

# Solid wall insulation

Up to 45% of heat from your home will escape through the walls if they are not insulated. If your home was built before 1930 it will most likely have solid external walls with no cavity. The lack of a cavity means more heat can escape from your house through the walls. Solid wall insulation could help you save up to 25% on fuel bills.

Insulation can be applied to either the external or internal face of the wall and makes it much more difficult for the heat to pass through your walls. Think of it like wrapping your home in a blanket, as the insulation creates a cocoon that slows down the rate at which heat escapes, keeping it inside your home for as long as possible. If you're not sure whether you have solid walls, you should be able to tell by looking at the brickwork on the outside of your house. Qualified assessors will be able to identify whether your house is built with solid or cavity walls when they visit your home or you can have this confirmed by a Building surveyor.

If your home has solid walls, you will be able to see a pattern showing the long and short side of the bricks like Fig A.



Fig A

If your home has cavity walls, you will only be able to see the long side of the bricks like Fig B.

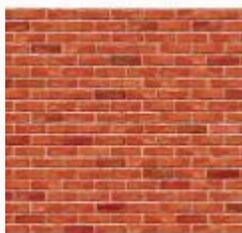


Fig B

## How much could I save on my heating bills?

Every household is different and savings depend on the size and type of your property as well as any existing insulation measures and your average energy consumption. The following figures are published by the Energy Saving Trust and are a realistic guide to the level of savings you might expect to make:

| property type | detached | semi detached or end terrace | mid terrace | bungalow | flat |
|---------------|----------|------------------------------|-------------|----------|------|
| annual saving | £460     | £270                         | £180        | £180     | £150 |

Source: Energy Saving Trust

### How much will it cost? (as at 2015)

External wall insulation: typically £6,000 (mid terrace) to £15,000+ (detached)

Internal wall insulation: £4,000 (flat) to £16,000+ (detached)

### What is the insulation product used on external wall insulation?

Our standard specification is to use an EPS insulation board. EPS stands for expanded polystyrene.

**What if I don't want to use EPS insulation? Are there any other options available?** Essentially there are four different insulation products that can be used which have slightly different properties. Some may work better in certain situations to others, may require a thicker product to achieve the same performance (u-value) and may cost more money. The table below outlines basic information to help you decide on what is best for you. For more detailed information you may need to search online to compare product details.

| Insulant type              | Thickness required to achieve 0.3W/M2k u value | Cell structure                                 | Cost             |
|----------------------------|--|--|------------------|
| EPS - expanded polystyrene | 90mm   | Closed cell structure.<br>Not vapour permeable | £ lowest cost    |
| Phenolic foam              | 60mm   | Closed cell structure.<br>Not vapour permeable | ££ medium cost   |
| Mineral Wool               | 90mm   | Open cell structure.<br>Vapour permeable       | ££ medium cost   |
| Wood Fibre                 | 100mm  | Open cell structure.<br>Vapour permeable.      | £££ highest cost |

### Do I need to be at home when the work is carried out?

For exterior wall insulation: No. All contractors need is your permission to go onto your land.

For interior wall insulation: Yes, to give installers initial access to the property.

### How long does the work take?

It takes on average three weeks (15 working days) from start to finish. It is a major programme of work, but the results will certainly be worth the wait!

For exterior wall insulation: These timescales are weather dependent.

### What are the weather conditions that can affect installation?

A number of weather conditions can slow the installation. If the temperature drops below 5C the bonding and render cannot be applied. Heavy and persistent rain can stop the installation process. Contractors cannot apply some final top coat of renders unless there is at least 24 hours without rain.

### Can I come and go easily?

Usually yes, access to your property will not be affected.

Depending on how close your exterior walls are to your driveway, you may be asked you to move your car whilst work is taking place nearby.

### **What preparations do I need to make?**

For exterior wall insulation: No preparation should be necessary. Contractors generally handle all the 'pre-enabling' work, such as moving cables, disconnecting outside lights and taps as part of the install service, and re-install or position them when the work is complete.

For interior wall insulation: As a precaution, you should move any valuable or easily breakable possessions away from the areas of work. It is also ideal if you can take your curtains down and store them safely.

### **Will there be much noise?**

Unavoidably, there will be some noise, as with any building works..

### **What choice of colour can I have?**

There is a wide choice of render colours available but most people choose from a range of mainly whites, creams and pastel shades. If you would like a different colour there may be a small additional cost and a two week order delay.

### **Will the render discolour?**

No. But it will weather naturally, as with any building material.

### **What happens if I accidentally damage the render?**

The products we use are extremely tough and resilient to damage – in fact more so than your existing finish. For example, it is unlikely that a scrape with a child's bike would chip or scratch the render, as it might with traditional render. In the case of surface marks, some contractors provide a touch up kit, colour matched to your render, so you can simply paint over any marks. Should accidental damage occur, however, solid wall insulation is relatively simple to repair.

### **How much will it increase the thickness of my walls by?**

Exterior wall insulation: will add about 97mm to the outside of your property. However, if space is an issue (such as in a passageway between two properties), a more condensed higher density board is available that will add just 70mm to the exterior depth.

Interior wall insulation: will add about 80mm to your interior walls.

### **Is there a guarantee?**

Usually yes. Check these are transferable to new owners.

### **I live in a semi-detached house – can I still have external wall insulation installed?**

If your neighbour's house is not already insulated installers will insert a cavity wall barrier to divide the two properties. This stops any material passing through. Of course the ideal scenario is that you will talk to your neighbour and encourage them to have it done at the same time.

### **What about damp?**

Provided it is done properly, insulating the outside of your home will give you a new weather proof layer that will protect you from penetrating damp for years to come, and should deal with any existing penetrating damp problems you may have had due to poor wall finish. The insulation will also increase the temperature of the internal surface of the wall, making it less likely that you will get condensation problems on your walls.

The main damp issue to be avoided with external wall insulation is rising damp. If you have an existing problem with rising damp, it will have to be treated before the insulation is fitted, otherwise you run the risk of trapping the damp inside the wall structure and so making the problem worse.

It is also important to make sure that the new external insulation layer and cladding do not bridge the damp proof layer in the wall. The insulation should start above this, otherwise water may be able to use the insulation to climb above the damp proof membrane, causing rising damp where it wasn't a problem before. Installers will always ensure that there are no problems with rising damp before commencing work and that the external surface is fully weatherproof throughout, so you should not see any new damp issues and you may see some benefit if condensation has been a problem in the past.

**Will there be any noise reduction?**

Where road noise or the sounds of children playing or dogs barking outside is an issue, you will notice a significant reduction in exterior noise as a result of solid wall insulation.

But, to get the maximum noise reduction benefit your property must also be double glazed.

Fact sheet provided by Geoffrey Hunt Chartered Building surveyor.

Pre-war and Listed building surveys.

Passionate about Property.