Acoustics

for gyms

FACT SHEET

Know your risks

A basic risk analysis can help you understanding the likely consequences of noise impacts.

Vibration and Mixed-use Developments

For gyms, noise can also include vibration or structure-borne noise. Such impacts typically require attention when a proposed development or building fitout is within a mixed-use building (for example, having residential use above a commercial tenancy) or where buildings are structurally connected in some way.

Both vibration and structure-borne noise need to be considered where there is a risk of impacts or shock occurring on a building element, which may include a floor or wall that allows vibration and structure-borne noise to be easily transmitted through a structure into a sensitive premises.

While gyms come in different formats, higher risks are associated with the dropping of weights, including pin-loaded machines, free weights and other exercise equipment.

Resilient flooring is a common method of mitigating these impacts and can range from simple rubber floor finishes to raised platforms on springs. Specialist advice should be sought to determine what is appropriate for your business.

Amplified Music

Another common source of noise from gyms is the amplification of music. Automatic noise limiting devices are a common method of ensuring that amplification does not exceed noise limits. This is done by special devices that electronically limit how loud music can be turned up and can include more specific controls to regulate tampering and auditing of the levels.

While amplification can be controlled, applicants should understand what limitations may be imposed on an operation as a result of inadequate sound insulation that would otherwise be provided by a building. While noise limiters can be an effective way to demonstrate compliance, you still need good sound insulation to create the right conditions for your gym. This should be considered as part of your planning consideration and risk analysis.

Depending on the risk of impact, specific requirements may be imposed on noise limiting that allows Council to better enforce its use, including ways to monitor and audit limiter records.

Business operators should also consider other best practice controls and management such as ensuring that loudspeakers are appropriately positioned and that excessive low frequency bass is controlled or limited.

Example of a noise limiter

For Commercial Tenants

If you are a Tenant operating a gym within a building:

- Understand the permit controls that apply to the land
- Understand the permit controls that apply to the use
- Understand your lease agreement, which may or may not include provisions for noise
- Consider whether the location is within a larger building or complex that includes sensitive uses above or below the fitout
- Understand your limitations to controlling impacts within the premises fitout. If you are fitting out an existing building cold shell, consider testing the acoustic performance of the building prior to designing the fitout, where possible

For Commercial Landlords

If you are a Landlord with a gym tenant:

- Understand your responsibilities, in particular if you are the permit holder on the land
- Understand your tenant's proposal and risks associated with noise impacts
- Consider more specific regulation through a lease agreement to protect your interests beyond general amenity agreements
- Consult with Owners Corporations where relevant

Noise control tips and what to look for

These tips can help you identify any issues before you buy or lease a property.

- Inspect the property with noise impacts in mind. Visit the site at night during the latest trading hour being applied for to gauge the sensitivity of the surrounding area.
- If there are any nearby (<20m) windows directly overlooking your venue, this is considered high risk for an outdoor open area as there are limited opportunities to screen noise. For any acoustic screening to be effective, it must break direct line of sight to any sensitive use.
- Consider specific interfaces with neighbours and practical limitations:
  - External patron noise impacts cannot easily be controlled
  - There may be other planning restrictions that limit the effectiveness of acoustic screening or boundary fencing that is permitted, such as neighbourhood character and overshadowing
- If the building exists, consider requesting that your acoustic consultant carries out an inspection and testing of the sound insulation performance, ideally prior to committing to a lease or property purchase, to determine if your proposal is suitable for the site. This is particularly important if the property shares a common wall, floor or ceiling with an existing residential use.
- Install sound or air lock doors, to manage the escape of noise as patrons enter and leave
- Locate live entertainment areas within dedicated sound isolated rooms
- Be aware that low frequencies (bass) from music are particularly difficult to attenuate, even when enclosed, so you should seek advice from an acoustic consultant.
- Face loudspeakers away from boundaries and facing away from neighbours (if outdoors). Consider installing more, rather than fewer loudspeakers at locations closer to patron areas, so that they can be run at lower volume.
- Limit high noise impacts during sensitive hours, e.g. collect bottles and move waste during less-sensitive hours, like the following day.
- Budget for specific attenuation during initial design and application, such as electronic noise limiting for amplification and high performing partition walls and ceilings that can attenuate low frequency noise.
- Prepare a detailed noise and amenity action plan detailing security protocols and how patrons will be managed.

What you should consider in a permit application

a. **Trading hours sought**

b. **Number of patrons, including specifically the number of patrons proposed in external areas**

c. **Confirmation of the type of amplified music proposed (live entertainment, DJs, background music, etc)**

d. **Confirmation of any self-regulated restrictions such as limited or prohibited external amplification and loudspeakers**

e. **Confirmation of any controls, including noise limiting, that will be installed**

f. **Management protocols for how patrons will be managed**

g. **An acoustic report that includes:**

i. Identification of all sensitive uses in proximity to the site

ii. How noise limits have been established

iii. Any noise modelling that has been carried out to assess the proposal, and the basis of the noise information assumed that reflects the proposal

iv. Mitigation requirements that need to be constructed or implemented on the site

v. Operational controls or conditions that the proposal would need to abide with

What to expect after you submit your application

After your application is lodged with Council, it may be reviewed to determine if:

- The application documents are satisfactory in relation to addressing noise impacts
- Further information is required for specific noise issues or controls to be addressed
- Permit conditions need to be considered for the application to be approved

A period of advertising and community response may also impact on whether your application is approved. Concerns regarding noise impacts commonly arise through this process and Council may take these objections into account when making a decision.

If a permit is approved, you should understand that the permit conditions need to be adhered to and that Council carries out investigations to ensure compliance with a permit, which may include conditions to control noise.

There may also be further requirements before your documentation is endorsed under the permit, such as further acoustic information and a requirement for amended plans that are consistent with the recommendations provided in your acoustic report.