Attachment 8 - Application to Amend L8752/2013/2

Supporting Information

Woodside Burrup Pty Ltd

April 2026

Rev 0

EXECUTIVE SUMMARY

The Pluto Liquefied Natural Gas (LNG) Project Licence L8752/2013/2 under Part V of the *Environmental Protection Act 1986* ('EP Act'), held by Woodside Burrup Pty Ltd ('Woodside'), is due to expire on 31 July 2026. This supplementary document provides additional information to support the application form requesting a 4-year extension of the licence beyond the current expiry date.

The requested extension to the licence is being sought in accordance with Department of Water and Environmental Regulation (DWER) guidance and taking into account that the Pluto LNG Facility (Pluto Train 1) has, and will continue to, undertake normal operations in the context of licenced activities during the requested extension period with no change to authorised emissions or discharges and no change to the risk profile of the licenced premises. It is noted that the newly constructed Pluto Train 2 will continue to progress through environmental commissioning and time limited operations during this extension period, regulated in parallel under Works Approval W6332/2019/1.

As specified in *Guidance Statement: Licence Duration* (DWER, 2016), licences can be issued for a period of up to 20 years. Given the existing licence has been in operation for over 12 years, it is considered that the most appropriate time for a full renewal of the existing Pluto LNG Licence will be once Train 2 Works Approval environmental commissioning requirements have been completed, and Train 2 operations are ready to be incorporated into a single Pluto LNG Licence encompassing both Train 1 and Train 2.

The extension request is supported by the existing approvals under both Part IV and V of the EP Act remaining appropriate to the activity and the management of associated risks and impacts. The Pluto Facility has demonstrated environmental and compliance performance over more than 12 years of operation through historical monitoring and compliance reporting, including adherence to established emissions and discharge limits and mitigation measures implemented in accordance with approved environmental management plans and procedures.

1. INTRODUCTION

The Pluto LNG Facility processes hydrocarbon gas and liquids piped onshore from the offshore Pluto riser platform to produce LNG and condensate. Development of the Pluto LNG Facility was referred to the Western Australian Environmental Protection Authority (EPA) for assessment in April 2006 and the then Commonwealth Department of Environment and Heritage (DEH) in August 2006 (EPBC 2006/2968). The project was assessed through a Public Environment Report/Review and achieved primary environmental approvals via EPBC 2006/2968, and Ministerial Statement 757 (supported by MS850 and MS1208). Key environmental aspects of the activity continue to be managed in accordance with these approvals and the associated management plans.

The Pluto LNG Facility was commissioned in 2012, with Operational Licence L8752/2013/1 issued under Part V of the EP Act in July 2013, followed by a licence reissue in 2014 as L8752/2013/2. Most recently, a licence amendment was granted by DWER in February 2025, authorising modifications to the existing Pluto Train 1 Regenerative Thermal Oxidiser (RTO) to support the continued safe and reliable operation of the facility. L8752/2013/2 is due to expire on 31 July 2026. This supplementary document provides additional information to support the application form seeking a 4-year extension to the licence period under s. 59(1)(k) of the EP Act, drawing on environmental analysis of Pluto LNG's strong performance and historical compliance with established limits and mitigation strategies over the past 12 years.

2. JUSTIFICATION FOR EXTENSION REQUEST

Guidance Statement: Licence Duration (DWER, 2016) indicates that licences may be granted for a period of up to a maximum of 20 years, acknowledging the Department's preference for longer term licences and the administrative burden a full licence renewal imposes on industry and the Department. Woodside therefore submits this application for an extension to L8752/2013/2 for a period of 4 years, until 31 July 2030. This would provide for a total licence term of 16 years. The scope of the application is to extend the duration of the licence only (in accordance with s. 59(1)(k) of the EP Act), with no change to authorised emissions or discharges and no change to the risk profile of the premises.

Supported by Woodside's historic performance under the current licence, which is set out below, the requested extension will provide an appropriate timeframe for a full renewal for the Pluto LNG Licence (subject to DWER guidance) during Pluto Train 2 time-limited operations under Works Approval W6332/2019/1. Aligning the timing of a full licence renewal with the commencement and integration of Train 2 operations, would avoid inefficiencies and administrative burden associated with multiple licence assessments, and enable a comprehensive, single review and incorporation of both Train 1 and Train 2 operations into a single Pluto LNG Facility Licence.

3. PLUTO LNG FACILITY HISTORICAL ENVIRONMENTAL PERFORMANCE

Environmental performance of the Pluto LNG Facility is controlled in accordance with management plans required under Ministerial Statements 757, 850, 1208, requirements of Licence L8752/2013/2, and in line with Woodside's Environment and Biodiversity Policy.

Woodside has established management plans that outline procedures for controlling environmental risks and impacts, aiming to minimise impacts and enhance environmental outcomes. These management plans, made pursuant to Part IV approvals, specify objectives, methodologies, and performance indicators used to measure progress. The following sections outline a summary of Licence L8752/2013/2 compliance and performance information, the key management plans in place, the compliance performance reports for these, and align with the Licence structure: Emissions to Air, and Discharges to Land and Water.

For further information relating to environmental management for Pluto LNG Facility, refer to the current version of the management plans, and performance and compliance reports available online at: Pluto LNG Facility Environmental Compliance Reporting - Woodside Energy.

Table 1: Summary of Pluto LNG Facility Performance and Compliance History with L8752/2013/2

Reporting Year	Compliance as reported in Annual Audit Compliance Report and Annual Environment Report
2013-2014	Compliant
2014-2015	Compliant
2015-2016	Compliant
2016-2017	Minor exceedance (discharge to land) – refer to Section 3.2
2017-2018	Compliant
2018-2019	Compliant
2020-2021	Minor exceedance (discharge to land) – refer to Section 3.2
2021-2022	Compliant
2022-2023	Compliant
2023-2024	Compliant
2024-2025	Compliant
2025-2026 (yet to be submitted)	Compliant

3.1 Emissions to Air

Table 2: Pluto LNG Facility Emissions to Air focus areas, objectives, methodologies, and key performance indicators.

Relevant Management Plan	Environmental Objectives	Methodologies used to achieve objectives	Key indicators of performance
Air Quality Management Plan Revision 4 (2019) – approved for Pluto LNG Facility two-train operations	• Ensure best available practicable and efficient technologies are used to minimise and monitor air emissions from the plant; • Minimise environmental impacts associated with air emissions; • Minimise impact on Indigenous rock art on the Burrup Peninsula; • Ensure management is in accordance with objectives defined in Ministerial Statement No. 757 and Approval to Take a Controlled Action EPBC2006/2968; and • Adopt best practice pollution control measures. • Light emissions are managed in accordance with Sea Turtle Management Plan Revision 14 (2025) • Cultural Heritage in and around the facility is also managed in accordance with the Cultural Heritage Management Plan – Commissioning and Operations (2012).	• Dry low nitrogen oxides (NOx) emissions control systems on gas turbines; • Recovery of waste heat from several gas turbine units; • Waste gas from the Acid Gas Removal Unit treated through a Regenerative Thermal Oxidiser (RTO); • Rejection and destruction of BTEX through the RTO; • Design for 'no continuous flaring'; • Use of nitrogen to maintain the continuous purge of flare piping; • Air monitoring (ambient & point source emissions, dark smoke, nitrogen deposition) to validate expectations; and • Reporting of emissions in accordance with legal and other requirements.	• Achievement of air emissions targets and limits specified the within the Plan, and Part V Licence limits under the Environmental Protection Act 1986 (WA) (L8752/2013/2); • Part V Licence Annual Audit Compliance Report; • Part V Annual Environmental Report; • Air Quality Management Plan reporting; • Annual Environmental Compliance Report; • Dark smoke events reported to DWER as soon as practicable; • Ambient air quality monitoring program; • Participation in the State Murujuga Rock Art Monitoring Program[1]; and • Annual reporting to the National Pollutant Inventory (NPI) and National Greenhouse and Energy Reporting (NGER) scheme
Greenhouse Gas Abatement Program (GGAP), Revision 4 (2025)[2] – approved for Pluto LNG Facility two-train operations	• Describe how the plant is designed and operated in a manner which achieves reductions in greenhouse gas emissions as far as practicable, consistent with best-practice design and operations. • Demonstrate ongoing identification, assessment and evaluation of	• Best-practice facility design and operational controls, including (but not limited to): Acid Gas Removal, Thermal Combustion Unit, Waste Heat Recovery, Tandem Dry Gas Seals, optimising nitrogen content in the fuel gas, floating roof	• Annual greenhouse gas emissions calculations and reporting as required by the National Greenhouse and Energy Reporting Act 2007 (Cth);

[1] The Murujuga Rock Art Monitoring Program (MRAMP) second year report and the associated Interim Environmental Quality Criteria (EQC) were published by Curtin University in May 2025. The Year 2 Summary Report (DWER, 2025) notes: '*The research indicates that the current levels of the pollutants of most concern for the rock art are lower than the interim guideline levels'* and *'Emissions measured to date are below the interim EQC, so there is currently a low risk of impact to the rock art.'* Woodside will continue to support the MRAMP and align with guidance from DWER as future monitoring results become available.

[2] At time of writing, the 2025 Pluto GGAP (Revision 4) is in effect and incorporates the revised conditions set out in Ministerial Statement (MS) 1208 Condition 12, published 15 August 2023. Since publication of MS 1208, the State Government released its updated "Greenhouse Gas Emissions Policy for Major Projects" on 15 October 2024. The updated policy responds to reforms to the SGM which establishes a nationally consistent approach to reducing GHG emissions, and at time of writing a Section 46 inquiry is still underway. Woodside will continue to implement the GGAP Rev 4 until otherwise advised of changes occurring as part of regulatory reforms, and will continue to comply with all State and Commonwealth requirements associated with regulation of greenhouse gases.

Relevant Management Plan	Environmental Objectives	Methodologies used to achieve objectives	Key indicators of performance
	emissions reduction, energy efficiency and production optimisation opportunities through adaptive management. • Provide mechanisms for progressive reduction in net greenhouse gas emissions over time, consistent with declining Safeguard Mechanism (SGM) baselines and Australia's net zero by 2050 objective. • Ensures management of net GHG emissions (under the SGM) achieve net emissions limit objectives specified in Ministerial Statement No. 1208	Condensate storage tanks, nitrogen flare purging, relief valve minimisation and Main Cryogenic Heat Exchanger redesign, dual boil-off gas compressors to minimise flaring; • Continuous optimisation of plant operations to improve reliability, reduce flaring and fugitive emissions, and improve methane destruction efficiency. • Identification, assessment and (where feasible) implementation of energy efficiency, production optimisation and emissions reduction initiatives during operations. • Use of registered carbon offset projects and authorised offsets, where required, to manage residual emissions in accordance with Safeguard Mechanism requirements. • Identify and implement energy efficiency, production optimisation and emission reduction opportunities.	• Periodic assessment of performance against Safeguard Mechanism baselines and net emissions limits. • Progress against energy efficiency and absolute emissions metrics; • Energy efficiency, production optimisation and emissions reduction opportunities implemented; • GGAP reporting; • Annual Environmental Compliance Report; • Five yearly revision of the GGAP and associated public summary reporting; and
Licence L8752/2013/2 Historical Performance Summary – Emissions to Air			
• Stack emissions testing for NOx is undertaken annually, and quarterly in recent years. Full suite of stack emissions tests are taken for the mixed refrigerant compressor, propane compressor, gas turbines generators and the RTO. • Nitrogen Oxides (NOx) emissions results were well below the 100mg/m^3 limit for each licence point since starting operations in 2013 including during the most recent 2024-2025 environmental performance reporting period. The historic annual mean NOx concentrations of less than 40 mg/m^3 reflects that all the values were well below criteria. • Stack sampling results are provided to DWER for each reporting period in the Annual Environmental Report required by L8752/2013/2. • Flaring and dark smoke monitoring has been undertaken in accordance with the Licence, with no exceedances of the Licence smoke limit during operations. • Expected or actual dark smoke event notifications, and RTO operation reporting are regularly provided to DWER in the Quarterly Shutdown Reports and the Annual Environmental Reports required by L8752/2013/2.		

3.2 Discharges to Land and Water

Table 3: Pluto LNG Facility Emissions to Land and Water focus areas, objectives, methodologies, and key performance indicators.

Relevant Management Plan	Environmental Objectives	Methodologies used to achieve objectives	Key indicators of performance

Treated Waste Water Management Plan Revision 4 (2014) – valid for two-train operations	• Maintenance of ecosystem integrity with spatially-assigned levels of protection;
	• Maintenance of aquatic life for human consumption assigned to all parts of the marine environment surrounding the ocean outlet;
	• Maintenance of primary contact recreation values assigned to all parts of the marine environment surrounding the ocean outlet;
	• Maintenance of secondary contact recreation values assigned to all parts of the marine environment surrounding the ocean outlet;
	• Maintenance of aesthetic values assigned to all parts of the marine environment surrounding the ocean outlet;
	• Maintenance of cultural and spiritual values assigned to all parts of the marine environment surrounding the ocean outlet; and
	• Maintenance of Industrial Water Supply.
		• Waste water collection, treatment and disposal:
		  • Site water production, collection and drainage systems;
		  • Treatment and reuse systems including: effluent treatment plant, sludge treatment and disposal, tertiary waste water treatment and sewage treatment plant; and
		  • Final collection and disposal systems and analysis prior to discharge or reuse on site.
		• Monitoring during operations including marine monitoring and Whole Effluent Toxicity (WET) testing; and
		• Contingency Management Plan.
			• Achievement of Environmental Quality Objectives as described in the document Pilbara Coastal Water Quality Outcomes: Environmental Values and Environmental Quality Objectives (Department of the Environment, 2006);
			• Compliance with requirements specified in Part V Licence under the Environmental Protection Act 1986 (WA) L8752/2013/2;
			• Pluto LNG Facility Treated Waste Water Marine Discharge Management Plan:
			  • Compliance with discharge specifications: Waste water Constituents, Sources, Expected and Maximum Concentrations, Australian and New Zealand Environment and Conservation Council (ANZECC) Thresholds and Estimated Annual Loading; and
			  • Compliance with discharge specifications: Waste water Constituents, Sources, Expected and Maximum Concentrations, Australian and New Zealand Environment and Conservation Council (ANZECC) Thresholds and Estimated Annual Loading; and
			  • Compliance with monitoring requirements outlined by Water Corporation operational water quality monitoring programme as specified for contracted users of the multi user brine return line' (ocean outfall).
			• Part V Annual Environment Report provided to DWER. The report provides a summary of volumes of waste water discharged, levels of chemical constituents governing toxicity, results of annual WET test and full suite compositional analysis, use of alternative measurements if applicable, and an assessment against Environmental Objectives; and
			• Exception reporting to DWER in the event of discharge not meeting approved specification.

Licence L8752/2013/2 Historical Performance Summary – Discharges to Land and Water

- The full suite of monitored parameters specified for Licenced Emission Points W1 & L3 by Conditions 14 and 15 of the Licence respectively are tested at least quarterly in accordance with the Pluto LNG Project TWWMDMP (Revision 4).
- Sampling results are provided to DWER for each reporting period in Sections 7 & 8 of the Annual Environmental Report required by L8752/2013/2.
- Two exceedances have been recorded for Licenced Emission Point L3 to Land, where the pH level exceeded the prescribed limit. In both cases, these exceedances were promptly identified, investigated, reported, and necessary corrective and preventive actions were taken as described in the Table below.

Pluto LNG Facility Discharges to Land – Prescribed Limit Exceedances

Date of Breach	Description	Investigation - Corrective Actions
31 May 2016	Approximately 23 m^3 of treated wastewater was discharged to the irrigation field with a pH value outside of licence specification due to instrument drift which was reported in the 2016-2017 report.	1. A set of procedures were put in place to ensure that samples are analysed against specific license criteria by a laboratory accredited by the National Association of Testing Authorities (NATA). 2. The Waste Water Treatment Plant (WWTP) operations manual was revised to incorporate measures to troubleshoot and correct water quality parameters that fall outside the license specifications. 3. A maintenance plan was developed for portable laboratory equipment to ensure proper calibration. 4. Investigation into the cause of low pH levels revealed that ineffective chlorine dosing of the irrigation and permeate tanks had caused microbial activity, which led to acidification of the wastewater. 5. The WWTP operator competency profile was reviewed and updated to include the necessary knowledge of license requirements, sampling, and dosing.
29 August 2020	Approximately 40 m^3 of treated wastewater with a pH of 5.3 (compared to the prescribed limit of 6–9) was discharged before the exceedance was identified.	Whilst controls were in place to verify the pre-discharge sample met the defined limits, it was not identified that pH was outside the emission limit as part of pre-discharge approval. The investigation deemed human error as the key root cause of this incident. The discharge approval process was updated from a manual verification to a semi-automated process which is aimed at reducing the likelihood of human error.

3.3 Complaints Management & Stakeholder Engagement

In accordance with licence requirements, Woodside has a complaints management system in place to record the number and details of complaints received concerning emissions from the premises and any action taken in response to complaints. Complaints relating to licensed emissions are recorded, investigated and responded to in accordance with Licence L8752/2013/2, with reporting provided through the Annual Environmental Report.

Woodside also undertakes stakeholder and community consultation for Pluto LNG. Woodside's engagement with stakeholders and the local community is primarily carried out by its Karratha based Corporate Affairs team. Engagement with regulators is generally undertaken by the Environmental Advisers onsite. Engagement may include planned or as required meetings, site tours, phone calls, fact sheets and emails. A summary of this consultation is publicly available and detailed in the 2017 – 2022 Pluto LNG 5 Year Performance Review Report.

3.4 Summary

The continuous application of Pluto LNG's environmental management framework over a period exceeding twelve years demonstrates that aside from two minor exceedances, the limits and mitigation strategies implemented are being complied with and are effectively managing the risks associated with identified emissions and discharges within prescribed limits.

This operating history demonstrates compliance with licence requirements over the assessable period, and supports this Amendment request for extension to the licence duration.

4. PLUTO TRAIN 2 PROJECT ENVIRONMENTAL REGULATION

Works Approval W6332/2019/1 was granted for Pluto LNG (Pluto Train 2) in May 2021. It authorises the construction, environmental commissioning and time-limited operations of Pluto Train 2 and is regulated separately to the existing Pluto Licence L8752/2013/2. During the proposed Pluto Licence extension timeframe, it is expected that Pluto Train 2 construction and environmental commissioning will be completed, after which time a full renewal will be sought to incorporate Pluto Train 2 into the Pluto LNG Facility Licence during time-limited operations.

In accordance with the current Works Approval W6332/2019/1 Pluto Train 2 environmental commissioning commenced 21 March 2026 and is authorised for a period not exceeding 36 months from the date commissioning commenced. Time-limited operations of Pluto Train 2 are subsequently authorised for a period not exceeding 270 calendar days from the date of completion of environmental commissioning, or until such time as a licence is granted (whichever occurs sooner).

With consideration of these timeframes, and to ensure sufficient time for the full renewal process to occur whilst enabling continuing operations under a valid Licence, a 4-year licence extension is requested via this application. This approach enables the full licence renewal process to occur at an appropriate point, as it will enable incorporation of both Train 1 and Train 2 into a single Pluto LNG Facility Licence. Until such time Pluto Train 2 will continue to be regulated in parallel under Works Approval W6332/2019/1.

5. REFERENCES

Department of Environmental Regulation. 2016. Guidance statement- Licence duration

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6. ABBREVIATIONS

Acronym	Description
ANZECC	Australian and New Zealand Environment and Conservation Council
AQMP	Air Quality Management Plan
BTEX	Benzene, Toluene, Ethylbenzene and Xylene
DWER	Department of Water and Environmental Regulation
EP Act	Environmental Protection Act (1986)
ETP	Effluent Treatment Plan
GGAP	Greenhouse Gas Abatement Program
LNG	Liquified Natural Gas
NGER	National Greenhouse and Energy Reporting
NOx	Nitrogen Oxides
NPI	Annual reporting to the National Pollutant Inventory
RTO	Regenerative Thermal Oxidiser
TWWMDMP	Treated Waste Water Marine Discharge Management Plan
WET	Whole Effluent Toxicity
Woodside	Woodside Burrup Pty Ltd
WWTP	Waste Water Treatment Plant

Attachment 8 - Application to Amend L8752/2013/2 Supporting Information

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