

Traffic noise and homes

Housing company, take the following matters into account!

Can you hear traffic noise in your home? Is the housing company planning to renovate the building? Old residential buildings were designed and built at a time when there was less traffic in our city and, consequently, less traffic noise than today. It is likely that soundproofing was not adequately taken into account in the construction of these buildings. This guide will help housing companies get started with improving the soundproofing of their buildings.

Traffic noise can have a significant impact on housing health and quality of life of residents.



A good time to improve soundproofing

When carrying out renovations and energy efficiency upgrades, improving soundproofing is often both cost-effective and sensible. As alterations are going to be made to the structures anyway, soundproofing measures can be carried out smoothly alongside the other renovation work.

Get an acoustic designer on board at an early stage

Every building is different, so the best soundproofing solutions depend on the building's structure and location, and the extent of the renovation work. The acoustic designer will determine the main sources of noise entering the interior of the building and identify the best ways to improve soundproofing.



For example, an energy efficiency upgrade will not in itself improve soundproofing. Instead, the acoustic solutions must be designed separately. The soundproofing of a building is affected by the combination of its external components: external walls, windows, doors, ventilation valves and, in some cases, the roof as well. It is often the weakest component of these that determines the end result. The acoustic designer will assess the impact of improvements to the individual components of the overall exterior, thereby avoiding excessive measures.

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Take ventilation
into account when
sealing windows.

How to improve the soundproofing of a home

Windows

Windows are often the weakest point of a building when it comes to soundproofing. Soundproofing can be improved through measures such as:

- checking whether the windows close tightly and replacing or repairing the seals (taking into account the need for ventilation)
- replacing windows with ones that have better soundproofing (multi-glazed or soundproof windows).

Ventilation

In buildings with natural ventilation or mechanical exhaust ventilation, noise is often transmitted via the intake air ducts.

- Mufflers may be fitted to the intake air valves, provided that adequate ventilation is maintained. Unmuffled valves significantly reduce the soundproofing of the external wall.
- New windows can utilise frame valves, for which sound-dampening solutions are available.

Any changes to the ventilation system must be planned with a professional.

External wall

The structure of a building's external walls has a significant impact on soundproofing. Massive stone structures provide good soundproofing. Porous materials, such as wood and aerated concrete, are less effective at dampening sound. There are several ways to improve the soundproofing of wall structures, and the choice of suitable solutions is made in consultation with a professional. This ensures that the solutions will meet both the technical requirements and the operational needs.



Balcony and terrace

Glazing a balcony or terrace effectively dampens noise from outside and improves usability. The glazing protects the interior facilities behind the balcony from noise. Soundproofing can also be improved by sealing the balcony door.

Yard area

If changes are made to the yard area as part of a renovation project, attention should also be paid to the sound environment of the yard. The design of the yard can influence noise propagation and the pleasantness of the yard.

- Play and recreation areas should be located in the quietest parts of the yard, where buildings provide shelter from traffic noise and other disturbances.
- Lush, multi-layered vegetation and a soft ground surface will make the yard more pleasant and help to soften the reflection and scattering of sound. Sound waves are reflected more effectively off hard surfaces (gravel, asphalt and concrete).

