Gas Import Jetty and Pipeline Project
AGL Wholesale Gas Limited
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Noise and vibration impact assessment

Crib Point FSRU Works Approval Application - Noise

Revision 0 – 12-Mar-2021
Prepared for – AGL Wholesale Gas Limited – ABN: N/A

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Client: AGL Wholesale Gas Limited

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0	12-Mar-2021	Response to the notice from the Environment Protection Authority (EPA)	[redacted] Associate Director - Environmental Planning	[redacted]

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1.0 Introduction

The following advice has been provided in response to the notice from the Environment Protection Authority (EPA) to supply further information for works approval number 1003907, in respect of a Floating Storage and Regasification Unit (FSRU) at the Crib Point Jetty (Berth 2), Victoria.

1.1 Request from the EPA

This report specifically responds to Item 16 of the Section 22(1) Notice to Supply Further Information that requested a revised noise impact assessment with the following information:

a) detail and justify the assumptions and considerations made regarding contributions from other premises that will also impact on noise sensitive areas.

b) explain what process was in place for selecting equipment and mitigation measures to minimise emissions and demonstrate how all reasonable opportunities to reduce noise have been taken.

c) clarify and justify the conservatism of the assumptions and considerations made regarding the noise emissions of the LNG carrier, and justify their adequacy for the range of vessels that is expected. Clarify what are the contingency plans / measures for vessels that may present higher noise emissions than expected.

d) provide the risk of low frequency noise impacts to noise sensitive areas.

e) provide the risk of adverse noise impacts, including, but not be limited to low frequency noise, on natural areas that are not protected by the recommended noise levels (refer NIRV section 2.1).

f) clarify whether any source of noise has not been included in the noise assessment and justify why.

g) confirm and justify that noise emissions from the FSRU will not present tonal, impulsive or intermittent character. (otherwise confirm and justify the values adopted for adjustments that may have been applied).

1.2 Context to this response

The works approval application to install and operate the proposed FSRU at Berth 2 of the existing Crib Point Jetty was received by the EPA on 25 June 2020. An Environment Effects Statement (EES) was being prepared concurrently for the Gas Import Jetty and Pipeline Project (GIJPP). The EES was released for public consultation on 2 July 2020.

The EES report (see Technical Report H: *Noise and vibration impact assessment* (Technical Report)) provides a comprehensive assessment of the existing acoustic conditions at Crib Point and an impact assessment of the proposed Gas Import Facility (FSRU, Jetty Infrastructure and Crib Point Receiving Facility). As a result, the noise and vibration assessment included within the Technical Report provides most of the information requested by the EPA in Item 16.

Consequently, a revised noise impact assessment for the works approval has not been prepared. Alternatively, each request for information has been addressed individually with specific detail and references provided in the relevant sections of the Technical Report.

Furthermore, both the EES and works approval included a set of noise and vibration mitigation measures to be considered by the independent Inquiry and Advisory Committee (IAC). The mitigation measures were developed to address the potential adverse noise impacts on nearby sensitive receptors.

These mitigation measures were reformatted into proposed Environmental Performance Requirements (EPRs) for consideration by the IAC during the panel hearing. The proposed EPRs (replicated in Section 3.0) and relevant expert evidence from the panel hearing have been referenced throughout this report to support the response.

2.0 Response

16(a) detail and justify the assumptions and considerations made regarding contributions from other premises that will also impact on noise sensitive areas.

The submitted works approval and Technical Report has considered noise contribution from the following operators/other premises, in the vicinity of the Crib Point Jetty, that would not be directly managed by the proponent:

1. Future tug boat movements required to moor LNG carriers next to the FSRU, managed by the Port of Hastings Development Authority (PoHDA).
2. Onshore pump noise from the premise located onshore at Crib Point operated by United Petroleum when a vessel is moored at Berth 1 of Crib Point Jetty.
3. Future LNG carriers delivering gas to the FSRU (See response to query 16 (b)).

These noise sources have been presented in Section 11.3 and Section 11.5.4 of the submitted works approval. No other known sources of commercial/industrial were identified at the time of the assessment.

Tug boats (POHDA)

Sound power levels for the tugs were based on information provided by the Port of Hastings for a tugboat with two 2000 kW diesel engines. This information was used to calculate the total sound power level (See Table 1) of 105 dBA for each tugboat. Noise from four tugs in use during mooring was incorporated into Scenario 1 as set out in Section 8.4.1.2 of *EES Technical Report H: Noise and vibration impact assessment*.

Table 1 Tug boat sound power level

Item	Nominal Sound Power Level (dB)							Total dBA
	Octave band centre frequency (Hz)							
	63	125	250	500	1K	2K	4K	
Tug boat	121	116	108	100	92	82	88	105

It was assumed that a total of four tug boats that are the same or similar to the ones currently in operation would be required to help moor an arriving LNG carrier.

United Petroleum operations

Baseline measurements were undertaken on the 18 January 2019 (See Section 5.2.2 of the EES Technical Report) to quantify the contribution from the landside pump offloading petroleum from a ship docked at Berth 1.

The noise from this operation was approximately L_{eq} 40 dBA (without tonal penalty) at 103 The Esplanade, Crib Point (5 dB over the Recommended Maximum Levels applicable at Night derived for this location).

Table 2 Recommended Maximum Levels at 103 The Esplanade, Crib Point

Noise Sensitive Receptor	NIRV Recommended Maximum Noise Levels $L_{Aeq,30min}$ dB		
	Day	Evening	Night
103 The Esplanade	47	42	35

The assessment considered the likelihood that the introduction of the Gas Import Facility would increase the overall noise level when United Petroleum were operating. Modelling showed that noise levels could be slightly higher (~1 dB) at The Esplanade if United Petroleum were operating at levels similar to those measured. For example, the modelled Gas Import Facility level of L_{eq} 34 - 35 dBA (at 103 The Esplanade) combined with the measured petroleum offloading level of L_{eq} 40 dBA is calculated to be ~L_{eq} 41 dBA.

The assessment recommended that the proponent should look for opportunities to manage future cumulative noise impacts from the Crib Point Jetty by collaborating with other operators that produce noise. In this case of United Petroleum, noise reduction measures (screening, enclosures, quieter equipment etc.) at the landside pump could be the most practical way to mitigate this potential risk.

Amendments to the recommended management of cumulative noise impacts were prepared for consideration by the IAC during the panel hearing to better reflect this requirement.

EPR-NV06 (See Section 3.0) now outlines a requirement for the proponent to engage with the EPA and the relevant stakeholders for the purpose of managing cumulative noise impacts from the following projects:

- Crib Point Jetty upgrade construction works (Port of Hastings Development Authority)
- Crib Point Jetty operation (United Petroleum).

EPR-NV11 provides the compliance requirements for managing cumulative noise impacts during operation in accordance with Section 5 - *Managing Noise from Multiple Premises within the EPA Publication 1413 - Applying NIRV* to Proposed and Existing Industry where relevant.

The includes the requirement to establish a working group including the Port of Hastings Development Authority and commercial operators at the Crib Point Jetty to develop a cumulative noise impact strategy in consultation with EPA, including:

- Implementation of appropriate noise amelioration measures if required, including specification of the party responsible for implementing those measures; and
- Coordinating operations at the jetty.

The amendments aim to consolidate the proponent's commitment to working with the EPA and other operators to ensure that measures are in place to achieve the Recommended Maximum Noise levels.

16(b) clarify and justify the conservatism of the assumptions and considerations made regarding the noise emissions of the LNG carrier, and justify their adequacy for the range of vessels that is expected. Clarify what are the contingency plans / measures for vessels that may present higher noise emissions than expected.

The assumed sound power level of the vessel was based on the noise contribution from three key sources:

1. Engine room walls and roof
2. Engine exhaust via four flues
3. Ship-to-ship transfer operations

The first two noise sources were assumed to be the same as the FRSU, noting that the FSRU would be an existing LNG carrier that is retrofit for regasification.

Ship-to-ship transfer

Specific details about the noise associated with the ship-to-ship transfer via pumps and other supporting machinery were not available at the time of the assessment. Hoegh advised that ship-to-ship transfer could increase in noise when gas volume flow in the vapour system onboard the vessels is higher.

This assumption was confirmed by the peer reviewed publication Witte, J., "Noise from moored ship" that was published for presentation at the Internoise (International Congress and Exposition on Noise Control Engineering).

The study suggests that for tankers:

> *"The variety in sound power levels is large, mainly due to the large contribution of the pumps. The regression found has a low reliability, the regression line is almost a constant…"*

The regression curve mentioned above compares the dead weight tonnage (DWT) of ships to the sound power level of ships. The findings for each ship type has been replicated below:

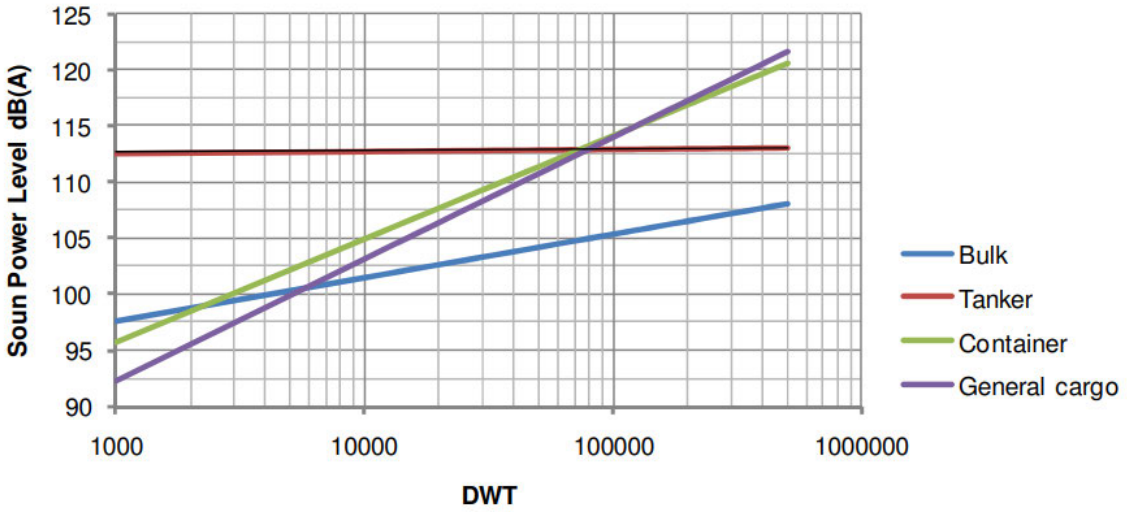

Figure 12: Regression line between DWT and sound power level for different type of ships.

The regression line from this study identifies a sound power level of approximately 112.5 dBA for tanker ships regardless of the DWT. The noise model assumed a level of 2.5 dB above this regression curve to account for the variability identified.

This was considered a reasonable assumption in lieu of specific data about the LNG carriers expected to make deliveries to Berth 2 at Crib Point.

Management of LNG carrier noise

Preliminary amendments were made to the proposed project mitigation measures for consideration by the IAC. The currently drafted EPRs (EPR-NV09, EPR-NV10, EPR-NV12 and EPR-NV13) provide a clear framework for managing noise.

This includes that following measures that would be undertaken in consultation with the EPA:

- Updated assessment as the design progresses (EPR-NV09)
- Identification of mitigation or operational limitations to achieve the Recommended Maximum Noise Levels (EPR-NV10)
- Preparation of a cumulative impact management strategy (EPR-NV11)
- Community engagement process (EPR-NV12)
- Development of a noise monitoring program (EPR-NV13)

The current draft of the proposed EPRs have been replicated in Section 3.0.

16(c) provide the risk of low frequency noise impacts to noise sensitive areas.

Modelled plant items with the highest low-frequency noise component are the regasification boiler exhausts and the tugboat exhausts. The operation of the boilers during closed loop operation are considered a greater risk as boilers would run continuously for longer periods, rather than the tugs, which would operate intermittently.

The equipment selection and noise mitigation (silencers, attenuators etc.) had not be identified at the time of the assessment. It is assumed that the noise sources would be controlled by appropriate equipment selection and that at-source mitigation would be developed during detailed design. This would be required to meet the Recommended Maximum Noise Levels (EPR-NV09).

Empirical evidence suggests that low-frequency noise can be a factor for some industrial gas-fired boilers, furnaces and heaters if not properly designed. The impact being airborne low-frequency noise that is produced by the combustion process. These impacts can be mitigated by acoustic damping (to reduce the likelihood of resonance) and detailed design of the boiler exhaust duct work. Low-

frequency noise would be considered further during the development of noise attenuation during detailed design.

Note that there was no evidence found (at the time of the assessment) that would suggest that unwanted low-frequency noise could be attributed to FSRUs operating in other parts of the world.

16(d) provide the risk of adverse noise impacts, including, but not be limited to low frequency noise, on natural areas that are not protected by the recommended noise levels (refer NIRV section 2.1).

Woolley's Beach Reserve and HMAS Otama Lookout Beach are the closest landside areas to the proposed Project infrastructure. These areas are not protected by the Recommended Maximum Noise Levels. The closest recreational areas at Woolley's Beach Reserve are approximately 150 metres from the nitrogen facility and 800 metres from Berth 2. HMAS Otama Lookout Beach is approximately 300 metres from the nitrogen facility and 1,200 metres from Berth 2.

The existing ambient levels in the area are expected to be between L_{eq} 40 – 50 dBA based on attended measurements undertaken in this area as part of the EES studies. The existing ambient environment was noted to comprise of natural sound from wildlife with intermittent anthropogenic noise from road traffic, aircraft and powered watercraft using Western Port (See Section 5.2.2 of the EES Technical Report H: Noise and vibration impact assessment).

The highest predicted noise levels (during nitrogen unloading) at Woolley's Beach Reserve and HMAS Otama Lookout Beach are L_{eq} 52 dBA and L_{eq} 49 dBA, respectively. The main contribution from the Gas Import Facility is predicted to be from the nitrogen facility (See Appendix E of the EES Technical Report H: Noise and vibration impact assessment). The levels are predicted to be 3 – 4 dB lower during other modelled operating scenarios.

It is expected that the facility would produce broadband sound that is comparable to emissions from other small industrial facilities. Based on these findings, the Project is likely to be audible at Wooley's Beach Reserve and HMAS Otama Lookout Beach in areas closest to the nitrogen facility. Consistent with the evidence given before the IAC, whilst this may be the case under certain operating conditions, the predicted noise levels would not preclude passive recreation within that open space.

16(e) clarify whether any source of noise has not been included in the noise assessment and justify why.

All known noise sources at the time of assessment have been incorporated into the relevant noise modelling scenarios. Each scenario assumes different equipment and machinery required to operate the Gas Import Facility:

- Continuous mooring of an FSRU at Berth 2 of the existing Crib Point Jetty
- Jetty Infrastructure on the Crib Point Jetty including marine loading arms (MLAs) and gas piping to transfer the gas from the FSRU to the Crib Point Receiving Facility
- Crib Point Receiving Facility (landside), including metering, odorant injection and nitrogen injection
- LNG carriers (including tugboats that would assist with mooring).

Noise from United Petroleum has been addressed in the response to Item 16(a).

16(f) confirm and justify that noise emissions from the FSRU will not present tonal, impulsive or intermittent character. (otherwise confirm and justify the values adopted for adjustments that may have been applied).

There was no evidence within the data reviewed that suggested that impulsive, tonal, or intermittent characteristics were going to be present during the operation of the FSRU. Accordingly, adjustments have not be applied to the predicted noise levels.

3.0 Environmental Performance Requirements (Version 4)

The draft EPRs submitted to the IAC for consideration have been detailed in Table 3.

Table 3 Environmental Performance Requirement

EPR ID	ENVIRONMENTAL PERFORMANCE REQUIREMENT	TIMING
EPR-NV01	**Construction Noise and Vibration Management Plan** Prepare a Construction Noise and Vibration Management Plan (CNVMP) in consultation with the EPA, approved by the responsible authority, prior to the commencement of construction. The CNVMP must be informed by modelling and monitoring undertaken by a suitably qualified noise and vibration consultant prior to the construction activities occurring. The CNVMP must be consistent with and give effect to EPR-NV02 – EPR-NV08 and must include: • The identification and assessment of noise and vibration sensitive receptors, including habitat for listed threatened fauna, likely to be impacted by the Crib Point Jetty Works; • Details of construction activities and an indicative schedule for construction works, including the identification of key noise and/or vibration generating construction activities that have the potential to generate airborne noise and/or surface vibration impacts on surrounding sensitive receivers; • Construction noise and vibration targets as specified in EPR-NV02 – EPR-NV08; • how predictive modelling, active monitoring, and compliance reporting will be undertaken and should specifically address how it informs the out of hours works permit process and will inform scheduling of works in general. • Measures to ensure that construction noise and vibration must be minimised and managed in accordance with the methods specified in EPR-NV02 – EPR-NV08; • The specification of any unavoidable works to be undertaken in respect of the Crib Point Jetty Works; • Measures to ensure effective monitoring of noise associated with construction with consideration to the construction noise and vibration targets. • Noise and vibration monitoring commitments and response protocols for managing complaints and exceedances above nominated noise criteria; and • Details of communication processes to be adopted in accordance with EPR SO01 relating to noise and vibration management actions and complaints.	Construction
EPR-NV02	**Managing noise and vibration from construction activities** Manage construction noise and vibration in accordance with EPA Publication 1834 *Civil Construction, building and demolition guide*. The following general good practice measures must be implemented during construction of the Crib Point Jetty Works: • using the lowest-noise work practices and equipment that meet the requirements of the job • locating site buildings, access roads and positioning plant such that the minimum disturbance occurs to the locality	Construction

<table>
<tr><th>EPR ID</th><th>ENVIRONMENTAL PERFORMANCE REQUIREMENT</th><th>TIMING</th></tr>
<tr><td></td><td>

installing broadband reversing alarms on construction vehicles and machinery in preference to ‘beeper’ reversing alarms - the site must also be planned to minimise the need for reversing of vehicles
turning off plant and vehicles when not being used
taking care not to drop spoil and construction materials that cause peak noise events
limiting works to the arrival of staff on site and toolbox meetings between 6am and 7am. The use of loud equipment, generation of unnecessary noise and the movement of vehicles on the construction footprint must be minimised where possible
undertaking all reasonable and feasible mitigation actions to minimise the impact on sensitive receptor locations. Measures may include (but are not limited to) to following onsite mitigation measures:
scheduling noisier works during less sensitive hours
adopting engineering noise controls at the source (e.g. silencer, mufflers, enclosures) by all practical means using current technology;
selection of quieter equipment;
installation of onsite barriers such as hoardings or temporary screens to provide a noise barrier between any particularly noisy construction works and the residences; and
implementation of respite periods by restricting the hours that the very noisy activities can occur.

</td><td></td></tr>
<tr><td>EPR-NV03</td><td>
Construction noise criteria

Implement additional onsite noise mitigation measures if construction noise is predicted to or does exceed the following construction noise criteria.

Additional noise mitigation measures may include but are not limited to respite periods or rescheduling of noise works (in particular works generating noise that is tonal, impulsive or intermittent or low frequency noise) or offsite noise management measures

Establish background noise levels having regard to the time at which the construction works will take place.

Appoint an independent and qualified environmental assessor to review and verify unavoidable night work (10 pm to 7 am) . Affected residents must be notified at least 24 hours before the out of hours work commences. Works notification for unavoidable night works will include details of the specified tasks that cannot be done during normal working hours.

<table>
<tr><th>Target Area</th><th>Time Of Day</th><th>Construction Noise Criteria [L_{Aeq}(15-Min) dB] and Management Measures</th></tr>
<tr><td colspan="3">EPA normal working hours</td></tr>
<tr><td>Residential</td><td rowspan="3">Mon-Fri: 7am - 6pm
Sat: 7am - 1pm</td><td>65</td></tr>
<tr><td>Educational institutions</td><td>60</td></tr>
<tr><td>Parks and recreational areas</td><td>65</td></tr>
</table>
</td><td>Construction</td></tr>
</table>

EPR ID	ENVIRONMENTAL PERFORMANCE REQUIREMENT			TIMING
	Community and commercial buildings		70	
	Outside of EPA normal working hours			
	Residential - Evening and weekend	Mon-Fri: 6pm - 10pm Sat: 1pm - 10pm Sun/Public Holiday: 7am - 10pm	Noise level at any residential premises not to exceed background (L_{A90}, dB) noise by: • 10 dBA or more for up to 18 months after project commencement Works notification Individual briefings Specific notification Respite offer	
	Residential – Night	Mon-Sun: 10pm - 7am	Noise inaudible within a habitable room of any residential premises except for unavoidable night works or night period low-noise or managed-impact works approved by an independent and qualified environmental assessor. Noise level at any residential premises not to exceed background (LA90, dB) noise by 0 dB.	
	Residential – Unavoidable night works	Mon-Sun: 10pm - 7am	Application of all feasible and reasonable work practices to minimise noise and its impacts Works notification Individual briefings Specific notification Respite offer when external construction noise level: LAeq(15min) > LA90, night + 5 dB Additional noise mitigation measures measures) when external noise construction noise level: will be predicted above 50 dBA on any night or measured above 50 dBA for two or more nights. Additional noise mitigation measures may include but not limited to respite periods or rescheduling of noisy	

EPR ID	ENVIRONMENTAL PERFORMANCE REQUIREMENT	TIMING
	works (in particular works generating noise that is tonal, impulsive or intermittent or low frequency noise) or offsite noise mitigation measures, such as Targeted engagement with impacted landholders to discuss individual mitigation options. Residents with special requirements will be consulted with on a case by case basis.	
EPR-NV04	**Vibration safe working distances** Implement additional management measures where occupancies, structures and assets are within the safe working distances derived using the values in the following standards: • British Standard BS 6472-1:2008 Guide to evaluation of human exposure to vibration in buildings. Vibration sources other than blasting – Table 1 Vibration dose value ranges which might result in various probabilities of adverse comment within residential buildings • German Standard DIN4150-3:2016-12: Table 1 – Guideline values for vibration velocity for evaluating the effects of short-term vibration on structures • German Standard DIN4150-3:2016-12: Table 3 – Guideline values for vibration velocity for evaluating the effects of short-term vibration on buried pipework • An asset owner's utility standards.	Construction
EPR-NV05	**Noise and vibration monitoring** Undertake noise and vibration monitoring during construction when: • noise sensitive residential property or properties are predicted (pursuant to the CNVMP) to be impacted by out-of-hours works to confirm compliance with the construction noise criteria and to confirm modelling outputs • buildings or assets are within derived set back distances for structural damage • an asset owner's utility standards are at risk of being exceeded. Develop and implement a response plan to manage potential impacts if nominated criteria in the CNVMP are exceeded, including: • actions taken to rectify the exceedance • actions to minimise risk of reoccurrence • name of person(s) responsible for undertaking the required actions. The noise monitoring results and the response plan must be available on a clearly identifiable Project website. The duration of the monitoring must be determined by a suitably qualified acoustic consultant.	Construction
EPR-NV06	**Managing cumulative noise impacts**	Construction

EPR ID	ENVIRONMENTAL PERFORMANCE REQUIREMENT	TIMING
	Consult the EPA and the relevant stakeholders listed below during detailed design and the construction planning phase for the purpose of managing cumulative noise impacts associated with the following projects: • Crib Point Jetty upgrade construction works (Port of Hastings Development Authority) • Crib Point Jetty operation (United Petroleum). • The Project must (construction only): • avoid overlap of sensitive works at night and other periods where excessive noise and vibration is likely • incorporate a requirement within the Stakeholder Engagement Management Strategy to notify residents of any unavoidable project overlaps and the potential impact to the community.	
EPR-NV07	**Managing impacts from ground vibration** Apply the following management measures when the setback distances derived using EPR-NV04 are encroached: • consult with above and below ground utility asset owners to establish construction vibration limits to maintain asset integrity • monitor vibration of sensitive buildings / structures inside safe working distances • undertake condition survey of properties within safe working distances.	Construction
EPR-NV08	**Condition surveys** Undertake condition surveys for sensitive buildings and assets that are within the derived set back distances for structural damage.	Construction
EPR-NV09	**Operations Noise Management Plan** Prior to the commencement of operation, prepare an Operations Noise Management Plan in consultation with the EPA that is consistent with the requirements of any Works Approval. The Operations Noise Management Plan must be consistent with and give effect to EPR-NV10 – EPR-NV13 and must include: • The identification and assessment of noise sensitive receptors, including habitat for listed threatened fauna, likely to be impacted by the project; • A noise monitoring program to be implemented prior to the commencement of operations, to establish existing ambient conditions at identified sensitive receptors, including during operation of the United Petroleum facilities; • the Recommended Maximum Noise Levels (RMNLs) determined in accordance with EPR-NV10 that apply to nearby noise sensitive receptors, including but not limited to: - 103 The Esplanade; - 132 The Esplanade; and - 43 Disney Street; • An explanation as to how the selected noise sensitive receptors can be used to assess noise against the Recommended Maximum Noise Levels for all noise sensitive areas; • Any mitigation or operational limitations necessary to achieve compliance with the Recommended Maximum Noise Levels determined in accordance with EPR-NV10; • Any cumulative impact management strategy developed in accordance with EPR-NV11;	Operation

EPR ID	ENVIRONMENTAL PERFORMANCE REQUIREMENT	TIMING
	• A post commissioning noise monitoring program in accordance with EPR-NV13.	
EPR-NV10	**Operational noise controls** The Gas Import Jetty Works must identify and specify practical measures for minimising noise in accordance with EPA Publication 1411 - Noise from Industry in Regional Victoria in consultation with EPA. Specify recommended Maximum Noise Levels determined in accordance with Part 3 of EPA Publication 1411 in respect of nearby noise sensitive receptors, including but not limited to: • 103 The Esplanade; • 132 The Esplanade; and • 43 Disney Street. (Specified Noise Sensitive Receptors) The specified noise sensitive receptors must be suitable for assessing compliance to the Recommended Maximum Noise Levels for all sensitive areas. This may involve considering the specified noise sensitive receptors as derived points and assessing effective noise levels against the relevant derived noise limits (as defined in SEPP N-1).	Operation
EPR-NV11	**Operational noise cumulative controls** Manage noise from the Project when operating near existing industry in accordance with Section 5 - Managing Noise from Multiple Premises within the EPA Publication 1413 - Applying NIRV to Proposed and Existing Industry where relevant. Establish a working group including the Port of Hastings Development Authority and commercial operators at the Crib Point Jetty to develop a cumulative noise impact strategy in consultation with EPA, including: • Implementation of appropriate noise amelioration measures if required, including specification of the party responsible for implementing those measures; and • Coordinating operations at the jetty.	Operation
EPR-NV12	**Notification for mooring LNG carriers** If the verification noise monitoring demonstrates that the night time Recommended Maximum Levels have not yet been met, residents within 1.5 kilometres of the FSRU must be notified at least 24 hours before the planned arrival of an LNG carrier between 10 pm and 7 am. Project communications resources such as the Project website must include a link to the Port of Hastings Development Authority Weekly Shipping List. This list provides a forecast for the ships that are expected to be in Port each week.	Operation
EPR-NV13	**Post-commissioning measurements** Measure noise produced by the Gas Import Facility and other commercial operations at Crib Point within six months of the beginning of commercial operation to confirm compliance with the Recommended Maximum Levels. Undertake noise measurements in accordance with current Victorian EPA requirements to verify compliance with the Recommended Maximum Levels applied at 132 The Esplanade Crib Point, 43 Disney Street Crib Point and	Operation

EPR ID	ENVIRONMENTAL PERFORMANCE REQUIREMENT	TIMING
	103 The Esplanade Crib Point and any other Specified Noise Sensitive Receptor in the Operations Noise Management Plan. If the measured noise levels demonstrate that the Recommended Maximum Levels are exceeded, then onsite noise mitigation (administrative, operating or engineering controls) must be taken as soon as practicable. If onsite noise mitigation cannot be feasibly implemented to reduce external noise to below the Recommended Maximum Levels, offsite noise mitigation (noise screening or architectural acoustic treatment to the exterior of rooms used for sleeping) must be offered to affected landowners.	