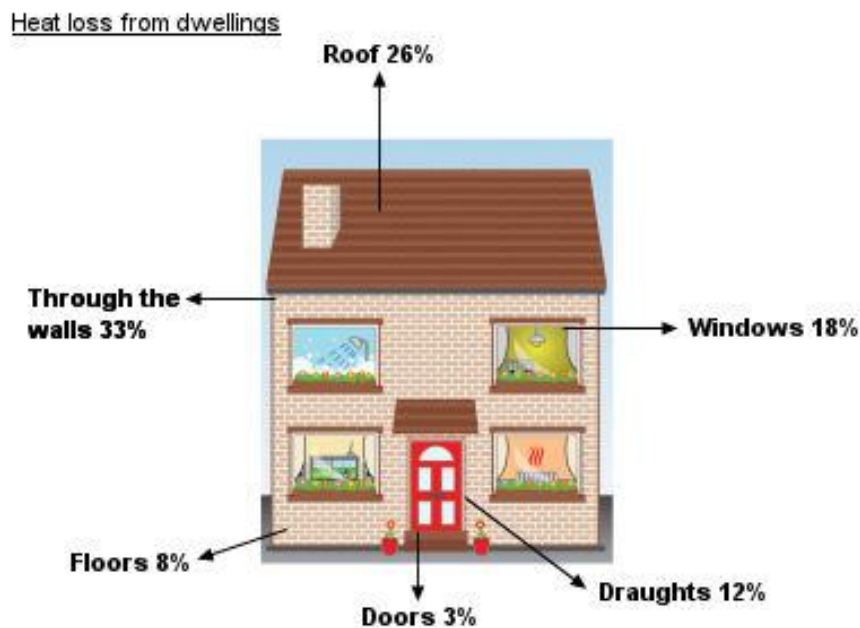


SOLID WALL INSULATION - ARRANGE- IT- YOURSELF OPTIONS



You can save up to 33% of your heating costs by wall insulation. There are several ways of insulating a solid or stone wall. Some similar methods can also be used for timber framed walls in older properties. This is best done when and if you plan to re-decorate.

VENTILATION

Ventilation into a building happens in two ways: at molecular level through the materials in an invisible manner, and by air movement. Traditional buildings work on a little bit of both routes. It is very rare for moisture to travel freely in an old house the way it did originally, as occupants invariably do things to their home. However a balance is needed and many buildings are too draughty. An air gap on the inside face of a wall (behind the lath and plaster or plasterboard) provides additional insulation, but only if not excessively ventilated. Modification (but not closing off) of this air space can give the key to improving the thermal performance of these walls.

- If lath and plaster walls

Internal insulation can be done using **Proctor's Spacetherm** which is a fibrous matting impregnated with silica aerogel. This is extremely effective and the best product available in terms of thermal performance.

With lath and plaster you would have a small amount of space, typically 25 mm between the outside wall and the lath. If your house is well ventilated you could remove the lath and plaster and insulate behind this and replace with lath and plaster. Historic Scotland are currently trialing Proctors Spacetherm Blanket, held to a lath and plaster wall with a mesh and they are awaiting the results.

- If there is a larger gap between your plasterboard and the outside wall (typically 50 – 75 mm)

Silverpor

Silverpor is a hydrophobic insulating aggregate made from coated expanded perlite. It comes under the general product name of Silverperl. It is water-repellent and non-flammable. It is loose-pour and seeks out and completely fills the area it is poured into. It is produced and tested to BS EN 14216-1:2004 Thermal Insulating Products for Building.

Warmcell

Warmcell can probably also be used in the same way and Historic Scotland are doing trials with this. This is cellulose made in Wales from recycled newspapers. It has a thermal conductivity of $0.04 \text{ W/m}^2 \text{ K}$ which is the same as fibreglass. The company that produces this product are adamant that it is suitable only for roofs so using this on a DIY basis for walls would be at your own risk.

Actis Triso Super 10

Actis Triso Super 10 is a thin material with exceptionally good insulating qualities for roofs. It works best if used to insulate the entire envelope of the house; i.e. roof and walls together. It was not specifically designed for walls alone, but it nevertheless works well and is much cheaper than Spacetherm. This is a very thin product which has the insulating effect of 190 mm of fibreglass.

This insulation is installed between the wall and the plasterboard. As the insulation is quite thin, there would be no need to have electric sockets, skirting boards etc re-done. In order for this to work best it needs to be installed perfectly with no gaps between the sheets or at corners etc.

Triso costs £240 + VAT per 24m^2 roll. Installation cost depends on the amount of joinery work required.

Insulated plasterboard

Insulated plasterboard can be fitted on top of existing plasterboard or directly onto the wall, but only if the wall is currently uninsulated. There are other insulated sheeting products available which can be fixed under the plasterboard to improve the heat retention. These and further advice is available from one of the main manufacturers – Kingspan.

Timber frame walls and all stone wall types

The cheap(er) and cheerful option is **Sempatap Thermal**. This is supplied in rolls and applied like wall paper. It is thin enough that you don't have to replace skirting boards. The biggest advantage is this is easy to fit but as it's very thin its insulating qualities are equivalent to only about 7 mm of fibreglass which isn't great but is a lot better than nothing. It is good for taking the chill off rooms. It can also be painted or wallpapered over. The insulation effect of one layer is only the equivalent of 7 mm of fibreglass, but more than one layer (overlapping) can be used. The cost is £169.20 for a 12.5 m x 1m roll.

If your home is next to an unheated stairwell or corridor wall insulation could be applied from the corridor side.

If you have an adjoining shed or garage it could be easy to add insulation to the external wall of your home from the shed/garage side. Rigid and lightweight insulation boards such as Kingspan TW 55 or TP 10 would be suitable. It can be placed directly against the shed/garage wall. 100 mm of this product has the effectiveness of 190 mm fibreglass.

V.A.T.

The V.A.T. rate for energy saving products including insulation is 5 %. However this is applicable **ONLY** if the product is supplied and fitted by a V.A.T. registered contractor. For D.I.Y. jobs and non V.A.T. registered tradesmen, it's 20 % and there is no way round this. The relevant information is V.A.T. notice 708/6 energy saving materials on the HMRC website.