

December 2024

SHDF Wave 1 Case Study

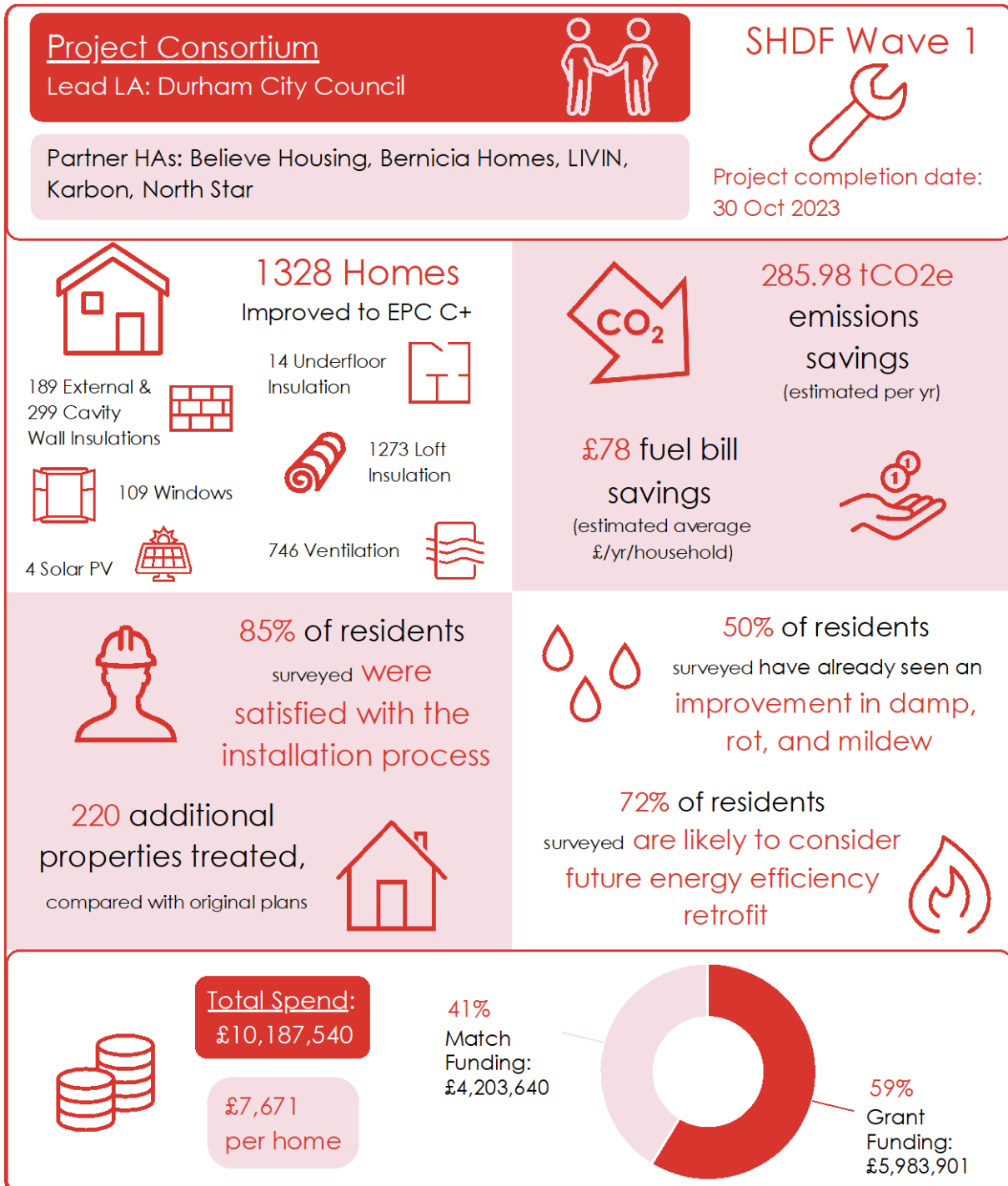


Durham County Council

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1. Project Summary¹



¹ Carbon emission and fuel bill figures are taken from the SHDF Wave 1 change control log and are based on the National Household Model. Figures are accurate as of 30th July 2024.

Rationale for case study selection

The Durham County Council project was selected as a case study because it was identified by DESNZ and the Delivery Partner as a project showing good progress against its objectives throughout delivery. The key factors supporting this progress, as explained below, cover:

- Pre-existing experience with retrofit
- Effective project management of a large consortium, building upon existing working relationships
- Accessing support, e.g. from the Technical Assistance Facility (TAF)
- Effective procurement and management of the supply chain

In addition, the project was able to install measures in 220 more homes than planned, making it one of the largest projects by number of properties treated in Wave 1. Durham County Council led a consortium of five registered housing providers (RPs) in this project. The costs per property were one of the lowest across Wave 1.

This case study is based on primary data (interviews and surveys with key stakeholders including the project team, the supply chain, and residents) and secondary data (such as scheme monitoring data and project reports).

2. Preparatory Phase and Project Management

2.1 Motivations to apply to the Social Housing Decarbonisation Fund

Durham County Council applied to Wave 1 of the Social Housing Decarbonisation Fund (SHDF) as a result of high energy bills and a national focus on promoting decarbonisation, making energy efficiency retrofit a high priority for the Council. The Council have a climate change plan² which states their aim to meet net zero by 2030. All five Registered Providers (RPs) participating in the project as a consortium either had specific retrofit or housing stock decarbonisation plans, or overarching decarbonisation targets. For example, the largest RP in the consortium, Believe Housing, have a goal of improving all of their social housing stock to EPC C by 2030.

2.2 Enabling factors and preparedness for project management

Interviewees reported several enabling factors for successful preparation and project management, as described below:

- The consortium had an **existing network of and longstanding relationships with contractors** which allowed them to quickly mobilise the supply chain for project delivery.
- **Previous experience of delivering retrofit**, within the Council and most of the RPs, informed their working processes for the delivery of Wave 1. For example, the Council used previous experience from LAD 1&2 and some European funding for installing external wall insulation (EWI) and heating controls, to inform their planning permission processes. While several RPs took part in previous government funded schemes, those who were less experienced in

² <https://www.durham.gov.uk/media/40220/Climate-Change-Strategy-and-Emergency-Response-Plan-2022-24/pdf/ClimateChangeStrategyAndEmergencyResponsePlan2022-24.pdf?m=637925305338470000>

retrofit utilised relevant learnings from other types of projects, such as large maintenance projects teaching RPs to deliver installations at scale.

- Some RPs had **existing plans for retrofit measures** ahead of bid preparation, so did not have to spend time planning which measures to install in which homes.
- **The Council and the RPs communicated well**, meeting every two weeks. This enabled the team to identify any issues early on.
- Some RPs had **dedicated energy efficiency retrofit teams**, whose sole focus was to oversee and manage energy efficiency retrofit. This allowed for more resources to be available for Wave 1 delivery.
- **Technical support from the Technical Assistance Facility** (TAF, also known as Social Housing Retrofit Accelerator, or SHRA) was accessed by some RPs. For example, one RP found the PAS 2035 requirement support particularly useful. The sessions were also reported as useful for learning from other Wave 1 projects and consortia, and one RP adapted their resident engagement strategy based on the experiences of another project.
- RPs also accessed **technical support from elsewhere**, for example Karbon Homes utilised support sessions from the provider of their energy modelling software (Parity Projects).

"I think the schedule of communication that we had was really helpful. So we've been meeting with each of the RPs separately every two weeks since the start of the project. So that just gives us an easy way in to find out if there's any issues, if everything's okay, and pick things up at an earlier stage." - SHL Interviewee

2.3 Challenges in project setup and management

Interviewees also reported encountering challenges during project preparation and in managing the project. These included:

- The **high number of consortium partners** meant there were a lot of people to collate information from when preparing the bid. The Council felt that the application timeframes were tight. Similarly, stakeholders from the RPs were surprised by how resource intensive the application process was, but now feel better prepared for future funding applications.
- The **PAS 2035 and Trustmark requirements** resulted in some difficulties during bid preparations. For example, at the time of the bid, the primary contractor of one RP was not certified which led to some delays. However, the RP was able to undertake the enabling works needed for the measures and the process resulted in the contractor becoming newly certified.
- There were some **issues with contractors**. For example, the Council reported that the principal contractor appointed by them on behalf of an RP went into administration during project delivery. They were able to overcome this challenge by directly contracting the subcontractor for those homes.
- The Council reported that one RP was working with a more **difficult housing archetype** and encountered issues when planning the measures but was able to access technical support from the TAF to help resolve this.

3. Resident Engagement and Interaction

3.1 Strategies and enabling factors for success

The project team used various resident engagement strategies ahead of installations, including:

- **Ahead of project delivery**, one RP **replaced the traditional introductory letter for residents with postcards**, as they had found that in the past some residents ignore letters from their housing association.
- A community **road show** to showcase the plans and answer questions or concerns.
- Appointing **dedicated resident liaison and environmental officers** to speak with residents and address their concerns about the measures ahead of installation. For example, there was concern among residents over EWI resulting in damp in homes, but installers took time to explain any risks and how to avoid these. Residents were overwhelmingly satisfied with the level of communication from project staff, with 85% and 91% of surveyed residents reporting satisfaction with communications from their landlords and installers, respectively (higher than the average across Wave 1 residents of 73% and 74% respectively).
- One RP had all **contractors' and installers' phone numbers linked to the housing association**, so calls would show up on residents' phones as coming from the housing association. They also made sure all staff members were informed about the works, so they could quickly answer residents' questions.

The project team continued to offer support to residents during and after installations were completed. Their activities included:

- **Post-installation support and guidance** on how to use measures, including information about ventilation. Over 80% of surveyed residents were satisfied with the information provided to them at the end of installations, higher than the average across Wave 1 (66%).
- **The Council and RPs felt that installers and contractors were knowledgeable** and were also able to address residents' questions and concerns. One RP stated this was especially useful for homes where it may have been more challenging to carry out works, such as those occupied by elderly or more vulnerable residents. The principal contractor stated that their large team of Customer Experience Co-ordinators (acting as resident liaison officers) worked with these residents and created resources to explain the impacts and benefits of the measures. The majority of surveyed residents now feel confident in using and maintaining their new measures. For example, 63% of surveyed residents feel confident checking for wear and tear and 85% feel confident in ventilating their home.

"The way [supply chain stakeholders] communicated with us, and explained stuff that was going to happen, they phoned, they emailed, just quite good stuff." - Resident Interviewee

- **Residents felt that delivery teams minimised disruption** where possible, and in some cases offered to move residents to alternative housing for the duration of installations. Over 80% of surveyed residents were satisfied with installation aspects such as noise levels, cleanliness, the number of visits, and disruption to their household and wider area. The figures for surveyed residents from Durham were consistently 10-20% higher than that of the whole resident survey sample, when asked about satisfaction with the installation process.

- One RP installed **environmental sensors** in the majority of homes, which monitor indoor air quality and share data with the RP for aspects such as temperature, humidity, and carbon dioxide levels. The sensors are linked to a resident-facing app which gives residents a better understanding of the health of their home. When there are changes in the home's environment the app can provide guidance on how to use measures to solve these, for example how to combat condensation if humidity rises.

"I haven't really been disrupted at all and it has improved my standard of living." - Resident Interviewee

3.2 Challenges and barriers encountered during resident engagement

Interviewees also reported experiencing some challenges related to resident engagement:

- RPs within the consortium reported some **resident drop-outs** from the initial stages through to project delivery. For one RP, 27% of the properties they surveyed that could technically proceed did not receive installations due to resident drop-out. The council perceived that higher rates of resident drop-outs occurred when **installing more disruptive measures**, for example, solar PV.
- One RP reported that where **party walls were shared with privately owned homes**, in some instances the neighbours refused access to supply chain stakeholders. As a result, the planned measures had to be changed.
- Much of the **early engagement coincided with the Covid-19 pandemic**, and the Council reported that some residents were apprehensive about people entering their homes to assess property suitability. Council representatives felt this problem continued throughout project delivery to some extent, with some **residents refusing entry to supply chain stakeholders** after agreeing to have measures installed, or part way through the installation process. Similarly, there were reports of residents refusing entry to complete the post retrofit assessment, as required by PAS 2035. However, supply chain stakeholders started completing this as soon as the measures were fitted to avoid making another visit. Despite this, only 3% of surveyed residents said they felt uncomfortable with allowing supply chain stakeholders into their home.

"We knew from the start that if we did the loft insulation first, then when you turn up for day two to do the ventilation, they won't let you in. So, you do the ventilation first and then save the bit that they actually want, the insulation, until the end." – SHL Interviewee

3.3 Emerging resident outcomes

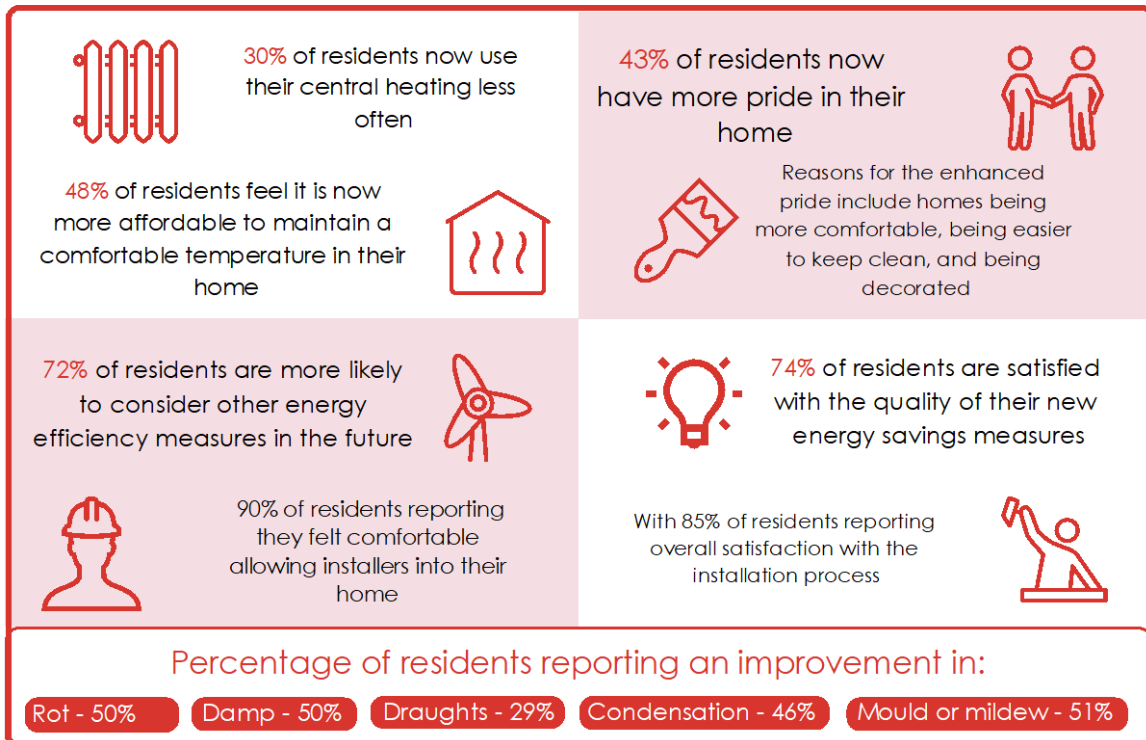


Figure 1: Emerging outcomes after the installation of measures reported by Durham residents in the survey (base: 569 residents).³

4. Installation and Supply Chain

Project Highlight – 220 extra homes treated compared to original project bid

Two RPs within the consortium were able to increase the number of properties they treated as part of their Wave 1 project:

- One RP switched suppliers, generating savings of up to £1.5 million. This allowed them to treat an additional 200+ properties. They reported using the same contractor on other projects, so they were able to negotiate the costs down as a result of the large size of the contract.
- A second RP changed the measures they were implementing in certain homes, due to the high levels of disruption when installing underfloor insulation. The new measures, which included loft insulation, were cheaper, so they were able to treat more homes to EPC C.

³ When compared with the outcomes from the whole resident survey sample, residents in Durham reported similar outcomes. In some cases, the Durham sample reported slightly more positive outcomes. For example, 72% of the total sample were satisfied with the installation process, and 67% are likely to consider future energy saving measures.

4.1 Enabling factors and successes for installations and management of the supply chain

During interviews, the Council and RPs reported several factors that enabled successful installations and management of the supply chain:

- **Use of existing relationships.** For example, one RP had taken part in LAD and procured the same contractor, which saved time and resources as the preliminaries of the contract were already in place.
- **Close working relationships between RPs and their contractors** has enabled the easy identification and quick resolution of any issues that arose throughout project delivery. For example, one RP reported having regular project meetings and their principal contractor providing weekly updates. Interviewed principal contractors also felt they had positive relationships with the RPs they were contracted by, and felt they had good levels of trust.
- **Significant cost savings through changing suppliers.** One RP changed their principal contractor and saved an estimated £1-1.5 million and was able to increase the number of homes treated. This was the largest RP in the consortium, covering over 1000 properties. The principal contractor was regionally based and had the scale and buying power to ensure that equipment and labour were sourced at competitive prices.
- **The Council have streamlined their contracting and supply chain processes.** After their participation in SHDF Wave 1, they created an energy efficiency framework, within which there is a list of certified and accredited contractors for installing different energy saving measures. This is expected to boost efficiency in future retrofit projects.
- Some RPs worked on **properties in the same area**, to increase the efficiency of supply chain stakeholder visits.

“Working closely with the contractor and having strong relationships really helped.” - SHL Interviewee

4.2 Challenges and barriers in supply chain setup and management

Despite the overall success of the installations and management of the supply chain, the Council and RPs encountered some challenges throughout delivery, as reported during interviews:

- Some RPs discovered that the **data on properties submitted in the application was not as accurate** as they had hoped. For example, some properties thought to be below EPC C were already at EPC C, so they had to be swapped out for other properties.
- The Council and RPs reported some cases in which **more enabling works were required** than predicted. For example, roof strengthening for solar PV installation or cavity wall extraction for insulation.
- Supply chain stakeholders reported some **challenges with sourcing materials** while remaining compliant with PAS 2035 requirements, such as EWI materials. Supply chain stakeholders felt that Brexit impacted this, and also made materials more costly than expected.

- Supply chain stakeholders stated that there were occasionally **issues with finding Trustmark approved supply chain stakeholders**. For example, Believe Housing could only find one Trustmark approved supply chain stakeholder to install the new lightbulbs. Supply chain stakeholders felt that the North East as a region has fewer certified and accredited supply chain stakeholders, but as a result they encouraged their regular subcontractors to gain accreditation in order to participate in any future projects with these requirements.
- Supply chain stakeholders reported that **weather conditions** caused some delays with installing EWI.

5. Future Plans

All of the participating RPs have further plans for energy efficiency retrofit projects, where they plan to utilise key learnings from taking part in SHDF Wave 1. For example, all RPs have applied to SHDF Wave 2 through various energy hubs in the region, and the Council has accessed funding through the Home Upgrades Grant (HUG) 2.

6. Data sources

Data sources used to produce this case study	
<i>Social housing landlord Interviews</i>	Three interviews (Q 3, 2023) with: <ul style="list-style-type: none"> • One Wave 1 representative from Durham County Council • Two Wave 1 representatives from Believe Housing • One Wave 1 representative from Karbon Homes
<i>Supply chain stakeholder interviews</i>	Two interviews (Q 3-4, 2023) with: <ul style="list-style-type: none"> • Two principal contractors (for different RPs)
<i>Resident surveys and interviews</i>	2 tranches of a survey with residents for whom installation work had started or had their works recently completed. 569 respondents in the whole Wave 1 sample tranches 1&2, 2023 (278 respondents from Durham, 2023). Any differences reported between the two samples are statistically significant. 23 in-depth interviews with residents who also took part in the survey and consented to take part in a follow-up interview (Q 3, 2023).
<i>Scheme management data returned by project</i>	Scheme management data, as reported by the project team and assessed by the Wave 1 Delivery Partner.

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