

Delivering Warmer and Healthier Homes on the Road to Net Zero



How Retrofit Delivery Plans can turn
Strategy into Delivery

October 2025



About Changeworks

Changeworks is a leading organisation dedicated to decarbonising Scotland's homes and a just transition to net zero. As a charity we adopt the social enterprise model, continually re-investing to further our impact and tackle the climate emergency.

A trusted partner, we deliver services across a variety of sectors and secure positive outcomes for householders. Our expertise spans energy advice and support, retrofit delivery and management, and developing innovative decarbonisation solutions. We also offer independent consultancy services. Through partnerships across the UK, we help accelerate the transformation of Scotland's homes toward sustainability.

Find out more at www.changeworks.org.uk

Authors



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Ian has over 15 years' experience in climate policy across think tanks, consulting, and academia, specialising in retrofit finance and governance, with advanced degrees from leading French and U.S. institutions.



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Sophie is a Consultant and Architect specialising in property archetype analysis and energy modelling for social landlords, using whole-house retrofit to improve comfort, reduce energy costs, and support net zero.

Executive Summary

How Retrofit Delivery Plans can turn Strategy into Delivery

The UK has some of the least energy efficient homes in Europe. In Scotland, leaky homes and predominantly fossil-fuel based home heating means **13% of the country's carbon emissions come from homes**¹. This – alongside high energy costs – has left 34% of people in Scotland in fuel poverty². Decarbonising homes is therefore key to tackling both the climate emergency and fuel poverty.

Scotland has ambitious statutory targets: achieving net zero by 2045 and eradicating fuel poverty as far as reasonably possible by 2040. Local Heat and Energy Efficiency Strategies (LHEES) are designed to deliver these targets, providing each local authority in Scotland a framework to plan for decarbonised heating and improved energy efficiency.

Equally, social housing has been a focus of Scottish Government efforts to address both greenhouse gas emissions and fuel poverty.

The challenge now is moving from ambition and strategy to actionable plans and on-the-ground delivery.

This whitepaper highlights how Changeworks, one of Scotland's leading social enterprises, is working with local authorities and housing associations to use end-to-end retrofit

planning to achieve the ambitions of LHEES.

With over 25 years of expertise in consultancy and retrofit delivery, and direct experience supporting councils across Scotland in developing LHEES since 2018, we provide an end-to-end retrofit service.

Our model is data-driven, quality-assured, and rooted in tenant engagement, ensuring strategies translate into real-world outcomes: warmer homes, reduced emissions, and healthier communities.

We worked with Midlothian Council to develop a retrofit delivery plan, creating a roadmap to net zero social housing – the first of its kind for a local authority in Scotland.

Our end-to-end approach combining housing stock archetype analysis, energy modelling, and project sequencing aligned with funding opportunities has supported Midlothian to move from planning to action.

With identifiable projects ready for funding and implementation, this replicable approach has enabled the council to unlock retrofit working with the wider community, including mixed-tenure housing via for example, Area Based Schemes.





1. Turning Strategy into Action

1.

Turning Strategy Into Action

The Local Heat and Energy Efficiency Strategies (LHEES) Scotland Order (2022) required every council to publish a strategy and action plan for heat and energy efficiency planning and delivery by the end of 2023.

Today, the 32 LHEES published across Scotland provide a place-based, locally-led framework to decarbonise buildings and reduce energy demand.

As intended, they have the potential to inform investment, guide delivery, and ensure progress toward Scotland's net zero and fuel poverty goals.

Moving from plans to delivering retrofit at scale presents many challenges, but also significant opportunities. Economic pressures and the worsening fuel poverty crisis underline why action cannot be delayed.

Warm homes are healthier homes, and retrofit offers multiple benefits: improved health, improved occupant comfort, lower bills, and reduced emissions.

While only one piece of the LHEES puzzle, the social housing stock managed by councils and other registered social landlords will play a central role in a joined-up approach to help translate these strategies into action.

Representing 23% of the Scottish housing stock³, improving the energy performance

of this segment has been a focus of Scottish Government since 2014 to reduce energy use, fuel poverty and emissions.

Delivery in the near-term requires advancing within the reality of limited funding, staff, and resources available to local authorities and partners.

It also needs to recognise the challenges specific to retrofit in socially rented homes, particularly in ensuring that tenants are provided a warmer, healthier home without increasing the cost of rent or heating.

A joined-up approach is key to leverage the pivotal role the social housing stock can play, ensuring that economies of scale and efficiencies are capitalised upon.



**16 LOCAL
AUTHORITIES
SUPPORTED
WITH LHEES**



1.

Turning Strategy Into Action

A joined-up approach requires harnessing data, leveraging place, and connecting people:

- **Harnessing Data:** make best use of available information, filling in gaps with targeted additional collection and analysis such as archetype modelling.
- **Leveraging Place:** ensure retrofit planning is not treated in isolation, but rather integrated into wider housing and infrastructure development plans such as heat networks.
- **Connecting People:** use the planning process to build relationships with key stakeholders including social landlords, community groups, and householders.

Leveraging our work with 25 local authorities since the initial LHEES pilots, we propose an end-to-end delivery approach to help councils and social landlords turn retrofit plans into action. At its core is a tailored delivery plan that takes partners from ambition to completion by enabling them to:

- Optimise energy performance through data-driven selection of measures, maximising bill savings.
- Sequence programmes across the stock, aligning with priorities beyond decarbonisation and existing upgrade cycles.
- Control and phase costs, integrating investment with capital planning.
- Minimise void periods and rental income loss, and reduce future repair costs.
- Mitigate risks early by identifying barriers, reducing delays and redesigns.
- Demonstrate commitment to sustainability and tenant wellbeing.
- Build stakeholder confidence through a professional, evidence-based approach.

1. Turning Strategy Into Action

For local authorities, this can play a central role in supporting broader LHEES delivery embedded in wider policy frameworks, such as Local Housing Strategies and housing investment programmes by:

- Providing a starting point to test and identify local solutions.
- Sharing learning with other homeowners
- Identifying opportunities to overcome mixed-tenure challenges.
- Demonstrating what decarbonisation looks like in practice and building community confidence.
- Stimulating the retrofit supply chain.

Finally, these strategies should also be embedded in both place with partners as well as wider policy frameworks, such as Local

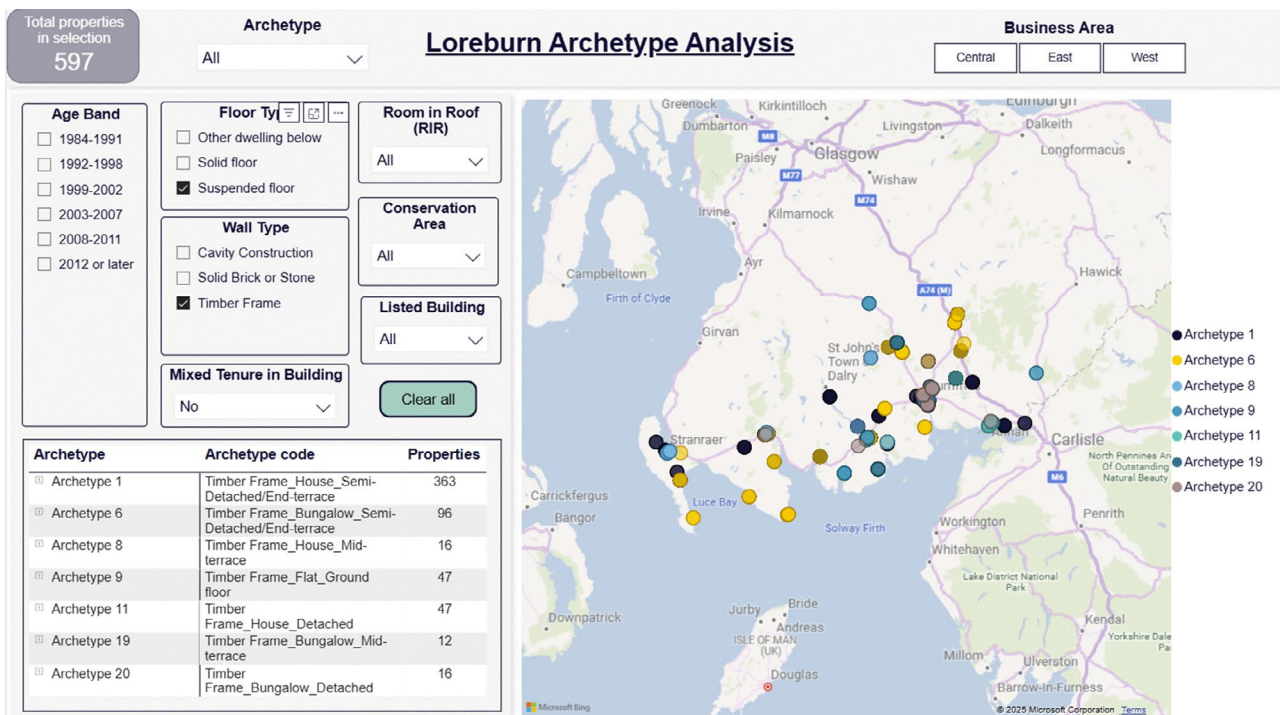
Housing Strategies and housing investment programmes.

Retrofit delivery planning can help to maximise the impact of the limited financial support available to local authorities, housing associations and other homeowners.

Area Based Scheme funding, Social Housing Net Zero Heat fund and Energy Company Obligation are critical enablers of delivery.

Taking a place-based approach to join up delivery can create opportunities for economies of scale, particularly in mixed-tenure areas and support engagement with partners.

By taking a holistic approach to retrofit planning, social housing activity can be folded into community-wide schemes, unlocking funding and achieving broader impact.



Example of the Power BI report that was made to support an archetype analysis study for Loreburn Housing Association.



2.

**Case Study:
Midlothian
Council Retrofit
Delivery Plan**

Case Study: Midlothian Council

Background

Midlothian Council has long-term ambitions for getting to net zero and becoming more energy resilient. In 2019, Midlothian demonstrated this commitment by declaring a climate emergency.

This was followed up in 2023 when the council published their Local Heat and Energy Efficiency Strategy (LHEES).

This strategy outlined their plans to improve the energy efficiency of their homes and decarbonise heating across the area.

To turn these ambitions into reality, and building on its existing partnership with Changeworks, the Council commissioned the development of a comprehensive retrofit delivery plan - the first of its kind for a Scottish local authority.

The Challenge

Part of Midlothian's LHEES was to improve the energy efficiency of their existing housing stock.

To make this a reality, they required a plan to support a coordinated approach.

The plan needed to:

- **Look at the big picture:**

Instead of focusing on the least energy efficient homes – based on their EPC score – Midlothian wanted to take a step back and analyse all of the council housing over the long-term up to 2045 – the Scottish Government's self-imposed net zero deadline.

- **Be ready for funding:**

Midlothian wanted to look at how they could prioritise and prepare projects so they could respond quickly to short funding cycles, such as Area Based Schemes and the Social Housing Net Zero Heat Fund as well as access rolling programmes such as ECO and ECO+.

- **Integrate Midlothian's retrofit planning with other Council projects:**

They needed an overarching retrofit plan that could sync-up with other projects, like heat network planning and infrastructure projects.

2. Case Study: Midlothian Council

Our Approach

The project was structured in three stages, with key outputs developed from each stage:

1. Classify the Housing Stock by Archetype

We analysed Midlothian's housing stock to categorise buildings into key archetypes based on how the properties were constructed.

The classification by construction method was used to support later identification of the retrofit measures most suitable for properties.

Outputs:

- Report explaining Midlothian's key archetypes
- Interactive Power BI report showing interactive housing stock analysis data



2.

Case Study: Midlothian Council

2. Identify Appropriate Retrofit Measures

To identify which retrofit measures would work best, we undertook surveys of a sample of cavity wall properties – the council's most common construction type – to further understand their current performance.

From this, we created detailed energy models to explore different combinations of energy efficiency measures.

This included some options demonstrating a staged approach.

For other property types, we used available property data and energy efficiency modelling to assess how different combinations of measures would impact energy costs for tenants, the cost of the measures themselves and how the measures would impact the space heating demand.

Outputs:

- Report identifying the key retrofit measures for each archetype
- Updated Power BI report showing interactive housing stock analysis data

3. Sequence a Retrofit Delivery Plan

Working with Midlothian Council, individual projects were identified and sequenced into a long-term roadmap.

This was based on proposed standards and available funding cycles as well as constraints such as working with listed properties.

Each project included options for meeting and exceeding the Scottish Government's minimum standards.

OUTPUTS

- Scotland's first local authority retrofit delivery plan.
- Detailed reports and interactive Power BI dashboards.
- Prioritised retrofit projects linked to funding opportunities.
- Recommendations on sequencing for maximum impact.

IMPACT

- Medium to long term certainty for Midlothian, enabling funding bids and early delivery.
- Ongoing project monitoring and stakeholder engagement via the dashboards.
- Tenant benefits: warmer, cheaper-to-heat homes.
- Facilitating access to finance.



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Case Study: Midlothian Council

Recommendations on delivery sequence were based on several factors.

These included areas at risk of fuel poverty and alignment with Midlothian's existing plans and priorities such as its wider infrastructure projects and proposed heat networks.

Plan feasibility was informed by Changeworks' experience in delivering retrofit projects with Midlothian and our expert knowledge of measure and system lifespans.

Outputs:

- Report detailing individual projects identified, including recommendations based on the best practice for the progression of each
- Interactive Power BI report showing all projects, their measures, estimated installation costs, expected impacts on emissions and fuel bills for tenants
- Comprehensive Retrofit Delivery Plan



Image of internal wall insulation being installed.

2.

Case Study: Midlothian Council

Success Factors

The staged approach to the project, and bringing together the expertise, knowledge and skills from Changeworks, Midlothian Council and other stakeholders, were key to the success of this project.

Each stage built directly on the analysis outcomes from the previous stage. This made it possible to create a bespoke approach each step of the way and engage relevant external stakeholders for input where needed, such as Midlothian Energy Limited, a joint venture between the council and Vattenfall.

Changeworks' extensive experience in analysing housing stock data, providing in-depth assessments of properties and delivering retrofit schemes on the ground, all contributed to developing and delivering the plan.

Furthermore, the approach has taken steps to anticipate future regulatory requirements. This means that the council can start planning and delivering retrofit projects with the confidence they will meet future standards and net zero ambitions.

The data-driven approach ensured that the final delivery plan was built around individual projects that were each in turn clearly identifiable, fundable, and aligned with wider council initiatives.

Finally, recognising the importance of the communication of outputs to different stakeholder groups, the interactive Power BI reports are designed to enable Midlothian's housing team to explain their retrofit priorities and plans to other departments and elected officials.

These reports can be updated as and when projects are completed.

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The Changeworks team had the skills and experience we required to pull this big project together.

Andrew Souter, Programme Manager at
Midlothian Council



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Case Study: Midlothian Council

Next Steps

Within six months of completing the retrofit delivery plan, Midlothian Council has used it to adopt a place-based approach to its engagement with social housing providers and other partners. This has supported successful Social Housing Net Zero Fund applications, expansion of Area Based Schemes in partnership with other social housing providers, and structure a pipeline of ECO-funded opportunities.

The supporting data and individual project plans have helped the council match projects with funding and streamlined the proposal process, saving time and resource.

Andrew Souter, Programme Manager at Midlothian Council, commented:

“Midlothian Council wanted to take a strategic approach to our retrofit programme, to enable us to move through data collection and into delivery at pace, while maximising our ability to attract funding in to support the programme.

“Having worked with Changeworks on numerous projects in the past, we knew they were the right team to help guide us towards meeting our retrofit net zero goals.

The Changeworks team had the skills and experience we required to pull this big project

together, and our confidence was rewarded in the quality and detail of the final report.

“This report has given us a holistic view of our housing types, what needs to happen and when to meet our future goals.

Having the work broken down into individual retrofit projects is hugely beneficial and allows us to tackle each project efficiently and effectively.

“

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Case Study: Midlothian Council

“This plan now means we have a medium to long-term plan in place for our housing stock that connects into our wider net zero strategy and is delivering warmer, drier homes that will cost less to heat for our tenants.”

Sophie Burgess, Senior Consultant at Changeworks, commented:

“Long- term planning to meet upcoming statutory targets is a not an overnight job, and requires experience and understanding of the challenges.

Producing Midlothian’s retrofit delivery plan was a real team effort and showcased the wide range of skills within our consultancy and delivery teams.”

“This plan will enable the Midlothian Council to future proof their housing for anticipated energy efficiency standards, and to prioritise specific works over the coming years.”

This staged, data-driven approach exemplifies how councils can move from strategy to delivery.

It also demonstrates how retrofit planning can feed into the Improvement Service, providing the data infrastructure required for monitoring, evaluation, and alignment with Scotland’s national net zero agenda.

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3.

Why Retrofit Delivery Planning Matters

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This case study of our work with Midlothian Council shows how an end-to-end approach to delivery planning can address many of the challenges faced by councils.

This was achieved by creating phased, costed pathways; integrating retrofit into wider development plans; and enabling data-driven action.

Delivery planning enables:

- **Retrofit delivery aligned with client-determined time frames** and multiple priorities.
- **Optimised costs and sequencing investments**, linked to stock improvement cycles.
- **Improved capital investment planning** through cost modelling.
- **Improved energy performance** through a data-driven approach.
- **Risk mitigation** by identifying barriers early.
- **Visible commitment** to sustainability and tenant well being.
- **Greater stakeholder confidence** through a professional, evidence-based approach.
- **Integration with ABS**, unlocking community-wide impact through mixed-tenure retrofit.
- **Stimulating the supply chain.**

3.

Why Retrofit Delivery Planning Matters

Local authorities are looking to:

- **Better understand** what homes require to meet efficiency targets in a phased and costed way.
- **Overlay retrofit data with other planning streams**, such as heat network development and local development plans.
- **Embed data into policies** including Local Housing Strategies and housing investment strategies.
- **Bring stakeholders together** to shape decisions collaboratively.
- **Use flexible and adaptive planning approaches**, evolving delivery programmes iteratively.
- **Avoid “starting again” for each project** by establishing enough baseline data to guide future decisions.
- **Engage households early** with practical advice and fuel poverty prevention.
- **Match projects with funding** opportunities and maximise economies of scale.

3.

Why Retrofit Delivery Planning Matters

The successful delivery of the retrofit component of LHEES requires a collective involving local authorities, social landlords and other home and property owners.

Changeworks is committed to working with a broad range of partners to ensure retrofit delivery plans are effective, practical, and scalable.

We are well placed to support our partners given our extensive delivery experience, helping to inform strategic discussions and strengthen collaboration.

Working collaboratively, we help councils and social landlords to bridge the gap between strategy and delivery.

We combine data expertise, quality-assured technical retrofit delivery, tenant engagement and impact evaluation.

Our aim is to use our end-to-end approach to connect strategy and delivery, while actively engaging with partners and supporting local authorities to leverage housing stock to unlock further scale and impact.

Conclusion

Midlothian Council's pioneering retrofit delivery plan shows what is possible when data, expertise, and collaboration come together. Their roadmap demonstrates a replicable model for Scotland's councils, other social landlords and beyond.

Changeworks is uniquely positioned to support this shift from strategy to delivery. Our end-to-end retrofit model provides:

- Robust data and insight.
- Quality-assured delivery.
- Tenant-focused engagement.
- Monitoring and evaluation.

The scale of the task demands urgency, collaboration, and proven expertise.

Together, we can close the delivery gap and ensure that Scotland's homes and communities are warmer and healthier on the road ready for a to net zero future.



Partner with us

LOCAL AUTHORITIES

Turn your LHEES into funded, sequenced action – and use your own housing stock as a lever for community-

SOCIAL LANDLORDS

Future-proof housing stock and improve tenants' lives.

FUNDERS & POLICY MAKERS

Support scalable, data-driven delivery models that build confidence in the supply chain and communities.

To find out how we can support your organisation, please email workwithus@changeworks.org.uk.

References

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