



DOORSTEP DIGEST

# Insulating your Home

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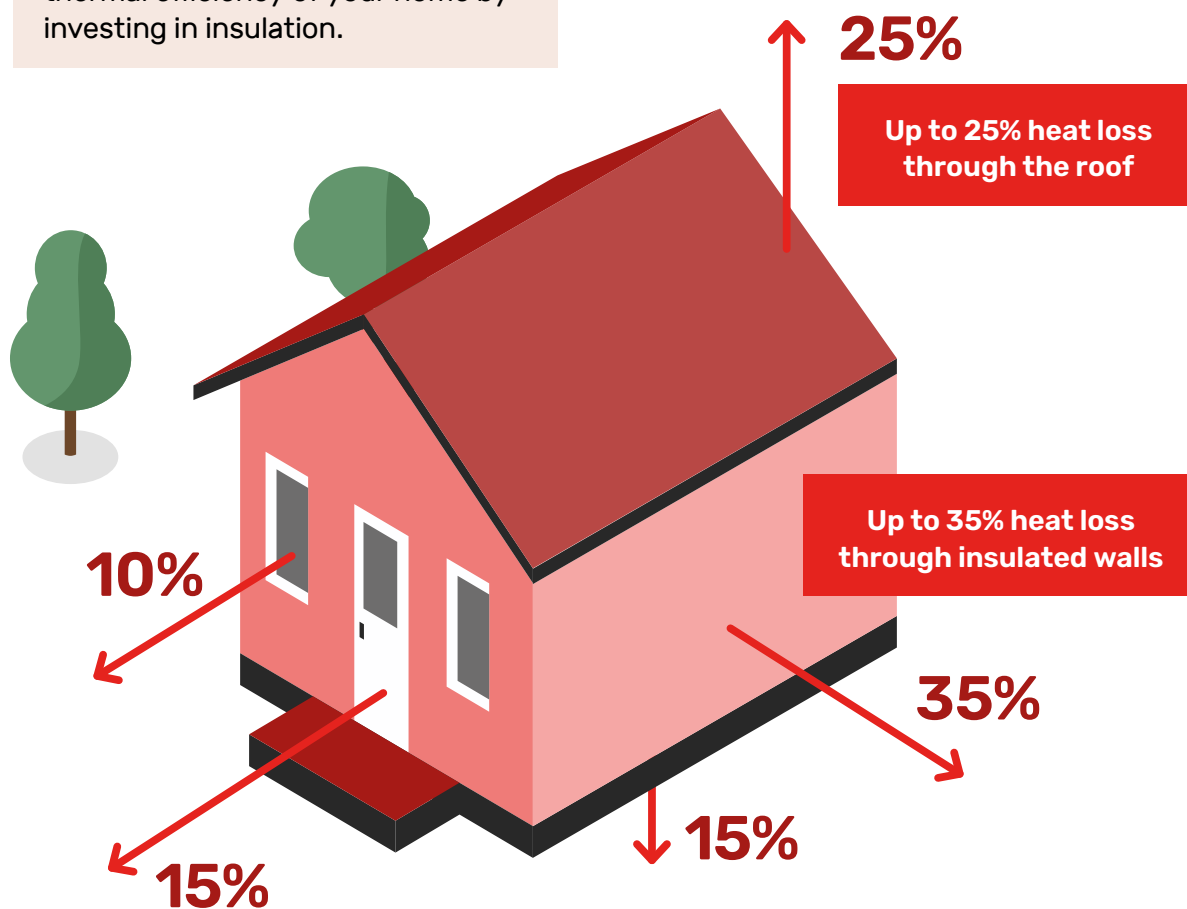
02

With recent increases in energy costs, homeowners are looking for ways to save money on their energy bills. Many will look at changing their windows or replacing their boiler with a more efficient system, which is certainly a step in the right direction. Still, it's also important to look at the fabric of the building and whether you can improve the thermal efficiency of your home by investing in insulation.

The diagram below shows the main areas of heat loss in a home.

The key areas for insulation are the walls, where up to 35% of heat is lost, roofs, 25%, and floors, 15%.

These percentages can vary depending on the property's age and type, but improving your insulation could achieve significant energy savings.





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03

## Did you know?

- Several different insulation types and materials can be used within a property, and a suitably competent and experienced individual should check suitability before installation. Many installation companies will complete a whole-house assessment of your property, often called a whole-house approach, to see how your home could be improved in terms of thermal performance. They will provide recommendations based on several factors, including building type, age, conservation area or Listing status, and exposure zone.
- Insulation may not appear as innovative as some of the newer technologies like heat pumps and solar panels. Still, it can offer significant energy savings and make solar panels and heat pumps work even more efficiently, reducing energy usage and costs.



- Multiple types of wall insulation systems are available, depending on the wall's makeup. These include cavity wall insulation, external wall insulation, and internal wall insulation.

- **Cavity wall insulation** is a possible solution for properties that have an existing masonry cavity built during construction. In older properties, these cavities may have been left empty or partially filled—they can be filled with new insulation.

Some properties have old cavity insulation that is not performing as it was intended. This cavity can be cleaned and new insulation installed, improving the building's thermal performance.

Not all cavities can or should be insulated – that's why it's important to have your home properly surveyed.

- **External wall insulation (EWI)** is primarily for solid wall properties. However, it can be installed in cavity wall properties if it is also filled with insulation or capped to prevent heat loss. There are several different types of external wall insulation systems on the market. Still, all usually involve an insulation board added to the outside of a building with a render coating or cladding.

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THE DOORSTEP DIGEST SERIES



04

■ **Internal wall insulation (IWI)** is primarily for solid wall properties where EWI is not suitable or inappropriate, such as where the exterior appearance of the building cannot be altered. Internal wall insulation systems vary, but they all generally involve a frame system being built against the inner leaf of the building, which is filled with insulation and then covered with plasterboard.

■ **Roof insulation**, where you have an accessible loft in a pitched roof, is one of a home's cheapest and easiest insulation improvements. Many people will do this as a DIY job, buying loft rolls from their local builder's merchant or DIY shed. However, hiring a professional to ensure it is installed correctly and following health and safety advice is worth it.

You must maintain ventilation in your roof space to prevent condensation and mould from forming. Never stuff the insulation into the eaves or block up air vents.

Insulation can also be applied between or underneath the rafters of pitched roof eaves spaces to create a warm roof space (provided ventilation is provided). You might even consider creating a room in the roof, subject, of course, to the necessary fire and structural upgrades and Building Regulations approvals.

Flat roofs to extensions or dormers often have insulation that doesn't meet today's standards (found in Approved Document L). It's less simple to insulate a flat roof without removing the ceiling or roof covering, but it's still worth considering if you are undertaking a renovation.

This is classed as the renovation of a thermal element under Building Regulations, so it may require approval.

Spray foam insulation—also called spray foam or spray polyurethane foam (SPF)—is an alternative to traditional building insulation. However, it has a number of drawbacks, including high cost and safety concerns, and it could potentially lower your property's value.

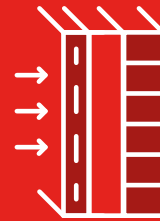
Other types of structures, like park homes, can also be upgraded thermally using a combination of the different insulation types.

■ **Floor insulation** has only been a requirement under solid floors relatively recently. Depending on the floor makeup, the insulation could go above a concrete floor (or below if you are replacing it) or below a suspended timber floor. Underfloor insulation below-suspended timber floors can offer significant energy cost savings. The level of disruption will vary considerably depending on the floor construction. You must maintain or duct any existing subfloor ventilation using air bricks to avoid condensation, dampness, and mould problems.

■ **Ventilation** must be a priority for any insulation upgrade to ensure moisture and pollutants can escape. Without appropriate ventilation, condensation, dampness, and mould can occur, harming the health and well-being of the occupants and the long-term condition and value.

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THE DOORSTEP DIGEST SERIES



05

## KEY ADVICE

### Not all cavities can or should be insulated – that's why it's important to have your home properly surveyed.

Hybrid solutions exist, such as insulation of a cavity wall at the rear of a property and the use of internal or external wall insulation on the front aspect. It is important that a professional assessment of the property takes place to help achieve the best insulation solution for the property. A professional installer will assess the property's suitability for insulation and its ventilation requirements.

Renovating a thermal element, like a roof, wall or floor, requires Building Regulations approval. This includes work involving removing and replacing the slates or tiles, replacing the timber deck of a flat roof, removing and replacing the render on an external wall, or replacing floorboards or a concrete floor slab. You'll generally need to install more insulation than was there previously. Speak to your local authority building control team or visit [www.labcfrontdoor.co.uk](http://www.labcfrontdoor.co.uk).

If your installer is a member of a **Competent Persons Scheme**, depending on the scope of the work, they may be able to self-certify their work rather than applying for Building Regulations approval. They will be able to carry out a home insulation assessment, install insulation at your property, and provide a guarantee for the work completed.

Good luck with your insulation project! Remember that having builders working on your home often requires patience and compromise, but it will be worth it when your investment comes to fruition, and your home works well for you and your family.

The NHIC wishes to thank WG2 | Consumer Voice members for contributing to this guide.

Please note that this guidance document produced by the NHIC was correct when created. However, information and regulations may have changed since its publication. Therefore, seeking the most up-to-date information and expert advice is always advisable before making any decisions based on the information provided in this guide.

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