Snapshot:

Installation of air conditioners, evaporative coolers and heat pumps

## September 2023

Did you know noise from heating and cooling equipment can disturb your neighbours, disrupt their sleep and interfere with their normal daily activities?

# Be a good neighbour

Before purchasing and installing reverse cycle air conditioners, hot water heat pumps, pool pumps, evaporative coolers etc. ensure that you consider the location in relation to neighbours.

It is a good idea to discuss noise concerns with neighbours before installing equipment that emits noise.

If a noise issue does arise, take the time to talk to neighbours and ask them for suggestions about solving any problems.

You may also wish to consider dispute coaching or mediation through the Conflict Resolution Service by phoning 6190 7100. This service is free and confidential for neighbourhood disputes.

Seek advice from the installer on whether the unit will comply with noise standards in the proposed location or refer to the Australian Institute of Refrigeration, Air Conditioning and Heating guide to help you decide which cooling system may best meet your needs and the relevant noise standards. Visit **airah.org.au**

# Legal requirements

The ACT noise limits or standards are detailed in Schedule 2 of the Environment Protection Regulation 2005[[1]](#footnote-1). The noise standards permit higher noise levels in industrial areas and much lower levels in residential areas.

The Environment Protection Authority (EPA) is responsible for enforcing these limits including noise limits for air conditioners, evaporative coolers, hot water heat and pool pumps.

# Will my equipment comply?

Noise levels are measured at the boundary of the property emitting the noise. If the noise is coming from a unit (such as a flat or a townhouse) located within a multiunit complex, the noise limit may be up to 5 dB(A) lower than if it was coming from a house.

Any noise generated within the common use areas of complexes is a matter for the body corporate to deal with.

It is important to select appropriately sized equipment which will comply with the noise standard and have it installed in an area that will not affect your neighbour.

Compliance may also depend on how you use your unit.

Just as it is your responsibility to ensure you don’t exceed the speed limit when driving a car, it is your responsibility to ensure you don’t exceed the noise limit when operating an air conditioner. This may mean being mindful of the temperature settings.

If the equipment exceeds the limits, the EPA can issue an Environment Protection Order and an on-the-spot fine.

## Table 1: Noise standards in residential areas

|  |  |  |
| --- | --- | --- |
| **Location** | **7am-10pm Monday to Saturday#****8am-10pm Sunday and Public Holidays** | **10pm-7am Monday to Saturday#****10pm-8am Sunday and Public Holidays** |
| Civic centre and other town centres (Belconnen, Gungahlin, Woden and Tuggeranong) | 60 dB(A) | 50 dB(A) |
| Group centres such as Dickson and Kingston | 55 dB(A) | 45 dB(A) |
| Smaller local centres such as Griffith and Lyneham | 50 dB(A) | 35 dB(A) |
| Residential Zones | 45 dB(A) | 35 dB(A) |

# 12.00am for Civic/Town Centres and 11.00pm for Group Centres on Friday and Saturday nights.

# Shopping for an air conditioner

When choosing an air conditioner or other noisy heating and cooling equipment, consider how the unit will be operated, the times you will be running it, and check the sound power level on the unit label or in the production specifications.

Do you only want to run the unit during the day or also during the night? Check Table 1 for the right noise standards and then check the sound power level on the unit label or in the product specifications.

The smaller the number of dB(A) on the label, the quieter the air conditioner. Comparing levels on units of the same capacity allows you to choose a quieter unit.

You may find that the sound power level label on an air conditioner is 60 dB or more and wonder how it could comply with a legal limit of 45/35 dB(A). This can be explained by the following comparison.

A light globe with a power rating of 60 watts has a certain intensity of light at the actual globe, but with distance this intensity decreases, although the power of the globe remains at 60 watts.

Similarly, the noise level of an air conditioner with a sound power level of 60 dB will decrease as distance from the unit increases.

# Seek professional advice

# Air conditioning installers and suppliers are best placed to advise you on whether a unit will comply with the legal requirements at your home.

# This includes selecting an appropriate location and ensuring it can run at the desired temperature without exceeding the noise limits.

# Installing an air conditioning unit in a location where it may not comply with noise restrictions may result in post-installation costs, such as needing to move the unit, or needing to operate it at less comfortable temperature settings.

# All reputable installers should be aware of the requirements and are usually able to give good advice.

# Selecting installation position

The location of the air conditioner and other noise equipment is the most important factor in ensuring noise is not going to be intrusive.

Placing the unit at the side of your house close to the neighbour’s house is likely to create excessive noise, as the noise is trapped and reflected between the walls and eaves of the two houses. A fence has limited value in reducing the noise in this situation unless it is solid and is as high as the eaves of the houses.

For example, placing an air conditioner on the rear wall facing the backyard, or on a front or side wall facing the street, reduces the noise reaching neighbours.

Also, if the noise is found to be excessive, seek advice from an acoustic consultant on methods to reduce noise from the air conditioning system to ensure compliance with the noise levels as an incorrectly built shield can increase noise levels.

If a unit must be put at the side of a house because no reasonable distance from a neighbour can be found, a practical alternative to reduce the noise is to install an acoustic enclosure.

Acoustic enclosures are custom built and must incorporate correctly designed ventilation.

They need to be built and fitted in conjunction with the manufacturers requirements in order to maintain the warranty on the unit.

Enclosures are expensive and you would be wise to seek a guarantee from the installer on the expected noise level before taking this option.

# Allow for a noise increase

Over time, air conditioners, like many other machines deteriorate due to use. This deterioration may be accompanied by an increase in noise from worn bearings, cabinet rattles, dirty or rusty fan blades, worn rubber mountings and compression wear.

Some of the increased noise can be reduced by regular maintenance. However, you should allow for a slight increase in noise over time when installing the unit.

# Evaporative coolers

Roof mounted evaporative coolers are generally quieter than refrigerated units. However, the noise level between models does vary. While evaporative coolers do not come with sound power level labels, manufacturers should be able to provide sound power levels for each model. Ask your retailer for these prior to purchase.

# Installation position of evaporative coolers

Some high-capacity evaporative coolers may be excessively noisy when mounted on a roof that slopes towards a neighbour’s yard, particularly if the unit is on the lower portion of a roof with a steep pitch. To minimise reflected noise, it’s best to locate an evaporative cooler as high on the roof as possible.

If your neighbour’s land is much higher than yours and your air conditioner is likely to be level with their backyard, the noise reaching your neighbour will be greater.

De-rating (slowing the motor down) is generally the only way to quieten noisy evaporative coolers.

# Hot water heat pumps

You’re probably familiar with the noise from air-conditioners and have heard the ‘fan-coil’ unit whirring away. Heat pump systems are similar, and care should be taken when choosing where to locate a heat pump to ensure it complies with the relevant noise standard.

Some heat pumps also come with a noise reduction function where they can be programmed to reduce the speed of the ventilation fan between certain hours. In most instances, this function will not be necessary, but it’s an option in case the unit is installed close to a neighbour.

# What can be done about excessive noise?

1. Know your rights and responsibilities regarding noise. Visit **accesscanberra.act.gov.au**
2. Discuss your noise concern with the person causing the noise. Many noise concerns can be resolved with a simple conversation. For tips on how to start the conversation visit **accesscanberra.act.gov.au** or if you need further help contact the Conflict Resolution Service on 6189 0590 or email **mediation@crs.org.au**
3. If you are unable to resolve your noise concern, you can lodge a complaint via **accesscanberra.act.gov.au**. Please note a complaint will only be considered if it is made by the person affected by the noise.
4. In the first instance a letter will be sent to the person making the noise.
5. If the noise continues to be an issue, the matter will be investigated. Should the noise be found to be above the noise standards a warning letter, a fine or an Environment Protection Order (EPO) may be issued. Breach of an EPO is a serious offence and could lead to prosecution in court.

# For more information

Call Access Canberra on 13 22 81 or email **environment.protection@act.gov.au**

1. [www.legislation.act.gov.au/sl/2005-38/current/pdf/2005-38.pdf](http://www.legislation.act.gov.au/sl/2005-38/current/pdf/2005-38.pdf) [↑](#footnote-ref-1)