



27 December 2018

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Email: aclifton@agl.com.au

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Dear Aaron

Re: Rosalind Park Gas Plant - 2018 Annual Noise Compliance Monitoring Report

INTRODUCTION

Noise monitoring of the AGL Upstream Investments Pty Ltd Rosalind Park Gas Plant (RPGP) was carried out by Wilkinson Murray (WMPL) in order to assess compliance with the relevant noise limits set by the NSW Environment Protection Authority (EPA) Environment Protection Licence conditions (Licence No. 12003) and the Department of Planning and Environment's Conditions of Consent (DA No. 282-6-2003-i).

Noise monitoring was undertaken in accordance with the *NSW Industrial Noise Policy*.

This Annual Noise Compliance Monitoring Report is based on quarterly noise monitoring conducted by WMPL on Monday, 19 March 2018, Thursday, 14 June 2018, Wednesday, 12 September 2018 and Wednesday, 5 December 2018. The report has been prepared to satisfy the EPA's Licence Condition R1.9 (Licence No. 12003).

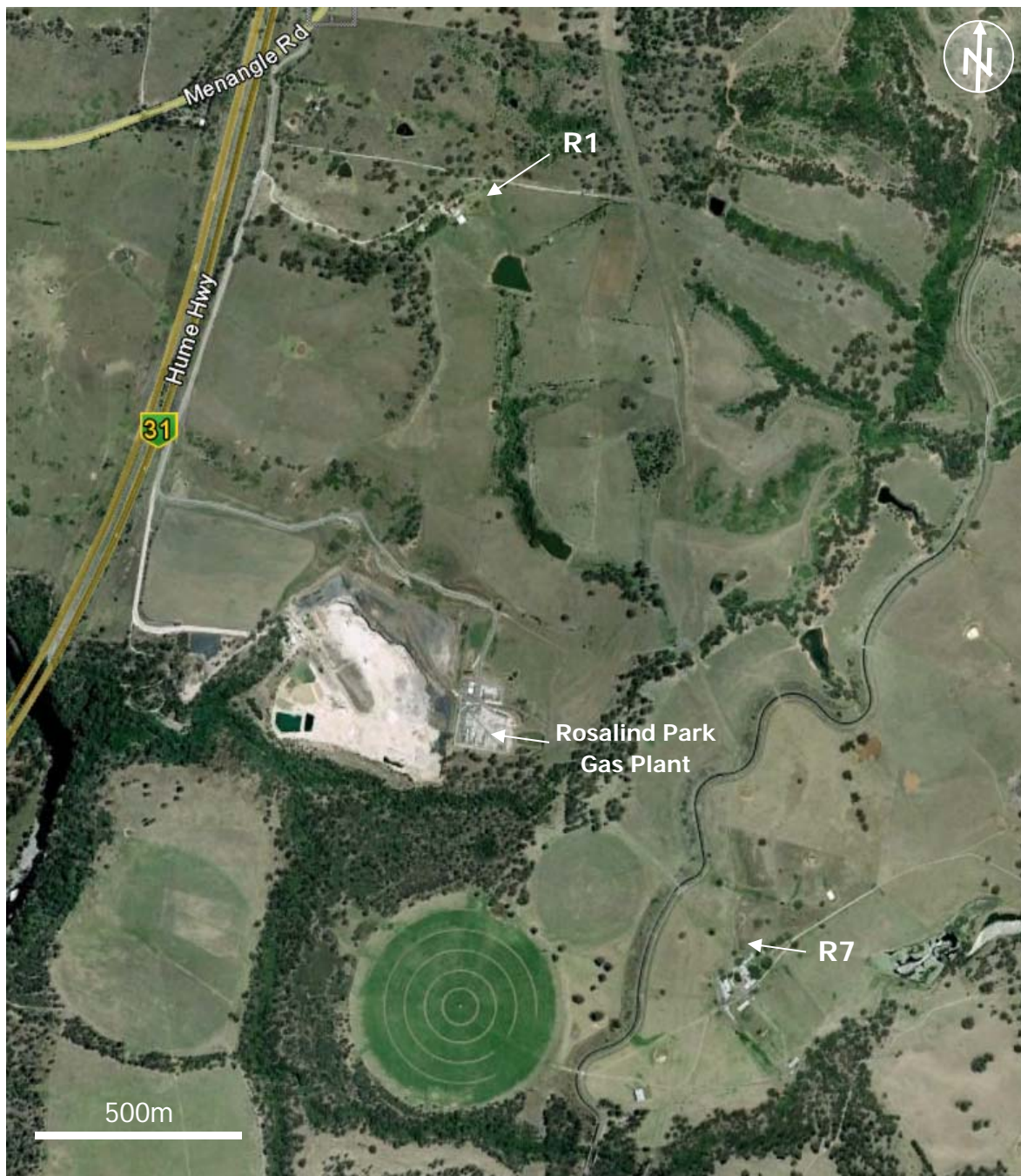
SITE / PROJECT DESCRIPTION

Two receiver locations were identified in the Rosalind Park Gas Plant Environmental Impact Statement (EIS) as follows:

- R1: Medhurst Road, Gilead (approx. 0.9km north of RPGP)
- R7: Mount Gilead, Gilead (approx. 1.1km southeast of RPGP)

The approximate monitoring locations are shown in Figure 1.

Figure 1 Noise Monitoring Locations



NOISE LIMITS

The noise limits identified in the EPA's Licence Condition L5.1 (Licence No. 12003) apply to daytime, evening and night time periods and are expressed as $L_{Aeq,15min}$ noise levels. The noise limits are summarised in Table 1.

Table 1 Noise Limits (EPA Licence No. 12003)

| Location | Daytime (7am-6pm Mon-Sat, 8am-6pm Sun) | Evening (6pm -10pm) | Night Time (10pm-7am Mon-Sat, 10pm-8am Sun) |
|--------------|--|------------------------|---|
| | $L_{Aeq,15min}$ (dBA) | $L_{Aeq,15min}$ (dBA) | $L_{Aeq,15min}$ (dBA) |
| R1 Medhurst | 35 | 35 | 35 |
| R7 Mt Gilead | 37 | 36 | 36 |

MONITORING PROCEDURE

Noise monitoring was conducted at both identified receivers for the three time periods defined in Table 1 in order to assess compliance for the day, evening and night time periods. The measurements were conducted in suitable meteorological conditions (low wind speeds and no rain). The percentage of cloud cover during each site visit is summarised in Table 2.

This Annual Noise Compliance Monitoring Report is based on quarterly noise monitoring conducted by WMPL on Monday, 19 March 2018, Thursday, 14 June 2018, Wednesday, 12 September 2018 and Wednesday, 5 December 2018. The report has been prepared to satisfy the EPA's Licence Condition R1.9 (Licence No. 12003).

Table 2 – Summary of Cloud Cover during 2018 Noise Monitoring

| Quarterly Monitoring | Assessment Period | % Cloud Cover |
|----------------------|-------------------|---------------|
| 19 March | Day | 0% |
| | Evening | 0% |
| | Night | 0% |
| 14 June | Day | 10% |
| | Evening | 0% |
| | Night | 0% |
| 12 September | Day | 10% |
| | Evening | 10% |
| | Night | 10% |
| 5 December | Day | 100% |
| | Evening | 100% |
| | Night | 100% |

All measurements were carried out during typical operating conditions with one (1) compressor unit operating at the RPGP site.

All attended noise measurements were conducted at a location representative of the most affected point within the 30m-perimeter surrounding the house for both identified noise sensitive receiver locations as listed in Table 1.

All measurements were made using a B&K Type 2236 Sound Level Meter. Wind speed and direction was established using hand-held digital anemometers Digitech QM1642 and Smart Sensor AR816.

MONITORING RESULTS

Table 3 summarises the 2018 noise results expressed as $L_{Aeq,15min}$ noise levels.

The plant was generally found to be inaudible or only barely audible. When the plant was barely audible, the measurement data was used to estimate the noise contribution from the plant.

Table 3 – Summary of 2018 Noise Monitoring

| Quarterly Monitoring | Assessment Period | R1 Medhurst | | | R7 Mt Gilead | | |
|----------------------|-------------------|--------------------|--|---------------------------------|--------------------|--|---------------------------------|
| | | Measurement Period | Measured $L_{Aeq,15min}$ due to RPGP (dBA) | $L_{Aeq,15min}$ Criterion (dBA) | Measurement Period | Measured $L_{Aeq,15min}$ due to RPGP (dBA) | $L_{Aeq,15min}$ Criterion (dBA) |
| 19 March | Day | 5.44pm – 5.59pm | Inaudible | 35 | 4.40pm – 4.55pm | Inaudible | 37 |
| | Evening | 8.35pm – 8.50pm | Inaudible | 35 | 7.45pm – 8.00pm | 32 | 36 |
| | Night | 11.08pm – 11.23pm | Inaudible | 35 | 10.18pm – 10.33pm | 33 | 36 |
| 14 June | Day | 4.31pm – 4.46pm | Inaudible | 35 | 5.25pm – 5.40pm | Inaudible | 37 |
| | Evening | 6.19pm – 6.34pm | Inaudible | 35 | 7.14pm – 7.29pm | Inaudible | 36 |
| | Night | 10.00pm – 10.15pm | Inaudible | 35 | 10.43pm – 10.58pm | Inaudible | 36 |
| 12 September | Day | 4.54pm – 5.09pm | Inaudible | 35 | 5.42pm – 5.57pm | Inaudible | 37 |
| | Evening | 7.25pm – 7.40pm | Inaudible | 35 | 8.20pm – 8.35pm | 33 | 36 |
| | Night | 10.00pm – 10.15pm | Inaudible | 35 | 10.42pm – 10.57pm | 32 | 36 |
| 5 December | Day | 5.49pm – 6.04pm | Inaudible | 35 | 5.10pm – 5.25pm | Inaudible | 37 |
| | Evening | 8.52pm – 9.07pm | Inaudible | 35 | 8.06pm – 8.21pm | 31 | 36 |

| Quarterly Monitoring | Assessment Period | R1 Medhurst | | | R7 Mt Gilead | | |
|----------------------|-------------------|--------------------|-----------------------------------|---------------------------------|--------------------|-----------------------------------|---------------------------------|
| | | Measurement Period | Measured | $L_{Aeq,15min}$ Criterion (dBA) | Measurement Period | Measured | $L_{Aeq,15min}$ Criterion (dBA) |
| | | | $L_{Aeq,15min}$ due to RPGP (dBA) | | | $L_{Aeq,15min}$ due to RPGP (dBA) | |
| 15 December | Night | 10.43pm – 10.58pm | Inaudible | 35 | 10.00pm – 10.15pm | 32 | 36 |

It should be noted that noise emission limits identified in EPL 12003 apply under all meteorological conditions except:

- a) during rain and wind speeds (at 10m height) greater than 3m/s; and
- b) under "non-significant weather conditions".

Gilead is considered a non-arid area (annual average rainfall greater than 500mm) according to the *INP* and as such, strong temperature inversions (G-class Pasquill-Gillford stability category) are considered to be a "non-significant weather condition". Therefore, the noise limits set out in Table 1 do not strictly apply to strong temperature inversions (G-class Pasquill-Gilford stability category).

Local meteorological data sourced from the Campbelltown (Mount Annan) Bureau of Meteorology (BoM) weather station indicated that during some of the night time monitoring, high strength (G-Class) temperature inversions were present. Notwithstanding, noise generated by the site under those conditions complied with the relevant noise limits at both monitoring locations.

CONCLUSION

The results of the noise monitoring of the Rosalind Park Gas Plant conducted in 2018 in accordance with the *NSW Industrial Noise Policy* show compliance with the relevant operational noise limits set by the NSW EPA's Environment Protection Licence conditions (Licence No. 12003) and the Department of Planning and Environment's Conditions of Consent (DA No. 282-6-2003-i) at both receiver locations for day, evening and night time with typical operating conditions.

I trust this information is sufficient. Please contact us if you have any further queries.

Yours faithfully

WILKINSON MURRAY



Roman Haverkamp
Senior Engineer

Note

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AAAC

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