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ENFIELD
ACOUSTICS
NOISE
VIBRATION

215 PURNELL ROAD, LOVELY BANKS

Acoustic Report for Town Planning Application

For



DOC. REF: V2890-01-P ACOUSTIC REPORT (R0)
28 JULY 2026

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Project	215 Purnell Road, Lovely Banks
Subject	Acoustic Report for Town Planning Application
Client	[REDACTED]
Document Reference	V2890-01-P Acoustic Report (r0).docx
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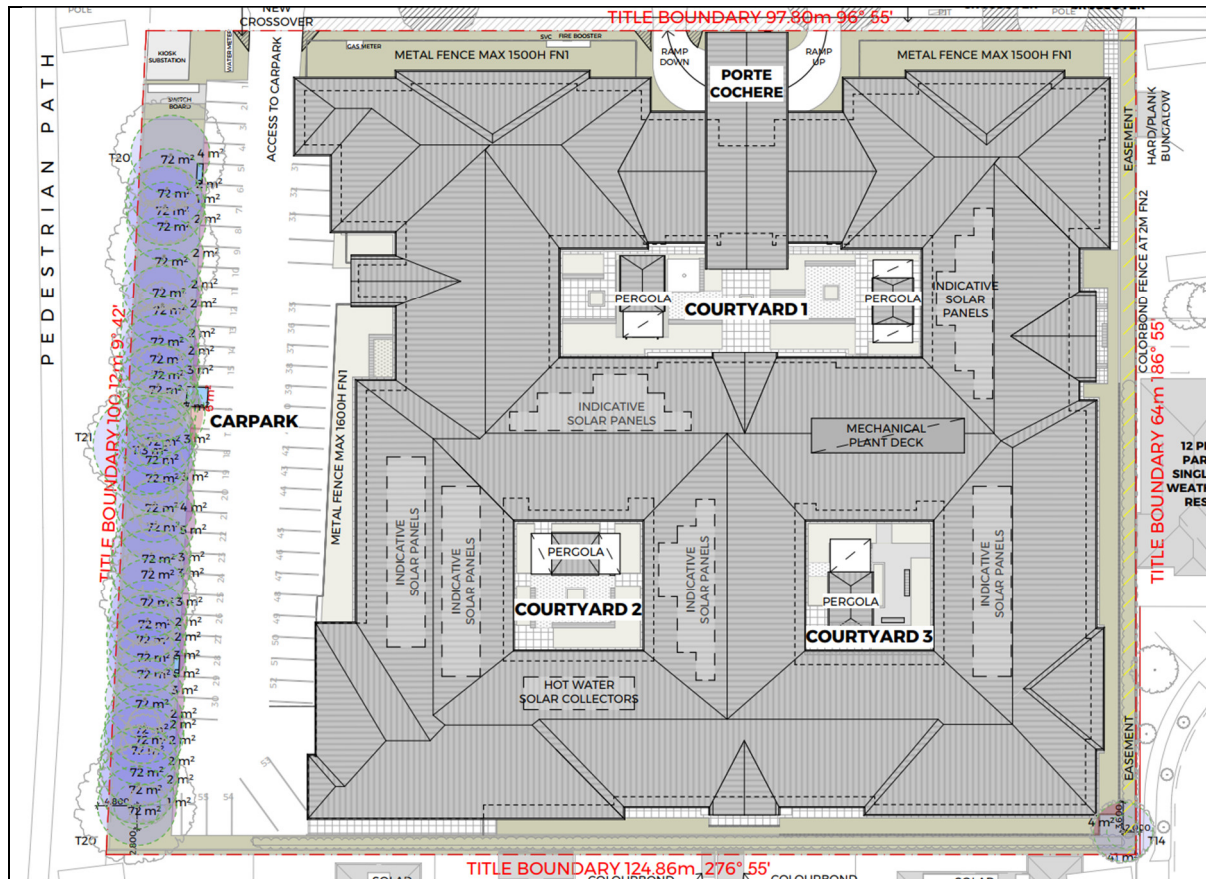
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1 Introduction

Enfield Acoustics has been engaged by [REDACTED] to assess potential noise impacts relating to the proposed residential aged care facility at 215 Purnell Road, Lovely Banks (Subject Land).

A site plan of the proposal is shown below for context:



This acoustic report is prepared in response to Item 1 of Council's RFI dated 10 July 2026, as follows:

1. Acoustic Report

An acoustic report prepared by a suitably qualified person to demonstrate how the proposal will comply with relevant noise legislation and mitigate amenity impacts on nearby residences.

As a residential aged care facility, the proposal presents an inherently low risk of noise impacts. Noise sources with potential off-site noise impacts include:

1. Mechanical plant
2. Carparking

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3. Waste collection and deliveries

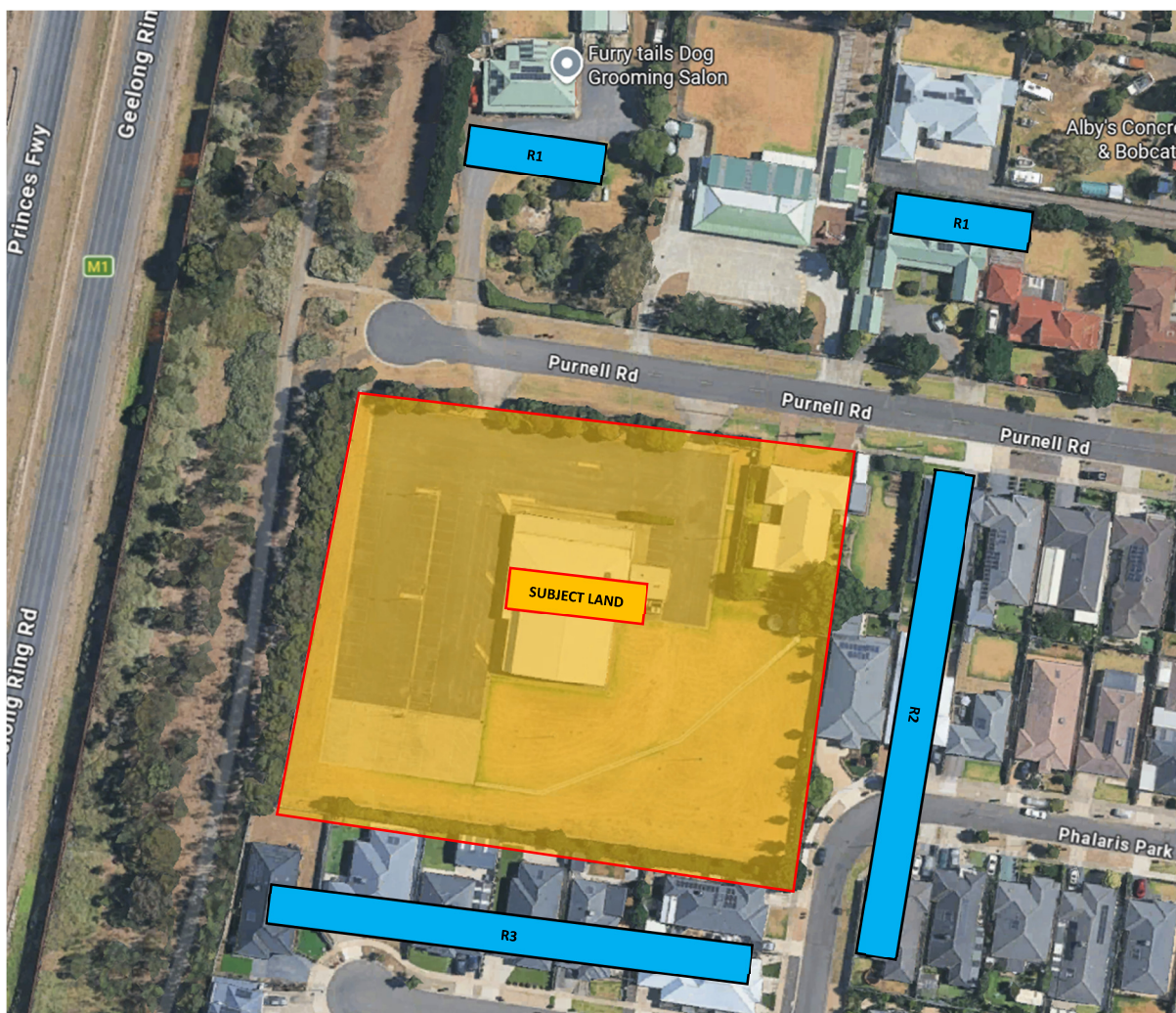
This report has been prepared in reference to the plans prepared by Tehla Clarke dated 1 June 2026.

2 Site Context

The Subject Land is sited within residential zoning (GRZ1), with sensitive uses located to the north, south and east of the Subject Land, as follows:

Tag	Location of Sensitive Use
R1	Dwellings North of Subject Land
R2	Dwellings East of Subject Land
R3	Dwellings South of Subject Land

Refer to the site map below for locations of sensitive uses:



The Subject Land is adjacent to the Geelong Ring Road to the west.

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3 Assessment

3.1 Base Building Mechanical Plant

Noise from any base building mechanical plant installed as part of the development must comply with the *Environment Protection Regulations 2021* (Regulations) and *EPA Publication 1826 – Noise Limit and Assessment Protocol for the Control of Noise from Commercial, Industrial and Trade Premises and Entertainment Venues* (Noise Protocol) when measured at adjacent dwellings.

Individual domestic air-conditioning units are not assessed under the Noise Protocol.

Based on our review of the plans, relevant base building mechanical plant for the development consists of typical residential equipment, including:

- Centralised HVAC equipment on the mechanical plant deck
- Hot water units, which do not emit material noise
- General exhaust fans

Based on the type and size of the development being residential, any base building services are unlikely to result in material noise impacts to a degree where it cannot be resolved via regular architectural and mechanical mitigation methods (e.g. attenuators for fans, acoustic screening, increased plasterboard linings to mitigate noise transmission through walls).

Detailed plans and specifications needed for accurate assessment are not typically available at the planning stage. Mechanical plant and equipment are therefore generally assessed during detailed design or construction, once all requirements and specifications are confirmed.

Regardless, our office has conducted a sensitivity assessment based on common rooftop vertical discharge condensers (VRF) located on the rooftop plant platform shown on the plans, as follows:

Description	Assumptions
Rooftop VRF unit <i>Estimated based on Mitsubishi PURY350 series</i>	83dB(A) L_{eq} Sound Power Level per unit <i>4 x units on rooftop plant deck</i>

Based on the assumptions above, 3D noise computational model has been generated using the software package CadnaA. The model considers acoustic propagation factors including attenuation from the proposed roof's built form.

The noise model does not assume any mitigation from the plant deck's local screening.



Based on the results of our modelling, the following noise levels were modelled:

Location	Effective Noise Level L _{Aeq-30 min}	Noise Protocol Limit L _{Aeq-30 min}	Exceedance/comply?
R1	20 dB(A)	51 dB(A) – Day 45 dB(A) – Evening 40 dB(A) – Night	✓ All periods
R2	28 dB(A)		✓ All periods
R3	23 dB(A)		✓ All periods

A map of the noise model is shown at Appendix A.

Our assessment assumes the Zoning Levels as the Noise Protocol limit, noting that the background classification is likely to be either ‘Neutral’ or ‘High’ and unlikely ‘Low’ due to proximity to the Geelong Ring Road. We consider this to be sufficiently conservative for a sensitivity analysis.

The modelling indicates that noise from the assumed rooftop VRF units would comply with the Noise Protocol limits at nearby dwellings by at least 12 dB. This is a substantial margin and is expected to accommodate reasonable variations in the modelling assumptions.

Overall, the risk of unreasonable noise impacts from the rooftop plant deck is low and is unlikely to require specific acoustic treatment, particularly given the screening already provided by the proposed roof ridges.

If further mitigation is required, the rooftop plant screen could be upgraded to an acoustically rated screen, however this is unlikely to be required based on our sensitivity analysis.

With regard to exhaust fans (bin room, laundry, kitchen), we do not consider this to present a material risk of noise impacts given that they can be readily mitigated by:

- Installing silencers and acoustically lined ductwork
- Selecting quieter fans
- Directing discharges away from dwellings

Regardless of the above, it is recommended that any base building mechanical plant is reviewed once plant specifications are known, noting that compliance with the Noise Protocol is a statutory requirement, regardless of planning controls. It is appropriate that these assessments are undertaken during detailed design phases once plant and equipment is specified.

3.2 Domestic Air Conditioning

All outdoor air-conditioning (AC) units will need to be installed and used in compliance with the Environment Protection Regulations 2021, which prohibits the use of such equipment at night if it is audible within an adjoining residence.

In reality, AC units are sometimes used during the night period but rarely result in noise complaints. Under the Regulations, an objective assessment is not typically required in planning



because all air-conditioning units emit similar types of noise and rely on prohibited use at night in the event of a noise complaint.

Overall, the risk of adverse noise impacts from domestic air condensers is low, especially in the context of being in a developed area next to the Geelong Ring Road.

Regardless, all domestic plant use is controlled by the Environment Protection Regulations 2021 which is enforceable regardless of planning controls.

In effect, the AC units proposed on the Subject Land will be no different from what already exists at surrounding dwellings.

3.3 Car Parking

The proposal includes a new carpark following demolition of the existing carpark on the Subject Land. Carpark noise is expected to comprise low-speed vehicle movements and vehicle door closures. As such, the proposal would not introduce a new noise source to affected dwellings.

Given the residential aged care use, vehicle movements are expected to be relatively low and spread throughout the day. The proposed use is not expected to generate the high turnover, intensive evening activity or late-night patron movements typically associated with retail, entertainment or hospitality carparks.

The Subject Land is immediately adjacent to the Geelong Ring Road, a substantial existing source of road traffic noise. The surrounding acoustic environment is therefore already influenced by elevated traffic noise. Intermittent noise from normal carpark operation is unlikely to be distinguishable from prevailing road traffic noise or to materially affect acoustic amenity at nearby dwellings.

In effect, low-speed passenger vehicle movements within the site are not expected to generate material noise emissions relative to vehicles travelling at higher speeds on the Geelong Ring Road.

On this basis, noise from the proposed carpark is considered low risk, is unlikely to cause unreasonable off-site noise impacts, and does not require specific acoustic treatment.

Further, noise from passenger vehicles is not a prescribed noise source under the Noise Protocol and is exempt from statutory or legislative requirements.

3.4 Waste Collection and Deliveries

There is a dedicated bin room and loading bay towards the southwest section of the Subject Land.

The hours recommended by EPA *Noise Control Guidelines, Publication 1254* (Publication 1254) are commonly adopted for commercial uses to minimise noise impacts from deliveries and waste collection. Given the proximity of sensitive uses to the Subject Land, we consider the hours recommended by Publication 1254 to be appropriate.



To that end, it is recommended that the following controls apply on the permit:

Deliveries

All deliveries to the Subject Land shall only be permitted to occur between the hours of:

- 7am to 10pm – Monday to Saturday
- 9am to 10pm – Sundays and Public Holidays

Waste Collection

All waste collection on the Subject Land shall only be permitted to occur between the hours of:

- 7am to 8pm – Monday to Saturday
- 9am to 8pm – Sundays and Public Holidays

On this basis, we are satisfied that delivery and waste collection noise emissions will not result in adverse noise impacts at all identified sensitive uses, providing the controls recommended in this report are adopted.

The recommended hours for waste collection are also consistent with the Waste Management Plan prepared by One Mile Grid dated 1 June 2026.

4 Conclusion

In response to Council's RFI, Enfield Acoustics has assessed the potential off-site noise impacts associated with the proposed residential aged care facility at 215 Purnell Road, Lovely Banks.

Based on the proposed development, surrounding context and the sensitivity assessment undertaken, the proposal is considered to present a low risk of unreasonable noise impact at nearby sensitive residential uses.

Noise from base-building mechanical plant presents as low risk, noting that our sensitive assessment of the rooftop plant deck indicates that typical plant would comply with the Noise Protocol by significant margins. Other base build plant (i.e. exhaust fans) can easily be attenuated by regular forms of architectural and mechanical mitigation if deemed required.

Car parking activity is expected to involve low-speed, relatively low-volume vehicle movements and is unlikely to materially affect surrounding acoustic amenity, particularly given the existing traffic noise from the adjoining Geelong Ring Road.

Noise emissions from deliveries and waste collection are also tempered due to proximity to the Geelong Ring Road. Regardless, it is recommended that the delivery and waste collection hours of EPA Publication 1254 are adopted for the development.

On this basis, we are satisfied that the application can be approved by Council where the recommendations in this report are adopted.



Appendix A: Noise Modelling Results





Scale: 1: 808 @ A3

Legend:

- Point Source
- Building
- Barrier
- Contour Line
- Receiver



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NOISE EMISSIONS LEVELS - ROOFTOP PLANT DECK

LAeq Noise Levels

Sensitivity assessemnt based on 4 x VRF units of 83dB(A) Leq SWL

Project No: V2890

NOTES:

*Propagation in accordance with ISO9613