOC emissions. Averaging period requirements updated to align with the method requirements.
Schedule 1: Maps	Map of emission points updated to include new infrastructure.

The licence has also been converted to the new licensing format. The obligations of the Licence Holder have not changed and the department has not undertaken any additional risk assessment of the Premises related to transferring existing conditions to the new format.

In updating the licence format, the CEO has:

- updated the format and appearance of the licence;
- deleted the redundant AACR form set out in Schedule 1 of the previous licence and advised the Licence Holder to obtain the form from the department’s website;
- revised licence condition numbers, and removed any redundant conditions and realigned condition numbers for numerical consistency; and
- corrected clerical mistakes and unintentional errors.

The summary of the amendments relating to the transfer to the revised licence format is outlined in Table 2.

Table 2: Summary of licence amendments relating to the revised format.

Existing condition	Condition summary	Revised licence condition	Conversion notes
N/A	Expiry Date: 5 February 2017	Expiry Date: 5 February 2028	In accordance with the Notice of Amendment of Licence Expiry Dates (29/04/2016)
1.1.1 1.1.2	Interpretation and definitions	N/A Interpretation section, Definitions and Table 1	Redundant condition. Revised to current licensing format. Definitions added that were previously omitted for "AS 4323.1" and "AS/NZS 5667.11" The definition of 'freeboard' has been revised to more accurately reflect its intended meaning.
1.1.3	Australian or other standard		
1.1.4	Reference to code of practice		
1.2.1	Emissions	N/A Interpretation section.	Redundant condition. Revised to current licensing format.
1.2.2	Pollution control and monitoring equipment	N/A	Redundant condition. Adequately covered by alternative existing conditions. Deleted from licence.
1.2.3	Storage of environmentally hazardous materials	N/A	Redundant condition. Adequately regulated by the <i>Dangerous Goods Safety Act 2004</i> . Deleted from licence.
1.2.4	Recovery and removal of spills	N/A	Redundant condition. Adequately covered by <i>EP (Unauthorised Discharges) Regulations 2004</i> . Deleted from licence.
1.2.5	Prevention of contamination and containment of contaminated stormwater	N/A	Redundant condition. Adequately covered by alternative existing conditions and <i>EP (Unauthorised Discharges) Regulations 2004</i> . Deleted from licence.
1.3.1 Table 1.3.1	Premises Operations	Condition 1, Table 1	Revised to current licensing format. Inclusion of the abbreviation for Evaporation Pond 2 (E2) within Table 1. The phrase 'top of embankment' has been removed from item (c) under the Operational Requirement in Table 1, as the updated definition of 'freeboard' now sufficiently covers this aspect.
2.1.1	Record and investigate exceedances of limits or targets	N/A	Redundant condition. Deleted from licence.
2.1.2 and 2.1.3	Point source emissions to air	Conditions 2 and 3	Updated numbering. Condition 3 revised to current licensing format.

Existing condition	Condition summary	Revised licence condition	Conversion notes
2.7.1	Odour	N/A	Redundant condition. Adequately covered by s.49 of the EP Act 1986. Deleted from licence.
3.1.1	Methods for monitoring	Condition 8	Revised to current licensing format.
3.1.2	Frequency of monitoring	Condition 9	Sampling method for groundwater monitoring included that was previously omitted (AS/NZS 5667.11).
3.1.3	Recording production / throughput data	N/A	Redundant condition. Deleted from licence.
3.1.4	Calibration of monitoring equipment	Condition 10	Revised to current licensing format.
3.1.5	Notification of calibration	Condition 11	
3.2.1 – 3.2.2	Monitoring of point source emissions to air	Conditions 12 and 13	Revised to current licensing format.
3.2.3	NATA accredited analysis	Condition 14	
3.8.1	Groundwater monitoring	Condition 15	
5.1.1	Records	Condition 17 and 18	
5.1.2		N/A	Redundant condition. Deleted from Licence.
5.1.3	Records (Annual Audit Compliance Report)	Condition 19	Revised to current licensing format.
5.1.4	Records (Complaints)	Condition 16	
5.2.1 and 5.2.2	Reporting (Annual Environmental Report)	Condition 20	
5.3.1	Notification	N/A	Redundant condition. Notification requirements per s72 of the EP Act. Deleted from licence.
Schedule 1: Maps	Premises map	Schedule 1: Maps	Premises maps updated
Schedule 2 Reporting & notifications	Annual Audit Compliance Report Form AR1, GR1 and N1 Notification	N/A	Redundant attachment. Deleted from Licence AACR form accessed at www.wa.gov.au

References

1. Department of Environment Regulation (DER) 2016, *Guidance Statement: Environmental Siting*, Perth, Western Australia.
2. DER 2017, *Guidance Statement: Risk Assessments*, Perth, Western Australia.
3. DER 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
4. Herring Storer Acoustics (HAS) 2010, *BHP Billiton Macedon Gas Development Review of Acoustic Assessment* (Letter dated 18 March 2010)

Appendix 1: Summary of Licence Holder's comments

Condition	Summary of Licence Holder's comment	Department's response
Condition 1	Requested that the wording of this condition align with previous wording noting that the term "must be disposed of to" evaporation ponds does not provide flexibility for alternative suitable offsite disposal options.	Wording adjusted to allow flexibility for offsite disposal if needed noting that the <i>Environmental Protection (Controlled Waste) Regulations 2004</i> will apply in this instance and offsite disposal will need to occur at an appropriately authorised facility.
Condition 2	Requested condition wording revert to the existing wording in the licence rather than the proposed changes which are outside the scope of the amendment application and are considered to alter existing obligations.	The condition wording was reverted to align with the existing licence as the intent of any administrative changes is not to alter existing obligations.
	Table 2 amended to include correct stack height of the wet gas compressor.	Accepted.
Condition 3 (Table 3)	Emission point A10 was incorrectly omitted from the table.	A10 included. Limit aligns with that of the application and existing sale gas compressors.
Conditions 4 – 7	Amend dates as follows to allow sufficient time to undertaken work: <ul style="list-style-type: none"> Condition 4: 30 June 2026; Condition 4(d): 31 July 2026; and Conditions 6 and 7: 30 September 2026. 	Accepted. The Delegated Officer considers the revised dates suitable considering that the likelihood for exceedance of the Noise Regulations, and therefore impact to noise receptors, is low. Should modelling indicate non-compliance with the Noise Regulations, the Licence Holder will be required to implement measures to ensure the premises is achieving the relevant assigned noise levels. Noise complaints are required to be recorded and reported in accordance with conditions 16 and 20 of the licence. No noise complaints have been received to date. Also included specific reference to previous 2010 modelling for clarify.
Condition 8(b)	Amend the reference to "AS/NZS 5667.11" to "AS/NZS 5667.1".	The condition wording was reverted to align with the existing licence as the intent of any administrative changes is not to alter existing obligations.
Condition 12 (Table 4)	Requested that USEPA Method 25A is retained as an alternative test method.	Accepted.