



Llywodraeth Cymru  
Welsh Government

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# EXTERNAL SOLID WALL INSULATION

A planning guide for householders

October 2013



Helpu Cymru i leihau  
ei Hôl Troed Carbon  
Help Wales reduce  
its Carbon Footprint

# Climate change is happening now

The Welsh Government is committed to making the future of Wales the best it can be, and we have set out ambitious commitments to tackle the causes and consequences of climate change in a sustainable way in the Climate Change Strategy for Wales. This is underpinned by our commitment to sustainable development.

Our approach sets the stage for Wales to be a leader, and to take advantage of all the opportunities which come with moving ahead in a changing world. However, we believe that unchecked climate change is one of the most serious threats the world faces because it threatens the basic elements of life for people around the world: access to water, health and food production.

We can do something about climate change, if all of us work together. As a society we need to reduce the greenhouse gases we produce through changing the way we produce and use energy.

Each of us can make different choices that can help reduce emissions or build resilience to the impacts of climate change.

Improving your home through energy efficiency measures, such as external solid wall insulation, can reduce your energy needs and bills over the longer term. This leaflet provides information on external wall insulation with a focus on the current planning regulations for houses.



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# Starting Out

## What is this leaflet?

This is a leaflet for householders who want to insulate their home using external solid wall insulation. This may be to benefit from UK or Welsh Government initiatives to help tackle climate change or just to reduce your energy bills.

Whatever your reasons, the leaflet is intended to give you some useful information on what issues you should be considering before installing external wall insulation, focusing on the current permitted development rights and ways in which you can install the insulation to reduce any impact on you, your neighbours and the local built and natural environment.

This leaflet does not address technical issues relating to, or discuss the merits of, installing external solid wall insulation. For further information please refer to pages 21- 23. All images contained in this document are for illustrative purposes only.



# Reducing Your Carbon Footprint

## What should I do first?



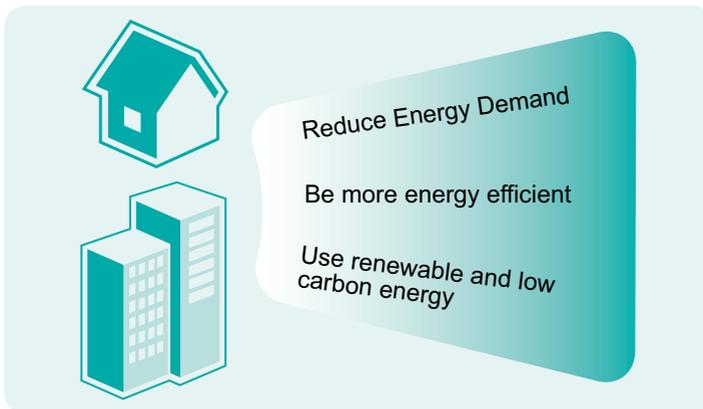
Helpu Cymru i leihau  
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Help Wales reduce  
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### Energy efficiency

If you have decided that you would like to reduce the carbon footprint of your home, you should first ensure that it is as energy efficient as possible. This means looking at the ways in which you can reduce the amount of energy your home requires.

Taking energy efficient measures, such as insulation of walls, can help minimise the use of energy and to heat your home. There are also a number of other energy efficiency measures, such as maintenance of the building, upgrading to a high efficiency boiler, insulation of roofs, draught proofing and using more efficient light bulbs, which you may also wish to consider.



## Renewable and low carbon energy

As well as installing energy efficiency measures, such as external solid wall insulation, you may also wish to consider generating your own renewable energy. We have a separate suite of 11 leaflets titled **‘Generating Your Own Energy – A planning guide for householders, communities and businesses’**. The leaflets provide information on what should be considered when installing a renewable energy technology, planning regulations and ways that any impacts can be reduced. They also provide advice on financial assistance available, such as the feed-in tariff.

The series is split into 11 separate leaflets as follows:	
1	Generating Your Own Energy – A Planning Guide for Householders, Communities and Businesses
2A	Wind Energy
2B	Solar Electricity
2C	Solar Water
2D	Hydropower
2E	Biomass
2F	Biomass (Anaerobic Digestion)
2G	Micro-CHP
2H	Heat Pumps
3A	Generating Your Own Energy – Planning Regulations for Microgeneration (Homes)
3B	Generating Your Own Energy – Planning Regulations for Microgeneration (Non-domestic)

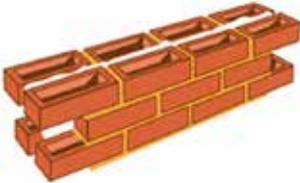
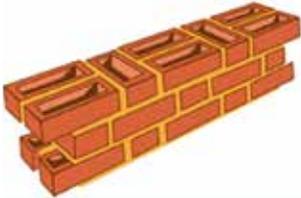
To access an electronic version of the leaflets refer to the Welsh Government’s website. [www.wales.gov.uk/planning](http://www.wales.gov.uk/planning)

# External solid wall insulation

## What is external solid wall insulation?

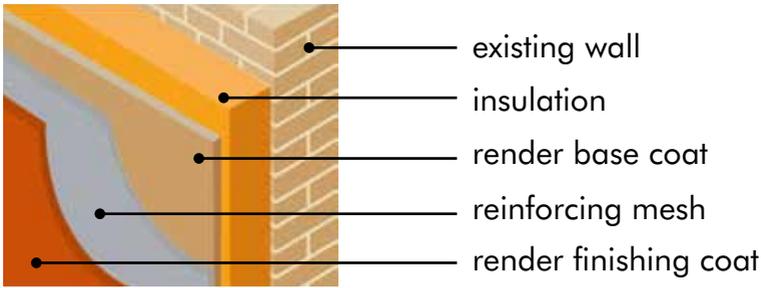
External solid wall insulation is a measure to improve the energy efficiency of buildings which have solid walls (rather than cavity walls). Most pre-1920s buildings have solid walls, with bricks or stone generally laid head-on and lengthways. Cavity walls are made of two layers with a small gap (or 'cavity') between them. Solid walls have no such gap, so they let more heat through. A poorly insulated building can lose up to 25% of its heat through its walls. Solid walls lose even more heat than cavity walls – often more than double that of an un-insulated cavity wall. Solid walls can be insulated, on the inside or outside of the walls, to help improve energy efficiency and cut heating bills.

There are many variations of solid wall construction types in Wales. It is essential that you obtain advice on the suitability of solid wall insulation before installing it. For further information please refer to pages 21 - 23.

What type of walls do I have?	
Cavity Walls	Solid Walls
	
Cavity walls will usually have a regular pattern of bricks.	Solid walls will usually, but not always, have an alternative pattern of bricks.

To insulate a solid wall from the outside, a layer of insulation material is normally fixed to the walls with mechanical fixings and adhesive, and then covered with protective layers of render or cladding. The finish can be smooth, textured or painted, tiled, panelled, pebble-dashed or finished with brick slips to provide a masonry brick finish. The finish covers the whole of the outside of the building, including existing brickwork, and can add between 70mm and 160mm in depth. All external pipe work and other fittings have to be removed and replaced during this process.

While external wall insulation can be installed by any householder, there are Government drives, at the UK level through the Green Deal and Energy Company Obligation (ECO) and in Wales through Arbed and Nest, to tackle existing buildings to improve their carbon performance. External solid wall insulation is one in a long list of measures. Further information on the Green Deal, Arbed, Nest and ECO is provided on pages 18 - 20.



## Internal wall insulation

An alternative to external wall insulation is to insulate solid walls on the inside. Internal wall insulation is installed using insulated studwork, rigid insulation board, combined dry-lining methods or flexible



thermal linings. These methods are typically cheaper than external solid wall insulation measures and there is no effect on the external appearance of the house. Internal insulation is particularly useful for houses only heated in the mornings and evenings as the wall surfaces warm up quickly. However, installation of internal insulation can be more disruptive and room sizes will be reduced. Skirting boards, door frames and electrical fittings would all need to be re-positioned following installation. Internal wall insulation will not normally require planning permission.

For further information on internal and external insulation see pages 21-23.

This leaflet only provides advice on external wall insulation as this will affect the external appearance of a building, which is a matter for planning regulations – refer to pages 12 - 17.

## Installers and products

External wall insulation should be fitted by a specialist installer trained by an approved system designer. Further information on system suppliers and approved installers can be obtained through one of the relevant trade associations.

- National Insulation Association (NIA)  
[www.nationalinsulationassociation.org.uk](http://www.nationalinsulationassociation.org.uk)
- Insulated Render & Cladding Association (INCA)  
[www.inca-ltd.org.uk](http://www.inca-ltd.org.uk)

Any installer should have British Board of Agreement (BBA) approval or equivalent. [www.bbacerts.co.uk/](http://www.bbacerts.co.uk/)



The Energy Saving Trust’s website provides details of recommended insulation which is tested by independent experts and complies with relevant British Standards. [www.est.org.uk](http://www.est.org.uk)

Only an authorised Green Deal Installer can install energy efficiency improvements under the Green Deal finance mechanism. Once they have achieved the relevant accreditation, authorised installers will be able to identify themselves as ‘Green Deal Installers’ and use the Green Deal Quality Mark. The Green Deal Oversight and Registration Body maintain registers of Green Deal Assessors, Installers and Green Deal Providers. These can be accessed using the following link.

<http://gdorb.decc.gov.uk/>

For further information on the requirements for the Green Deal please visit the Department of Energy and Climate Change’s website.

[www.decc.gov.uk/en/content/cms/funding/funding.aspx](http://www.decc.gov.uk/en/content/cms/funding/funding.aspx)

## Homes

Our homes are a major source of energy demand and there are a number of measures around the home which you can install to reduce your energy needs. These include insulation of walls and roofs, replacement boilers, draught proofing and using more efficient light bulbs and other appliances.

A householder’s first port of call should be our **Improving Your Home: A Climate Change Guide** which provides a useful source of information for those considering making changes to



help tackle climate change by making their homes more resilient to climate change and reducing your overall carbon footprint.

[www.wales.gov.uk/planning](http://www.wales.gov.uk/planning)

## Help Wales Reduce its Carbon Footprint

Find out about your carbon footprint and ways you can reduce it.

[www.walescarbonfootprint.gov.uk](http://www.walescarbonfootprint.gov.uk)

## External solid wall insulation and homes

External wall insulation can offer householders a sustainable solution to reducing their energy needs, carbon footprint and fuel bills. The Energy Saving Trust estimates that, depending on the type of solid wall insulation, householders could save around £445 a year. There are funding sources available for reducing the up front cost of external wall insulation – please see pages 18 to 20.



# Do I need planning permission for external solid wall insulation?

## Houses

Planning permission is required for various types of development. There are some types of development that do not require planning permission as they benefit from 'permitted development rights'. Changes have been made to provide 'permitted development rights' for the installation of external solid wall insulation on houses. It is important to note that there are conditions to whether external solid wall insulation on houses is permitted development – further information is provided below.

### What should I check first?

Before installing external solid wall insulation it is important to first check whether your property is:

- In a **Conservation Area, National Park, Area of Outstanding Natural Beauty** or **World Heritage Site**;
- A **Listed Building** identified for its historic or architectural interest;
- In an area where the Council have removed some of your permitted development rights by issuing an **Article 4 direction**. These are made when the character of an area, of acknowledged importance, would be threatened. You will probably know if your property is affected by such a direction, but you can check with your council if you are not sure.
- Subject to a condition attached to the original planning permission for the house, removing permitted development rights.

In these cases restrictions apply and you should seek further advice from your local planning authority.



## When does external solid wall insulation not require planning permission?

Providing the above restrictions do not apply you can install external solid wall insulation as long as:

- The insulation does not project more than 16 centimetres beyond the exterior of the part of the house it is affixed.

This leaflet sets out a general guide on permitted development rights for external solid wall insulation. It is important that you always contact your local planning authority, in the first instance, to ensure your proposal does not require planning permission.

The regulations are set out in The Town and Country Planning (General Permitted Development) (Amendment) (Wales) Order 2013. For more information on the regulations you can also visit our website. [www.wales.gov.uk/planning](http://www.wales.gov.uk/planning)

## Flats and Non-domestic Properties

For flats and commercial properties, planning permission may be required for the installation of external solid wall insulation. The main planning consideration is the impact of the work on the external appearance of your building. Your local planning authority will be able to advise if your proposal requires planning permission.



## Other issues to consider

It is also important to recognise that if you insulate a solid wall it must comply with the current **Building Regulations**. For further information on Building Regulations please refer to the Welsh Government's website or the Planning Portal website.

Welsh Government –

<http://wales.gov.uk/topics/planning/buildingregs/?lang=en>

Planning Portal (Welsh Site) –

<http://www.planningportal.gov.uk/?language=wa>

A **party wall agreement** may be required where external wall insulation ends at a party wall. For further information refer to the Party Wall etc. Act 1996: Explanatory Booklet.

<http://www.planningportal.gov.uk/buildingregulations/buildingpolicyandlegislation/currentlegislation/partywallact>

It is also important to check whether your property is located within a **Flood Zone**. There may be an impact on the performance of external wall insulation from flooding. If your property is at risk of flooding it is important to use suitable materials. To ascertain whether your property could be at risk of flooding refer to the Development Advice Map for Wales website.

<http://data.wales.gov.uk/apps/floodmapping/>

If your property does not have a front garden, and abuts the pavement, you should seek advice from the highway authority, as well as your local planning authority, as **highway consent** may be required. It is important to obtain such advice to ensure the increased projection, beyond the front of your property, would not obstruct the highway or adversely affect the amenity of neighbouring properties.



# What issues should I be aware of when considering installing external solid wall insulation?

External solid wall insulation can significantly alter the external appearance of buildings. There are a number of ways in which the design and choice of product can minimise these impacts. There will also be certain situations where external solid wall insulation will not be an appropriate measure and you may need to consider alternative energy efficiency measures – such as internal wall insulation (see page 8).

The checklist below shows ways in which you can minimise the impact of external solid wall insulation. If permission is required, the local planning authority will consider the issues raised here, alongside other relevant factors, in deciding whether to grant planning permission.

## Design

Everybody's taste varies and different styles will suit different types of buildings. Nevertheless, an appreciation of the existing appearance and character of the streetscene and surrounding buildings can help you choose the right materials and finish for the work. This is likely to be more attractive to you and your neighbours and may help to enhance the attractiveness of your area.



## External Wall Insulation (EWI) Checklist

Issue	Impact	Ways to minimise the impact
Landscape and Visual Impact	<ul style="list-style-type: none"> <li>• Impact on the character and appearance of the property and surrounding area's local distinctiveness.</li> <li>• Loss of original facing material which is a beneficial feature of the property and/or character of the area.</li> </ul>	<ul style="list-style-type: none"> <li>• Apply a high quality finish which, where appropriate, matches the existing.</li> <li>• Seek to ensure that the works are in keeping with the local distinctiveness of the area.</li> <li>• Use appropriate materials, colour and texture which respond sensitively to the site's context.</li> </ul>
Historic Environment	<ul style="list-style-type: none"> <li>• Visual impact on the character and/or appearance of a building or site of historic value (eg. listed building) or area of historic value (eg. conservation area).</li> </ul>	<ul style="list-style-type: none"> <li>• Avoid EWI on buildings of historic value or in sensitive locations.</li> <li>• Ensure that works to a listed building preserve the building and its setting or any features of special architectural or historic interest.</li> <li>• Ensure that the works preserve or enhance the character and appearance of conservation areas.</li> </ul>



## External Wall Insulation (EWI) Checklist

Issue	Impact	Ways to minimise the impact
Facade	<ul style="list-style-type: none"><li>• EWI on a single terrace or semi-detached house may have an effect on the relationship of the facade with the adjoining properties.</li></ul>	<ul style="list-style-type: none"><li>• A 'whole block' approach, through a comprehensive scheme (such as Arbed see page 18), to a row of terrace houses or a pair of semi-detached houses may reduce the visual impact of EWI.</li><li>• Speak to your neighbours to see if they are also considering installing EWI.</li><li>• Ensure the projection of the EWI is as minimal as possible – whilst ensuring the installation complies with Building Regulations.</li></ul>



# Funding

There are various sources of funding opportunities across Wales. These include:

## The Arbed scheme

The Arbed scheme is the Welsh Government's 'Strategic Energy Investment Programme' which funds local authorities and social housing providers to improve homes through measures such as solar panels, air source heat pumps, boilers and external wall insulation. The Arbed scheme takes a community or street-by-street approach wherever possible.

For further information on Arbed refer to the Welsh Government's website or, for advice on what support may be available for you, e-mail the Welsh Government's Arbed team.

[www.wales.gov.uk/topics/environmentcountryside/energy/efficiency/arbed](http://www.wales.gov.uk/topics/environmentcountryside/energy/efficiency/arbed)

E-mail [arbed@wales.gsi.gov.uk](mailto:arbed@wales.gsi.gov.uk)

## Nest

Nest is the Welsh Government's fuel poverty scheme. Nest offers advice and support to all householders to help them reduce their fuel bills by saving energy, improving the energy efficiency of their home and maximising their income. Nest targets the highest level of support at households who are in receipt of a means tested benefit and live in a home that is not energy efficient (G rated). Eligible households receive a whole house assessment, which will consider what package of measures is the most appropriate and cost effective for that



property. Packages will vary but could include a new boiler, central heating, loft and cavity wall insulation, external wall insulation or renewable technologies.

Contact Nest for advice on what support may be available for you.

[www.nestwales.org.uk](http://www.nestwales.org.uk)

Tel 0808 808 2244

## The Green Deal

The Green Deal is a new financing framework enabling private firms to offer consumers energy efficiency improvements to their homes, community spaces and businesses. It aims to overcome some of the financial barriers to the uptake of energy efficiency measures by removing the need to pay upfront costs, increasing the availability of finance and increasing the affordability of improvements. The key principle for accessing Green Deal finance is that the charge attached to the energy bill should not exceed the expected energy bill savings made.

For further information on the Green Deal call the Energy Saving Advice Service on 0300 123 1234 or refer to the Department of Energy and Climate Change's website.

[www.decc.gov.uk/en/content/cms/funding/funding.aspx](http://www.decc.gov.uk/en/content/cms/funding/funding.aspx) or

<https://www.gov.uk/government/organisations/department-of-energy-climate-change/series/green-deal-quick-guides>



## Energy Company Obligation (ECO)

ECO is an obligation placed on energy companies, with over 250,000 customers, from October 2012 by the UK Government. Estimates by the Department for Energy and Climate Change indicate that ECO expenditure in the UK will be in the region of £1.3 billion in 2013-14. ECO has three components:

- The Carbon Saving Obligation/Carbon Emissions Reduction Obligation (CERO): approximately £760m. Largely designed to complement the Green Deal to make more expensive measures, such as solid wall and hard to treat cavity wall insulation, affordable. However, this can also be used with other funding sources and is not exclusively for use with the Green Deal.
- The Carbon Saving Communities Obligation (CSCO): approximately £190m. Targeted at homes in the bottom 15% of Lower Super Output Areas, with at least 15% in rural homes.
- The Affordable Warmth Obligation/Home Heating Cost Reduction Obligation (HHCRO): approximately £350m. Supports installation of measures to private householders on low incomes (in receipt of specific means tested benefits and tax credits). Measures include heating systems and solid, cavity and loft insulation.

For further information on ECO call the Energy Saving Advice Service on **0300 123 1234** or refer to the Department of Energy and Climate Change's website.

[www.decc.gov.uk/en/content/cms/funding/funding.aspx](http://www.decc.gov.uk/en/content/cms/funding/funding.aspx)



# Further Information

## Welsh Government - Planning

This contains further information on householder permitted development rights – Town and Country Planning (General Permitted Development) (Amendment) (Wales) Order 2013.

[www.wales.gov.uk/planning](http://www.wales.gov.uk/planning)

## Welsh Government - Climate Change

This provides policy information on what the Government is doing to tackle climate change in Wales.

[www.wales.gov.uk/climatechange](http://www.wales.gov.uk/climatechange)

## Energy Saving Trust

Their website provides impartial advice on energy saving and reducing your carbon emissions as well as information on external wall insulation.

[www.est.org.uk](http://www.est.org.uk)

Tel 0800 512 012 (option 3)

## Energy Saving Advice Service

You can get free and impartial energy saving advice from the Energy Saving Advice Service, which is a centralised government-funded telephone advice service.

Tel 0300 123 1234



## National Insulation Association (NIA)

The NIA is a trade association for solid wall insulation. Their website includes a postcode locator to find installers who are members of the NIA.

[www.nationalinsulationassociation.org.uk](http://www.nationalinsulationassociation.org.uk)

## Insulated Render and Cladding Association (INCA)

The INCA is a trade association for external wall insulation. Their website holds a register of installers who are members of the INCA.

[www.inca-ltd.org.uk](http://www.inca-ltd.org.uk)

## Wales Carbon Footprint

This site allows you to calculate your carbon footprint and get advice on how you can help tackle climate change, and has a range of resources for community groups.

[www.walescarbonfootprint.gov.uk](http://www.walescarbonfootprint.gov.uk)

## Cynnal Cymru - Sustain Wales

Their website has a wealth of information about sustainable living, as well as a directory of organisations, projects, help and support available where you live.

[www.sustainwales.com](http://www.sustainwales.com)

## Development Advice Map for Wales

The online maps on this website can be used to ascertain whether your property is at risk of flooding.

<http://data.wales.gov.uk/apps/floodmapping/>



## Cadw

Cadw is the Welsh Government's historic environment service working for an accessible and well-protected historic environment for Wales. Cadw conserve Wales' heritage, help people understand and care about the history and distinctive character of Wales.

[www.cadw.wales.gov.uk](http://www.cadw.wales.gov.uk)

## Planning Portal (Welsh Site)

The Planning Portal is the UK Government's online planning and building regulations resource for England and Wales. Their website provides information on the planning system in Wales for home owners, businesses and planning professionals.

<http://www.planningportal.gov.uk/?language=wa>

## Retrofit Buildings

This website provides news and knowledge about improving buildings and energy conservation.

[www.retrofitbuildings.com](http://www.retrofitbuildings.com)

## Sustainable Traditional Buildings Alliance (STBA)

The STBA aim to promote and deliver a more sustainable traditional built environment in the UK through research, education, training and policy. Their website provides information on improving the sustainability of traditional buildings.

[www.stbauk.org](http://www.stbauk.org)



This document can be found on our website at:

[www.wales.gov.uk/planning](http://www.wales.gov.uk/planning)

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