

Environmental Noise Technical Requirements

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Overview

This document references technical requirements referred to by relevant conditions of consent for environmental noise and vibration control.

Requirements

This is a general list of requirements.

Where a condition of consent references a requirement within this document, the approved development must comply with that requirement.

Other conditions may be imposed on a development consent and not reference this document.

NSW Vibrancy Reforms

The NSW 24-Hour Economy Legislation Amendment (Vibrancy Reforms) Act 2023 aims to revitalise the state's night-time economy, supporting live music, hospitality, and creative industries. These reforms have the following effects:

- Effective 1 July 2024, Liquor & Gaming NSW (L&GNSW) became the lead regulator for entertainment noise complaints from licensed venues under the Liquor Act 2007.
- Requirements aiming to limit noise from entertainment activities will have no effect if they apply to any venue with a liquor licence.
- Where Special Entertainment Precincts (SEPs) are established, entertainment sound criteria like Requirement 3 below will be replaced by the relevant SEP noise management plan.

Councils must still assess noise under the Environmental Planning & Assessment Act and apply development consent conditions. The NSW Government's 1 July 2024 Circular advises councils to continue identifying and managing potential noise impacts to provide greater certainty for venue operators.

Conditions to be satisfied prior to issuing an occupation certificate or a construction certificate will be required by the Certifier.

More details: [NSW Liquor & Gaming – Vibrancy Reforms](#).

Notes

1. Suitably Qualified Acoustic Consultant means a consultant who possesses the qualifications to join the Australian Acoustical Society, Institution of Engineers Australia (grade of member) or the Association of Australasian Acoustical Consultants (grade of member firm).
2. Unless otherwise provided in a relevant requirement, a noise descriptor is as described in AS1055:2018 – *Acoustics - Description and Measurement of Environmental Noise*.

Sound limiters and entertainment noise

(1) AMPLIFIED SOUND AND THE UPKEEP AND OPERATION OF LIMITER/S

- (a) A copy of the approved verification report for the sound limiter(s) must be kept on the premises at all times.
- (b) The sound limiter(s) and amplification system must be properly maintained and not tampered with. No unauthorised changes may be made that conflict with the verification report or any applicable consent. Repairs and replacements are permitted as needed, provided they do not increase the maximum noise levels specified in the report.
- (c) No additional amplification equipment may be brought onto the premises if its use could result in the cumulative entertainment noise (including amplified sound) exceeding the limits set out in a consent.
- (d) This restriction does not apply to:
 - (i) Equipment that is used only when connected through, and controlled by, the approved limiter(s), meaning the limiter(s) and sound system can manage and regulate its output and
 - (ii) Equipment used in a way that does not cause amplified sound to exceed the cumulative entertainment noise limits set by the relevant consent.

(2) AMPLIFIED SOUND AND THE INSTALLATION, SETUP, TESTING AND CALIBRATION OF LIMITER/S, PRIOR TO AN OCCUPATION CERTIFICATE

- (a) All sound amplification equipment must be controlled by a Root Mean Square (RMS) limiter, configured with an attack time constant no greater than 0.5 seconds, a release time constant of at least 1 second, and a compression ratio of no less than 20:1. The limiter must be configured by a suitably qualified acoustic consultant in accordance with the manufacturer's specifications.
- (b) Limiters and all equipment located after the limiter in the signal chain, including power amplifiers, must be tamper-proof and operable only by the acoustic consultant, licensee, or business owner.
- (c) The limiter(s) must be installed, tested, and calibrated to ensure that amplified noise complies with applicable 'noise from entertainment-related activities' conditions.
- (d) The sound limiter verification report must be prepared in accordance with the following requirements and include details on each:
 - (i) An initial calibration of the limiter and sound amplification system must be conducted. This assessment must document the full system configuration and setup to demonstrate compliance with the noise criteria outlined in points (a) to (c).
 - (ii) The limiter settings and downstream equipment must be benchmarked during this assessment. A pink noise signal and a swept sine wave must be input into the system. The signal should be increased in level until the limiter activates continuously, ensuring compliance with the specified noise

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criteria. Measurements of LAeq, LA1, LCeq, and LC1 (in 1/1 octave bands from 31.5 Hz to 8 kHz) must be taken at relevant reference points within the premises (while unoccupied, except for essential staff), and corresponding measurements must also be taken at identified nearby noise-sensitive locations.

- (iii) Music must then be played through the sound system(s) with the limiter(s) in continuous operation to verify that the system functions correctly and continues to comply with noise requirements at all specified locations.
- (iv) The report must include full details of the installed limiter, including brand, model, technical specifications, and installation location. It must also state the configured sound control levels and include a copy of the digital configuration file for any DSP (Digital Signal Processing) devices used. All post-limiter equipment and their physical locations must be documented with photographs and a layout plan.

(3) NOISE FROM ENTERTAINMENT ACTIVITIES

- (a) Between 7:00am and 12:00 midnight, the LAeq, 15-minute noise level generated by the use must not exceed the background noise level (LA90, 15-minute) in any octave band (from 31.5 Hz to 8 kHz) by more than 5 dB, when measured at the boundary of any form of residential accommodation or tourist and visitor accommodation.
- (b) Between 12:00 midnight and 7:00am, the LAeq, 15-minute noise level from the use must not exceed the LA90, 15-minute background level in any octave band (31.5 Hz to 8 kHz) at the boundary of any residential or tourist and visitor accommodation.
- (c) Despite clause (a), between 7:00am and 12:00 midnight, the LAeq, 15-minute noise level from the use must not exceed the greater of the following inside any habitable room of residential or tourist accommodation, or at any time within an affected commercial premises:
 - (i) The existing internal LA90, 15-minute level (from external sources, excluding the entertainment use) in any octave band (31.5 Hz to 8 kHz); or
 - (ii) If the LZ90, 15-minute level in any octave band is below the hearing threshold curve (Tf) from Table 1 of ISO 226:2003, the lowest audible level (Lp) from the Tf curve in that band becomes the criterion for that octave's LZeq, 15-minute noise level.
- (d) Despite clause (b), between 12:00 midnight and 7:00am, the LA1, 15-minute noise level from the use either measured or modelled inside any habitable room of affected residential or tourist accommodation must not exceed the greater of the following:
 - (i) The existing internal LA90, 15-minute level (from external sources, excluding the use), minus 10 dB in any octave band (31.5 Hz to 8 kHz); or
 - (ii) If the adjusted LZ90, 15-minute minus 10 dB level is below the hearing threshold curve (Tf) from ISO 226:2003, then the lowest audible sound level (Lp) from the Tf curve in that band becomes the criterion for that octave's LZ1, 15-minute noise level.

- (e) For the purposes of this requirement and relevant conditions, "Entertainment Activities" are defined under Section 202A of the Local Government Act (NSW).

Notes:

- LAeq, LA1, LA90: Defined as per AS1055-2018, with 'A' weighting applied.
- Z-weighting: Indicates unweighted noise measurements.
- Internal LA90: Must be measured in the absence of any noise from the entertainment use, and must reflect a quiet, representative baseline for the receiver.
- External LA90: Must be determined using the long-term methodology in Fact Sheet B of the NSW Noise Policy for Industry (NPfI), unless otherwise agreed with the City's Area Planning Manager.

Commercial and industrial noise

(4) NOISE FROM COMMERCIAL AND INDUSTRIAL ACTIVITIES

- (a) Cumulative noise must not exceed either a project noise trigger level or maximum noise level in accordance with relevant requirements of the NSW EPA Noise Policy for Industry 2017 (NPfI).

External background noise monitoring must be carried out in accordance with the long-term methodology in *Fact Sheet B* of the NPfI unless otherwise agreed by the City.

- (b) Cumulative noise from the use must comply with the following requirements when assessed inside an occupiable room of a separate premises that is residential accommodation, tourist and visitor accommodation, or a sensitive commercial premises at any time:
- (i) An $L_{Aeq, 15 \text{ minute}}$ measured with external windows and doors closed must not exceed the lesser of either an internal $L_{A90} + 0 \text{ dB}$ measured with external doors and windows closed, or 30 dB(A) for a sleeping area, or else 40 dB(A) in any other habitable room.
 - (ii) An $L_{Aeq, 15 \text{ minute}}$ measured with external windows and doors open must not exceed the internal $L_{A90} + 0 \text{ dB}$ when measured with external windows and doors open. This is not applicable if the room has an alternative source of ducted ventilation.
 - (iii) An Internal L_{A90} must represent the receiver in a quiet state. It may be derived from the median of multiple $L_{A90, 15 \text{ minute}}$ measurements at the same location.
 - (iv) Internal background noise measurements must not include noise from the land subject to development but may include noise from necessary alternative passive or mechanical ventilation at the affected premises.
 - (i) Corrections in *Fact Sheet C* of the NPfI are applicable to relevant noise from the use measured in accordance with the above, however duration corrections are excluded from commercial noise. A correction for impulsive noise must be made in accordance with section 6.6.4 of Australian Standard 1055.1-1997.

- (i) This requirement does not apply to an entertainment activity as defined by S202A of the NSW Local Government Act. Noise sources outlined in S1.5 of the NPfI with the exception of sporting facilities, are excluded from this requirement unless advised.

Additional considerations for gyms

(5) NOISE – STRUCTURE BORNE IMPACT ON SEPARATE PREMISES

Structure borne noise from the premises is not to exceed the following criterion when measured within any separate premises:

- (a) $L_{A1, \text{Slow 15 minute}} \leq L_{A90, 15 \text{ minute}} \text{ dB(A)}$.

(6) OLYMPIC AND POWERLIFTING WEIGHTS PROHIBITED

Olympic and or powerlifting weights are defined as follows:

- (a) 'Olympic weights' are equivalent to Regulation 3.3.3 including barbels, discs and collars of the *IWF (International Weightlifting) 2020 Technical and Competition Rules & Regulations*, published by the IWF, dated 2020.
- (b) 'Powerlifting weights' are equivalent to that described by the Bars and Discs and Collars subsection of the Equipment and Specifications section of the IPF (International Powerlifting Federation) Technical Rules Book 2021, updated on 31 December 2021.

Note: The City will typically impose a condition to prevent the occurrence of regenerated noise that will not comply with requirement 5 or any perceptible vibration from the use in a separate premises.

Approval

Date of approval	Approved by
September 2025	Executive Director City Planning Development & Transport

Review table

Date of review	Reviewed by	Changes made
September 2025	Manager Standards & Policy Acoustic Specialist Standards & Policy	Document Finalised

