



AFFORDABLE, HIGHLY INSULATED, DOUBLE GLAZED,
BESPOKE GARDEN OFFICES, ALL YEAR USE

Soundproofed Music Rooms

SINGLE SKIN SOUND INHIBITED ROOMS,
ENHANCED SINGLE SKIN

&

DOUBLE SKIN PROFESSIONAL BAND PRACTICE ROOMS
(less than 60db from a 120db level)

Below: Dublin - double skinned (room-within-a-room) band practice room



www.extrarooms.co.uk



Soundproofed Music Rooms

Sound travels through the air in waves, and those waves cause the objects they come into contact with to vibrate. When a sound is loud enough, those vibrations travel through walls, floors and ceilings, transferring sound everywhere. The key to effectively stopping unwanted noise is to stop the vibration.

In most buildings, walls and floors have an interior support structure of wood or steel studs or joists and are covered with some form of rigid sheeting like plasterboard, or particle board flooring, leaving an air space between the walls, floors and ceilings. That air space allows for the easy transfer of sound waves with very little solid mass for the sound to vibrate through or slow its transfer. One of the most common methods used to reduce the transfer of that sound has been to insulate the wall, floor or ceiling with one of several types of insulation. This may reduce the transfer of sound vibrations through the air space, but does nothing to stop the sound transferred through studs, plasterboards, joists or flooring.

It's also important to understand that all sound frequencies are not the same when it comes to insulation. Lab tests show that low frequency sounds are not stopped by insulation, nor are high frequency sounds reduced significantly.

Insulating the air space is only effective in deadening mid-range frequency sound.

Many people have found this out to their cost by having sound deadening insulation installed only to find that the bass beats of drums or a bass guitar or any bass sound comes through almost unaffected, as if no insulation was present. High pitched sounds also travel through uninterrupted.

So how is sound transferred in an insulated wall? When plasterboard is nailed directly to wall studs, sound waves vibrate the plasterboard, that vibration is transferred to the stud, and is finally transferred to the plasterboard on the other side of the wall. That vibrates the air in the room and the vibrations become sound waves again. The industry calls this coupling.

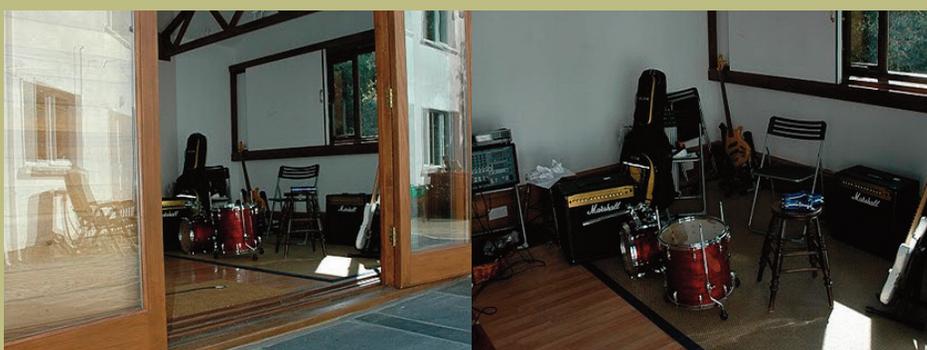
Unsurprisingly, the solution to this is called de-coupling. De-coupling creates a space between the drywall and studs. This dampens the sound. That is, the vibration and resulting transfer of sound is greatly reduced. This can be achieved during construction by placing a resilient rubber cushion between the plasterboard and studs to absorb the vibrations. Another even more effective method is to install a cushioning sheet over the stud wall and under the drywall, or over floor joists and under sub-flooring. When combined with insulating the air space between walls and floors, there is a significant reduction in the transfer of high, low and mid-range sound frequencies. We go even further than that for even greater effect.

When used together, each of these standard methods goes a long way in controlling the transfer of unwanted sound. When all this is done twice over, as with a "room within a room" and the weakest link, the windows, are also shuttered with sound isolating shutters to both leafs, acoustic triple glazing, noise lock doors, the effectiveness is tremendous. There are also a few additional applications we utilise, to increase the effect still further, but this is commercially sensitive so we do not go into it here.

You may not need this level of effectiveness, but at the same time, you do not want to find your studio is not as effective as you need it to be. Talk to us, tell us what level you require and we will supply it in an attractive building at the lowest price possible, bespoke, turnkey and guaranteed.

So whilst sound isolation can be complicated and labour intensive, involving many layers of different materials, once completed, noise levels become no longer an issue if sound isolation is done properly.

All extra rooms, with no exceptions, are built entirely by ourselves. Total control over the quality and every detail of the layout and construction is therefore able to be ensured, this gives our customers exactly the building they require which suits them and their garden.



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