# Passivhaus gains momentum in social housing amid Scotland's 2028 standards push



Collette Miller’s exploration of the Passivhaus and EnerPHit energy efficiency standards highlights their relevance in the context of social housing, particularly as providers strive to align with net zero targets and enhance tenant well-being. Originating from the collaborative thinking of Bo Adamson and Wolfgang Feist in the 1980s, the Passivhaus standard was designed to create low-energy buildings that maintain comfortable indoor climates with minimal energy consumption.

Despite its promising objectives, the adoption of Passivhaus principles has been sluggish in the UK, with only about 1% of new housing projects meeting these standards. The UK Passivhaus Trust, however, is actively working to increase that figure to 10% by 2035, emphasising the need for a cultural shift in construction practices. Scotland has made notable strides, leading the way with a significant number of Passivhaus certifications, a situation likely to gain further momentum with the Scottish Government's plans to introduce a mandatory Passivhaus-equivalent standard by 2028. This anticipation urges social housing providers to integrate these standards into their energy efficiency initiatives now.

The stringent requirements of the Passivhaus standard include thermal bridge-free construction, mechanical ventilation with heat recovery, and an airtight building fabric, all aimed at creating a consistent indoor temperature with minimal energy input. Such designs not only enhance thermal comfort but also ensure quieter living spaces and improved air quality. Nonetheless, the realisation of these benefits hinges on occupant behaviour, necessitating that social landlords provide guidance to tenants on optimising their living environments.

Complementing the Passivhaus standard is EnerPHit, a framework tailored for retrofitting existing buildings to improve energy efficiency significantly. While less stringent, EnerPHit still requires the installation of high-performance windows, efficient heat generation systems, and adequate insulation to ensure a healthier indoor environment. The push for retrofitting is pivotal, especially as a considerable portion of the UK’s housing stock could benefit from energy efficiency strategies, contributing to broader carbon reduction goals.

Despite the advantages outlined, the journey towards Passivhaus certification is fraught with challenges. Administrative burdens can deter many organisations, particularly smaller social housing providers, as the certification process demands considerable resources for documentation, testing, and compliance. This is compounded by the limited number of certified professionals, often leading to delays and increased costs. Reports suggest that the initial capital cost of Passivhaus constructions can vary from an extra 8% to 25%, depending on the project's complexity and the local market conditions.

Moreover, while Passivhaus and EnerPHit-certified homes promise reduced utility bills and enhanced comfort for tenants, there is often an unclear correlation between certification and increased property value. The perception of a potential uplift in market value remains nuanced, with no definitive evidence to quantify the impact. However, it is widely acknowledged that energy-efficient homes can lead to greater tenant satisfaction and lower turnover rates, thereby benefiting social landlords in the long term.

As social landlords embark on improvements to meet these energy efficiency standards, several examples from Scotland shine a light on the practical implementation of Passivhaus and EnerPHit principles. Notable projects, such as Glasgow’s Springfield Cross—its largest Passivhaus development—and the ambitious retrofitting initiative by Renfrewshire Council, indicate a growing commitment to sustainable housing solutions.

In addressing equality and accessibility, social housing providers must also consider the diverse needs of tenants. Energy retrofits could inadvertently disenfranchise occupants with varying degrees of accessibility needs; thus, careful planning and inclusivity must form a core part of any retrofit strategy. The case for maintaining tenant rights during such works is imperative, as social landlords face legal obligations to ensure tenants are not unduly displaced or disadvantaged.

The horizon for Passivhaus in Scotland appears promising, particularly with the Scottish Government’s commitment to a net zero target by 2045. As the urgency surrounding climate change escalates, the drive to enhance energy performance in social housing is not merely a compliance issue but a vital component of social responsibility.

Ultimately, social housing providers will benefit from a balanced approach, weighing the principles of Passivhaus and EnerPHit against the realities of implementation. While formal certification may not be universally applicable, integrating these principles can lead to substantial improvements in energy efficiency, tenant satisfaction, and overall sustainability in the housing sector.

Achieving net zero in social housing will require collaboration, innovation, and informed decision-making—factors that social landlords must embrace as they navigate this evolving landscape.

### 📌 Reference Map:

* Paragraph 1 – [[1]](https://www.scottishhousingnews.com/articles/collette-miller-passing-on-the-passivhaus-parcel-unwrapping-the-benefits-and-drawbacks-for-social-housing), [[2]](https://www.archikei.co.uk/post/future-of-passive-house-design-energy-efficiency-buildings-uk)
* Paragraph 2 – [[1]](https://www.scottishhousingnews.com/articles/collette-miller-passing-on-the-passivhaus-parcel-unwrapping-the-benefits-and-drawbacks-for-social-housing), [[5]](https://www.cibcomms.co.uk/blog/a-new-nhbc-foundation-report-details-the-uks-journey-towards-passivhaus)
* Paragraph 3 – [[1]](https://www.scottishhousingnews.com/articles/collette-miller-passing-on-the-passivhaus-parcel-unwrapping-the-benefits-and-drawbacks-for-social-housing), [[4]](https://ww3.rics.org/uk/en/journals/built-environment-journal/passivhaus-standard-scotland-new-housing.html)
* Paragraph 4 – [[1]](https://www.scottishhousingnews.com/articles/collette-miller-passing-on-the-passivhaus-parcel-unwrapping-the-benefits-and-drawbacks-for-social-housing), [[3]](https://www.brydenwood.com/passivhaus/s115138/)
* Paragraph 5 – [[6]](https://buttress.net/journal/2024/05/10/passivhaus-your-questions-answered)
* Paragraph 6 – [[1]](https://www.scottishhousingnews.com/articles/collette-miller-passing-on-the-passivhaus-parcel-unwrapping-the-benefits-and-drawbacks-for-social-housing), [[7]](https://www.everest.co.uk/energy-efficiency/passivhaus/)
* Paragraph 7 – [[3]](https://www.brydenwood.com/passivhaus/s115138/), [[2]](https://www.archikei.co.uk/post/future-of-passive-house-design-energy-efficiency-buildings-uk)
* Paragraph 8 – [[4]](https://ww3.rics.org/uk/en/journals/built-environment-journal/passivhaus-standard-scotland-new-housing.html), [[1]](https://www.scottishhousingnews.com/articles/collette-miller-passing-on-the-passivhaus-parcel-unwrapping-the-benefits-and-drawbacks-for-social-housing)
* Paragraph 9 – [[1]](https://www.scottishhousingnews.com/articles/collette-miller-passing-on-the-passivhaus-parcel-unwrapping-the-benefits-and-drawbacks-for-social-housing), [[3]](https://www.brydenwood.com/passivhaus/s115138/)

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## Bibliography

1. <https://www.scottishhousingnews.com/articles/collette-miller-passing-on-the-passivhaus-parcel-unwrapping-the-benefits-and-drawbacks-for-social-housing> - Please view link - unable to able to access data
2. <https://www.archikei.co.uk/post/future-of-passive-house-design-energy-efficiency-buildings-uk> - This article discusses the future of Passive House design and energy efficiency in the UK, highlighting the benefits and challenges associated with adopting the Passivhaus standard. It covers aspects such as cost implications, adaptability, availability of experienced specialists, climate considerations, and the impact of occupant behaviour on building performance. The piece also notes that while Passive House Design has been successfully implemented in various building types in the UK, costs are projected to fall as more builders, suppliers, and designers become acquainted with Passive House Design, making this approach to building more accessible to a broader variety of clientele.
3. <https://www.brydenwood.com/passivhaus/s115138/> - This article outlines the benefits and challenges of adopting the Passivhaus standard. Benefits include a well-recognised quality mark, reduced performance gap, ultra-low energy/carbon emissions, excellent occupant experience, and resilience to different climate conditions. Challenges encompass increased design cost and complexity, increased capital cost, extended programme duration, and skill shortages. The piece also notes that while the initial capital costs of Passivhaus construction have fallen with time and increased uptake, the additional construction capital cost can vary from 8% to 25%.
4. <https://ww3.rics.org/uk/en/journals/built-environment-journal/passivhaus-standard-scotland-new-housing.html> - This article discusses the potential challenges Scotland faces in meeting the Passivhaus standard for new housing. It highlights concerns about cost premiums, supply chain readiness, and the construction industry's preparedness to comply with the new standards. The piece notes that building to Passivhaus standard incurs a cost premium over an equivalent house conforming to current Building Regulations, with the Passivhaus Trust UK's 2019 report placing this premium at around 8%.
5. <https://www.cibcomms.co.uk/blog/a-new-nhbc-foundation-report-details-the-uks-journey-towards-passivhaus> - This article summarises a report by the NHBC Foundation detailing the UK's progress towards adopting the Passivhaus standard in new homes. It notes that the UK has seen a significant increase in Passivhaus-certified buildings over the last decade, from just 165 in 2013 to over 2,900 in 2024, with more than 8,000 units currently in some stage of development. However, the adoption of this approach has been slower than initially expected due to challenges around education, costs, and the need for cultural and structural change in the construction industry.
6. <https://buttress.net/journal/2024/05/10/passivhaus-your-questions-answered> - This article addresses common questions about the Passivhaus standard, including cost considerations, certification requirements, and the benefits of building to this standard. It notes that the extra cost uplift associated with building to the Passivhaus standard in the UK is around 10%, reducing to 4% with further development of skills, expertise, and supply chain maturity. The piece also highlights that every Passivhaus project aiming for certification requires a Passivhaus designer/consultant and an independent certifier.
7. <https://www.everest.co.uk/energy-efficiency/passivhaus/> - This article discusses the Passivhaus standard, highlighting its benefits and drawbacks. It notes that Passivhaus buildings consume around 75% to 95% less energy than standard UK buildings, leading to significantly reduced heating and cooling costs. However, it also points out drawbacks such as higher initial costs, strict design and construction requirements, maintenance needs, limited adaptability, and potential for overheating in certain climates.