



# External Solid Wall Insulation



## A thermal layer for outside walls

Nearly half of all the heat lost from some solid-walled houses (those without a wall cavity) escapes through the walls. Insulating these walls keeps the warmth inside for longer and makes homes more comfortable and cheaper to heat.

External solid wall insulation may be suitable for a variety of wall types such as brick, stone, steel-framed and concrete construction. This type of measure often means significant cost and disruption, but the long-term benefits can be substantial. There may be funding available depending on the property and your circumstances.

## Average home savings

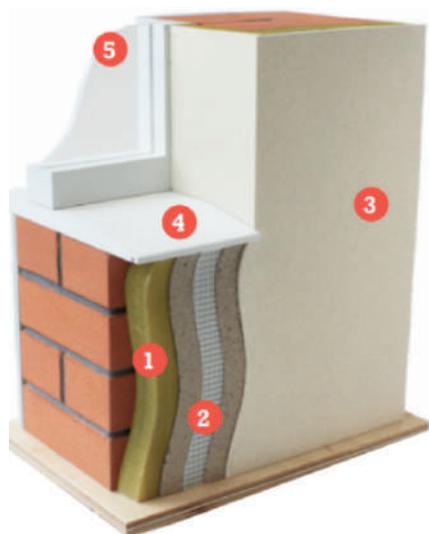
You could save as much as £300 per year on heating bills by installing external wall insulation for a typical 3 bedroom semi-detached home.

## How do I know if my home has solid walls?

Houses were built with solid walls up to the 1930s. If your home is made of brick, and the bricks have an alternating long-short-long pattern, then the walls are likely to be a solid construction with no cavity. If you can see only the long edge of the bricks, then the wall is almost certainly a cavity wall.

### Before the work

Planning permission may be required if there are changes to the outward appearance of the house. 'Brick slips' replicate the appearance of brickwork.



### During the work

External solid wall insulation is a major job which can be disruptive to the householder. Things to consider include:

- Scaffolding may need to be erected, and a space found for a skip and storage space for materials.
- External fittings like rainwater pipes, satellite dishes and telephone and power cables may need to be removed and replaced afterwards.
- Garden access may be required. Boundary walls and lean-to structures may need to be adapted or removed.
- There will be some noise, and the work will generate some dust and dirt.

**1 |** Insulation board, up to 100mm thick. Attached to the external wall with thermally separated fixings. For best thermal performance this should extend 40cm below ground level, but can also terminate just above the damp proof course.

**2 |** A mesh between two thin layers of render for strength and rigidity.

**3 |** A final layer of render is applied to give the wall the required appearance.

**4 |** Window sills, soffits, fascia's and roof verges may need to be extended to protect the cladding.

**5 |** Insulation returns into a window recess to join the window frame. This may be thinner insulation so that openings are not affected.

Any areas left uninsulated can create thermal bridges, areas where heat can still escape from inside.

