

ACOUSTIC CONSIDERATIONS FOR INDUSTRIAL AND COMMERCIAL DEVELOPMENT APPLICATIONS

INTRODUCTION

An acoustic assessment is to be provided with development applications for industrial and commercial development where the development:

- a. Has the potential to impact on residences or noise sensitive receivers (defined as a LAeq, 15min level of more than background or more than the recommended amenity criteria within the NSW Environmental Protection Authority's Noise Policy for Industry (NPfI) minus 10 dB); or
- b. Is located within a 100m radius from, or has a direct line of site of distance of 150m, to residences or noise sensitive receivers; or
- c. Proposes to operate anytime between 10pm and 6am.

Noise emissions from industrial development must be assessed in accordance with the NSW EPA Noise Policy for Industry (NPfI).

Noise emissions from commercial development must be assessed in accordance with the Noise Guide for Local Government and must be consistent with the methodology within the NSW EPA NPfI.

Noise from the construction of industrial and commercial developments must be assessed and managed in accordance with the NSW Environmental Protection Authority's Interim Construction Noise Guideline 2009.

NOISE FROM CHILD CARE CENTRES AND EDUCATIONAL ESTABLISHMENTS

Development applications for child care centres and educational establishments must be accompanied by an acoustic report.

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Child care centres and educational establishments are to be designed to not exceed the following noise levels:

- a. LAeq (15 minutes) noise level from children in the outdoor areas of the site must not exceed the background LA90 sound level by more than 10dBA when measured at the boundary of the nearest or most affected residential premises (or if the boundary is more than 30 metres from a residential dwelling, at the most affected point within 30 metres of a residence).
- b. LAeq(15 minutes) noise levels from all other operations (i.e. car park, plant) must not exceed the background LA90 sound level by more than 5dB(A) when measured at the boundary of the nearest or most affected residential premises.

ACOUSTIC MITIGATION MEASURES

Acoustic assessment reports are required to identify feasible and reasonable noise mitigation measures to be implemented to achieve compliance with the project specific noise criteria.

There are three main areas where measures to reduce noise can be applied:

1. Controls at the source such as:
 - selecting quieter equipment (including noise as a consideration in procurement policies and practices).
 - enclosing the source; the design of the enclosure and materials used to absorb sound will affect the attenuation achieved.
 - closing doors on enclosures/buildings at sensitive times.
 - silencing exhausts – muffler design and noise-barrier systems.
 - active noise control, effective on a limited range of noise sources.
 - times of operation.
 - smooth roadways and vehicular access points.
2. Controls along the sound-transmission path such as:
 - noise barriers: more effective if near source or receiver; effectiveness also controlled by materials used (reflective or absorptive) and by height.
 - mounds and bunds.

- site design to maximise the distance from the critical noise source to the receiver and with intervening buildings to act as barriers.

3. Controls at the noise receiver such as:

- insulation.
- upgraded glazing of windows and use of mechanical ventilation and/or air conditioning.
- other mutually accepted trade-offs for benefits.
- voluntary acquisition.

ACOUSTIC BARRIERS OR FENCES

Where possible, developments are encouraged to mitigate noise impacts through building orientation and design. Where acoustic barriers or fences are required, they should not exceed 2.1m or should be designed to reduce visual impacts on surrounding premises.

Noise mitigation measures are site specific and vary significantly depending the type of noise being generated and nearby receivers.

Proposed mitigations measures are assessed on their merits on a case by case basis.

RESOURCES AND GUIDLINES

- [NSW EPA Noise Policy for Industry \(NPfI\)](#)
- [NSW EPA Road Noise Policy](#)
- [Interim Construction Noise Guideline](#)
- [NSW EPA Noise Guide for Local Government](#)
- [Association of Australasian Acoustical Consultants Guidelines and documents](#)

FOR MORE INFORMATION

If you require any further information about this or other Acoustic requirements, please contact Council's Environmental Health Section on (02) 4677 1100.