

Warm and Safe Homes in Fishwick

Rebuilding trust

The repair of failed external wall insulation at Fishwick and recommendations to improve retrofit outcomes for householders



Acknowledgements

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Introduction

The failed external wall insulation at Fishwick, and the subsequent misery of the people living in affected houses, is still regularly cited within the energy efficiency retrofit community as a cautionary tale of what can go wrong when good installation practice and a sense of care are lacking.

National Energy Action, with the support of partners, has repaired the failed insulation in 45 affected properties. This document sets out how the project has been carried out, the challenges faced, and how the approach adopted has delivered safe, warm homes for a number of affected families. It aims to provide guidance and recommendations for future retrofit rectification projects. Adopting the recommendations may also help ensure that more retrofit projects are 'right first time' and deliver the best outcomes for householders.

The rectification of failed retrofit work at Fishwick is far from resolved. In addition to those we helped, National Energy Action has been contacted by a further 72 householders who reported problems with their homes. Around 300 additional houses in Fishwick have external wall insulation that was fitted at the time of the initial failed works, but we have not yet been in contact to establish how many of these require remedial work. Estimates by the site team are that £10-20 million of capital works could be required to fully rectify problems in the area on a street-by-street basis. Identifying such sums of money is proving elusive.

The nature of the damp penetration problems mean that affected properties continue to get worse. The longer that failed insulation is left in situ, the higher the costs will be to remove and repair the building fabric. National Energy Action has witnessed first-hand the misery and health problems that poor-quality installations can cause, and it is heartbreaking that we are unable to rectify every failed installation we are aware of. We may also question why it should fall to a charity like us to try to address the failings of government schemes delivered by commercial companies.

For householders at Fishwick, this continues to be a very real nightmare that they have been forced to live through for over a decade. A fundamental lesson never to be forgotten is that retrofit takes place in people's homes, and any problems will directly impact their quality of life. Moreover, the process of retrofit itself can be stressful and anxiety-inducing for householders. Those responsible for retrofitting homes must take every care to alleviate this stress, reduce anxiety, and give residents a sense of agency throughout the process by which their own home is being improved.

Retrofit is not something that should be done to householders; it must be done with them.

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The problems at Fishwick and the wider context

Background

Fishwick is an area in Preston, Lancashire, made up of largely small, terraced houses built in around 1900. Many of Fishwick's occupants are elderly and many are on low incomes. It is estimated that nearly half of the homes are owner occupied, around 40% are in the private rented sector, and the rest owned by Housing Associations.

The Community Energy Saving Programme (CESP) programme, established by the UK government to make homes easier and cheaper to keep warm, required energy companies to fund energy saving measures in disadvantaged communities. Through the CESP scheme, over 75,000 dwellings¹ received External Wall Insulation (EWI), of which at least 387 were completed in Fishwick in late 2012 and early 2013.

There were significant problems with the EWI installations in Fishwick. An initial 62 households complained to Ofgem and, as a result of an enforcement action, were provided with remedial work that was completed in 2018. However, problems took time to manifest themselves in houses, so this was only the tip of the iceberg. Further complaints were made but, with the initial contractor going into liquidation, the householders had no satisfactory recourse to get the work put right.

The problems with the EWI installation were not based on its resulting thermal performance, although this was undoubtedly compromised. The key problem was water penetration caused by poor workmanship. This resulted in extreme damp in the properties, manifesting itself in black mould and fungal growths as well as physical deterioration of the interior surfaces. The occupants were severely affected by this, with instances of worsening respiratory conditions and hospitalisation, as well as widespread negative impacts on their physical and mental health from having to live in damp conditions.

Residents affected by the failed scheme were not protected by guarantees or warranties. While lessons were taken into the Government's 'Each Home Counts' review, which set out to improve retrofit standards and enhance consumer protection, these improvements aimed at future developments offered little solace for the residents of Fishwick.

The fact that both the occupants and Preston Council were finding it difficult to get anyone to take responsibility for putting it right was becoming a high-profile news story, damaging to the whole concept of retrofitting homes to improve their energy efficiency.

¹ [Ofgem: The final report of the Community Energy Saving Programme \(CESP\) \(2013\)](#) pg.5

National Energy Action was shocked by the living conditions being experienced by households in Fishwick because of the failed EWI, and set out to raise money to carry out further rectification work on the properties. As a result of this we have been able to complete two phases of work, replacing the failed EWI on a total of 45 properties. Over the course of the project a further 72 householders came forward to report problems with their homes who we have been unable to help. It is expected that there are other properties in Fishwick, beyond the area we were working in, that also require remedial work.

This report sets out the results of our work, the challenges faced and lessons learned, and the implications this has for current and future energy efficiency schemes.

External Wall Insulation

External Wall Insulation, referred to throughout this document as EWI, is a layer of insulation fixed to the outside walls of an existing building to improve the thermal performance of that building. It is then either rendered or cladded to protect the insulation from the elements.

It is mainly applied to solid wall properties and is generally viewed as being preferable to internal wall insulation as it is less disruptive to install and does not reduce the internal floor area. However, it does significantly change the external appearance of a house – something that can be viewed either negatively or positively. It is also an expensive process to carry out.

The Demonstration of Energy Efficiency Potential report² in 2024 recognises that solid walled homes are among the least efficient in the UK, and their occupants are more likely to be in fuel poverty. A significant finding from this research is to confirm that solid wall insulation is by far the most impactful energy efficiency retrofit measure for such homes, but it notes that installing solid wall insulation poses more risks of unintended consequences than any other retrofit.

A potential problem with EWI is that any gaps or flaws in the installation can lead to water penetration, which can then result in damp in the property. Particular care is therefore needed on detailing around any point where the insulation stops. EWI is also categorised as a ‘major measure’ in terms of its impact on the airtightness of a building, which means that mechanical ventilation should be provided to offset potential problems with condensation or poor indoor air quality³. Care is also needed with the installation of EWI to avoid thermal bridging, and there is a need to recognise the potential impacts of future installation work, such as new windows or external fixings, on the continuity and integrity of the insulation (and their warranties).

² DEEP Report 1: Synthesis, Demonstration of Energy Efficiency Potential, Department for Energy Security & Net Zero, Leeds Beckett University, Loughborough University, University of Salford, 2024

³ Building Regulations Part F, Approved Document Volume 1: Dwellings 2021 edition (England)

Implications

For the UK to hit its net zero target by 2050 it is estimated that at least 250,000 solid walls need to be insulated every year from 2025 onwards⁴. This estimate assumes that only around half of all potential solid wall insulation will take place due to uncertainty around public willingness to adopt this as a measure.

Government statistics estimate that 833,000 homes in Great Britain have solid wall insulation, around 10 per cent of all homes with solid walls⁵. Since 2013, government schemes targeted at fuel poor households have installed EWI on over 170,000 homes⁶.

In October 2024, the BBC ran a story on homes in Luton that had extreme damp and mould caused by poorly installed external wall insulation. In January 2025, government issued a statement to say that widespread cases of poor-quality solid wall insulation had been identified, and that these were installed under Energy Company Obligation 4 (ECO4) and the Great British Insulation Scheme (GBIS) since 2022. As a result, thirty-nine insulation installers were suspended, increased checks of solid wall insulation installed under these schemes are to be undertaken, and installers will be required to fund repair work. There needs to be an effective quality framework in place that is fit for purpose so that further problems don't arise in the future. In addition, we need to ensure that all householders are listened to when they raise complaints, have a trusted third party who can broker solutions on their behalf (rather than being sent back to the same installer who failed in the first place), and that there is a system of redress in place that can rectify failed installations whether or not the original installer is still in business.

Rectification work carried out at Fishwick

Issues with the initial EWI installations

The affected houses in Fishwick are terraced, two storey homes built in the 1900s and mostly with gas central heating. There are a variety of stone features on the houses, for example around the front door, and many have had small extensions built into the lower rear yard.

Under the CESP scheme in 2013, EWI was installed to 387⁷ of these properties. It is believed that the original EWI work was completed under rushed conditions, driven by pressure to meet the scheme's obligations, meaning that many

⁴ Climate Change Committee Sixth Carbon Budget, Balanced Net Zero Pathway (2020)

⁵ Household Energy Efficiency Statistical Release, DESNZ, Data to December 2023.

⁶ GOV.UK funding scheme statistics to Sep 2023

⁷ Precise records have been difficult to access but the figure of 387 was referred to in parliament (Hansard October 2018.) A visual survey in 2025 counted 398 properties that still appear to have EWI installed under this scheme.

installations failed to achieve the required standards. To avoid penalties, companies had little choice but to accelerate the installation process, despite facing a shortage of skilled labour.

The key impact of this poor installation was that many houses had gaps where water could penetrate between the EWI and the external brick walls, resulting in trapped water between the two layers. The external walls of the houses were typically constructed with a narrow cavity, less than 50mm wide. Prior to the work in 2013 these had been injected with cavity wall insulation, despite it generally not being recommended to insulate cavities of such a small width. In any event, its presence should have been identified during the installation process for the EWI and removed prior to the installation of the EWI. This did not happen, and its presence exacerbated the damage to the properties as it allowed water to transfer across the cavities and into the internal brick layer.

A number of the properties were already in poor condition, both internally and externally. Our remedial work has identified many cases where fabric repairs were not completed prior to the EWI works. Services such as boiler condensate pipes were often covered by the EWI, rather than being properly rerouted or protected. There was also clear evidence of the lack of design for the top detail of the EWI, which led to an over-reliance on silicone-sealed joints for weatherproofing. This created significant vulnerabilities, as silicone seals typically last only five years—far shorter than the 25-year warranty period expected of the EWI system. The eventual failure of these seals led to widespread water ingress into the properties. Additionally, there was no ventilation strategy or improvements implemented as part of the original works, leaving the properties more susceptible to condensation and poor indoor air quality.



Figure 1 - Typical top-level detail of the 2013 insulation

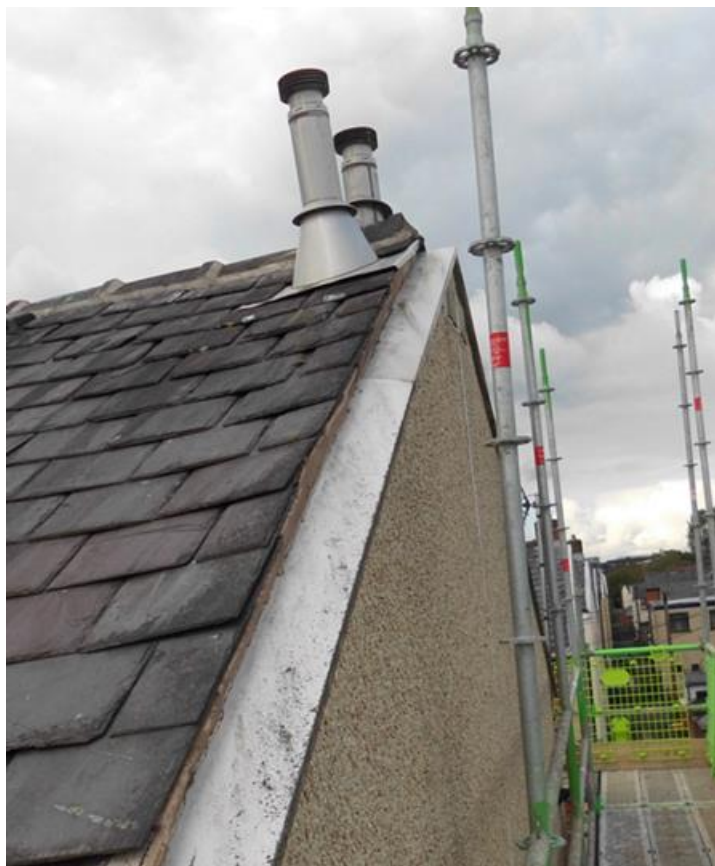


Figure 2 - Typical top-level detail of the 2013 insulation on gable ends



Figure 3 – Close-up of poor design example

Internal consequences of the system failure

There is a significant cost burden to not installing energy efficiency measures correctly in the first place. In this case, the total cost must look at the initial work, the work done in removing this, and the cost of fitting new EWI and making good the buildings. This is without even considering the physical and mental stress caused to the occupants by the resulting damp and mould.

Below is a sample of photographs illustrating the signs of failed insulation, as observed and experienced by householders on a daily basis. These images were taken pre works in homes that underwent remedial works during Phase 1, delivered by National Energy Action.

Notably, these properties have not reported any issues with damp, condensation, or internal damage in the three years since the completion of the remedial works, demonstrating the effectiveness of the corrective measures implemented.



Figure 4 - Cold bridging under the windows due to uneven distribution of the Cavity Wall Insulation



Figure 5 - Wallpaper and ceiling panels falling due to the high condensation and moisture in the fabric



Figure 6 - The plaster would crumble in the most serious water ingress cases.

Additional issues with the properties

The houses themselves are over a hundred years old. For long periods they have been occupied mainly by low-income families with limited means to pay for maintenance or improvements. The combination of these factors led to a number of additional factors encountered, which had to be dealt with as part of the project to replace the failed EWI. These included:

- Structural issues with properties, either caused by or covered up by the failed EWI
- Presence of asbestos
- Gas safety issues
- Old or unsafe electrical wiring
- Poorly carried out building work on properties, including extensions
- Poor maintenance records for the properties
- High ancillary costs to return the fabric to its original condition and install measures

These are not necessarily issues that are unique to Fishwick, and are likely to be common in older homes, particularly those occupied by fuel poor households and designated under the category 'worst first.' The Demonstration of Energy Efficiency Potential research mentioned above found that the need to make repairs or prepare homes for retrofits added an average of 26% to the costs of retrofitting solid walled homes. Yet the Energy Company Obligation, which is currently the largest Government funding scheme for whole house retrofit, caps funding for remedial work to £1,500.



Figure 7 - Example of external structural issues.



Figure 8 - Example of internal structural issues.

Community liaison and building trust

There is no record available of the level of householder engagement that took place when the EWI was initially installed under the CESP scheme in 2013. However, the anecdotal evidence does not paint a good picture. Residents have told National Energy Action of coming back from work to find scaffolding on their house with no prior notice. On one occasion a householder went away on holiday and returned to find, to her surprise, that her home now had external wall insulation on it. There were no pre-works discussions or consultations, and during the works no one was available from the installer to address any concerns or queries from the householders. Additionally, some householders were reassured that this scheme was being delivered by the Local Authority, which led them to place complete trust in the installers. It only came to light after completion that the council was not involved in the quality control of the installations.

It seems clear that the initial experience of the householders was not positive. This was exacerbated by the emergence of damp and mould problems in the homes where work had taken place. After some initial repairs had been undertaken, the bulk of households were left with the problems, with no one taking responsibility and no help in sight. What started as an energy efficiency improvement project to improve people's health and comfort had achieved the opposite. A project that should have had a positive impact on people's lives became to be seen as wholly negative.

The community that National Energy Action encountered when first getting involved was understandably distrustful of the construction industry and the institutions that surround the funding schemes for energy efficiency retrofit. They were reluctant to come forward and sceptical that any significant help would be offered. It was clear that rebuilding trust was essential, not just for the project to work but for the outcomes to be fully positive. The following steps instigated were found to be critical in building that trust:

- National Energy Action and the project contractors were based in the Preston Community Hub, which is located in the heart of Fishwick. This made it easy for local householders to meet those involved in the project and to ask questions in a venue they were already comfortable with. There was also direct financial support to the community and the Community Hub through payment for rent and repairs, the latter instigated by the contractors, which helped to change the local perception of those providing retrofit.
- Links were formed with local organisations and bodies who were already trusted within the community. This included the local MP, who had advocated on behalf of the residents, Preston City Council, religious groups, and community-based businesses. These channels were used to receive feedback and understand residents' needs, so

that the works could better meet those needs, and to improve processes and communication.

- Resident engagement activity was proactive. The project team were physically present in the community whenever possible, and community insight panels were used from the beginning and repeated every three to six months. These gave local people a very real opportunity to contribute to the way that the project was run.
- A community liaison officer was appointed from within the community. This was crucial not only in practical issues, such as being able to communicate with non-English speaking residents, but also in the fact that this was someone already well known within the community. This meant he was more readily welcome in people's homes, aware of some of the cultural and community sensitivities, and could explain things to people in terms they could readily understand. It was also important that he was supported by the project team to identify and respond quickly to minor issues or queries.

Alongside those practical steps to build trust, it was important that the whole approach applied for the project followed the same principles. As part of this we took on a 'duty of care' for the works carried out. This involved carrying out rectification and repair work that would allow the works to be completed to a high standard even though it added to the costs of the project.

It should also be noted that 'word of mouth' was recognised as an important element in reinforcing our efforts to build trust. Not living up to the principles that we had set out in terms of resident and community engagement would no doubt have led to a spiral of mistrust and put the completion of the project in jeopardy.



Figure 9 - Launch event with National Energy Action, the MP, the Main Contractor, the Clerk of works.



Figure 10 - The Community and Resident Liaison Officer with a householder

Procurement and management

The National Energy Action approach at Fishwick focused on the approach more generally adopted for non-domestic retrofit, where professional companies are contracted and supervised to carry out specific works in a quality manner.

Aldrock provided the RICS chartered building surveying services and acted as the principal designer and as contract administrator and CDM (construction, design and management) co-ordinator on site. Aldrock brought a deep knowledge of the Fishwick project, having been part of the 2018 rescue of 60 properties. Aldrock has a proven track record in delivery of refurbishment projects from design stage to tender and administering contracts, and was able to demonstrate a company commitment to the aims of the Fishwick programme. To appoint the contractor for the Fishwick project, Aldrock led a competitive tendering and due diligence exercise process on behalf of National Energy Action. Strong consideration was given to the failings identified in the previous works, processes and warranties at Fishwick.

Seddon Construction was appointed as the Main Contractor to the Fishwick programme in April 2022. They submitted the most competitive and complete bid, in line with the pre-tender estimates. Seddon also proved to be very experienced in EWI projects, including remediation of failed insulation projects and were very invested in delivering this project.

The project was overseen by a dedicated management team within National Energy Action, working with both Aldrock and Seddon Construction on a day-to-day basis. Formal progress meetings were held monthly on site with representatives from all companies. For quality assurance the EWI manufacturer carried out independent periodical inspections to the works on all Fishwick homes, including witnessing testing the moisture content of the bricks to ensuring the fabric was ready for the reinstating of the new EWI. This is part of the 25-year warranty process and ensured compliance with the manufacturer's specifications. Preston City Council Building Control certified compliance with the requirements of the Building Regulations.

All technical detailing and drawings completed by Aldrock were first reviewed by the main contractor and the EWI subcontractor responsible for delivering the works. Subsequently, these documents were reviewed and approved by the EWI manufacturer's technical team. Only after this quality assurance process were the works permitted to proceed in each home. This approach ensured that all parties had input into the design process, resulting in high-quality and robust detailing.

To ensure the highest standard of customer experience, both the social evaluation team and the Community and Resident Liaison Officer maintained regular contact with householders, communicating weekly to bi-monthly via phone or text. This frequent engagement enabled householders to promptly

report any issues and provide immediate feedback to National Energy Action's team. The established feedback loop served to reassure householders and supported continuous improvement in service delivery.

A Householder Licence Agreement was agreed and signed between National Energy Action, the freeholders and the householders of each property. This agreement gave authority and access to National Energy Action, the contractor (Seddon and their supply chain), agents and employees to carry out the works.

Contractor invoices for the project are subject to a retention. Half is released on practical completion of the contract works and then the balance released once the defect period ends (12 months after). This provides an incentive for the contractor to complete all works to the correct standard and remedy any defects arising after completion of the works.

A formal Oversight Group was established for the project. This group performed an advisory role, and members provided scrutiny, challenge and assurance to the project. Membership of the group comprised the Department for Energy Security and Net Zero, Ofgem, the office of Sir Mark Hendrick MP for Preston, Preston City Council, Affordable Warmth Solutions and National Energy Action Board of Trustees.

Selecting the properties for work to be done

When National Energy Action got involved, it was clear that there was not sufficient funding to deal with more than a small proportion of the total homes affected. To provide a robust framework for prioritisation of properties that was fair, transparent, and systematic, National Energy Action's Research Team developed a process called 'Project Works Mapping'. This considers the condition of the houses (through technical surveys) and the circumstances and experiences of the householders (through our social research methods including a householder survey and stakeholder call for evidence). The experiences are divided across three parameters: Fuel Poverty and Comfort; Health and Wellbeing; and Income and Affordability. Each household's technical survey and circumstantial result are scored, which provides data to enable a whole household situation to be ranked. Properties were selected for inclusion based on a combination of the 'worst first' principle and, in the first phase, with the additional aim to test and find solutions to some of the technical challenges presented by the properties in Fishwick.

Following the trust-building activities described in section 2.4, householders began approaching National Energy Action for support. The regular presence of National Energy Action staff in Fishwick, assisting community members with energy and benefit advice, helped foster this engagement. Questionnaires were distributed and followed up with newsletters and postcards in several languages spoken within the community. Additionally, two canvassing operations were conducted during school holidays, further increasing National Energy Action's visibility and encouraging more householders to come forward.

When householders came forward, an initial visit to their property was undertaken to ask about problems related to the failed EWI. Aldrock then carried out a non-intrusive survey of the property, scoring from 1 to 9 where 1 meant minor issues only (i.e. no additional damp registered due to the presence of the EWI) and 9 being very poor property condition such as visible fungus growth on the internal walls.

National Energy Action then used a matrix including the other factors to determine which properties would move forward into work phases. Aldrock then revisited and carried out a detailed Scope of Works, including photographic evidence.

Rectification work completed to date and costs

Phase 1 works started in June 2022 and were completed in February 2023. In this phase 22 houses had the failed EWI removed and problems caused by damp penetration rectified. As a duty of care, National Energy Action and its contractors also dealt with related structural, electrical safety, and gas safety issues in the homes, not all of which were related to the failed EWI but were necessary to leave the homes in good order. New EWI was installed on 20 of those houses – two occupants refused this after the failed EWI had been removed.

Phase 2 works started in June 2023 and were completed in March 2024, rectifying a further 23 homes. Work in this phase repeated what was carried out in phase 1 with the addition that new double glazing was installed in all homes to avoid any future problems with maintaining a robust thermal seal with the wall insulation. All homes in this phase had new EWI fitted.

The remedial works themselves proved to be both expensive and unpredictable. The average cost per property for all works in phase 1 was £69,275, while in phase 2 the average cost was £75,221. However, the cost of remedial work for individual properties could range from around 60% of the average to two and a half times greater. Once the failed insulation was removed, after almost a decade in place, underlying issues with the building fabric either caused by the original installation, or that should have been addressed prior to those works, became apparent and required extensive repair. These problems were frequently exacerbated by water ingress and excessive dampness of the solid walls, leading to further deterioration. The combination of these unforeseen repairs, delays, and the need for comprehensive interventions across several trades drove up costs for the project as a whole.

Adopting a place-based approach was considered essential to deliver a community focused approach within a distinct area, and also to effectively manage quality standards on such a complex project, allowing for regular assessment of installations both by the project team and by third parties. However, the limited budget and desire to tackle the worst first meant that it was not possible to work on a 'street by street' basis that could have potentially reduced costs further. Under this approach, the main contractor had the capacity

to co-ordinate multiple specialist trades, ensuring that all elements of the complex rectification could be managed effectively. Given that the Fishwick retrofit project had become nationally recognised as a retrofit disaster, this reputation made the supply chain hesitant to engage, with many trades wary of the high-profile and high-risk nature of the work.

A summary of the typical scope of works per property is below:

- Make a photographic record of areas potentially affected by the work so that any post-work defects can be rectified
- Erection of scaffolding
- Removal of existing EWI and of cavity wall insulation where present
- Repair of the fabric and of wall ties where necessary
- Allowance for a drying out period
- Inspect, repair and make good internal damage caused by the failed EWI
- Insulate window and door reveals to minimise thermal bridging
- Install new double glazing with trickle ventilators
- Install continuous mechanical extract fans in wet rooms and undercut internal doors
- Complete all enabling works (e.g. extending the gas flues) and inject a new damp proof course
- Removal of the bottom three courses of roof slates and apply a vapour permeable underlay
- Repair and replace existing guttering
- Test the building fabric to ensure the moisture content of brickwork is at satisfactory levels
- Reinstall a new EWI system in accordance with manufacturers' instructions and weathering detailing and apply a render finish
- Provide a homeowners maintenance manual containing all relevant information in relation to the works



Figure 11 - Example of a home with completed retrofit rescue



Figure 12 – Ongoing works at top level typical detail of the lead overlap the trim

Aftercare and consumer protection

Given the history of Fishwick, it was essential that householders would be left with robust consumer protection should any problems materialise in the future. It also gave us the opportunity to test the consumer protection mechanisms that are available for all retrofit projects and to assess what works most effectively.

Alongside the homeowner's maintenance manual, a good practice guidance package was provided. This package outlined the warranties and guarantees associated with the works and included detailed information on where to access support and how to make a claim if necessary. The Resident and Community Liaison Officer tested the claims process for each guarantee, to ensure that the instructions provided to the residents were accessible and understandable. This information was also incorporated into the good guidance package. This approach recognises that information provided in some guarantees and

warranties, in line with PAS 2035 requirements, can be lengthy, jargon-heavy, and burdensome for residents, potentially making it inaccessible.

Each household was supplied with a digital hygrometer featuring a visual colour scale to indicate recommended healthy relative humidity levels, intended for placement in the living room. An advice leaflet on reducing moisture build-up from condensation was also provided. These materials were delivered by National Energy Action's community and resident liaison team, together with the technical and project management teams.

Post-installation, several points of contact were established to ensure householders' satisfaction and to identify any latent defects. Excluding all the social evaluation contacts, there was the first visit shortly after completion, conducted to deliver, review and explain the manuals, the guarantees and the good practice guidance. Approximately 10 months later, or after at least one winter after completion of works, a final end-of-defects period inspection was carried out by National Energy Action, Aldrock, and the Main Contractor.

In line with what is mandated for any publicly funded retrofit schemes (e.g., ECO4⁸) set by Trustmark⁹, the project ensured robust consumer protection for the householders. This was critical for National Energy Action to achieve, as it leaves the householder fully protected in case of any defect in materials or workmanship related to the EWI. Each householder was left with a 25-year warranty on the new EWI system, from the manufacturer, and a 25-year External Wall Insulation Guarantee Certificate, provided by the Insulation Assurance Authority.

⁸ [Ofgem ECO4 Delivery Guidance](#) v2.1 (April 24): page 149 - 5.259.

⁹ [Trustmark – Framework Operating Requirements](#) v2.6 (July 22): page 18 – 10.2.10

Evaluation and learnings

Social evaluation

A detailed social evaluation was carried out on the Fishwick project, and this report is available on the National Energy Action website – www.nea.org.uk.

Lessons learned and recommendations

This section outlines some of the challenges encountered across the course of the project and provides recommendations on how such challenges can be anticipated and accommodated.

Householder engagement

Given that many of the properties were owner-occupied, it was essential to ensure residents were fully informed and empowered to make decisions regarding the proposed retrofit measures. Detailed information was provided to all householders, including the importance of adequate ventilation and the potential impacts on heat loss and energy bills. For private rented properties, the decision-making authority rested with the freeholder. However, the project team made concerted efforts to keep tenants engaged and maintain transparency throughout the process.

The majority of residents remained in their homes during the works, which presented logistical challenges and increased both time and cost. Work had to be completed on a room-by-room basis, with daily clean-up to minimise disruption. Only two households required temporary relocation due to the scale of remedial works.

There were instances where residents were reluctant to have certain works undertaken, such as the new EWI systems or mechanical ventilation, often due to concerns about potential cold, damage to existing finishes, or lack of physical space within the property. These preferences were respected as far as possible, with adaptations managed through a resident-centred approach.

High occupancy rates, including multi-generational households, further complicated the selection and delivery of appropriate retrofit measures. Co-ordination with tenants in private rented homes, under the permission of landlords, sometimes led to communication challenges. A small number of properties proved difficult to engage, particularly where residents were hard to reach or mistrustful of external contact.

A robust process for engagement with residents having work undertaken was established, beginning with comprehensive dilapidation surveys conducted jointly by the contractor, clerk of works, and the householder. These surveys

provided a critical baseline, ensuring transparency and serving as vital evidence should disputes arise during or after the works. Initial surveys also highlighted access issues and the need for neighbour authorisation, especially where property boundaries or extensions were involved. This occasionally led to contention, underscoring the value of employing a Community and Resident Liaison Officer from within the community who could mediate and build trust.

Resident briefings were refined in subsequent phases of the project to improve clarity and manage expectations. All householders received clear, written records of the planned works and pre-disclaimer documents outlining the scope of works and implications of any changes in consent. The presence of multiple contractors and subcontractors on site was carefully managed to avoid confusion.

Insurance requirements presented a further complexity. Contractors required proof of valid building insurance from reputable providers before commencing work. National Energy Action assisted some of the most vulnerable households in securing temporary insurance for the duration of the works, as many did not have existing coverage due to affordability issues. However, National Energy Action did not assume liability for these policies.

Householders were also consulted on aesthetic choices, such as window colour, with samples provided at local hubs and a formal sign-off process implemented to avoid disputes. The impact of ventilation measures on fuel bills was discussed openly, and residents' concerns were addressed with clear, jargon-free communication.

Recommendations for future works:

- **Early and proactive relationship building:** Prioritise relationship building and establishing trust in the community during the early stages of the project. This may include buy-in from trusted names, for example, the local MP or community leaders.
- **Set the project office in the heart of the community:** Base the client and the project contractors within the community and accessible to local householders wanting to ask questions. Payment for rent and repairs to local community facilities can also demonstrate a commitment to the community.
- **Appointment of a community-based Resident Liaison Officer** to facilitate communication, understand cultural sensitivities, and explain technical matters in accessible language.
- **Regular community insight panels** to incorporate resident feedback into project design and delivery – ensure the householders feel they are empowered and can participate.
- **Tailored support for vulnerable residents**, including flexibility around scheduling and additional assistance as needed.
- **Requirement for contractors and subcontractors to demonstrate soft skills**, with contractual incentives linked to customer service and identification of vulnerable residents.
- **Transparent communication at every stage**, with a commitment to use plain language and avoid technical jargon.

Building works

The delivery of EWI projects benefits significantly from a place-based approach, particularly in complex settings such as that which National Energy Action encountered in Fishwick. By coordinating works at the community or neighbourhood level, it becomes possible to oversee quality on an ongoing basis, address the needs of the residents in a timely manner, and foster stronger community engagement, trust and cooperation.

Drawing on methodologies more commonly used in non-domestic retrofit projects, the engagement of professional contractors under close supervision is recommended for large-scale or technically challenging schemes. While this approach may incur higher upfront costs, it is justified by the improved standards of workmanship, greater accountability, and the ability to manage complex site logistics effectively.

A critical lesson from the Fishwick experience is the necessity of addressing underlying structural defects before the installation of new EWI systems. In the original project, many such defects were simply concealed rather than rectified, leading to further complications. Therefore, it is essential to allocate sufficient budget and demonstrate a willingness to undertake remedial works as a prerequisite to any retrofit intervention.

Given the potential for unforeseen challenges and additional costs, it is prudent to establish a contingency fund and conduct detailed pre-retrofit surveys for all properties involved. This ensures that risks are identified and managed proactively, reducing the likelihood of cost overruns or compromised outcomes.

Throughout the project, a strong duty of care should be maintained, prioritising the most appropriate solutions over those that are merely the least expensive. This may involve, for example, rewiring properties to safely accommodate new ventilation systems, thereby preventing future issues with condensation and mould.

Wherever possible, a whole-house approach should be adopted. At Fishwick, this meant upgrading windows along with EWI installation to prevent cold bridging and to avoid the risk of damaging the new insulation during future window replacements, thus voiding the EWI warranty.

Recommendations for future works:

- **Adopt a place-based approach.** This is the best way to ensure quality standards are maintained in complex projects. By embedding the delivery team in the community, you will foster a stronger community engagement, trust and cooperation.
- **Allocate budget and resources for remedial works** prior to EWI installation, addressing any existing structural defects.
- **Establish a contingency fund and conduct detailed pre-retrofit surveys** to anticipate and manage unforeseen costs and challenges.

- **Maintain a strong duty of care throughout the project**, prioritising the best long-term solutions for residents, even if these require additional investment.
- **Implement a whole house retrofit approach where feasible**, co-ordinating upgrades (such as window replacement) to maximise performance and prevent future issues.

Compliance standards and consumer protection

Throughout the Fishwick project, a strong emphasis was placed on compliance with funding scheme standards and the highest levels of consumer protection. To ensure independent quality assurance, the project encouraged third-party oversight, including regular, independent inspections by the EWI system manufacturer. This approach provided an additional layer of scrutiny to the works and helped reinforce confidence in the quality and durability of the installations. Using local contractors with a longstanding local reputation was also beneficial in building trust and ensuring that the project delivered quality outcomes.

A central focus of the project was safeguarding the interests of residents. Each householder was provided with a comprehensive good practice guidance package, which clearly outlined the warranties and guarantees associated with the works. This package was delivered to each resident by the RLO and explaining what steps to take if any issues arose, and the process for making claims under the relevant warranties or guarantees. By making this information accessible and straightforward, the project aimed to empower residents and ensure they were fully protected long after the works were completed.

One element that has developed significantly since the project started in 2020 is the widespread application of, and experience with the PAS2030 and PAS2035 standards for installation. These standards are now general requirements for government funded projects.

The National Energy Action approach at Fishwick has been focused on the approach more generally adopted for non-domestic retrofit, where professional companies are contracted and supervised to carry out specific works in a quality manner. In addition to this, we have followed the elements of the process set out in PAS2035 with the Fishwick project and taken additional measures to ensure the best levels of protection for the householders whose homes we have been working on. It is also clear that there are elements of the project work that fall outside of the scope of PAS2035 but are fundamental to the success of the rectification work.

There are two key factors to consider. Firstly, this was primarily a 'disaster recovery' project with the focus on removal and replacement of the failed EWI. This, allied with structural repairs required as a result of the failed EWI meant that the budget for additional measures had to be weighed against the desire to repair as many homes as possible with a finite budget. Secondly, many of the

houses were in a state of disrepair which limited, for example, safe access to lofts.

Recommendations for future works:

- **Engage professional contractors and utilise on-site supervision of quality standards.** This can ensure high standards of workmanship and accountability even on complex, large-scale projects.
- **Encourage third party oversight** such as the EWI manufacturer carrying out independent periodical inspections to the works.
- **Focus on consumer protection.** Residents should be left with a good practice guidance package that outlines the warranties and guarantees for the works, with detailed information on where to access help if anything goes wrong, and how to claim in that event.

Overall, National Energy Action's project approach at Fishwick prioritised trust, transparency, and respect for residents' needs and preferences. It recognised that successful retrofit is achieved not only through technical excellence but also through genuine partnership with the people whose homes are being improved.

Thank you for reading!

