

# **Heat Pumps**

## **Guidelines for Installing to Prevent a Noise Nuisance**

Heat Pumps (reverse cycle air conditioners) are designed and built to Australian Standards in order to minimise inherently noisy designs entering the market. The sound output of each unit will usually be indicated on a descriptive plate as a Sound Pressure Level, for example 50dB(A).

Before installing a heat pump the effects of noise from the unit on your property, as well as neighbouring properties should be considered. Noise problems usually occur when the effects of noise emission from the outdoor unit are not carefully considered when selecting its location, such as facing the unit directly at a neighbour's window.

### **Site Selection**

The following should be carefully considered when selecting the location for the outdoor unit:

1. Noise travels in straight lines and can be reflected by walls, brick fences and other hard surfaces.
2. Consider the surrounding environment's background noise levels and choose a unit to suit. The lower the dB(A) level the better.
3. Locate the unit as far away from your bedrooms and the neighbour's bedrooms as possible.
4. Never face the condenser fan discharge directly towards the window of a neighbour's residence, particularly those of habitable rooms, or outdoor living areas. The unit should face the boundary fence of the property furthest away from the adjoining residences.
5. Try to avoid mounting the outdoor unit on the house wall and in particular above ground level, as this can result in unimpeded transmission of noise to neighbouring properties. The outdoor unit should be mounted at ground level if possible. The unit should be mounted on a solid base, preferably a concrete pad or blocks. To help minimise vibration the unit should be mounted on rubber pads or other suitable material.
6. Where refrigeration lines pass through walls, there must be adequate clearance and insulation; this will help prevent vibration within walls which has the potential to magnify noise.
7. Fences and walls between your property and the neighbours may help to reduce the noise transmission. These may be used to an advantage when locating the outdoor unit. It is important to remember that while a brick fence may reduce noise travelling to the neighbour on the other side, it will also reflect the noise.

## Installation

Heat pumps installation contractors are in the best position to prevent problems before they occur. It is therefore important that an experienced contractor installs the heat pump.

The noise from the installation of a heat pump must not infringe on your neighbour's right to enjoy their environment. You may be required to move the unit if a noise nuisance is created. Talk to your neighbours before you have a heat pump installed, to help ensure that there will not be any impact on their living areas.

Do not install a unit where it is evident a potential noise nuisance may be created that will impact on the surrounding neighbourhood. Seek an alternative heating solution.

After installation it is important that the unit is routinely serviced to ensure that noise nuisances from rattles, vibrations and worn parts is not created over time.

## The Law

The Environmental Management and Pollution Control (Miscellaneous Noise) Regulations 2004 specify:

1. A person must not operate a heat pump (air conditioner) on any premises if the noise emitted Exceeds the levels specified in the table below.
2. Considerable penalties and daily fines for continuing offences apply.

Operating Times	Time average A-weighted sound pressure level (dB(A))		
	Sleeping Areas	Recreation and Study Areas	Working Areas
7.00am until 10.00pm	45	50	52
10.00pm until 7.00am	40	45	47

Council is able to issue an Environmental Protection Notice if a heat pump is creating an Environmental Nuisance. This may lead to you having to remove or relocate the heat pump.

The complete Environmental Management and Pollution Control Act 1994 and Environmental Management and Pollution Control (Miscellaneous Noise) Regulations 2004 may be viewed online at <http://www.thelaw.tas.gov.au/index.w3p>

**If you need further information please contact Council on 03 6376 7900**

### **Disclaimer**

*These guidelines are intended as suggestions to help minimise noise nuisance from the installation of heat pumps. Adherence to these suggestions should not be interpreted as discharging any party from its responsibilities in relation to the creation of a noise nuisance or as a method by which responsibility can be transferred to Break O'Day Council.*