

Research

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# Decarbonising UK housing: the regional view

# Introduction

Climate change is the greatest challenge in a generation, and one we have a responsibility to tackle as individuals, businesses, governments and industries.

The urgency around the climate crisis and the role of the built environment was clear to see at the recent COP28 gathering in Dubai, where 28 nations including the UK signed up to make near-zero emissions and climate resilient buildings the new normal by 2030, via the 'Buildings Breakthrough' pledge.

England's housing sector accounts for 20% of the country's carbon emissions, and research has found that these homes produce more CO2 every year than is produced by all of the country's cars. Meanwhile, the pain of the cost-of-living crisis has put significant strain on households across the country.

Making UK housing stock more energy efficient is now quite rightly in sharper focus – and is seen as part of the solution to both addressing household fuel poverty and this government's road to net zero.

Set against that backdrop, JLL has produced new research on the cost of decarbonisation across UK housing, to help paint the picture of the scale of the challenge in the current economic environment – and to stress the need for solutions and commitments from government and partners that will help the housing sector achieve its EPC C and net zero ambitions.

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Upgrading an existing home is a significant undertaking for individuals, while working at scale can see costs rise to an eye-watering level.

**Marcus Dixon**

*Director UK Residential, JLL Research*





Given the current economic climate, our latest research estimates:

- Working on an average cost of retrofitting an existing home at £35,000 per property, the cost of retrofitting will make up a much more significant proportion of a homes value in some regions than others.
- to implement a substantial refurbishment to achieve a SAP score of 90+ could cost well over £100,000 per dwelling.

We have set those costs in the context of house values, analysing the proportion of sales prices across England and Wales which would need to be spent to retrofit the average home, and found:

- There are 26 local authority areas where a £35,000 bill would account for more than a fifth of the average house price.

- Eight of the top 10 most impacted local authority areas are in the North East or North West.
- Lower average prices mean that flats and apartments are hit hardest by retrofit costs, with only 9% (28) of local authority areas where retrofit costs would account for less than 10% of average flat values. All are in London and the South East.

For housing associations and local authorities, upgrading over 4.5 million social homes that they own is of course a major transformation project.

Despite the Government rowing back on energy efficiency targets, there are no signs of the social housing sector slowing down, stopping, or radically altering plans to face up to the challenge of improving energy efficiency for new developments; or to grapple with the much bigger challenge of retrofitting existing stock.

# 01

## The challenge and opportunity for social housing



With more than 4.5 million social homes in England alone, the decarbonisation of the country's social housing stock needs to be a major strand of the UK Government's strategy to reach net zero by 2050.

It presents a significant challenge to social landlords across the UK – but also provides an opportunity for the sector to show how it is leading this agenda and providing the solutions and innovations that government will look to roll out in the private housing sector and the wider built environment too.

There is also a strong social impact argument for investing in more energy efficient homes. Social housing tenants are among the hardest hit by high energy prices and fuel poverty, and as we enter the cold winter months, the role of housing associations and councils in helping to ensure their homes are warm and comfortable is critical.





Affordable housing providers, already stretched financially, are having to undertake these works. Upgrading 1,000 homes (a realistic, even conservative situation) will come at a cost of £35m.

Making a rough extrapolation, we can see the enormous costs involved with decarbonising the country's homes. Applying a £35,000 bill to just half of the 4.5 million homes owned by local authorities and housing associations across England equates to almost £79bn. This figure represents nearly two-thirds of the social housing sector's entire committed debt, both drawn and undrawn (£123bn).

The challenge weighs more heavily on lower value markets (typically found in the North) and there's no grant or funding for areas that shoulder a greater burden. Availability of funding is scarce.

Our research follows on from previous projects undertaken by the National Housing Federation and Savills in 2021.

As we all know, much has changed since that research was released – not least economically, with inflation and interest rates soaring, and multiple challenges bearing down on households and the social housing sector that requires a significant uptick in investment in existing homes.

We hope this research helps the social housing sector, UK government, residents, funders and other key stakeholders, better understand the scale of the challenge, and the acute need to collaborate and partner to find solutions.

We believe UK government has a role to play too of course. Despite some disappointing announcements on the net zero agenda in recent months, the importance of addressing climate issues cannot be overstated.

Along with many others, we want to see UK government sustain the momentum built so far in the sector and to announce the release of the full £3.8bn of the Social Housing Decarbonisation Fund, which represents just 2.5% of the estimated cost of decarbonisation.

## 02

# Retrofit's regional effects



Along with providing an average cost for reaching EPC C, we have also provided analysis of the costs in different localities and regions across the country.

Lower value markets typically have higher levels of deprivation and people are less able to make the necessary changes. Areas in which there is a higher demand for social housing have the greatest need for retrofitting work, but are also the least able to deal with it.

Most heavily affected markets are also typically colder. This means people with less disposable income, in a colder place, with less ability to borrow against the cost of their home, shouldering a major expense that won't really add to the value of a home.



## Biggest challenge

At a local authority level there are 26 where a £35,000 bill would account for more than a fifth of the average house price. With eight of the top ten most impacted in the North East or North West.

### 10 local authorities where retrofit makes up highest % of average price

Local authority	Region	Average house price – 2023 YTD	% average flat price	% average terraced price	% average semi price	% average detached price	% average price
Burnley	North West	£130,209	50%	37%	20%	13%	27%
Kingston upon Hull	North East	£139,273	43%	29%	21%	14%	25%
Hyndburn	North West	£139,571	36%	36%	19%	14%	25%
Blackpool	North West	£141,907	41%	29%	23%	13%	25%
Middlesborough	North East	£146,504	45%	38%	23%	13%	24%
Blaenau Gwent	Wales	£147,108	38%	30%	23%	12%	24%
County Durham	North East	£147,970	33%	35%	24%	13%	24%
Stoke-on-Trent	West Midlands	£152,993	39%	32%	22%	13%	23%
Sunderland	North East	£154,314	42%	30%	22%	12%	23%
Blackburn with Darwen	North West	£155,891	36%	32%	20%	11%	22%

Source: JLL using HM Land Registry

**48%**

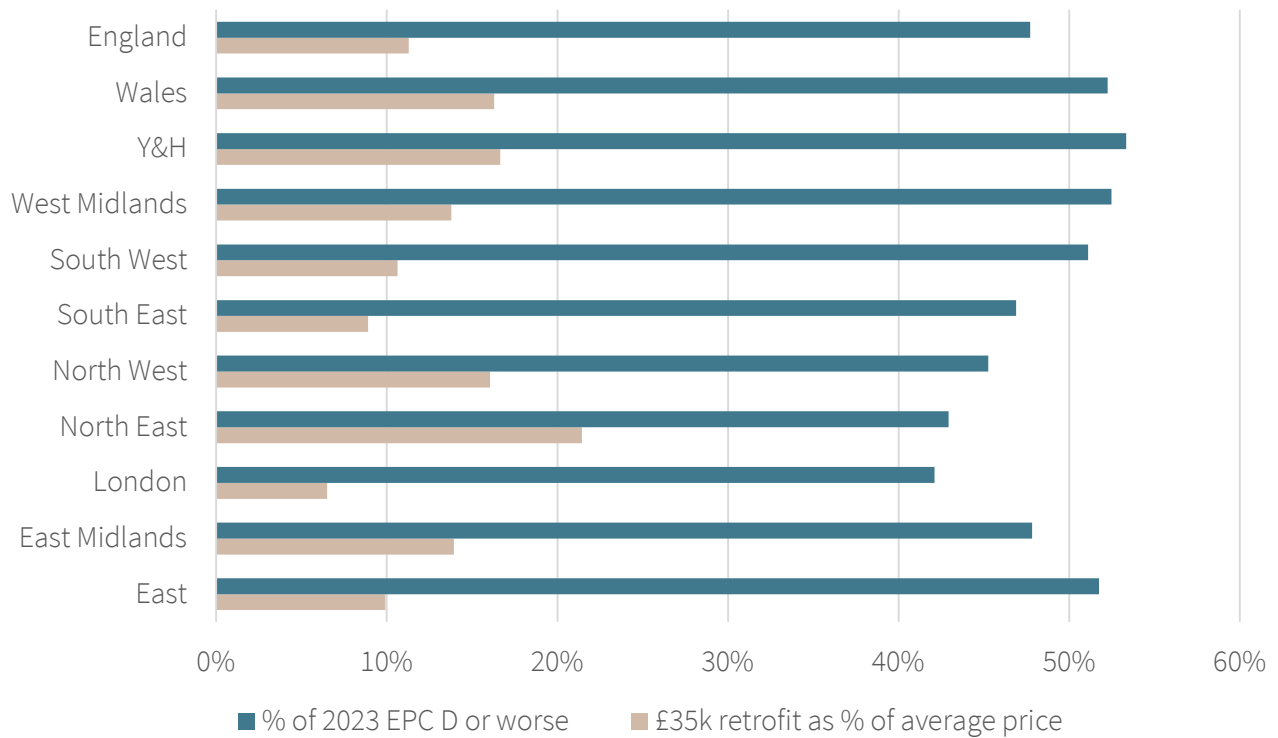
of existing properties surveyed for an EPC in 2023 have an EPC rating of D or below across England & Wales. Yet in some regions a £35k retrofit bill would account for more than 20% of the value of an average home.

New homes are already reaching higher efficiency standards, with 84% of developments providing properties with EPC ratings of A or B so far in 2023.

However, bringing existing housing stock up to the same standard is a different story, with just 4% nationally at EPC A or B, and fewer than half at EPC C.

Costs of labour may fluctuate, but the costs of windows, doors, insulation, vents and heat pumps are consistent across geographies.

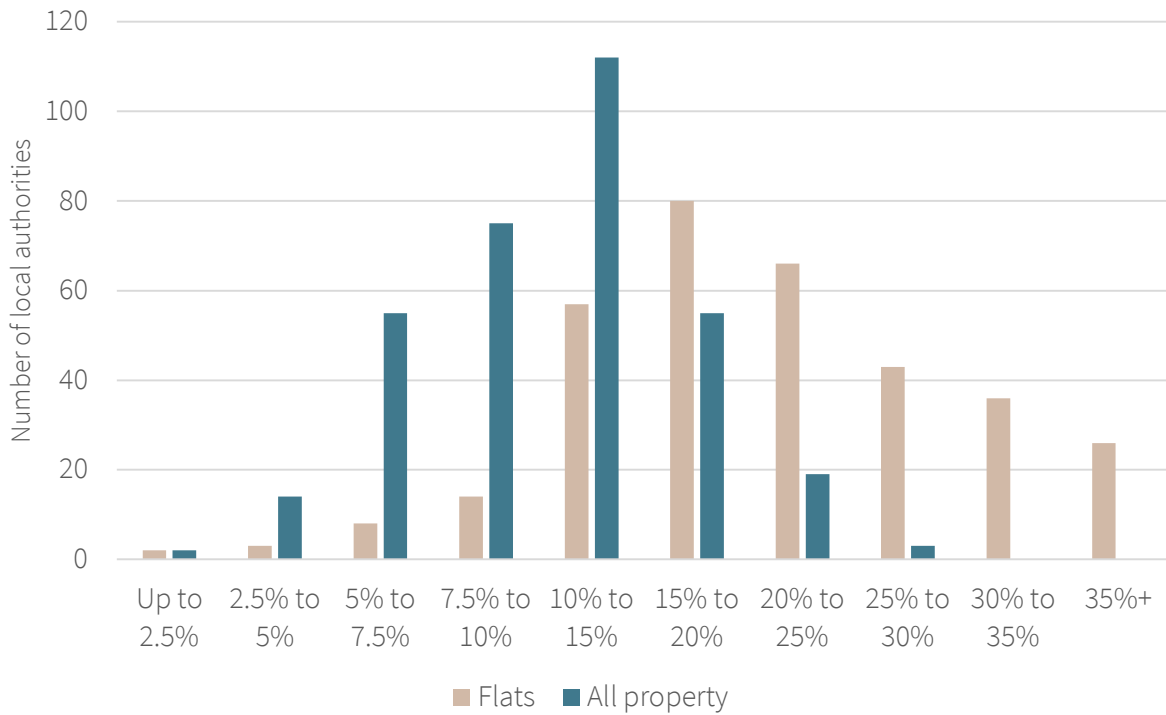
**Retrofit cost as % of average price and % of homes at EPC D or worse**



Source: JLL HM Land Registry, DLUHC (excluding new build)



### £35k retrofit as % of average price – by number of local authorities



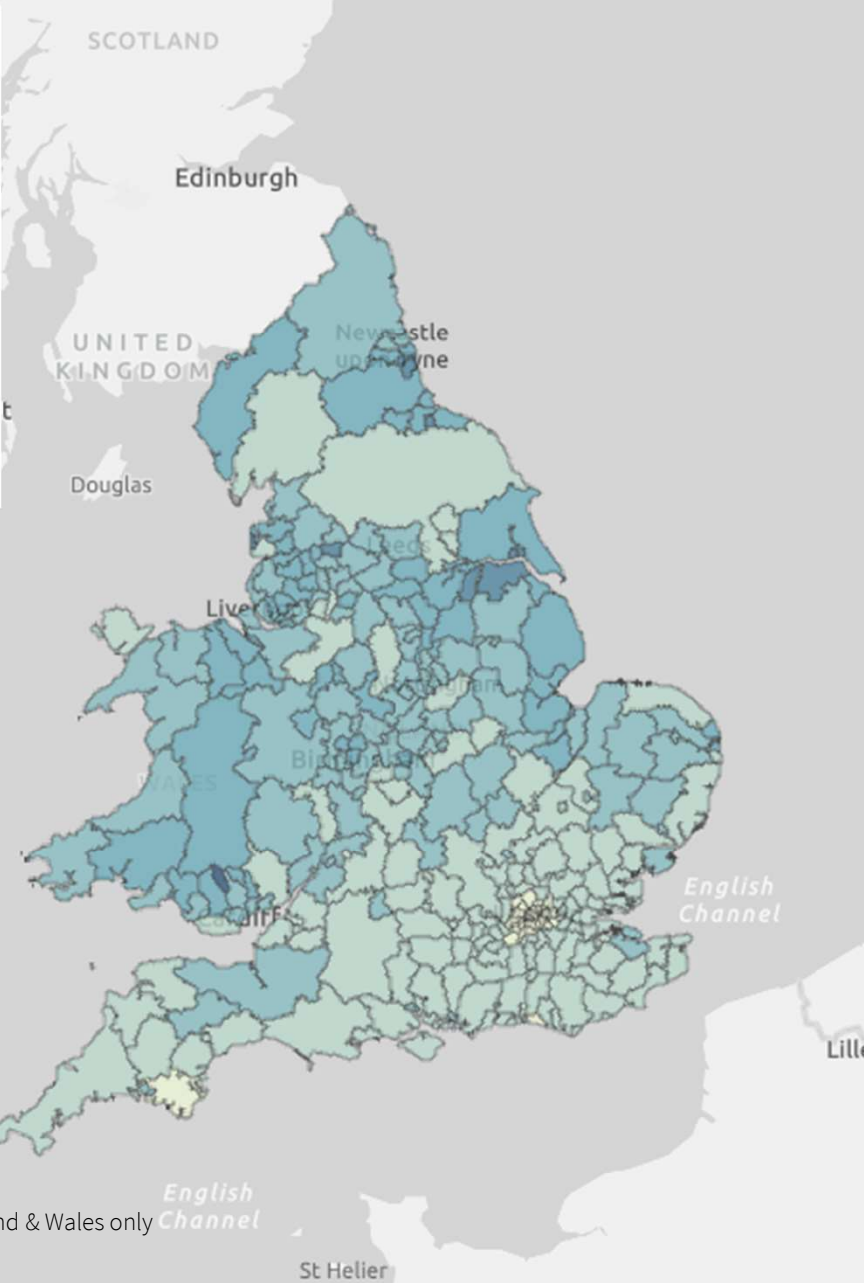
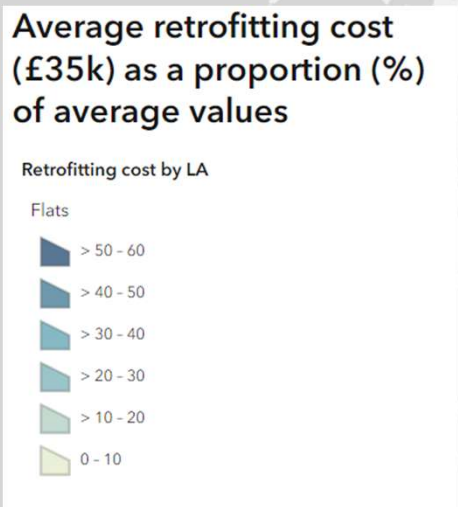
Source: JLL using HM Land Registry

In the social sector, by putting a greater burden on housing providers, we will also see fewer new homes delivered as cash is earmarked for retrofit rather than build.

In a worst-case scenario, there's a potential situation where homes are left empty or even demolished rather than upgraded because of the gulf in values versus cost.

**56%**

of the 335 local authorities across England and Wales where a £35k retrofit bill equates to 10% or more of the average house price. For flats that rises to 92% of local authorities.



Source: JLL using HM Land Registry 2023 data – England & Wales only

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Lower average prices mean retrofit costs are most challenging for flats. With only 28 local authorities in which retrofit would account for less than 10% of average flat values, all are in London and the South East.

**Marcus Dixon**

*Director UK Residential, JLL Research*



# Conclusions and key takeaways

The upgrading of existing homes is a substantial undertaking and will require extensive and disruptive refurbishment to achieve required performance levels, particularly with the external envelope of the buildings. In some cases, a ‘back to frame’ approach will be required.

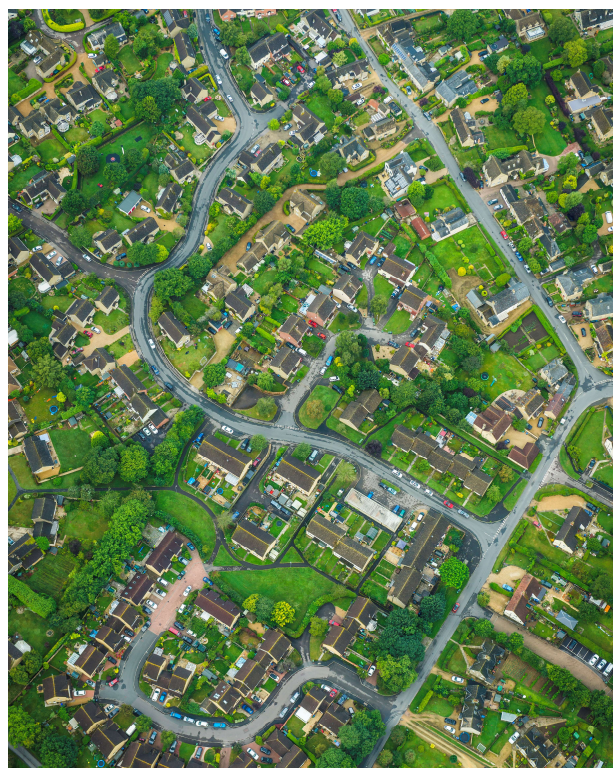
In a worst-case scenario, there’s a potential where homes are left empty to be demolished rather than upgraded because of the gulf in values versus cost.

In the private housing market, there needs to be more incentives to invest in home refurbishment and energy efficiency works.

Helping residents to achieve positive outcomes starts with the design choices, the ease with which new equipment can be controlled and used, and the benefit in terms of the cost of living, as well as the reduced environmental impact.

Once works are completed, there is still a need for greater communication with tenants to understand how efficient properties function differently.

There is a clear role for UK government here too, in incentivising the private market and supporting the social housing sector to help decarbonise homes across the country – which will in turn support a healthier population living in warm, more energy efficiency and cheaper to run homes, a reduction in the market’s carbon footprint and a step closer to net zero by 2050.



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## Methodology

JLL has used Land Registry data from 2023 detailing the average sale prices by property type in local authorities. These local authority figures were then used as a benchmark to understand the implications of an average £35,000 retrofit cost in different markets.

The £35,000 figure relates to all homes, not just social housing. Costs of labour may fluctuate, but the costs of windows, doors, insulation, vents and heat pumps are consistent across geographies.

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