Innovation Procurement Empowerment Centre

A Connected Places Catapult Initiative

Unlocking procurement for net-zero: overcoming barriers in social housing retrofits

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Executive summary

Retrofitting social housing is one of the essential activities for achieving the UK's net-zero targets, while reducing fuel poverty, and improving housing quality. However, the procurement systems that enable retrofit delivery remains complex, fragmented, and often poorly aligned with the scale of the required transformation. This research brief examines the key challenges in public procurement processes for social housing retrofit and explores innovative approaches and delivery models to help overcome these barriers. The brief provides practical recommendations for local authorities (LAs), housing associations (HAs), and policymakers to improve the efficiency and effectiveness of retrofit programmes.

The research highlights three primary barriers to procurement:

Financial Constraints – Short-term funding cycles, high upfront costs, and fragmented financial mechanisms hinder large-scale retrofitting efforts.
Quality Assurance Issues – Inadequate data, workforce shortages, and supply chain bottlenecks impact project execution and sustainability.
Coordination and Regulatory Challenges – Fragmented policies, inconsistent procurement frameworks, and limited stakeholder collaboration slow project implementation.

To address these challenges, the brief examines innovative procurement, financing, and delivery approaches from across the UK. Examples include the WMCA Devolved Retrofit Pilot (2025–2028), Liverpool City Region Dynamic Purchasing System (2022), Bristol City Leap Single Supplier Framework, West Berkshire Climate Change Bond (2020), and Lancaster City Council's Regional Retrofit Training initiative (2022). These cases illustrate how new procurement models, financing mechanisms, and partnership structures can help overcome barriers to large-scale retrofit delivery. Based on these examples, the brief identifies several key recommendations:

- Establishing long-term funding frameworks to support sustained and large-scale retrofit delivery.
- Utilising innovative financial instruments, such as climate bonds and community investment mechanisms, to overcome financial constraints.
- Investing in workforce development to build the skills capacity required to meet growing retrofit demand.
- Strengthening public–private partnerships to improve coordination and mobilise additional investment.
- Improving procurement processes through more flexible and outcome-driven approaches to strengthen the retrofit supply chain.
- Adopting place-based approaches to align retrofit delivery with local housing conditions, economic priorities, and labour market needs

By examining innovative practices and translating these lessons into actionable recommendations, this research aims to support policymakers and practitioners in overcoming procurement barriers and accelerating the transition to net zero in the social housing sector. Implementing these recommendations can help scale retrofit delivery while generating wider economic, social, and environmental benefits.

Introduction

Retrofitting social housing is essential for achieving the UK's net-zero targets and improving energy efficiency within the housing sector. The UK's commitment to reaching net-zero carbon emissions by 2050 requires significant changes across multiple sectors, with the built environment playing a critical role in reducing emissions. Social housing, in particular, represents a major opportunity to deliver large-scale energy efficiency improvements while addressing fuel poverty and improving housing conditions.

The UK currently has approximately 3.9 million social housing units, with nearly half already rated between Energy Performance Certificate (EPC) bands A–C. However, around 1.7 million homes remain below EPC band C, requiring significant upgrades to meet future energy efficiency standards (Palmer et al., 2018). Achieving net zero across the social housing sector is estimated to cost between £58 billion and £100 billion, with retrofit costs ranging from £25,000 to £70,000 per property, depending on building characteristics and the depth of intervention required (Happold, 2021; Nanda et al., 2022). At the same time, funding gaps remain significant. Estimates suggest a £7 billion shortfall between 2020 and 2025, while approximately £3.6 billion annually may be required to support the Social Housing Decarbonisation Fund (SHDF) and related retrofit programmes (Edmen, 2021).

However, the success of retrofit programmes depends not only on technological solutions or funding availability but also on the procurement systems that govern project delivery. Procurement processes determine how materials are sourced, contractors are selected, and retrofit projects are implemented. Despite the urgency of achieving net-zero targets, procurement barriers continue to hinder the large-scale adoption of retrofit measures.

While ambitious policy targets have been set, the main challenge lies in translating these ambitions into effective implementation. Evidence suggests that procurement inefficiencies often create significant obstacles for LAs and housing associations (HAs), limiting their ability to secure funding, engage suppliers, and ensure compliance with sustainability standards.

This research therefore, addresses the following question:

What are the key barriers and challenges in public procurement processes for achieving net-zero objectives, particularly in retrofitting social housing?

This study aims to:

1. Identify procurement-related challenges that hinder social housing retrofits.
2. Examine good practice examples across the UK to deliver actionable insight.
3. Develop evidence-based recommendations to strengthen and support procurement frameworks.

This study was conducted over a ten-month period (June 2024 – March 2025) and employed a qualitative research approach combining stakeholder interviews, a review of academic and policy literature, and participation in industry webinars. The objective was to examine procurement barriers affecting net-zero social housing retrofits and to identify examples of good practice that could support LAs and HAs in addressing these challenges.

The research began with a desk-based review of academic and policy literature to establish a foundational understanding of procurement barriers and existing strategies within social housing retrofit programmes. This stage involved analysing academic publications, government reports, and policy documents to identify key financial, regulatory, and operational challenges that limit large-scale retrofit delivery.

In addition to the literature review, industry webinars and stakeholder discussions were attended to further contextualise the findings. Webinars hosted by organisations such as the National Retrofit Hub (NRH), RISE, LHC, and other sector bodies provided insights into emerging procurement practices, financial mechanisms, and broader industry challenges.

To complement the desk-based research, semi-structured interviews were conducted with five stakeholders currently involved in social housing retrofit initiatives. The interviewees represented different parts of the retrofit ecosystem, including organisations responsible for programme delivery, housing management, and financing. The interviews included:

- Two representatives from local authorities responsible for designing and implementing retrofit programmes.
- Two representatives from housing associations and social landlords managing retrofit projects.
- One representative from financial institutions and investors supporting retrofit initiatives.

The stakeholders were selected using purposive sampling, focusing on individuals with direct experience of procurement processes within social housing retrofit programmes. These interviews provided first-hand insights into procurement challenges such as financial constraints, supply chain limitations, regulatory complexities, and coordination issues. Interviewees also shared examples of innovative procurement approaches and collaborative models that have helped overcome these barriers in practice.

Good-practice examples were identified through a combination of desk-based research, sector engagement, and stakeholder interviews. During the literature review and webinar participation, particular attention was given to programmes and initiatives that demonstrated innovative approaches to procurement, collaboration, financing, or delivery mechanisms within social housing retrofit projects.

Examples were considered “good practice” when they showed evidence of successfully addressing one or more procurement-related barriers, such as improving supplier engagement, enabling SME participation, introducing innovative financing mechanisms, or strengthening coordination between stakeholders. Additional consideration was given to initiatives that demonstrated scalability, replicability, and measurable improvements in project delivery or programme outcomes.

The findings from the literature review, sector engagement, and stakeholder interviews were synthesised to identify common themes and emerging lessons across the sector. These insights were then condensed into this research brief to provide practical and evidence-based recommendations for improving procurement frameworks.

2. Findings - the challenge, good practice examples and lessons learned

This brief provides an overview of the key procurement barriers and emerging solutions in social housing retrofit, further analysis of the challenges, good practice examples, and lessons learned has been developed through three complementary research briefs. These additional briefs examine the issues in greater depth:

- **Part 1:** Financial constraints - overcoming financial barriers to scaling retrofit,
- **Part 2:** Quality assurance issues - strengthening data, skills, and supply chains for effective retrofit delivery
- **Part 3:** Coordination conundrum - overcoming fragmentation to deliver retrofit at scale

Together, these companion briefs provide a more detailed exploration of the barriers and solutions identified in this research.

2.1. Financial constraint

The challenge: Financing remains one of the most significant barriers to scaling social housing retrofit programmes. Many local authorities and housing providers face high upfront capital costs, while traditional funding sources are often limited to short-term grant cycles that create uncertainty and disrupt long-term planning (CPC, 2021; UKGBC, 2020; GFI, 2022). In addition, intense competition for national funding streams and constrained local budgets make it difficult to secure sufficient resources for large-scale retrofit projects (inefficiencies (Palmer et al., 2018; Dyson, 2023; Rafique and Yuan, 2025). The complexity of financing mechanisms, combined with accessibility barriers for smaller housing providers and social landlords, further limits the ability of organisations to mobilise investment for net-zero initiatives (Edmen, 2021; Nanda et al., 2022). Good practice example: Several initiatives across the UK demonstrate innovative approaches to overcoming financial barriers. The West Berkshire Climate Change Bond, launched in 2020, introduced the UK's first Community Municipal Investment (CMI), raising £1 million from residents and investors to fund local climate initiatives such as solar PV installations and energy-efficient infrastructure (Holder, 2020; UK100, 2022). In Coventry, the Strategic Energy Partnership (SEP) established in 2023 between Coventry City Council and E.ON UK provides a 15-year framework for delivering city-wide decarbonisation projects through a long-term public–private collaboration model (McDermott, 2024). Similarly, the West Midlands Combined Authority (WMCA) Local Net Zero Accelerator (LNZA) programme (2024–2026) explores blended finance approaches by combining public and private capital to develop a regional Net Zero Fund that can support large-scale retrofit and low-carbon infrastructure projects (WMCA, 2024; WMCA, 2025b).

Lessons learned: These examples highlight several important lessons for addressing financial constraints in retrofit delivery.

- Diversified funding sources can reduce reliance on short-term grants.
- Establishing long-term financing frameworks can enable strategic planning.
- Promoting community investment mechanisms can allow residents to become more engaged while raising additional capital
- Public–private collaboration can mobilise investment.

2.2. Quality assurance issues

The challenge: Ensuring consistent quality in retrofit delivery remains a significant challenge across the social housing sector. One of the main issues relates to poor data quality and the variation in housing stock, which makes it difficult to design standardised retrofit solutions and accurately plan interventions (CPC, 2021). In addition, limited monitoring and reporting mechanisms can reduce transparency and hinder the ability to track performance and outcomes across projects (Happold, 2021; CPC, 2021). These challenges are compounded by supply chain constraints and shortages of skilled workers, particularly those capable of delivering whole-house retrofits, which are essential for achieving meaningful energy efficiency improvements (Nanda et al., 2022; GFI, 2022; Dyson, 2023).

Good practice examples: Several initiatives demonstrate how these challenges can be addressed through improved procurement systems, workforce development, and regional collaboration. Since 2022, Liverpool's Dynamic Purchasing System (DPS) has modernised procurement by enabling continuous supplier onboarding, faster contract awards, and improved access for SMEs, helping to strengthen the retrofit supply chain (LCRCA, 2022). Meanwhile, WM Housing Group (now Citizen Housing) has invested heavily in apprenticeships, vocational training, and contractor-led training embedded within procurement contracts. Through initiatives such as the Knowledge Academy and social value-driven procurement, the organisation has supported long-term workforce development and created new employment pathways (WMHousing, 2018). At the local level, Lancaster City Council's Retrofit Action Plan training initiative has brought together councils, training providers, and industry stakeholders to address workforce gaps through accreditation awareness, demand-driven training programmes, and stronger engagement with local contractors (LGA, 2022a; LGA, 2022b).

Lessons learned: These examples highlight several lessons for improving quality assurance in retrofit programmes such as:

- Flexible procurement mechanisms can aid in expanding supply chain participation.
- Workforce development can be strengthened through targeted training and apprenticeships.
- Enhancing collaboration between local authorities, training providers, and industry can help align training provision with labour market demand.
- Adopt place-based approaches to supply chain and skills development.

2.3. Coordination conundrum

The challenge: Delivering large-scale retrofit programmes often requires coordination across multiple policy areas, organisations, and levels of government. However, the current system is frequently characterised by a fragmented policy and regulatory landscape, which can create uncertainty and misalignment between national programmes, regional initiatives, and local delivery. In many cases, weak cross-sector coordination and uneven local capacity further complicate implementation, particularly where local authorities lack the resources or expertise to manage complex retrofit programmes (Palmer et al., 2018; UKGBC, 2020; Happold, 2021; Nanda et al., 2022).

Challenges are also evident in engagement and communication across organisations and housing tenures, which can slow decision-making and reduce programme effectiveness (Palmer et al., 2018; UKGBC, 2020). These issues are compounded by limited delivery capability within many local authorities, making it difficult to scale retrofit programmes at the pace required for net-zero targets.

Good practice examples: Several initiatives demonstrate how stronger coordination and governance can improve retrofit delivery. The WMCA Net Zero Neighbourhoods Demonstrator promotes decentralised delivery, early supplier engagement, and SME participation while supporting local skills development through apprenticeships and upskilling (WMCA, 2022; BCC, 2023). Bristol City Leap, a public–private partnership between Bristol City Council and Ameresco, has streamlined procurement through a single supplier framework, reducing delays and enabling bulk purchasing (Nolden et al., 2023; 3Ci, 2023).. Similarly, the WMCA Devolved retrofit pilot procurement strategy introduces a multi-year funding approach to improve planning certainty, strengthen supply chains, and attract private investment (WMCA, 2025a).

Lessons learned: These initiatives demonstrate that stronger coordination mechanisms can significantly improve retrofit delivery.

- Supply chain coordination can be improved through procurement hubs and purchasing agreements.
- Public–private partnerships can enhance collaboration across various stakeholders.
- Build institutional capacity within local authorities

3. Recommendations

To scale retrofit delivery and address the financial, coordination, and capacity challenges identified in this report, policymakers should prioritise the following actions:

i. Establish long-term funding frameworks to support sustained retrofit delivery
Governments should move beyond short-term grant programmes by introducing stable, multi-year funding mechanisms that provide certainty for local authorities, housing providers, and supply chains. Long-term funding frameworks enable strategic planning, support programme continuity, and allow retrofit initiatives to scale effectively.

ii. Utilise innovative financial instruments to mobilise additional capital
Innovative financing mechanisms, such as climate bonds, blended finance models, and community investment schemes, can help overcome financial constraints associated with retrofit projects. These instruments can attract private and community capital while reducing reliance on public funding alone.

iii. Invest in workforce development to address skills shortages
Expanding training programmes, apprenticeships, and partnerships with further education institutions is essential to build the skilled workforce required for large-scale retrofit delivery. Targeted investment in workforce development can help address current labour shortages and strengthen the long-term capacity of the retrofit sector.

iv. Strengthen public–private partnerships to enhance coordination and investment.
Public–private partnerships can play a key role in improving coordination between government bodies, housing providers, and the private sector. Structured collaboration can help mobilise additional investment, share delivery risks, and accelerate the implementation of retrofit programmes.

v. Improve procurement systems to strengthen the retrofit supply chain
Procurement processes should adopt more flexible, outcome-driven approaches to improve efficiency and increase participation by SMEs and specialist contractors. Streamlined procurement systems can help strengthen supply chains, reduce delivery delays, and support innovation in retrofit delivery.

vi. Adopt place-based approaches to retrofit delivery.
Place-based strategies that align retrofit programmes with local housing conditions, economic priorities, and labour market needs can improve coordination and delivery outcomes. Integrating retrofit initiatives with wider regional development strategies can also maximise economic and social benefits for local communities.

4. Conclusion

The success of social housing retrofit programmes depends on effective procurement strategies capable of addressing financial, regulatory, and supply chain challenges. The good practice examples highlighted in this report demonstrate how innovative procurement approaches can improve coordination, strengthen supply chains, and support large-scale delivery aligned with the UK's net-zero ambitions.

Access to stable and long-term financing remains one of the most significant barriers to retrofit delivery. Initiatives such as the West Berkshire Climate Change Bond demonstrate how local authorities can mobilise community investment while supporting local climate action. Similarly, the West Midlands Combined Authority's Local Net Zero Accelerator illustrates how blending public and private finance can attract additional investment into retrofit programmes and reduce reliance on short-term government grants.

Strong supply chains and workforce capacity are equally critical for scaling retrofit delivery. Bristol City Leap's Single Supplier Framework provides a model for establishing long-term partnerships with contractors, improving procurement efficiency and reducing delivery delays. At the same time, workforce development initiatives such as WM Housing Group's apprenticeship programmes demonstrate how procurement can support skills development and create local employment opportunities within the retrofit sector.

Improved governance and delivery structures also play a key role in strengthening coordination. The WMCA Devolved Retrofit Pilot and Liverpool City Region's Dynamic Purchasing System demonstrate how more flexible procurement models and devolved delivery approaches can enhance coordination, increase supplier participation, and enable long-term planning by local authorities and housing providers.

Taken together, these examples show that procurement can move beyond a compliance function to become a strategic tool for delivering retrofit at scale. By combining innovative finance, flexible procurement models, workforce development, and place-based delivery approaches, policymakers can strengthen retrofit ecosystems and accelerate progress towards the UK's net-zero goals. Ultimately, transforming procurement from a compliance exercise into a strategic tool for innovation and delivery will be critical to scaling retrofit and achieving the UK's net-zero ambitions.

Future work

While the examples presented in this report demonstrate how procurement can move beyond a purely compliance-based function to support large-scale retrofit delivery, they also highlight the need to better understand the challenges associated with procuring innovation within the sector. Many of the barriers discussed relate to broader procurement and delivery constraints, including funding structures, supply chain capacity, and institutional coordination. However, procuring innovative technologies, delivery models, and financing mechanisms introduces additional complexities, including higher perceived risks, uncertain performance outcomes, and limited market maturity. Understanding these innovation-specific procurement challenges will be an important next step for future research, helping policymakers and practitioners design procurement frameworks that not only support retrofit delivery at scale but also enable the adoption of new technologies and solutions required to achieve long-term net-zero goals.

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