Noise Mitigation for your Home

There may be things you can do to reduce the amount of noise that enters your home, usually in more sensitive areas such as sleeping and living spaces.

Quiet House Design for New Houses

Housing that is in an area close to potential sources of noise is required to be built to a standard that will reduce noise levels to a more acceptable level. Often the developers will be required to prepare a Noise Management Plan, and because of this plan, individual houses that need to exclude noise may be identified.

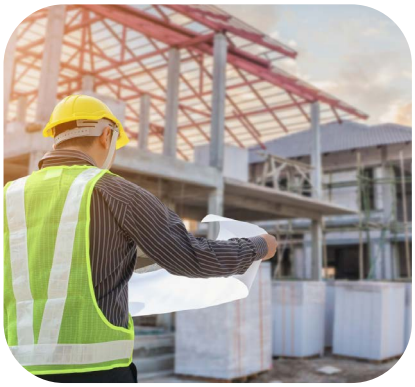
The Local Development Plan may identify specific design and construction requirements as well as Notification on the Certificate of Title to ensure that prospective landowners are informed.

When designing your home in a noise affected area, you should consider:

- The direction of the noise source in relation to the house design. Can you locate bedrooms, living spaces, balconies, and windows away from the potential source of noise?
- Windows into bedrooms and living spaces may be required to be made of thicker or specially treated glass, with window designs and/or acoustic seals, to keep noise out
- Noise levels cannot always be controlled outside the house
- Are there Bushfire Management requirements that should be considered when designing your home?

Construction Methods and Materials

If your home has construction requirements on the Local Development Plan or Development Approval to exclude noise, the plans lodged with the Building Permit Application must show all specified design and structural requirements additional to those set out in the National Construction Code. Noise mitigation methods shall not compromise the safety or structural integrity of the home.



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New Home Noise Considerations

Windows
Consider reducing the size and where they are located. Are they looking at the source of the noise? Consider sections of fixed panels or thicker glazing, laminated or double glazing, the type of frame and window seal. If there are Bushfire Attack Level (BAL) requirements, does this change how the windows are designed or the type of glass that can be used?

Walls
Consider the type of wall construction and its performance (brick, concrete tilt panel, rammed earth is better than a light frame). Are there exhaust vents, conduits and piping through the walls which might let noise in?

Doors
Are they looking at the source of the noise? Consider glazing for sliding doors and the type of frame and door seals.

Roof and Ceiling
Consider if the noise might come through the roof and ceiling. Specific acoustic requirements for sealing of roofs, acoustic performance ceilings; elimination of open eaves; and insulation of ceiling voids.

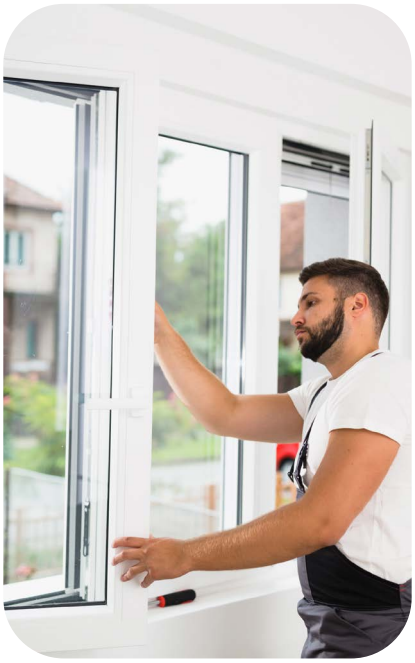
Ventilation
If windows need to be closed to exclude noise, mechanical ventilation, which provides fresh air, is required. Split air conditioner systems recirculate existing air within the room. Refrigerated air conditioners can be fitted with fresh air intakes (this is often an extra attachment). Evaporative air conditioning is not always a suitable quiet house design solution (check your Local Development Plan) and requires additional vents to be installed so that windows can be kept closed while the air conditioner is operating. Consider if the air conditioning services might let noise in through roofs and walls or cause a separate noise problem to your neighbour.

Modifying Existing Homes

For existing houses, making modifications to exclude noise can be more challenging. Upgrading or insulating existing walls may not be feasible and require specialist renovation advice.

For masonry homes where closing the windows keeps the noise out, providing an alternative fresh air source may be required. Some window frames may be suitable for acoustic seals to be installed or existing seals replaced (these can be purchased from hardware stores).

Retrofitting thicker glass to the windows of an existing house or installing new double glazing is expensive. There are, however, specialist window fittings that can be retrofitted over existing windows to act in a similar way to double glazing, which may be more affordable. The effectiveness of these solutions will be reliant upon the window(s) remaining closed, so air conditioning or mechanical air conditioning may be necessary to provide an alternative means of fresh air.



Looking for more information on what you can do?

Check out the Perth Airport publication "Reducing Aircraft Noise in Existing Homes", which describes changes you can consider for existing homes to reduce the entry of noise. See **https://aircraftnoise.perthairport.com.au/wp-content/uploads/2018/07/Reducing-Aircraft-Noise-in-Existing-Homes-Brochure.pdf.**

For road traffic noise for existing houses, the Vic Roads publication "A Guide to the Reduction of Traffic Noise" explains how road noise affects homes and describes changes you can make to your own home, at **www.vicroads.vic.gov.au/-/media/files/documents/planning-and-projects/environment/noise/aguidetoreductionoftrafficnoise2003.**

Site-specific advice can also be sought from acoustic consultants, who are technical specialists in noise attenuation and mitigation. You can find a suitably qualified and experienced person through their professional bodies:

The Australian Acoustical Society – refer to the webpage: **www.acoustics.org.au**, and click on "Find a member"; or

The Association Of Australasian Acoustical Consultants – refer to the webpage: **www.aaac.org.au**, and click on "Find an AAAC Consultant".