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# Road Noise Impact

## 124 New England Highway Lochinvar

Reference 3330-RN-01-A

#### **Project Details**

Site Location 124 New England Highway Lochinvar

Client Hoover Group Pty Ltd

Project Description Six townhouses

Project Reference 3330-RN

#### Project Details

Site Location	124 New England Highway Lochinvar
Client	Hoover Group Pty Ltd
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Project Reference	3330-RN

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#### **Release Details**

Date	Version	Description
31/03/2025	01-A	For submission to council.

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The recommendations made within this report consider the acoustical problems only, and do not consider other performance requirements such as structural, fire, thermal and buildability. Professional advice should be obtained by suitably qualified and experienced persons in regards to other performance requirements. All comments and recommendations are made in good faith on the basis that Soundscape Consulting Pty Ltd are not liable for any loss or damage whatsoever incurred as a result.

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## 1 INTRODUCTION

Soundscape Consulting Pty Ltd was commissioned by Hoover Group Pty Ltd to complete a road noise impact assessment at 124 New England Highway Lochinvar. The report is to be submitted to the certifying authority as part of the DA.

The proposal is to construct six residential townhouses. A copy of the floorplans are available in appendix A.

The noise assessment follows the methodology of the NSW Department of Planning' interim guideline: Development Near Rail Corridors and Busy Roads (2008) (Herein DoP Guideline) in order to determine the noise control treatments required. This report has been completed with reference to the requirements of the State Environmental Planning Policy (Transport and Infrastructure) 2021 (herein SEPP) and Australian Standards 2107.

Section 2.1 (3) of the SEPP provides the following noise requirements:

If the development is for the purposes of residential accommodation, the consent authority must not grant consent to the development unless it is satisfied that appropriate measures will be taken to ensure that the following LAeq levels are not exceeded—

(a) in any bedroom in the residential accommodation—35 dB(A) at any time between 10.00 pm and 7.00 am,

(b) anywhere else in the residential accommodation (other than a garage, kitchen, bathroom or hallway)—40 dB(A) at any time

DoP Guidline provides the following noise requirements in table 3.1:

#### Table 1.1 DoP extract of table 3.1

Residential Buildings				
Type of occupancy	Noise Level (dBA)	Applicable time period		
Sleeping areas (bedroom)	35	Night 10 pm to 7 am		
Other habitable rooms (excl. garages, kitchens, bathrooms, & hallways)	40	At any Time		

Note: Airborne noise is calculated as  $L_{eq}(9h)$  (night) and  $L_{eq}(15h)$  (day).



Noise measurements of the New England Highway were previously taken by RAPT acoustics across the road at 127 New England Highway, Lochinvar. The traffic noise levels obtained during this noise survey have been used to calibrate a noise model and calculate the treatment requirements.

#### Table 2.1: Traffic noise exposure (critical façade) (dBA)

Time of Day	LAeq
Day (7:00–22:00)	56
Night (22:00-7:00)	55

#### Table 3.2: Exceedances against noise criteria

Period	Bedroom	Other Habitable
Day Extended	16	16
Night	20	15



Figure 3.1: Logger location (red)



## 3 RECOMMENDATIONS

### 3.1 Building Components

The following recommendations have been provided based on the noise assessment contained in section 3, reverberation calculations completed in accordance with AS3671 (1989) and the NSW DoP Interim Guideline.

- 1. The assessment identifies a noise exposure which falls within the category 1 treatment requirements.
- The noise levels will be attenuated by standard construction techniques meeting the NCC and BASIX requirements as presented in the plan drawings by Hoover Group (project RPL -202401 – dated 25-03-2025).
- 3. Fresh air ventilation will be required for all bedrooms (see section 3.2).

Category	Windows Sliding doors	Front Façade	Roof	Entry Door	Floor		
Category 1	24	38	40	28	29		

#### Table 3.1: Category Treatment Requirements (extract of DoP Guideline)

### 3.2 Ventilation

To achieve compliance with the nominated indoor target noise levels, windows and doors will need to remain closed. Alternate mechanical ventilation is required to achieve compliance with F6D6 of the National Construction Code, AS1668 and AS/NZS 3666.1. This may be achieved using:

- Wall ventilators, such as an Aeropac, capable of attenuating 22dBA for bedrooms and 25dBA for habitable rooms, and/or
- Fresh air intake into a ducted air-conditioning system. The intake duct should be placed on the underside of the eve to provide shielding from road noise.

Any noise emitted from the intake system must comply with Council requirements.



## 4 CONCLUSION

Soundscape Consulting Pty Ltd was commissioned by Hoover Group Pty Ltd to complete a road noise impact assessment at 124 New England Highway Lochinvar. The report is to be submitted to as part of the DA. The proposal is to construct six residential townhouses.

The acoustic recommendations provided in this report are based on the methodology and requirements of NSW Department of Planning' interim guideline: Development Near Rail Corridors and Busy Roads (2008). The components recommended are subject to external confirmation of suitability against the NCC, BASIX, safety requirements, and any other applicable codes, standards and guidelines. Where alterations are required, Soundscape should be contacted to ensure noise compliance is achieved.

Provided the recommendations as presented in section 3 of the report are implemented, it is our opinion that the proposed development will meet the intent of DoP guideline and SEPP.





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