



RISE

Retrofit information,
support & expertise

Listed Buildings

Quick guide

October 2024

Funded by:



Department for
Energy Security
& Net Zero

www.riseretrofit.org.uk



Contents

Contents	2
Summary	3
What is a listed building?	3
Why are they protected?	4
Key challenges	4

Summary

How to use this quick guide?

This quick guide has been prepared to assist local authorities and registered providers that are considering making listed buildings more energy efficient. It is an introduction to the subject and those wishing to pursue this should refer to the other planning constraints and heritage documents on the RISE website.

What is a listed building?

A listed domestic building in England is a property that has been officially designated as having historical or architectural significance. This listing is part of the government's effort to protect and preserve buildings that contribute to the nation's cultural heritage. Buildings can be listed for various reasons, including their architectural style, historical importance, or association with notable figures.

Being listed imposes restrictions on alterations and demolitions to ensure the building's character and integrity are maintained. There is a range of buildings designated to various grades by Historic England. Here are some examples of what listed buildings can look like:



Figure 1 Example of a listed town house. This is The Circus in Bath, listed for its unique curved exterior. Source: <https://historicengland.org.uk/listing/the-list/list-entry/1394142>



Figure 2 Example of a listed disused industrial building now used for domestic purposes. The old mill in Wiltshire used to be a grain mill. Source: <https://oldmillsalisbury.co.uk/>



Figure 3 Example of a Grade II listed home, significant for its architecture and historical setting in Dorset. Source: <https://historicengland.org.uk/listing/the-list/list-entry/1110597>

Why are they protected?

Properties are listed to protect and preserve their historical, architectural, or cultural significance. The listing process serves several key purposes:

- **Heritage preservation:** Listing helps safeguard the nation's heritage for future generations by recognising the importance of historical buildings.
- **Legal protection:** Listed buildings are protected by law, which means that any alterations, extensions, or demolitions require special permission, ensuring that their character and integrity are maintained.
- **Cultural significance:** Many listed buildings reflect the architectural styles, historical events, or notable figures associated with a particular area, contributing to the local identity and culture.
- **Encouraging conservation:** Listing encourages the conservation of older buildings, promoting sustainable practices by repurposing existing structures rather than building anew. This includes the conservation of embodied energy.
- **Public awareness:** The listing process raises awareness about the importance of historical buildings and encourages public and community engagement in heritage conservation efforts.

Key challenges

What are the key challenges of retrofitting a listed property?

Any alterations that affect a listed building's significance or special interest require permission. This can complicate the implementation of energy-efficient upgrades. This is because many energy-efficiency measures, such as double glazing or external wall insulation, may alter or obscure significant original architectural features. This means special permission, known as listed building consent, is

required from the local authority. If the measures are seen to harm the building's significance, permission may be refused.

The scope for modifications can be limited by this, as the need to conserve significance, character and appearance of the building can limit options for retrofit measures. The compatibility of many modern methods and retrofit measures with traditional materials and designs can also cause problems. Older buildings were built to 'breathe' whereas more modern methods aim to be waterproof. This key difference in the way they handle moisture means installing modern measures to older buildings, such as insulation or airtightness tape, must be done with extreme care.

The challenges and limitations around listed buildings mean there can be increased costs to retrofit works. The specialised nature of work required to make them more energy efficient while conserving their significance often necessitates bespoke solutions. This in turn requires skilled retrofit assessors, designers and craftspeople/installers that can carry out the alternations and ensure they protect the building's significance. PAS2035 recognises this and requires that retrofit assessors, co-ordinators and designers should all have training specific to older buildings when working on them. Your local authority may also know of professionals and contractors that have experience of working on these buildings.

How can we overcome these challenges?

Despite these challenges, there are opportunities for improving energy efficiency in listed buildings through careful, sensitive retrofitting that conserves them while enhancing comfort and sustainability.

Implementing energy efficiency measures in listed buildings requires a careful approach to balance conservation with modern sustainability. Here are some measures that can be considered:

Type of measure	Specific installation	Detail
Improved Insulation	Internal Insulation	Adding insulation to walls, ceilings, and floors without altering the exterior appearance can improve thermal performance. This may also include the insulation of pipes and hot water tanks to minimise heat wasted.
	Draft Proofing	Sealing gaps around windows, doors, and floors helps reduce heat loss without compromising the building's character.
	Secondary Glazing	Installing secondary glazing can enhance insulation while preserving the original windows.

	Window Films	Applying solar films can improve thermal performance without changing the window's exterior appearance.
Heating Systems	Smart Thermostats and building management systems.	Installing programmable thermostats can optimise heating schedules for better energy use.
	Solar Panels	In some cases, solar panels can be installed on less visible parts of the building, such as roofs.
	Heat Pumps	Air or ground source heat pumps can be integrated with careful planning, especially if they do not alter the building's external appearance.
Energy-Efficient Lighting	LED Lighting	Switching to energy-efficient LED bulbs can reduce energy use while maintaining appropriate lighting levels.

Source: <https://historicengland.org.uk/advice/your-home/energy-efficiency/making-changes-to-save-energy/>

Next steps

Anyone considering energy efficiency measures in a listed building should familiarise themselves with the planning constraints and heritage content on the RISE website. The toolkits available contain information on how to understand and define the significance of your asset, in to order to provide this to the local authority as a heritage statement. This is a key part of applying for listed building consent.

It may also be useful to speak to your local authority about the changes you are considering. They may have experience in this area that can help guide your planning. Ensuring your retrofit works conserve the building's significance and comply with the consent system will take time and should be considered from the outset of the project.



www.riseretrofit.org.uk



RISE – Retrofit information, support & expertise