RISE | Retrofit information, support & expertise

A Collaborative Supply Chain Initiative with B4Box

Case Study

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Summary

This case study describes a retrofit supply chain development project made possible by the MCS Foundation. It involved collaboration between the client and contractor to design training that addressed a known skills shortage. The model shows how integrating relevant site work into classroom-based sessions can accelerate learning and benefit a broad range of stakeholders.

The initiative resulted in a well-recognised retrofit qualification being achieved by a large proportion of the contractor's workforce, with all learners reporting improved confidence and recommending the course to others.

This case study will be of interest to client organisations seeking to achieve social value through local upskilling in the delivery of domestic retrofit projects.

Introduction

The project was delivered as part of Carbon Co-op's area-based retrofit scheme in the Levenshulme area of Manchester. As a community energy organisation that helps local residents reduce domestic energy emissions, Carbon Co-op sought to demonstrate innovation through:

Acting as a client intermediary to bring multiple property owners into a single contract.

Using this "scaled" retrofit model to strengthen local supply chain capacity.

To achieve the second aim, Carbon Co-op collaborated closely with its construction partner, B4Box. This case study introduces B4Box and its partnership-based way of working, then explores how this approach led to the joint design of a practical, upskilling-led training programme.

The Levenshulme project (LevABS) was a council-supported, place-based demonstrator, focused on addressing both the technical challenges of deep retrofit and the social challenge of local workforce development. It provided a real-world testing ground for Carbon Co-op's "whole-neighbourhood" retrofit approach and B4Box's integrated training model.

About B4Box

B4Box is a Stockport-based construction firm with a distinct model that combines commercial construction delivery and accredited training. Local learners and employees sit at the heart of every business decision, guided by four central values:

- **Tackling poverty:** B4Box provides training and employment to address the root causes of poverty such as unemployment, educational disadvantage, and debt.
- **Addressing climate change**: By using local people and materials, B4Box reduces its environmental footprint while developing green construction skills.
- **Promoting social justice:** The company helps every team member reach their potential and build a better future.
- **Reducing inequalities:** B4Box prioritises opportunities for underrepresented and disadvantaged groups.

The company employs 70 people and integrates construction delivery with vocational training and retrofit expertise. It works in communities affected by fuel poverty, upgrading homes for improved energy efficiency and creating green jobs. To date, B4Box has:

- Trained more than 120 apprentices.
- Completed over 500 whole-property refurbishment and retrofit upgrades.
- Diversified the construction workforce – 85% of its trainees come from underrepresented communities.

The role of procurement

B4Box's track record is grounded in close, values-based partnerships. One long-term collaborator is Stockport Homes, an arms-length management organisation (ALMO) of Stockport Metropolitan Borough Council and the borough's largest landlord.

Following years of cooperation on maintenance and repairs, B4Box and Stockport Homes sought to create a more stable, long-term arrangement that would support deeper social impact. Traditional tender cycles had introduced gaps between contracts, threatening both consistency of service and B4Box's ability to train and employ disadvantaged local people.

To mitigate this, the organisations worked with Anthony Collins Solicitors (ACS) to establish a procurement approach underpinned by shared social and environmental goals. ACS provided:

- Advice on achieving specific social and environmental outcomes through procurement.
- Support in designing a contract focused on sustainability, social value, and community benefit.
- Legal assurance that a direct award was justified due to the contract's unique nature.

This direct appointment model enables B4Box to continue training and employing residents while providing high-quality construction services. The approach reduces travel emissions, creates local jobs, and embeds long-term value in the community.

Integrating training and construction services

Under this model, B4Box combines the delivery of maintenance and retrofit works with structured training. Its retrofit projects typically include:

- Installation of new kitchens, bathrooms, windows and doors.
- Brickwork and rendering repair
- Draughtproofing and insulation

This breadth supports a multi-trade apprenticeship model, blending classroom learning (one day per week) with four days of supervised site work. The training also includes modules on health and safety, customer service, and sustainable construction practices.



Figure 1 Staff at property installing external measures. Source: B4Box



Figure 2 Staff at property installing external measures. Source: B4Box

> *"The multi-trade skills training goes above and beyond the qualification requirements. This approach benefits B4Box as an employer, but more importantly, it enhances trainees' skill sets and career prospects."*
> — Michael Dickinson, Director at B4Box

On typical projects, two skilled operatives plus one or two trainees can complete up to 90% of a whole-house retrofit, cutting time and costs compared with a traditional single-trade approach.

The programme has a 90% completion rate and has helped long-term unemployed people, single mothers, and care experienced school leavers, without previous qualifications, enter sustainable employment. Trainees must live within five miles of a site, ensuring that social and economic benefits stay local.

About 50% of learners remain in full-time work with B4Box after qualifying, with a percentage of others progressing into work with other employers in the sector.



Figure 3 External insulation applied, final result.
Source: B4Box

Collaboration with Carbon Co-op

Building on its social value foundation, B4Box joined forces with Carbon Co-op in 2022 to deliver an area-based, tenure-blind retrofit scheme in South Manchester. Acting as an intermediary for participating households, Carbon Co-op directly engaged B4Box as the main contractor through a relational collaboration agreement designed with ACS and the advisory firm 500words.

Unlike standard construction contracts, this agreement promoted a non-adversarial, trust-based culture with built-in dispute resolution and a "no blame" ethos.

This approach to partnership extended to householders as well. Carbon Co-op developed accessible, plain-language contracts so that residents fully understood their commitments and could actively participate in project decisions. The overall process strengthened trust, transparency, and collaboration across the project team.

Real-time training

The retrofit scheme focused on hard-to-treat pre-1919 homes. Energy modelling identified measures such as triple glazing, external wall insulation, ventilation improvements, and heating upgrades, would be most effective to improve energy efficiency.

Although B4Box had retrofit experience, it recognised that working on older buildings required specialist knowledge. This led the project team to enhance an existing qualification for delivery by B4Box to its learners: Level 3 Award in Energy Efficiency Measures for Older and Traditional Buildings. Aimed at adults with prior experience in the built environment, it equips learners with knowledge and understanding of older buildings, traditional construction methods, their pathology, and appropriate energy efficiency measures.

Traditionally, this qualification is taught through a block of theory-based sessions. B4Box adapted it into a practice-integrated model, embedding classroom learning in real-world retrofit activities:

- Theory: One day in the classroom.
- Practice: Two weeks of structured site work.
- Reflection: Return to the classroom for review and assessment.

This cycle allowed participants to apply what they learned immediately, pause when encountering real site challenges, and discuss solutions in the classroom setting. The result was a meaningful bridge between theoretical understanding and practical application.

The hands-on training took place across five Levenshulme homes receiving comprehensive fabric-first retrofit works, including:

- External wall insulation
- Triple-glazed timber windows and doors
- Loft and chimney insulation and airtightness improvements
- Demand-controlled mechanical ventilation
- Smart heating controls

These measures provided varied, realistic learning scenarios and directly contributed to residents' comfort and energy efficiency.

Confidence assessments before and after the course showed:

- Increased capability in identifying suitable retrofit measures for traditional buildings.
- Improved ability to evaluate risks and select appropriate materials.
- 100% of participants would recommend the course to colleagues.

The training also benefited B4Box trainers, who stayed current with evolving technologies and materials.

> *"Certainly, I recommend the course as it's very informative and must be the future for lowering carbon footprint and, more importantly, reducing people's energy bills."*
> — Course Participant

Evaluation is ongoing, with energy performance and comfort monitoring data due to be published after winter 2025/26. Early results already show improved comfort for participating households.

Social value

This model demonstrates how on-site, real-time learning can yield direct social and environmental benefits. Although the approach requires greater resource than conventional courses, stakeholders considered it a worthwhile investment in local capability.



Figure 4 Glazing installation. Source B4Box

> *"We see this as a key element of the project – supporting the development of a skilled, knowledgeable workforce in retrofitting. This is increasingly important in a world aiming for Net Zero by 2050."*
> — Catherine Simmons, Carbon Co-op Project Manager



Figure 5 Staff at B4Box. Source B4Box

The pilot helped two previously unemployed individuals move into full-time roles, supported the retention of existing skilled workers, and increased diversity in the retrofit workforce, including the participation of women in construction trade roles.

The project has strengthened B4Box's capacity to deliver retrofit at scale, with trained operatives now spreading their learning to other schemes. Its collaborative approach and tangible local benefits have drawn attention from the Greater Manchester Combined Authority, the Department for Energy Security and Net Zero, and the Minister for Energy Consumers, positioning it as a national demonstrator for place-based retrofit delivery. A Phase 2 expansion is now in development to retrofit additional homes and train more workers.

The project shows that training combined with live site experience can transform how retrofit skills are taught, building confidence, capacity, and community benefit all at once.



Figure 7before external insulation applied to housing. Source B4Box



Figure 6 After external insulation applied to housing. Source B4Box

Resources

Link to resources referenced:

Anthony Collins Solicitors – Transforming a services contract into a force for good

Ashden – Low carbon skills

Carbon Coop – Power of collaboration

Carbon Coop – Real-time supply chain training

Carbon Coop – Real-time training: a reflection

MCS Foundation – Retrofit supply chain pilot study

Links to relevant RISE resources:

Supply chain advice pack: Social value in the supply chain

Procurement practices in housing

www.riseretrofit.org.uk

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