



Key challenges to the UK's ambitious green retrofit and property de-carbonisation strategy

Until relatively recently restoration of UK building stock has largely been regarded as an aesthetic matter rather than one of sustainability.

As the dust settles on [COP26](#) and the world marches towards a net zero target, sustainability has risen to the top of the UK's built environment agenda and we are now seeing both market forces and sentiment affecting values.

Alert to the fact that [sustainability is a key item on the UK real estate agenda for 2022](#), we are starting a new blog series to explore some key issues that we have identified in the context of the UK's ambitious retrofit strategy. These include:

- Whether the UK's legislative and regulatory framework is fit for purpose in the context of the UK's ambitious green retrofit and de-carbonisation strategy
- What role innovation has to play in the challenge of retrofitting at scale
- How important collaboration and data sharing between stakeholders such as landlords, occupiers and developers is in driving forward the ESG agenda.

What is retrofit?

Retrofit is the process of [improving the energy and environmental performance](#) of a building using technical interventions. A prime focus of retrofit is on reducing heat losses through the building fabric such as the walls, doors, windows, floors and roof thereby cutting heating costs, energy use and CO₂ emissions.

There are however also other important ways of reducing these impacts, including improvement in services such as heating systems, controls and lighting and by the use of renewable energy.

There is no one size fits all to retrofit schemes and different buildings and different occupants benefit from different approaches.

Is it worth retrofitting an old building?

Return on investment analysis now looks not only at financial return but also on green premium and environmental returns and perhaps more importantly takes into consideration the cost of inaction (such as not being an early adopter of green technology) thereby changing the investment metrics in the property sector.

Old and historic buildings (and in particular the grand dames of the built environment) are often viewed as inefficient simply because they are less likely to be equipped with new green or innovative technology.

The irony lies in the fact that the greenest buildings are almost invariably those that have already been built and whilst there are often good social reasons why pre-existing buildings should be preserved the now resounding reason is the importance of embedded carbon.

New development only becomes carbon neutral once the carbon generated in manufacturing and transporting building materials has been discounted. This point of equilibrium may never be reached and even if it is the likelihood is that by that stage the building will need to be redeveloped.

When is the best time to retrofit?

Whilst ESG metrics are constantly changing and evolving it is important to [recognise that the environmental impact and broader carbon footprint of a building](#) is not something that only needs to be considered at the design stage.

Most buildings are occupied for decades and it is therefore important that ESG is considered at all stages of the building's lifecycle including the initial design and construction through to fit-out and alterations and culminating in demolition. Retrofitting a property is essentially the process of adding measures to improve efficiency while retaining the main structure thereby locking in the embedded carbon. This can take place at any stage in the middle of a building's lifecycle. Examples of retrofit works include internal or external wall cladding, upgrading heating systems or installing low carbon heating or installing insulation.

Upgrading the built environment across all property asset classes and in particular scaling energy renovation in the UK's existing building stock presents a huge challenge not only in terms of scalability but also in terms of the cost and the risks associated with adopting new and innovative technologies.

In our next piece, we will consider **the role that innovation has to play in retrofitting at scale.**