

19-29 Glynburn Road

Acoustic Assessment

Planning and Design Code Amendment

S4217.32C6

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Acoustic Assessment – Planning and Design Code Amendment

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Prepared By: Chris Turnbull, MAAS

Reviewed By: Mathew Ward

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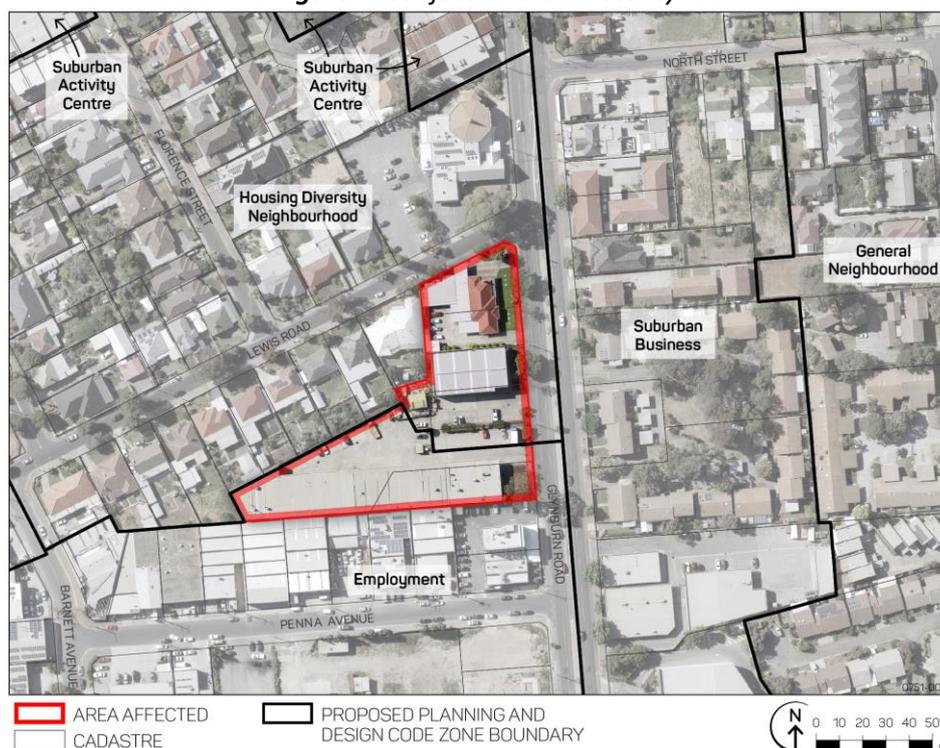
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1. INTRODUCTION

A Planning and Design Code Amendment is being considered for 19-29 Glynburn Road, Glynde. The proposed amendment seeks to rezone the land to a *Suburban Activity Centre Zone*.

The subject land is currently located within a *Housing Diversity Neighbourhood Zone* and an *Employment Zone* of the Planning & Design Code. The area affected by the proposed amendment is depicted in Figure 1 below.

Figure 1: Subject land and locality.



This assessment considers the environmental noise associated with the proposed Planning and Design Code Amendment.

The assessment determines the suitability of the noise criteria that apply to the Planning and Design Code Amendment, and has also considered the likely acoustic treatment measures that will be required based on the understanding that the most intensive form of development likely to occur on a land parcel of this size and configuration in a *Suburban Activity Centre Zone* is likely to be a shop or supermarket.

2. CRITERIA

The Planning and Design Code Amendment will result in the subject site being located in a *Suburban Activity Centre Zone* of the Planning and Design Code. The closest residences remain located within a *Housing Diversity Neighbourhood Zone* to the north west of the subject site.

Planning and Design Code

The Planning and Design Code has been reviewed, and the following provisions apply to environmental noise.

Part 4 - General Development Policies

Interface between Land Uses

Assessment Provisions (AP)

Desired Outcome (DO)

DO 1: Development is located and designed to mitigate adverse effects on or from neighbouring and proximate land uses.

Performance Outcomes (PO) and Deemed-to-Satisfy (DTS) Criteria / Designated Performance Feature (DPF)

Performance Outcome	Deemed-to-Satisfy Criteria / Designated Performance Feature
General Land Use Compatibility	
<p><i>PO 1.2 Development adjacent to a site containing a sensitive receiver (or lawfully approved sensitive receiver) or zone primarily intended to accommodate sensitive receivers is designed to minimise adverse impacts.</i></p>	<p><i>DTS/DPF 1.2 None are applicable.</i></p>
Activities Generating Noise or Vibration	
<p><i>PO 4.1 Development that emits noise (other than music) does not unreasonably impact the amenity of sensitive receivers (or lawfully approved sensitive receivers).</i></p>	<p><i>DTS/DPF 4.1 Noise that affects sensitive receivers achieves the relevant Environment Protection (Noise) Policy criteria.</i></p>
<p><i>PO 4.2 Areas for the on-site manoeuvring of service and delivery vehicles, plant and equipment, outdoor work spaces (and the like) are designed and sited to not unreasonably impact the amenity of adjacent sensitive receivers (or lawfully approved sensitive receivers) and zones primarily intended to accommodate sensitive receivers due to noise and vibration by adopting techniques including:</i></p> <ol style="list-style-type: none"> <i>1. locating openings of buildings and associated services away from the interface with the adjacent sensitive receivers and zones primarily intended to accommodate sensitive receivers</i> <i>2. when sited outdoors, locating such areas as far as practicable from adjacent sensitive receivers and zones primarily intended to accommodate sensitive receivers</i> <i>3. housing plant and equipment within an enclosed structure or acoustic enclosure</i> <i>4. providing a suitable acoustic barrier between the plant and / or equipment and the adjacent sensitive receiver boundary or zone.</i> 	<p><i>DTS/DPF 4.2 None are applicable.</i></p>

Environment Protection (Noise) Policy 2007

The *Activities Generating Noise or Vibration* PO 4.1 references the *Environment Protection (Noise) Policy 2007* (the Policy). The Policy provides goal noise levels to be achieved at residences from activity at a site.

The goal noise levels are based on the principally promoted land use of the zone in which the subject site and the noise receivers (the residences) are located.

Noise Criteria Resulting from the Planning and Design Code Amendment

The proposed amendment will require a new development at the subject site to achieve the following allowable external (outdoor) goal noise levels at receivers within the *Housing Diversity Neighbourhood Zone*:

- an average (L_{eq}) noise level of 52 dB(A) during the daytime (7am to 10pm);
- an average (L_{eq}) noise level of 45 dB(A) at night (10pm to 7am); and,
- a maximum (L_{max}) noise level of 60 dB(A) at night (10pm to 7am).

3. ASSESSMENT

For a development on this parcel of land, the most important receivers from an acoustic perspective will be the closest residences located within the *Housing Diversity Neighbourhood Zone* to the north west of the subject site.

Suitability of The Environmental Noise Criteria

To assess the suitability of the environmental noise criteria that would apply after the Planning and Design Code Amendment to rezone the subject land to a *Suburban Activity Centre Zone*; reference is made to the *World Health Organisation Guidelines* (the WHO Guidelines) to prevent annoyance, sleep disturbance and unreasonable interference on the amenity of an area.

The WHO Guidelines provides the following recommendations for external (outdoor) noise:

- an average (L_{eq}) noise level of 50-55 dB(A) to protect against annoyance in an outdoor areas during the day;
- an average (L_{eq}) noise level of 45 dB(A) to protect against sleep disturbance at night; and,
- a maximum (L_{max}) noise level of 60 dB(A) to protect against sleep disturbance at night.

Based on the above, the Policy external (outdoor) goal noise levels that apply in the *Housing Diversity Neighbourhood Zone* will satisfy the noise level recommendations of the WHO Guidelines.

Likely Acoustic Treatment Measures

Where a shop or supermarket is located at 19-29 Glynburn Road after the Planning and Design Code Amendment, the criteria of the Policy are likely to be achieved with practical acoustic treatment measures, such as:

- fencing at the boundary between the *Suburban Activity Centre Zone* and the *Housing Diversity Neighbourhood Zone*;
- screening of mechanical plant;
- locating high level noise sources away from the boundary or shielding with barriers; and,
- restricting rubbish collection to the least sensitive period of the day.

4. SUMMARY

An assessment has been made to consider the environmental noise criteria that would result from the proposed Planning and Design Code Amendment being considered for 19-29 Glynburn Road, Glynde.

The relevant environmental noise levels determined for the Planning and Design Code Amendment in accordance with the *Environment Protection (Noise) Policy 2007* have been determined and summarised in Section 2 of this report.

The proposed amendment to rezone the land to a *Suburban Activity Centre Zone* will result in noise criteria, which are consistent with the *World Health Organisation Guidelines* within the *Housing Diversity Neighbourhood Zone*. Compliance with these levels will prevent annoyance, sleep disturbance and unreasonable interference on the amenity of an area.

Based on the above, the existing *General Development Policies (Interface between Land Uses)* provide a suitable level of acoustic amenity at residences, and will result in the incorporation of practical acoustic treatment measures which are typical for similar developments located adjacent to residences.