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30/05/2022

EQ Constructions Pty Ltd
Unit 1, Level 8
43 Bridge Street
HURSTVILLE NSW 2220

Attn: David Zhao

8 Forest Road, Warriewood - Rooftop Mechanical Plant Review

1 INTRODUCTION

This letter addresses consent condition B13 and B28 of the modification of development consent no. N0440/15, issued by Northern Beaches Council regarding noise impacts from proposed roof mounted mechanical plant servicing the residential development at 8 Forest Road, Warriewood. The consent condition states the following:

13. Noise from the operation of any plant or equipment at the premises shall comply with the noise provisions of the Protection of the Environment Operations Act 1997.

28. Air conditioning units, hot water systems, and other mechanical equipment shall not be located on any roof or in locations that are visible from a public space.

SYDNEY
9 Sarah St
MASCOT NSW 2020
(02) 8339 8000

ABN 98 145 324 714
www.acousticlogic.com.au

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2 ACOUSTIC REQUIREMENTS

Unattended noise monitoring was undertaken by this office between 12th May to 30th May 2022 in order to determine background noise levels are surrounding residential receivers.

Unattended noise monitoring was conducted using a Rion NL-42 noise logger. The monitoring was continuous, with statistical noise levels recorded at 15-minute intervals throughout the monitoring period. Measurements were taken on "A" frequency weighting and fast time response.

All monitoring equipment used retains current calibration - either manufacturers' calibration or NATA certified calibration. The monitors were field calibrated at the beginning and the end of the measurement with no significant drift in calibration noted.

It is advised to us that during this period, construction activities were being conducted at the site during typical construction hours (7am-6pm). As a result, background noise levels for the evening period have been conservatively adopted for the daytime period for the purposes of this assessment.

Mechanical plant and equipment are to comply with the requirements of the NSW EPA's Noise Policy for Industry (NPfI) 2017. Noise emission objectives for this assessment have been determined as follows:

Table 1 – Summarised Noise Emission Objectives

Receiver	Time of Day	Project Trigger Noise Level dB(A) $L_{eq}(15mins)$
Residential receivers (suburban)	Day Time (7am – 6pm)	39
	Evening (6pm – 10pm)	39
	Night (10pm – 7am)	35
Commercial	When in use	68
Industrial	When in use	63

3 ACOUSTIC REVIEW OF MECHANICAL PLANT

Acoustic Logic has conducted a noise emission assessment of proposed mechanical plant consisting of AC condenser units to the nearest sensitive residential receivers to the east along Bert Close. A total of 76 centrally located units are proposed as follows:

- Buildings A, B and D – 18 units each
- Building C – 12 units

This assessment is made based on the architectural plans provided by ADS Architects dated 22/4/2022 (Project no. Pn_0800, Rev 16) and condenser unit data provided by ACR. AL have conservatively adopted the loudest potential unit with data advised as follows:

- Fujitsu AJT090GALCH (heating) - outdoor
 - Sound Pressure Level – 60 dB(A)
 - Dimensions - 1690 x 930 x 765

Cumulative noise from proposed mechanical plant has been assessed to nearest affected receivers during the most stringent noise sensitive periods and is summarised in the table below.

Table 2 – Predicted Cumulative Plant Noise Emissions to Residential Receivers

Receiver Location	Calculated Noise Level dB(A) $L_{eq}(15mins)$	Project Noise Trigger Level dB(A) $L_{eq}(15mins)$	Comment
Residential Receivers along Bert Close	<20	35 (night)	Satisfies requirement

Acoustic Logic confirms that based on the provided condenser unit data, all proposed outdoor air conditioning units will be acceptable with no additional acoustic treatment required.

4 CONCLUSION

Acoustic Logic have conducted a noise emissions assessment of proposed AC condenser units located at roof level servicing Buildings A-D for the residential development at 8 Forest Road, Warriewood.

Based on the provided architectural and mechanical documentation, Acoustic Logic confirms that the proposed units will not adversely impact the acoustic amenity of surrounding receivers at any time.

We trust this information is satisfactory. Please contact us should you have any further queries.

Yours faithfully,

A handwritten signature in black ink, consisting of a stylized, cursive 'H' followed by a long horizontal line extending to the right.

Acoustic Logic Pty Ltd
Hyde Deng