Built Environment – Smarter Transformation (BE-ST)

Evidence to Local Government, Housing and Planning Committee on draft Climate Change Plan – 9 December 2025

Introduction

BE-ST welcomes the opportunity to give evidence to the Local Government, Housing and Planning Committee and to support its scrutiny of the Draft Climate Change Plan (CCP) on the 16th of December 2025.

We support the publication of the draft CCP, in particular its recognition that decarbonising our built environment is going to be critical to achieving Scotland's net zero targets. However, we would like to lay out some recommendations and solutions that would strengthen the outcomes of the plan.

In summary, we recommend that the CCP should not focus on heat decarbonisation alone. Scottish Government should instead adopt a holistic retrofit approach which values repair and maintenance, building fabric, building condition, and climate resilience as highly as heat decarbonisation to unlock real carbon, cost, and societal benefits.

Second, while the construction sector is going to be at the heart of delivering decarbonisation for our homes and buildings, to drive action and create certainty and scale for finance, the sector needs leadership from Scottish Government which builds trust and creates demand. This should be achieved through a systematic approach to building pipelines of retrofit work.

Our current, largely individual, disaggregated 'home by home' approach to retrofit is not driving the speed or scale needed to unlock innovation to reduce costs. We support programmes that can provide long-term certainty to allow the industry to deliver on clear targets, backed by data, robust project development, innovation, and delivery funding and mechanisms.

A robust skills strategy and competency and evaluation frameworks will also be critical to quality delivery and risk reduction for customers, but ultimately, a strong pipeline is what will give companies, colleges, businesses and trainees the confidence to invest in their skills training and business growth.

We encourage Scottish Government to act with urgency and certainty to adopt innovative but tested solutions to deliver the scale of training, retrofit and installations we need, at the speed we need.

This written submission sets out recommendations and solutions which BE-ST believes could strengthen the CCP, allow Scottish Government to achieve heat decarbonisation targets in a way which reduces risk and unintended consequences, and instead allow the outcomes of the plan to unlock as many of the benefits of decarbonising our homes as we can - from economic opportunities, to overcoming fuel poverty, and reducing emissions, to name a few.

We would also be delighted to host members of the Committee and Scottish Government at BE-ST's Innovation Campus, including Scotland's National Retrofit Centre, to experience these solutions first-hand. A visit to the Campus offers the opportunity to explore live demonstrators of innovative retrofit products and systems, see Scotland's emerging retrofit training centre in action, and discuss how we can work together to deliver the scale of transformation needed in Scotland.

Scottish Government needs to unlock finance and create clear retrofit pipelines

To decarbonise successfully, Scotland requires a financial environment that supports householders, building owners and investors to take action with confidence. Current market conditions – including affordability barriers, uncertain sequencing of measures, and inconsistent investment signals – are limiting progress.

To address this, BE-ST recommends that the Scottish Government supports the development and delivery of a package of simple, accessible incentives that drive behaviour change and make retrofit a viable choice for all. These include:

- Support for project development of either place-based or archetypal projects that can drive a scaled pipeline – such as that set out in the Green Heat Finance Taskforce Report 2 and the National Existing Buildings Database.

- Grants for fabric and clean-heat measures, ensuring that energy demand reduction and heat decarbonisation proceed in tandem.

- Fabric first measures should also be considered as the primary solution for households who are expected to be connected to heat networks, ensuring a 'no-regrets' intervention that reduces energy consumption in the short term, and heat network connections in the long term.

- Interest-free loans to support households that do not qualify for grant support but require affordable finance.

- Energy-efficiency-linked mortgage products, such as reduced interest rates for homes that achieve measurable performance improvements.

- VAT reform to remove current disincentives and to incentivise retrofit over demolition and rebuild, aligning tax policy with net-zero objectives.

- Feed-in-tariff-style incentives to encourage adoption of rooftop solar and other small-scale renewables, unlocking household-level generation and reducing energy bills.

Data-driven retrofit strategies

A core barrier to scaling retrofit delivery is the lack of certainty for supply chains and investors. Funding models based on local building archetypes would allow areas to plan retrofit at scale, ensuring a steady pipeline of work and enabling the supply chain to grow in a predictable, investable way. The concept of building to a National Existing Buildings Database provides a viable model for domestic homes, and this,

alongside a project development unit (GHFT report 2) would be a clear way to build data-driven strategies that can link in with council's existing LHEES strategies.

For public sector decarbonisation, BE-ST's collaboration with Hub West Scotland (HWS) demonstrates the value of this approach. With a 2045 decarbonisation target for public buildings, BE-ST and HWS collaborated with ECD Architects Ltd, Doig+Smith and RYBKA to support local authorities in developing data-driven retrofit strategies.

By gathering detailed building-level data across local authority estates, the project has shown how it is possible to aggregate demand for retrofit interventions, unlocking economies of scale and reducing overall project costs.

The project combined learning, resource sharing, and detailed building studies based on archetype modelling. It equipped councils with estate-wide cost and carbon estimates, helping them plan retrofit works alongside existing maintenance, while ensuring services remain uninterrupted. This type of dataset can underpin coordinated area-based energy efficiency schemes and targeted heat-transition planning. Find out more.

By adopting these measures, the Scottish Government can significantly strengthen the CCP and accelerate progress towards heat-decarbonisation targets. A coordinated approach that combines financial incentives, data-driven planning and long-term market confidence will ensure that Scotland does not decarbonise heat in isolation but instead captures the full benefits of improving our homes – from lower bills and healthier living environments to green jobs and climate resilience.

BE-ST is ready to support the Government in delivering these solutions at pace and scale and is currently exploring with Transition Finance Scotland, how finance could be brought into project development at an earlier stage to enable delivery of scaled pipelines.

Strengthening workforce and skills infrastructure

A skilled and sufficiently resourced workforce is essential to delivering the Climate Change Plan's (CCP) ambitions for heat decarbonisation, as well as for holistic retrofit.

Scotland's skills system must be fully aligned with climate goals and industry needs, ensuring that workforce planning is treated as a core component of decarbonisation delivery rather than an adjacent activity. Scotland needs a national co-ordinated skills strategy. The Climate Emergency Skills Action Plan (CESAP) appears to have been effectively decommissioned following the dissolution of the Bute House Agreement. With no evidence of an update since the Pathfinder activity in late 2023, the original CESAP, intended to run from 2020-25 is in limbo and without it, Scotland has no clear strategy for skills planning going forward.

BE-ST believes the CCP can be strengthened by embedding a coordinated approach to skills, training, and standards that builds on what is already working, preparing Scotland for the scale of transformation required, and avoiding the erosion of public trust which can happen when retrofit is hard to access or measures are

carried out poorly. Moreover, a visible line of sight for skills planning strategy will bring confidence to the industry, signalling the type of skills and workforce development they should be investing in.

Scale what is working

To meet the retrofit challenge at pace, Scotland must accelerate and expand the low-carbon skills programmes and training approaches already delivering results; while making sure we have the right foundation of standards and evaluation frameworks to ensure quality. This requires stronger alignment between skills pipelines, industry demand, and wider decarbonisation strategies.

BE-ST recommends:

- Developing robust standards, training, and evaluation frameworks through BE-ST's Retrofit Scotland platform to ensure that advice and guidance provided to households and installers is trusted, high-quality and consistent.

- Working with Government agencies, colleges, and training providers alongside BE-ST to ensure course content accurately reflects current and emerging industry needs, supporting both the existing workforce and new entrants.

- Aligning skills pipelines with the phased expansion of national fuel-poverty and energy-efficiency programmes (such as the Warm Homes Plan and area-based schemes), enabling a stable, predictable increase in demand for trained professionals.

By scaling proven training approaches, embedding standards, and investing in curriculum and educator capacity, the CCP can accelerate delivery while ensuring quality, safety, and long-term industry resilience. BE-ST is ready to work with Government and partners to ensure Scotland's skills system is fit for a net-zero future.

BE-ST currently works across the skills system, delivering training to industry, colleges and students in low-carbon construction, building physics, Passivhaus, retrofit practices, including "train-the-trainer" programmes. To further strengthen the CCP, we recommend Government build on these courses that are already working to:

- Expand retrofit-specific content across mainstream vocational and professional pathways, ensuring new entrants across construction, engineering, surveying, architecture, and related professions in the supply chain, build retrofit competence from the outset.

- Significantly increase the rollout of "train-the-trainer" programmes, enabling rapid growth of educator capacity and ensuring consistent, high-quality delivery across Scotland's colleges and training centres.

- Continue supporting BE-ST through funding streams to provide hands-on, accessible training through BE-ST's facilities, enabling learners of all abilities

to engage in practical, industry-relevant learning that supports competence, confidence, and long-term workforce resilience.

    - BE-ST is currently delivering its Next Gen programme to S1 pupils across Scotland, designed to teach them about the carbon footprint of our buildings and about what a career in sustainable construction could look like, with funding from Scottish Government's Climate Engagement Fund.

Supporting data, modelling and workforce development

BE-ST believes that a commitment to invest in a stronger, more coordinated use of building data, workforce intelligence and demand modelling would significantly enhance the Climate Change Plan's ability to deliver heat decarbonisation at scale.

By embedding data-driven planning into national and local delivery structures, the Scottish Government can reduce costs, improve sequencing of interventions, and provide the construction sector with the clarity needed to build capacity with confidence.

Build a National Existing Buildings Database

Scotland currently lacks a comprehensive, shared evidence base on the condition, archetypes, and performance of its building stock. This limits the ability of Government, local authorities, housing associations, and industry to plan retrofit programmes effectively.

BE-ST recommends the creation of a National Existing Buildings Database, which would unlock significant benefits, including:

- Consistent, high-quality data on Scotland's diverse building stock
- Evidence-based planning of retrofit pathways, enabling more accurate selection and sequencing of fabric and heat interventions
- Efficient aggregation of demand across public, private and third-sector estates, improving programme design and delivery and reducing costs
- Greater investor confidence, driven by clear, data-backed retrofit pipelines

BE-ST has undertaken research with Robert Gordon University and the Construction Leadership Forum exploring how such a database could be developed for Scotland. This research outlines a practical blueprint for national implementation.

Report available here:

- https://static1.squarespace.com/static/675717626cb4fc2079ea8b55/t/6827112e633db552a7ef6ce6/1747390767269/National+Existing+Buildings+Database+-+March+25_compressed.pdf

Develop an aggregated demand model to unlock economies of scale

A national buildings database would enable the creation of an Aggregated Demand Model - a tool that can identify where retrofit interventions can be coordinated and delivered at scale.

This approach would:

- Support planning by archetype, ensuring the right measures are deployed to the right building types
- Enable economies of scale, reducing per-unit and programme delivery costs
- Provide a steady, predictable pipeline of work for the supply chain, supporting business investment, workforce expansion, and training activity
- Allow Government, local authorities, and housing associations to coordinate area-based or portfolio-based retrofit programmes more effectively

BE-ST can work directly with Scottish Government and delivery partners such as Transition Finance Scotland to help design and implement aggregated demand approaches across multiple housing portfolios and regions.

Use data to support skills, training, and workforce planning

Data-led planning can strengthen the transition of the skills system and workforce.

BE-ST recommends that Government:

- Deploy AI/ML-driven competency mapping - an area where BE-ST is already developing capability - to generate insights on workforce gaps, skills shortages and curriculum needs and map industry competencies to those gaps and mismatches.
- Align workforce planning with the outputs of the National Buildings Database and Aggregated Demand Model to ensure training provision grows in proportion to real-world market demand.

Without this in place, we are forecasting using past data which means we are always going to mismatching training with industry need. If we take a future focused approach to forecasting, utilising AI/ML driven approaches to skills development, we can ensure Scotland builds the workforce it needs.

Unlocking the economic opportunity in retrofit for Scotland

The CCP is overlooking a major innovation and economic opportunity in retrofit. Without a clear vision for innovation across materials, manufacturing, delivery models, and data, Scotland risks missing out on faster, better, and more affordable solutions alongside the economic benefits of a competitive home-retrofit industry. While the Climate Change Plan (CCP) recognises the importance of retrofit, it does

not reflect the critical role innovation plays in scaling delivery, improving materials, and strengthening manufacturing and skills.

Scotland already has many of the ingredients needed to lead internationally. Innovation centres such as BE-ST, academic expertise, demonstration projects, and emerging supply chains provide the foundations for a world-class retrofit ecosystem.

BE-ST's research for Scottish Enterprise, Energy Efficiency Market Analysis and Economic Opportunity Assessment, identifies a potential retrofit market worth £9.8 billion in social housing and the PRS, and £20.05 billion in the owner-occupied sector. Unlocking this requires clear, investible pipelines and long-term policy certainty to give businesses confidence to invest in skills, manufacturing, and accreditation.

To strengthen the CCP, BE-ST proposes the following solutions:

1. **Leverage local and sustainable products**

There are several economic opportunities for Scotland in delivering retrofit which are poised to be exploited. One in particular is the timber industry in Scotland. Proven innovations which rely on Scottish grown timber include timber-based panellised systems, and wood fibre insulation, all of which are demonstrated in the retrofit of Scotland's National Retrofit Centre at BE-ST. This retrofit at BE-ST's Campus now sits as a living demonstrator to showcase localised, scalable retrofit solutions.

If we are able to build a response to retrofit which prioritises sustainable, local products, as a nation we stand to benefit far more than just from reduced emissions.

2. **Convene and lead the innovation ecosystem**

BE-ST can accelerate retrofit innovation by bringing together industry, academia, and Government. We can support Scottish Government to convene a national innovation programme for retrofit, linking research, demonstration, and market deployment, by showcasing scalable solutions through demonstrators like the SNRC which can build confidence for stakeholders across the sector.

By embedding innovation into the CCP, Scotland can unlock a significant retrofit market, deliver higher-quality homes, create jobs, and build a globally competitive retrofit industry.

Conclusion

Scotland has an opportunity to lead the UK in delivering a just, affordable, and ambitious transition to low-carbon homes and buildings. The draft Climate Change Plan moves us in the right direction, but to unlock its full potential the approach must be holistic, coordinated and grounded in creating long-term certainty. By embedding data-driven decision-making, building clear pipelines, supporting innovation, scaling what already works, and investing in the skills infrastructure our workforce needs, the Scottish Government can ensure heat decarbonisation and retrofit is delivered in a way that reduces risk, maximises public value, and unlocks the full social and economic benefits of retrofit.

BE-ST stands ready to support government, industry, and communities in accelerating this transition. Our work across finance, data, innovation, training, and place-based delivery demonstrates that scalable, affordable solutions already exist — they now need leadership, investment, and strategic alignment to move from pilots to national implementation.

We would once again like to extend an invitation to the members of the Committee and Scottish Government to visit the BE-ST Innovation Campus to dive deeper into how we can support Scottish Government and the built environment sector to deliver decarbonisation for our homes and buildings, in a way that benefits all.