Walls

In some instances, it may be possible to install internal wall insulation (IWI) and external wall insulation (EWI) to your traditional building. However, in considering whether it is appropriate for your building, you should consider

- If your building is listed?
- Is your building located in a conservation area?
- What is the condition of your building?
- Does the wall have any traditional or architectural features (*e.g. hood mouldings, dado rails or skirting boards, eaves details*)?
- If installing IWI, then what is the size of the room?

Before installing any type of wall insulation, it is essential to ensure that your building is in good condition and does not have any existing damp problems. If any repairs are required to your building, or there is an existing damp problem, then this must first be identified and addressed. If this is not undertaken, then it is likely to result in problems with the building fabric and internal environment.

Internal wall insulation

If your building is listed, it is likely that Listed Building Consent will be required to install IWI. Any application will need to clearly identify what the existing wall finish is, the type of insulation proposed (material, thickness and method of applying/fixing to the wall). The application will also need to identify how the risk of **thermal bridging** will be reduced, particularly around windows/doors and between floors/ceilings. Details will also need to be submitted about how existing historic features will be retained.

Whether your building is listed or unlisted, it is essential to ensure that the level of insulation is consistent throughout and it is not generally advised that it is installed in only one room. This is because this can result in **thermal bridges**; these areas become more prone to

condensation and **interstitial condensation**. This can be both harmful to the fabric of the building and the health of any occupants/users. It is not advisable to use change from one thickness of insulation to a thinner one (or no insulation) for example around windows and their reveals. Therefore, it is often best to use a thinner type of insulation, which will over all achieve a lower **u-value** in a traditional building to reduce the risk of thermal bridges.

When insulating traditionally constructed buildings, it is important to use **vapour permeable** and **hygroscopic materials**. This is to ensure that any moisture in the building fabric can evaporate. Some materials insulating materials which may be suitable include

- Cork or hemp lime plaster
- Wood fibre board
- Aerogel

Materials which are not breathable, or are foil backed are not advisable in traditionally constructed buildings because they can result in moisture retention/accumulation.

When seeking to install IWI to your building, therefore, it is essential that you seek professional advice from a **retrofit co-ordinator** to ensure that the right type of insulation, thickness and detailing is specified.

External wall insulation

EWI, whilst an effective way to insulate your building, is more complex and requires careful detailing around doors, windows, eaves, ventilation/extraction outlets and can often require additional alterations to your building in order for it to be completed properly. This can involve changing the eaves or your building, moving windows or doors within their reveals, relocating rainwater goods. Therefore, it is essential to get an experienced contractor who understands traditional buildings to design and specify any external wall insulation for your building.

As with internal wall insulation, it is often better to use a thinner insulation if that means that you will achieve a more consistent application of insulation. This is to reduce the risk of cold bridging and therefore damp and condensation in your building.

You should also consider how the installation of EWI may impact your neighbours if you live in a terraced or semi-detached property. It is good practice to notify them before carrying out any EWI in case they have any concerns.

If your building is listed, then listed building consent will be required for EWI. However, with the exception of insulated lime render, EWI is rarely considered acceptable for listed buildings, because of the level of alteration required to the building to accommodate it, which often does not sustain the special architectural and historic interest of the listed building. However, if you would like advice on this matter from the Council, then your should use the Council's pre-application advice service.

If you building is located within a conservation area, then planning permission may be required for the installation of EWI. If planning permission is required, then an assessment of its impact on the character and appearance of the conservation area will need to be submitted to the Council. However, it should be noted that the loss of traditional architectural details or features as a result of the EWI may not be considered acceptable. It is therefore advisable that pre-application advice is sought first before submitting an application.

Further guidance

If seeking to insulate the walls of a listed building or external walls of a building in a conservation area, it is advisable to seek pre-application advice from the Council first. The Council's pre-application advice page can be found here.

The Department for Business, Energy & Industrial Strategy has produced a best practice guide for IWI, called Retrofit Internal Wall Insulation: Guide to Best Practice.

Historic England have advice on Insulating solid walls, Early cavity walls, and Insulating timber-framed walls.