

## Product Explainer

# Solid Wall Insulation



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A major upgrade for homes without cavity walls

### Solid wall insulation for homes without cavity walls

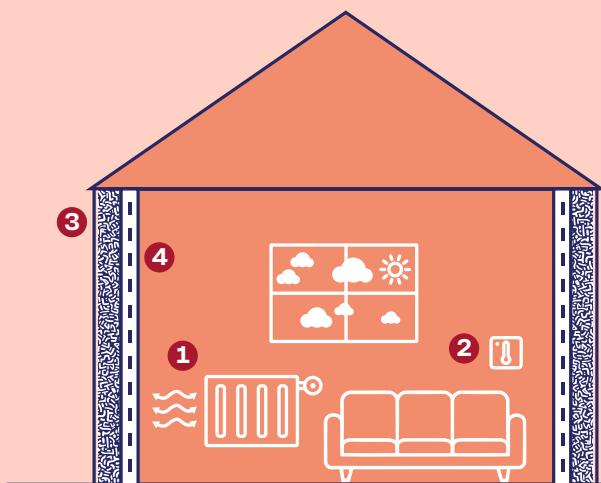
Many homes in the UK were built with solid walls, particularly those built before the 1920s. Unlike modern cavity walls with two layers and a clear gap between them, solid walls allow heat to pass through more easily, making homes harder to keep warm. Solid wall insulation adds a protective thermal layer either:

- **inside the home (internal wall insulation),** or
- **to the outside of the property (external wall insulation)**

Both approaches help reduce heat loss and improve comfort, especially in colder months.



### How does solid wall insulation work?



In a home with solid walls, warmth escapes directly through the walls.

Solid wall insulation works by adding an extra barrier between your living space and the outside air. This slows down heat transfer and helps your home retain warmth for longer. This means:

- 1 rooms stay warmer and maintain a more consistent temperature, so heating systems do not need to work as hard
- 2 less energy is wasted through the walls, improving comfort throughout the home
- 3 exterior wall insulation improves home energy efficiency
- 4 interior wall insulation effectively helps reduce heat loss

Solid wall insulation is one of the most effective ways to reduce heat loss in older buildings.

## Is solid wall insulation right for you and your home?

Solid wall insulation keeps your home warmer, reduces heat loss, and can make your heating more efficient. It's ideal if:

- your home has solid walls with no cavity
- rooms feel cold even with the heating on
- you live in an older or traditional property
- you want to prepare your home for low-carbon heating

Things to consider:

- may reduce room size, so check kitchens or bathrooms carefully
- existing electrics, plumbing, and heating may affect installation
- access, wall condition, and important architectural features

The survey covers:

- assessment of wall type, condition, and suitability for internal or external insulation
- evaluation of moisture levels, ventilation, and energy efficiency requirements
- consideration of planning regulations, including those in conservation areas

Because this is a larger measure, careful assessment is essential.

**Solid wall insulation improves warmth, comfort, and energy efficiency, supports low-carbon upgrades, and provides long-term performance.**



## Key benefits of solid wall insulation

Solid wall insulation can bring major improvements, including:

### A much warmer home

Walls hold onto heat instead of letting it escape quickly.

### Better comfort in every room

Rooms feel less cold, especially those with external-facing walls.

### Lower heating demand

With reduced heat loss, you may need less energy to stay comfortable.

### Supports whole-home retrofit

Solid wall insulation works well alongside heat pumps, solar panels and ventilation upgrades.

### Helps reduce carbon emissions

Using less energy means a smaller environmental footprint.

### Long-term performance

Once installed correctly, solid wall insulation provides lasting benefits for decades.

**Wall insulation is effective but requires careful planning, may cause disruption, affects space or appearance, and needs proper ventilation.**



## What you should be aware of

Wall insulation is very effective but requires significant investment and can cause major disruption. Consider space, cost, and building impact. Key points to consider:

### Internal insulation reduces room space

Internal wall systems add thickness to the inside of external walls.

### External insulation changes the outside appearance

External wall insulation adds a new finished layer, which can alter the look of the property.

### Planning permission may sometimes be needed

This is more likely for listed buildings or homes in conservation areas.

### Disruption is greater than simpler insulation measures

Some redecoration or access work may be required, depending on the method.

### Ventilation is essential

A better-insulated home must still have enough airflow to prevent condensation and damp.

All of this will be discussed clearly after your survey, so you understand the options before any work goes ahead.



## What to expect during installation

Installation depends on whether insulation is fitted internally or externally.

### Internal wall insulation may involve:

- Moving furniture and belongings to other rooms
- Fixing insulated boards, studwork, and skirting
- Considering electrics, sockets and radiators
- Replastering and redecorating affected rooms
- Planning for kitchen and bathroom areas

### External wall insulation may involve:

- Applying a protective render or cladding finish
- Extending window sills, pipes, and/or guttering
- Installing scaffolding for safe and secure access

Any asbestos in soffits must be tested and removed by accredited professionals. Installers will guide you through the process and keep disruption to a minimum.

## What you need to know after installation

Once installed, solid wall insulation requires very little maintenance.

To keep it performing well:

- maintain good ventilation and airflow
- follow any care guidance for external finishes
- monitor moisture levels in kitchens and bathrooms
- keep vents and extractor fans clear

Your installer will provide warranties and full handover information once the work is complete.

## Ventilation: essential for insulation upgrades

When a home is insulated, it becomes much better at holding onto warmth, which is exactly what is wanted.

But it also means that moisture created through everyday life can stay trapped indoors unless there is enough airflow.

That's why ventilation is included as part of any funded insulation installation. Good ventilation helps:

- maintain healthy indoor air quality
- reduce condensation on windows and walls
- lower the risk of damp and mould
- protect your home's structure and insulation materials

**Proper ventilation is essential in insulated homes to reduce moisture, prevent mould, and maintain healthy indoor air.**

## Why is ventilation needed?

Daily activities such as cooking, showering, drying clothes and even breathing all release moisture into the air.

Without proper ventilation, that moisture can settle on cooler surfaces, leading to condensation and over time mould or damp patches.

Insulation keeps heat in, but it's important that your home can still "breathe" properly.

As part of the survey, ventilation is assessed to find what is required for your property.

**Please note:** funded works cannot go ahead unless ventilation standards are met, in line with the PAS2035:2023 retrofit framework.

## What types of ventilation might be installed?

Common solutions include:

- **Background vents:** gentle airflow vents in key rooms
- **Trickle vents:** discreet vents fitted to window frames
- **Door undercuts:** a small gap beneath doors for airflow
- **Extractor fans:** fitted in kitchens and bathrooms
- **Humidity-controlled fans:** activate automatically when moisture rises

These measures are designed to be simple, effective and unobtrusive.

## Top tips for reducing moisture at home

- 1 Avoid drying clothes directly on radiators
- 2 If drying indoors, keep a window slightly open
- 3 Use extractor fans when cooking or showering
- 4 Cover pans to reduce steam
- 5 Keep trickle vents open in winter
- 6 Close kitchen and bathroom doors during use
- 7 Allow airflow around wardrobes and cupboards
- 8 Avoid pushing furniture tightly against external walls

Ventilation is not about making your home colder, it's about keeping it warm, comfortable, and healthy.

## Frequently asked questions

### What's the difference between internal and external insulation?

Internal insulation is fitted inside the home, while external insulation is added to the outside walls. The right option depends on your property type and priorities.

### Will solid wall insulation make a big difference?

Yes – for homes without cavity walls, this is one of the most impactful ways to reduce heat loss.

### Is it suitable for older or heritage homes?

Sometimes, but it depends on the building. A survey will confirm what's appropriate, especially for listed properties.

### Will ventilation be included?

Yes. Maintaining airflow is essential to protect your home and reduce condensation risk.

### Check your funding options

Solid wall insulation may be fully funded, including surveys and installation. However, costs can be high, and available funding may be limited or prohibitive for larger homes or where additional issues, such as asbestos, are present.



## Other solutions that could work for you

Solid wall insulation is often part of a whole-home approach, alongside:

- Loft Insulation
- Ventilation Improvements
- Air Source Heat Pumps



## WE CAN HELP YOU GET THAT WARM FUZZY FEELING.

### Ready to make your home warmer?

If you live in an older property and struggle with cold rooms or high heating costs, solid wall insulation could be a transformational next step.

Get in touch to explore your home's options.  
Visit [homeenergyhubnorfolk.org.uk](https://homeenergyhubnorfolk.org.uk)

