

External Wall Insulation

Almost 50% of heat in solid-walled houses is lost through the external walls. Installing insulation to these walls, can help keep the warmth in the home for longer, reducing damp issues and providing a more comfortable living environment generally.

External wall insulation is most likely to be required on a property which has solid walls (no cavity), on concrete or steel framed system-built homes such as Cornish units or Wimpey 'no fines' homes for example. In addition, some older stone and brick-built houses are of a solid wall construction and can be insulated in this way.

Another application for external wall insulation would be to insulate single skin (one brick thickness) extensions or rear additions, which are sometimes more commonplace in the rental sector and usually house toilets, bathrooms and sometimes bedrooms.



You must first ensure the external wall insulation work is permitted development, as in some areas and properties, external wall insulation will not be permitted, or a building notice or planning permission will be required. This work is not usually permitted to listed buildings, or those situated in a conservation area, but always check this regardless of the property status. In some areas planning departments will allow it, if the external features of the property are recreated with the product.

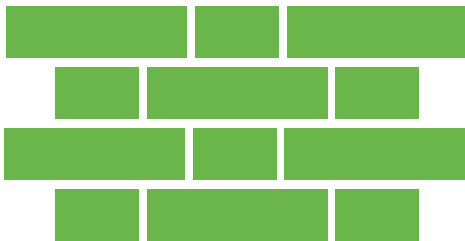
Before any external wall insulation is applied, the existing wall needs to be clean and free from loose material.

An insulation board, usually extruded polystyrene (EPS), is put on the wall with adhesive and/or mechanical fixings that hold it in place, a mesh and flexible render coat is then applied, this needs to dry out for a few days, before a top coat render is added and again needs to dry out before a final colour coat finishes the job.

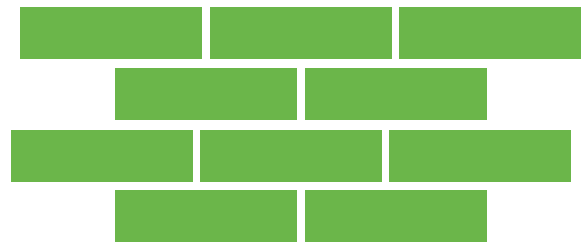
This work is best carried out during dry fair weather, so the render can dry out properly and no excess moisture or cold weather can affect the performance of the products.

How do I find out if my home has solid walls (no cavity)?

If your home is made of brick, if they have a stretcher-header-stretcher (long-short-long) pattern, then the walls are probably of solid construction with no cavity. If you can see only the long edge of the bricks (stretcher), then the wall is probably a cavity wall.



Solid Wall



Cavity Wall

If the wall is rendered and you can't observe the brick pattern, then measuring the thickness of the wall at the window reveal, will help determine the type of construction.

A solid brick wall is usually about 9 inches thick (22cm) and a cavity wall between 10.8 – 12 inches (27 -30cm, and a solid stone wall could be as much as 20 inches (50cm). The age of your home can also be a good indicator.

As a general rule, if it was built before the late 1920s it is likely to have solid walls. However, in parts of Dorset, cavity walls date back as early as 1880, so you'll need to check.

What's involved in installing external wall insulation?

External solid wall insulation involves adding a layer of insulation material to the outside walls of a building and covering this with a protective render or cladding. There are a number of different finishes you can choose from and many different colours. The thickness of the insulation system ranges from 2 to 5.5 inches (5cm to 13cm), depending on the type of insulation system used.

External solid wall insulation, as opposed to internal wall insulation, is more suitable if you want to avoid losing space internally, or the general disruption of work going on inside your home. If you are already planning on doing other work to the exterior of your property, such as re-rendering or painting, this might be the right time to think about doing this work. It is a specialist installation that requires an approved experienced contractor, who is qualified to work with a particular manufacturer's insulation system.

External appearance

As external wall insulation is classed as an 'improvement' rather than an 'enlargement' you are unlikely to need planning permission unless your house is listed, in a national park, area of outstanding natural beauty, conservation area or world heritage site. If in doubt, check with your local authority's planning department before having any work carried out.

How much might it cost?

Externally insulating your home costs on average £14,000, although this will depend on the size of the building and the number of walls being insulated. You should always get more than one quote and investigate any available grant funding you might be eligible for.

What could I save on my energy bills?

An average 3-bedroom semi-detached house using gas central heating could save around £800 per year on heating bills by installing external wall insulation and a detached house around £950 per year (based on 2023 average gas prices).

This would be higher for homes heated by electricity or oil for example.

What disruption might be involved?

External solid wall insulation is an involved job and will cause a degree of disruption. Your installer should highlight any particular issues, which may include:

- Scaffolding may be required
- A skip and storage space for materials may be required.
- External fittings like guttering, downpipes, soil stacks, satellite dishes, outside lights, power sockets and cables may need to be removed and replaced afterwards.
- Access through the neighbours' garden or driveway may be required and walls, fences and lean-to structures may need to be altered or taken down.
- Installers will require power, water and access to a toilet.
- There will be noise at times, mainly from drilling, and the work will generate a lot of dust.

How long will the installation take?

It will depend on the size of the property and the complexity of the job but, as a rough guide, a typical 3-bedroom semi-detached house will usually take 2 - 3 weeks. This includes all the preparatory works such as extending flues, outside taps and overflow pipes. reinstatement of the rain water pipes, installation of the system, application of materials, the finishing render and colour coats and all the drying times in between applications.

How long will it last?

External wall insulation is a long-term investment. Most system designers (manufacturers) will be able to provide a warranty of, or in excess of 25 years.

What happens about my home security/burglar alarm?

We recommend that your alarm company attend to remove and reinstate the alarm once the work is finished. Your installer should be able to advise you on the timings for this. Service connection will most likely be lost while the works are carried out.

What happens to my satellite dish or TV aerial?

All items fastened to the external walls of your home will need to be removed before the insulation is fitted and this includes satellite dishes and aerials.

Satellite dishes will be temporarily attached to the scaffolding, where they'll continue to work. There may be a short time when you won't have access to your TV service, whilst this is done.

For more information:

<https://energysavingtrust.org.uk/advice/solid-wall-insulation/>

<https://www.inca-ltd.org.uk/external-wall-insulation/ewi-a-guide-for-homeowners/>

<https://source.thenbs.com/product/epsiwall-external-wall-insulation-system-ps2/27SW9qDULf686Hcphejvu6/vxVwhTzJFKQMTTowpP7wFY>

<https://www.wbs-ltd.co.uk/customer-support/external-wall-insulation/>

