ACT Government

GUIDELINES FOR THE PREPARATION OF NOISE MANAGEMENT PLANS FOR DEVELOPMENT APPLICATIONS

ENVIRONMENT PROTECTION AUTHORITY

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WHAT IS A NOISE MANAGEMENT PLAN?

A Noise Management Plan (NMP) is a document that demonstrates how environmental noise pollution will be managed for a particular site and any developments on that site. A NMP details how a proposal will comply with the Environment Protection Act 1997 (the Act), Environment Protection Regulation 2005 (the Regulation) and other applicable standards. It outlines measures to prevent, minimise or control noise and vibration impacts.

The Act and Regulation are administered by the Environment Protection Authority (EPA).

If a NMP is required, it will need to be submitted as part of the development application for the site.

***Note:** The Environment Protection Act 1997 does not apply to noise made by a train, aircraft, a person's body, an animal or a motor vehicle being driven on the roads. Therefore, the EPA does not consider the impact of these sources when determining the compliance of a proposal.*

WHEN IS A NMP REQUIRED FOR DEVELOPMENT APPLICATIONS?

NMPs may be required under the Territory Plan, the key statutory planning document in the ACT, which is directed by the Planning and Development Act 2007. Certain land uses in local, group, town and city centres and other areas specified in the Territory Plan will trigger a NMP under the development and precinct codes. Mixed-use developments, multi-unit housing and single residential housing may also trigger a NMP under the development codes.

AS/NZS 2107:2000 Acoustics – Recommended levels and reverberation times for building interiors (AS/NZS 2107) establishes 'satisfactory' recommended design sound levels.
A NMP must demonstrate that acoustic levels meet the relevant satisfactory standard for: multi-unit residential developments located within a commercial zone or adjacent to a commercial or industrial zone; and multi-unit or single residential developments identified in a precinct code as being potentially affected by noise from external sources.

Where development applications, including lease variations, propose commercial accommodation located in or adjacent to areas subjected to higher noise levels, the EPA will require NMPs to demonstrate that the acoustic levels within commercial accommodation sleeping areas meet AS/NZS 2107.

The EPA may also require a NMP where the noise generated by a proposal may exceed the noise standards set in the Regulation at the boundary of the lease, or when the noise generated by a proposal may exceed the noise standard within other leases in the same complex.

Where a NMP is submitted with a development application (as required by the Territory Plan), the noise mitigation requirements that relate to the building fabric and structure must be included in the drawings; for example, concrete slabs, glazing, soffit linings in balconies, etc.
A development is to be constructed in accordance with the approved plans.

WHO SHOULD PREPARE A NMP?

NMPs must be prepared by a person suitably qualified in the assessment of environmental noise and/or vibration. The EPA considers full members of the Australian Acoustical Society, listed in the directory of Members Areas of Professional Practice under Environmental Noise, to be suitably qualified.

WHAT SHOULD A NMP CONSIDER?

Many factors need to be considered when preparing a NMP, with these factors differing with each proposal. It is necessary to consider the following when preparing a NMP:

- The permitted noise standard under the Regulation for the site: all noise emitted from the site regulated under the Environment Protection Act 1997 must comply with the noise standard at any point within the vertical plane of the site boundary.
- Where a residential development is proposed in an area with a noise standard higher than zone G in the Regulation, the development must meet the 'design sound level ranges' recommended for residential buildings of AS/NZS 2107. Commercial accommodation developments should meet AS/NZS 2107 for sleeping areas.
- The activities currently carried out within the local area: this is particularly relevant when considering a residential development in an area other than zone G (as defined in the Regulation).
- The permitted uses under the lease for the site: the NMP must address noise from all permitted uses identified as being noisy, regardless of whether the permitted use is utilised. If a noisy use is permitted by the Crown lease, the noise must be attenuated at the building design stage or by measures that allow the attenuation to be incorporated in the future should a permitted use be activated.
- Noise sources: the NMP must include all sources of noise, including amplified music and vibration that may have an impact on other tenancies in the development and/or adjoining sites.
- Noise complaints to the EPA are commonly in relation to: gyms, amplified music, bars and licenced premises; exhaust fans including kitchens and underground car parks; garage roller doors; mechanical plant; and garbage collection among others. There are also noise sources associated with many proposals which, due to their occasional nature, are not normally included in acoustic modelling, such as public address systems, emergency warning systems and reversing beepers. These noise sources should be identified in the NMP, their likely impacts discussed, and comment provided on any potential to minimise their impact. The NMP should also identify and discuss low frequency (particularly where amplified music is identified as a noise source), tonal, impulsive and intermittent noise sources and their associated mitigation measures.

- Vibration sources: vibration from plant and other machinery. For example, 24-hour gyms and drycleaners can generate acoustic disturbances, which fall into the following categories:
  - Vibration transmissions – vibration generated within a tenancy is transmitted throughout the building structure and into adjacent tenancies.
  - Radiated or structure borne sound – where vibration produced elsewhere transmits to an affected place via a connected structure and is radiated as sound.
  - Airborne noise transmission – where noise in a tenancy is transmitted through wall partitions into the adjacent tenancies or developments.

For developments that include plant and other machinery that generate vibration (e.g. gyms and drycleaners), the NMP must include an assessment of, and measures to ensure, any noise and vibration emissions associated with the use and operation of the activity are minimised and achieve compliance with the relevant acoustic requirements of the Australian Standards, the noise standard for the zone, and that the vibration impact has been assessed using the NSW EPA Assessing Vibration Guideline or other industry-applied standards.

The NMP should discuss both the protection of noise receivers from noise sources and the minimisation of noise generated at the noise source, while outlining appropriate noise

reduction measures. Where the proposal includes both residential and commercial components, the NMP must address the impact of noise sources on other units within the same lease boundary, particularly residential dwellings.

Note: *The ACT is divided into noise zones. Noise standards for these zones are set in the Environment Protection Regulation 2005. All noise emissions from a parcel of land must comply with the noise standards at any point within the vertical plane of the boundary. It can therefore be assumed that noise sources external to the parcel of land should not exceed the noise standards that apply to that land. The noise standards for the purposes of this document are taken to be expressed as LA10,T where T is 10 minutes (i.e. for a multi-unit dwelling located within the city centre, the maximum noise source external to the dwelling should be 60dB).*

WHAT SHOULD A NMP CONTAIN?

At a minimum a NMP should contain:

- the name, qualification and experience of the person who prepared the report
- an adequate description of the project, including background history or relevant previous studies, scope of work, noise/vibration issues addressed and hours of operation
- a detailed site map that identifies the location of the noise sources, noise receiver locations, including existing and proposed residential developments, topographical data that may affect noise propagation, measurement or prediction locations, and north point and scale
- relevant noise guidelines, policies or standards that have been applied, for example:
  - Environment Protection Regulation 2005
  - Noise Environment Protection Policy, Environment Protection Authority
  - Noise Measurement Manual, Environment Protection Authority
  - AS 2436 Guide to noise control on construction, demolition and maintenance sites
  - AS/NZS 2107:2000 Acoustics – Recommended design sound levels and reverberation times for building interiors
  - ISO AS 2631.2:2014 Evaluation of human exposure to whole-body vibration - Continuous and shock induced vibration in buildings (1 - 80Hz). (formerly AS 2670.2)
  - NSW EPA: Assessing Vibration – Technical Guideline. This Guideline presents preferred and maximum vibration values for use in assessing human responses to vibration and provides recommendations of the measurement and evaluation techniques
- details of any noise monitoring undertaken
- noise predictions for the proposed activity including:
  - how noise levels for each activity or permitted use was determined
  - type of computer noise modelling software used
  - noise source locations and source heights
  - topography settings
  - meteorological conditions used
  - receiver locations
  - operating conditions of the building when predicting internal noise levels including a justification for those conditions (i.e. windows and doors open or closed);
- a comparison of noise predictions against noise criteria
- details, feasibility and reasonableness of proposed mitigation measures, separated into building controls and management controls, indicating the expected noise reduction associated with these measures
- how compliance can be determined practically.

FOR MORE INFORMATION

Contact the Environment Protection Authority by calling Access Canberra on 13 22 81

Go to http://www.accesscanberra.act.gov.au for more information relating to noise

See also:

- Environment Protection Act 1997
- Schedule 2 of the Environment Protection Regulation 2005
- Noise - Environment Protection Policy
- Noise Measurement Manual

Telephone: 13 22 81

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