



Acoustics

for licenced premises, food & drink and live music venues

Fact Sheet

Know your risks

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

Generally, the risk of impact will be proportional to the scale of the proposal. If you have live music, DJs or a focus on entertainment and liquor, you're more likely to emit higher levels of noise than a café or restaurant.

Similarly, proposed venues with large outdoor trading areas and later trading hours are more likely to result in noise impacts.

Amplified Music

The most common source of noise from licensed premises is the amplification of music. This can include a live band or DJ as well as background music.

The type of music proposed, trading hours (in particular for loud music) and sound insulation of the building are the most important factors to understand what will restrict your operation.

Music noise limits generally become more onerous after 11pm (and 10pm on Sunday) when the most common music emission (low frequency bass) becomes difficult to control. You should consider the risk of your proposal by assessing how suitable the building's sound insulation is for loud music and later trading hours. For established buildings, the sound insulation can be empirically tested by a suitably qualified consultant. For new building developments, you will need to rely on accurate modelling. If you're planning for higher levels of noise, you may need to consider:

- Appropriate locations of live entertainment areas and loudspeakers away from interfaces with neighbours
- More significant physical controls such as acoustic glazing, door sound locks or acoustically isolated rooms
- Restricting or prohibiting outdoor amplification and loudspeakers



Noise Limiters for Live Entertainment

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 noise limiters can be an effective way to demonstrate compliance, you still need good sound insulation to create the right conditions for your business. This should be considered as part of your planning consideration and risk analysis.

Noise limiters can also be ineffective or costly (sometimes requiring several limiters) for live bands. You may need other solutions to control noise emission before proposing an operation for live music.

A report from an acoustic consultant may also be requested to confirm the noise limiting system has been installed and calibrated correctly.



Example of a noise limiter

Commercial Zones and Activity Centres

While strategic planning places an emphasis on commercial uses in specific areas, it is still common to find sensitive uses within these zones, including shop top dwellings. Where possible, you should be aware of surrounding uses that may be sensitive to noise, not just within the zone but also where it borders non-residential zones. Under the EPA's framework, all sensitive receptors are afforded the same protection from music noise regardless of zoning.



Background Music in Outdoor Areas

While background music is commonly defined under the Liquor Control Act, all premises still needs to comply with the noise limits defined by EPA Publication 1826. In some circumstances where sensitive land is close to a venue with external speakers, background music can still result in excessive noise impacts. A background music condition on a permit should not be understood to automatically infer compliance.

Liquor Licensing

In addition to planning controls, your Liquor Licence may also include conditions relating to noise and amenity. It is your responsibility to ensure that the conditions of both the planning permit and license are complied with.

Patron Noise

Patron noise is not covered by any specific controls under the legislative framework. However, Council will still consider this during the permit application.

If you will have outdoor areas for patrons, an acoustic report should be provided detailing how patron impacts have been assessed. A Patron and Amenity Management Plan should also be provided with specific controls and management protocols on how impacts will be mitigated, including the arrival and departure of patrons from a premises. Management plans may be endorsed under a permit if granted.

You should also consider limiting the number of patrons or installing additional physical controls (e.g. boundary acoustic fencing) where noise impacts are assessed as being excessive.

Refrigeration and Mechanical Plants

Food and drink premises will need to consider the impacts from any plant or mechanical noise. These sources of noise are controlled under EPA Publication 1826 and applicants and their acoustic reports should consider the following:

- Plants that run all hours of the day, not just during trading hours, such as refrigeration
- Kitchen exhausts and other large fans and air-conditioning equipment
- The siting of plant and in particular when located on roofs, whether there are sensitive receptors overlooking the plant

It is not always possible to assess plants in the acoustic report during a planning application phase. In such cases, the report should recommend suitable controls to ensure an assessment is carried out before it is used, including:

- A condition requiring a qualified acoustic consultant to review and approve plant selection and mitigation during design and/or construction; or
- A condition requiring testing of all installed plant prior to commencement of use to confirm compliance with the relevant noise limits.

Additional acoustic reports may be requested by Council prior to or post commencement of use as a condition of the permit.





Example of sound panels

Building Fitouts and Leasing

If you're proposing a licensed venue within mixed use buildings that include sensitive uses, you should investigate the building's sound insulation. Empirical testing of existing buildings can inform a fitout design prior to construction.

It is common for ceilings to be removed in pre-existing buildings as part of fitout, which can significantly change the sound insulation performance. You should consider this when assessing the risk of noise impacts and clearly identify your solution on the plans, especially if there is another business or resident above you.

You should consider:

- Whether the building is suitable for the proposed operation and surrounding any sensitive uses
- If it is practical to implement the required sound insulation controls within the base building shell before fitout commences, ideally during the planning application phase
- Contacting suitably qualified experts to assess prospective properties for lease

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

Your application should contain clear information on the proposal (and in the acoustic report) including:

- 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.