

A Just Transition in London's Retrofits

May 2025

A report for the London Sustainable Development Commission, with research, engagement and authorship conducted by The Young Foundation



About the London Sustainable Development Commission (LSDC)

The LSDC was established in 2002 to provide independent advice to the Mayor of London on ways to make London a sustainable, world-class city. The Commission works to promote sustainable development, embed sustainability into London-wide strategies and help make sustainability a meaningful and understandable concept for all Londoners.

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About The Young Foundation

The Young Foundation is a not-for-profit organisation driving community research and social innovation. We bring communities, organisations and policymakers together to understand the issues people care about and support collective action to improve lives. We involve communities in research and innovate together to inspire positive change. We deliver distinctive initiatives and programmes to shape a fairer future. We also power the Institute for Community Studies.

For more information visit us at: www.youngfoundation.org

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Foreword



Over the past few years, the LSDC has paid particular attention to examining how policymakers can ensure that London's transition to becoming a net zero, resilient city is one that is both equitable and just. By that, we mean ensuring that all of London's communities benefit from this move to a greener, cleaner and healthier city; have the chance to shape and influence the transition taking place in their neighbourhoods; and also realise the opportunities for new employment and wider economic benefits that will arise as a result of this investment.

This new study, *A Just Transition in London's retrofits*, builds on the LSDC's *London's Just Transition Report*, published in 2023, and examines a foundational element of the journey to becoming a net zero city, which is how can we successfully improve the energy use in millions of homes across London, and at the same time ensure that we leave no one behind. This means not only engaging with communities on practical aspects of the rollout

of retrofit, but also taking into account the lived experiences of vulnerable or underrepresented groups – particularly relating to age, disability, ethnicity, gender or sex.

To help address these challenges, the LSDC and The Young Foundation have produced policy recommendations and a toolkit to help make London's retrofit journey more inclusive. This is based on 45 peer-to-peer interviews and three participatory workshops, engaging close to 100 Londoners, to get a nuanced understanding of their lived experiences. It is also informed by practitioners, community energy groups and policymakers who design and deliver retrofits.

This report comes at a critical time - not only because energy prices are once again increasing and the cost of living crisis is still acutely felt by many households across the city, but also because the government has pledged to allocate significant levels of funding, £13.2bn, over this Parliament to retrofit homes, with details to be set out later this year in their Warm Homes Plan. In addition, in February, the Mayor and London Councils established Warmer Homes London to help accelerate energy improvements for the most vulnerable residents in the capital.

At the same time, we've heard concerns from households - and Ministers - about the poor standard of some insulation installations that had previously been supported by government programmes, and the low take-up of measures such as heat pumps - especially in London.

There is, therefore, much to do over the coming months to help ensure that this future funding is effectively spent, and directed to those Londoners most in need.

We hope this report and toolkit will help start the process of ensuring that, at the outset of any retrofit programme, communities are fully engaged and consulted with. We also hope the differences from household to household are recognised so measures installed not only help reduce the impact of energy use on the environment, but also work to improve the lives of all Londoners.

Syed Ahmed, LSDC Commissioner and Chair of Community Energy London

Executive summary

London's journey to net zero is not just about cutting carbon emissions. It's about social justice, and ensuring no one is left behind: we need a 'just transition'.

In London we must upgrade ('retrofit') 2m homes by 2030 to become more energy-efficient. It's a considerable task, but getting this right will deliver huge benefits, making the city's homes more sustainable, while reducing energy bills and enhancing the comfort and health of occupants. And yet, although a high proportion of Londoners are motivated to act around climate change (89%), progress so far is slow.

The reasons for this are many. Households and communities have diverse needs, experiences and aspirations when it comes to acting and adapting to climate change; retrofit is about entering people's homes, their personal space, and therefore requires a relational approach; and, while Londoners show a willingness to act, they need support, recognition and resources to actually take that action. These factors are particularly significant for households that include those with protected characteristics.

Therefore, to boost the uptake of retrofit schemes, we need an approach that supports households' specific needs and circumstances. When retrofit is designed with people and communities, it becomes about wellbeing and local knowledge, rather than technical fixes. This transforms retrofit schemes into a social opportunity, building trust and resilience, and enabling residents to gain additional benefits through home adaptation.

The London Sustainability Development Commission (LSDC) commissioned this research to bridge the gap between motivation and uptake, exploring a more equitable approach to retrofit that draws on the expertise of professionals and is informed by those with lived experience. Its overarching aim is to

understand the barriers London residents, particularly those with protected characteristics, currently come up against in retrofit rollout and uptake.

The report sets out our research approach and findings, and offers practical recommendations and tools for those on the frontline of retrofit delivery.

Summary of recommendations

The report makes recommendations for those commissioning and delivering retrofit programmes to improve the uptake and customer experience for all Londoners and ensure no one is left behind. These seek to support meaningful engagement with people with protected characteristics in the design and delivery of retrofit schemes.

- 1. The UK government should ensure flexible, long-term funding to engage under-represented residents on retrofits**
- 2. The GLA, boroughs and Warmer Homes London should engage Londoners from all backgrounds in the design and delivery of retrofit programmes**
- 3. All parts of the retrofit sector need to communicate how retrofit work will impact on residents' homes and the wider community**
- 4. Delivery companies and skills providers should incorporate 'soft skills' in retrofit training**
- 5. Knowledge and best practice must be shared among stakeholders**
- 6. Residents' feedback should inform ongoing monitoring and evaluation**

For more detail on these recommendations, see page 9.

Building the evidence base

Our interim research findings, published in January 2025, identified multiple common challenges faced by households with protected characteristics. This included, but was not limited to, language barriers, disadvantages associated with access to knowledge and information, and practical challenges associated with retrofit adaptations. People with protected characteristics often experience a combination of these, alongside social-economic and place-based disadvantages, such as being on a low income, experiencing fuel poverty, and limited access to local services. Our interim report also noted that many energy schemes and programmes are designed on a one-size-fits-all model, with an insufficiently nuanced approach.

This report builds upon that earlier work, gathering and presenting additional evidence on how factors that might make households more vulnerable to energy insecurity, and providing insights into the current housing experiences of individuals with protected characteristics, with particular focus on age, disability, ethnicity, sex and gender. See pages 16-17).

This research was grounded in participatory action methodology, bringing Londoners and retrofit professionals together in collaboration as equal partners in exchange.

Challenges and opportunities along the retrofit journey

[Our journey to net zero](#) (The Young Foundation, 2024) underscored the need for a person-centred and place-based approach to net zero policy and delivery. Applied to transition planning, this approach responds to the complex journeys that individuals and households face when measures, such as retrofit, are introduced. It recognises that the journey will look different for different people.

For this research, we mapped the most significant barriers faced by Londoners with protected characteristics related to age, disability, ethnicity, and sex, along the retrofit journey. We identified five stages of the person-centred retrofit journey, and their specific challenges:

Stages	Challenges
Awareness	Lack of, or inaccessible, information. Low trust in information.
Accessibility	Affordability and limited agency over changes in the home. Lack of approachability or trust in providers or trades people
Acceptance	Inconvenience and disruption. Lack of trust. Uncertain ‘return’ on retrofit measures
Adoption	Navigating disruption. Lack of accountability. Reimagining or rebuilding habits
Adaptation	Financial, health and environment impacts. Barriers to living with home adaptation

We also identified several opportunities for support or innovation to overcome those barriers, based on the insights and experiences of the London residents who participated in our research (page 11).

The path ahead

Knowing what the barriers to inclusion are is only the first step in addressing them. Investing in their removal, by embedding residents’ lived experiences into the design and delivery of retrofit programmes, is the vital next step. This report is therefore accompanied by a practical toolkit, aimed at retrofit professionals, to support work with individuals with protected characteristics to design, test and refine existing retrofit schemes and interventions.

Overall, this report and accompanying toolkit seek to ensure that the housing adaptation London needs does not deepen existing inequalities. Done right, with meaningful engagement, this report shows a path towards a *just* transition in retrofits that instead creates fair and inclusive conditions for all.

Julie McLaren, Interim Director of Sustainability and Just Transition, The Young Foundation

Introduction

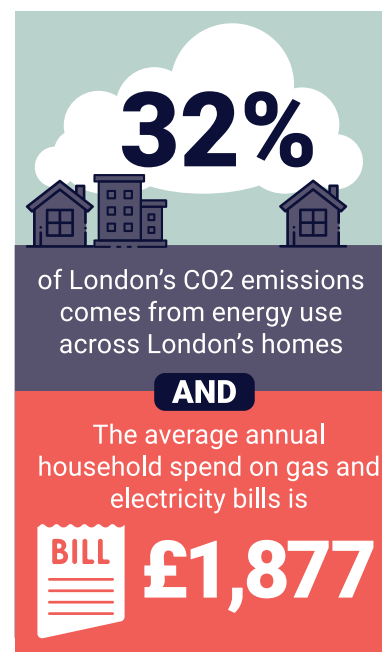
London's homes are incredibly energy inefficient. They take much more energy to heat and power than they should. To put the scale of work that is required in perspective, the city currently has a population of 9m, living in approximately 3.8m dwellings, of which 2m (52.6%) are expected to require retrofitting by 2030 (Element Energy). Energy use across London's homes accounts for 32% of the city's CO2 emissions ([published by GLA, 2025](#)) - and every household spends around £1,877 on gas and electricity bills every year (DESNZ Quarterly Energy Prices Table 2024, London average electricity bill £1049; London average gas bill £828).

It is crucial to recognise that retrofit changes the energy performance of the home and is likely to affect a range of household routines and practices, changing the way people's homes look, feel and operate. This will mean experiences of home retrofit will differ for individuals, households, and communities with different characteristics, including those with protected characteristics.

In 2023, research found that London residents and landlords are retrofitting their homes 10 times slower than needed for the city to hit net zero carbon emissions by 2030 (Polanski, 2023). Yet, at the same time, some 89% of Londoners want to see stronger climate action (Andre et al, 2024). This suggests a disconnect between Londoners wanting to see change and taking action to deliver it.

This research, commissioned by the London Sustainable Development Commission (LSDC), aims to begin bridging this gap, exploring person-centred solutions that draw from the expertise of both retrofit professionals and individuals with lived experience of protected characteristics from London boroughs with different place and population profiles. The research explores how protected characteristics, intersectional identities, and experiences of different communities across London affect barriers to retrofit rollout, uptake, and experience, with particular focus on age, disability, ethnicity and sex.

Our research is grounded in a participatory action research approach, bringing Londoners and retrofit professionals together in collaboration as equal partners in change. This report builds on insights shared in our [interim findings report](#) (The Young Foundation, 2025) delivered mid-way through the project, and brings forward insights and opportunities to a just transition in retrofit for Londoners.



Our recommendations

The recommendations below aim to support all those responsible for funding, designing and delivering retrofit programmes, so these initiatives leave no one behind. The recommendations are designed to strengthen engagement with residents, especially marginalised or under-represented households, in order to boost awareness and uptake, and improve the customer experience for all. They are based on the evidence presented in this report, including our primary research interviewing diverse Londoners as well as sector experts.

- 1. The UK government should ensure flexible, long-term funding to engage under-represented residents on retrofits:** Successful retrofit programmes depend not only on physical home upgrades, they must also win the hearts and minds of residents so people want to open their doors to the opportunity. This makes delivery more efficient by boosting uptake and reducing drop-out rates, as well as making it more accessible to all.

The government's recent retrofit programmes have provided longer-term funding in response to calls by the retrofit sector and local authorities, which is a welcome step. Current retrofit programmes such as *Warm Homes: Local* make some allowance for community engagement, but it must be funded from 'Administration & Ancillary' costs, which are capped at 15% and must also pay for staffing and other administrative costs. Community engagement could be more effective if this 15% cap was made more flexible.

To help secure the success of any future retrofit policies, the UK government's forthcoming Warm Homes Plan must ensure it includes funding for community engagement programmes - something that has been missing to date from the majority of energy efficiency retrofit schemes rolled out. A core part of this engagement funding should be specific resource allocated to engage under-represented residents on retrofit.

- 2. The GLA, boroughs and Warmer Homes London should engage Londoners from all backgrounds in the design and delivery of retrofit programmes.** For community engagement to be effective, relevant authorities should consult with the community for each area-wide funded programme. They should meaningfully explore the needs, concerns and aspirations of underrepresented groups, and adjust programmes accordingly, recognising that designing for specific needs (such as factoring in residents' disabilities) will enhance the overall experience for all residents. Relevant authorities should also put community group representatives on the governance boards of area programmes, and establish systems to gather ongoing resident feedback to ensure successful roll-out.

Definition of retrofit

Home retrofit is the process of improving homes and buildings to make them more energy efficient, requiring less energy to light, power, heat, cool, occupy, and cook within the home. This makes them healthier, cheaper to run, contributes to net zero goals, and makes them more resilient to climate change impacts such as overheating. Retrofit includes a wide range of measures, which might include insulation, double-glazing, heat pumps or solar panels.

'Your facade is the best, the most beautiful I've seen

Your opulent design makes the whole street look supreme

*But you know, with your coal burning fire, your oil burning lamps
You're choking the planet and me along with it!*

*But we can change your outlook,
Sign you up to a new look*

With discreet solar panels to give you 'cool' fuel

A generator back-up when the sun is a little cool

Energy-saving bulbs to light up the mews

And sustainable wood for your patio groove

So no more choking the planet and me along with it!

**Written by Lorna Bartley,
Peer Researcher
from Haringey**

- 3. All parts of the retrofit sector need to communicate how retrofit work will impact on residents' homes and the wider community.** The recommended approach is detailed further in our Toolkit, and involves ongoing communication to take residents through the 'retrofit journey'. This includes sharing the full story at the beginning to avoid 'drop-off' later on; communicating the co-benefits for households – beyond the environmental ones; making information accessible to people with a range of needs; reflecting London's diversity in communications materials; and sharing information through trusted and familiar channels, and meeting people where they are at.
- 4. Delivery companies and skills providers should incorporate soft skills in retrofit training** with support from Warmer Homes London. A number of initiatives are underway to help address the lack of skilled retrofit workers in London. However, in addition to training people in technical skills, it is also important to provide them with 'soft skills', such as communication, sensitivity and collaboration. These skills enhance the quality of work and improve the experience for residents. These good experiences can spread by word of mouth, leading to higher uptake and more successful roll-out.
- 5. Knowledge and best practice must be shared among stakeholders.** In order to achieve London's retrofit goals, best practice must be shared across all levels of government, delivery bodies, and stakeholders, such as community energy groups. This includes explainers, real-world examples, and best practice that reflects the lived experiences of the communities that are most marginalised, or at risk of being left behind in this transition.
- 6. Residents' feedback should inform ongoing monitoring and evaluation.** London's delivery of recent retrofit programmes, such as the Warm Homes: Social Housing Fund (formerly the Social Housing Decarbonisation Fund), include monitoring and evaluation of household satisfaction as well as energy performance improvements. This should be adopted and expanded across all retrofit programmes. Post-occupancy evaluations of retrofits should capture the social, financial, health and wellbeing outcomes for households, particularly among marginalised residents to understand how retrofits have made them more resilient. This is crucial as London embarks on a programme of retrofits that will take many years, and must therefore continually learn and adapt to be successful, while factoring in 'future shocks' such as energy price rises and excess heat caused by climate change.

Innovation opportunities

The retrofit sector has many stakeholders who, through this research, felt they may benefit from thinking more broadly about their role in this sector and identifying opportunities to join up solutions for a just transition.

For example:

- 1.** Relevant authorities should carry out integrated home assessments in order to provide an easier and more joined-up service for households. This could create healthier homes, by identifying retrofit measures that integrate residents' health needs. For example, home assessments for retrofit measures could be combined with health and disability home assessments carried out by the Department for Work and Pensions, local authorities or NHS. They could also be combined with local authority assessments of health and safety in privately rented homes, which mandate action by the landlord as part of their licensing requirements.
- 2.** Institutional landlords, such as student accommodation providers, should transparently bill residents for energy and water. This is especially relevant for young people, who may pay 'all in' for their accommodation. This reduces their knowledge and agency over resource use, limiting their ability to participate in pro-environmental behaviour. There is an opportunity to advocate for greater transparency in bills as a requirement for special landlord licences required for HMOs.
- 3.** Retrofit funders should provide micro-grants or loans for small measures after retrofit implementation, such as redecoration or 'snagging'. This can help residents adapt to the changes. It would also help people with limited mobility or long-term illness, who might need extra home adjustments to make the newly retrofitted home accessible for them.

What we know

There is a substantial evidence base on social justice and social equity in housing, including energy, fuel and warmth (see suggested bibliography in Appendix 2). Most of this is focused on individuals, households or communities that are most vulnerable to energy poverty or insecurity, noting a reduction in energy use due to scarcity or cost, which has a negative impact on people's mental and physical health and wellbeing.

Research has found that protected characteristics, household composition, housing tenure and socio-economic status – and the intersections of these – can increase vulnerability to energy insecurity. Existing evidence from [Our journey to net zero](#), a report from The Young Foundation (2024), highlights a range of characteristics that might make households more vulnerable to energy poverty and insecurity.

It is important to note that many households may face a combination of these characteristics, alongside place-based disadvantages - such as being disconnected from neighbourhoods, having low access to services, or living in a borough with high levels of fuel poverty. Such factors may prevent households engaging in retrofit. At the same time, fluctuating gas and electricity prices mean a large number of additional households are likely to move into fuel poverty soon.

Our initial literature and scoping review found that evidence on individuals with specific protected characteristics' journey to low-carbon living was extremely limited. However, recurrent studies find a principal problem is that energy schemes, retrofit programmes, and home retrofit policies are often designed around the 'average' consumer – and one who can pay or part-pay - which misses adaptation necessary for households with protected characteristics (see Appendix 2 for suggested reading). Where there are individual studies, these are very specific, often limited

to one geographic area that is incomparable to London, or focused on vulnerabilities outside of these characteristics (for example, focussing on tenure to examine barriers and opportunities for home retrofit in social housing).

A tailored approach

The Mayor of London defines [fuel poverty](#) as the condition where a household's income fails to meet the cost of heating and powering the home adequately (The Mayor of London, 2018).

Other factors also affect how people experience retrofit, including household type (listed buildings, terraced homes), household tenure (private renters, social housing occupants, houses with multiple occupancies) and home dependency (caring responsibilities, mobility adaptation measures).

The stakes of realising a just transition in retrofit are high. Done well, retrofitting homes could help address these existing inequalities, creating a low-carbon future that leaves no one behind.

Understanding protected characteristics

This project seeks to understand how protected characteristics – with a particular focus on age, disability, ethnicity and sex or gender - affect retrofit rollout, uptake and experience. Protected characteristics are [recognised by the Equality Act 2010](#) as age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex, sexual orientation (Equality and Human Rights Commission) – and we recognise that multiple, intersecting factors are experienced differently by different communities across London – and will connect with people's retrofit journey in different ways.

The context of home retrofit

For nearly two decades, consecutive governments have created a range of policies, aimed at supporting the development of the retrofit sector. In the early 2010s, policy focused on loans and private sector obligations schemes, such as the [Energy Company Obligation](#) (HM Government) and the [Green Deal](#) (HM Government). However, these schemes had a limited impact on sector growth.

By 2016, the Department for Business, Energy and Industrial Strategy and the Department for Communities and Local Government commissioned an [independent review of consumer advice and protection on energy efficiency and renewable energy](#) (Bonfield, 2016). The resulting report recommended a different approach, with measures to increase voluntary uptake of housing adaptation measures, including the establishment of a quality mark for adaptation, underpinned by a Consumer Charter and codes of conduct and practice (2016). The report spoke to the importance of trustworthy, impartial advice and information, and envisioned a strong, collaborative partnership among the public and private sector and residents to deliver high-quality adaptation.

Despite the clear-sightedness of this review, nearly 10 years later we are yet to see full implementation of its recommendations. On the contrary, a series of scandals have unfolded, which point to a lack of quality assurance in housing adaptation, including changing guidance on [spray foam insulation](#) (Rankl, 2024) and the recent exposure of [serious systemic issues in housing insulation under government schemes](#) (Conway and Carr, 2025). Gaps remain in ensuring resident experiences of the end-to-end retrofit journey are positive and achieve consistent outcomes.

London councils have recognised these gaps and have looked to address them through a range of net zero and climate resilience policy initiatives, aimed at closing the gap between policy and delivery. For example the London Environment Directors' Network (LEDNet) and the Transport and Environment Committee (TEC) have been working together on a joint programme since 2019, spanning seven themes for cross-borough collaboration:

- **Retrofitting buildings.**
- **Increasing employment in the green economy.**
- **Ramping up local renewable power.**
- **Ensuring new developments have a minimal carbon footprint.**
- **Advancing low carbon transport.**
- **Working with residents and businesses to reduce consumption-based emissions.**
- **Developing the resilience London needs to cope with the extreme weather events.**

Another example is London Councils implementation plan for their climate programme. Which has the overarching ambition to create a more secure path to delivering a just transition. With one the key objectives that each Borough develop a just transition action plan, similar to Newham Council, with a section devoted to inclusive retrofit.

Another example of retrofit action undertaken by the 32 boroughs in London, is their agreed goal to achieve an average energy performance certificate (EPC) of B by 2030 across London's 3.7m homes, at an estimated cost of £49bn. This represents a substantial improvement in home energy performance from the current median of EPC rating B, requiring differing levels of adaptation. To support these targets, the GLA and London Councils have developed range of policy and schemes.

Some examples include:

- A £10m investment in a new [Warmer Homes London](#) scheme, to establish a hub with the aim of delivering retrofits at pace (The Mayor of London and London Councils, 2025).
- The Mayor's [Accelerated Green Pathway \(AGP\)](#), which sets out the GLA's ambitious targets and gives examples of the potential policies and actions to support their delivery (The Mayor of London, 2022)
- [The GLA's Warmer Homes](#) retrofit programme and The Warmer Homes Advice Service, offer a more streamlined service to households (The Mayor of London, 2024).

Central government schemes' funding do have an impact on retrofit delivery in London. This was reflected in [A retrofit delivery model for London](#) (Arup, 2024), which found funding secured by London represented 'under half of the estimated cost of £628m, the on-target rate for retrofitting in-scope social housing properties in London in 2023'. The impact of this reduced funding was that London boroughs found it harder to develop the sector as planned, impacting delivery.

This barrier has been somewhat addressed in Warm Homes: Social Housing Fund Wave 3 with a change to the bidding process from earlier waves, moving away from a competitive tendering process (Department for Energy Security and Net Zero, 2024). Instead, to secure funding, tenders must now meet key minimum requirements. This gives London a clearer pathway to securing crucial long-term government funding to help drive retrofit in the city.

However, guidance for the fund states that if the scheme is oversubscribed, applications may not receive the amount of funding they request, requiring London stakeholders to monitor the amount of funding they receive and the impact this has on their ability to deliver their retrofit ambitions.

Current government retrofit funds make limited allowances for community engagement. In programmes such as Warm Homes: Local, it must be funded from 'Administration & Ancillary' costs, which are capped at 15% of the grant and must also pay for staffing and other administrative costs. Although some local authorities have successfully navigated this, for example by combining with other long-term maintenance funds and existing resident liaison schemes, other councils have found this cap to be limiting. Although London delivery of the Warm Homes: Social Housing Fund will conduct post-occupancy evaluations to survey customer satisfaction, this is not the case in all retrofit programmes.

The government's forthcoming Warm Homes Plan, which is expected to set out an approach to investing £13.2 billion to tackle fuel poverty, is an opportunity to provide long-term, flexible funding for community engagement. This would support programme design and delivery that works better for all.



Intersectionality and protected characteristics

While the retrofit experiences of individuals are not uniform, looking at people with shared protected characteristics gives greater understanding of how, broadly, those identifying with specific groups are experiencing the transition to net zero. It also helps see how these experiences might intersect with other known vulnerabilities, such as tenure, caring responsibilities, levels of digital literacy, and beyond (see [The Young Foundation, 2024](#); [Ipsos, 2025](#); [Climate Change Committee, 2025](#)).

Existing evidence

We have summarised below the existing evidence from our desktop research, highlighting a range of characteristics that might make households more vulnerable to energy poverty and insecurity.

Barriers	Potential policy interventions
'One size fits all' approach to retrofit eligibility criteria applied, with insufficiently nuanced approach.	Interventions that actively seek vulnerable groups rather than expecting households to come forward.
Overall public interest in retrofit measures is low, even when support schemes are in place. Distrust of retrofit due to lack of information on the returns or benefits and/or previous injustice or experience of poor home improvements.	Greater understanding of barriers to uptake and how these might be experienced by distinct groups and places. Normalise retrofit through area/community level proliferation, such as the use of 'show homes'.
Only a minority of homeowners can afford retrofit measures (upfront, and ongoing/changing running costs) without a loan.	Removing upfront costs, providing a range of financial packages for support.
Vulnerable households face barriers including the burden of proof and paperwork, physical barriers, concerns around physical disruption and disruption to the energy supply during retrofit installations, concerns or scepticism around recent technologies, and lack of aftercare from providers or Councils.	Area/community-based approaches to overcome social and cultural barriers to uptake of support schemes should be better suited to the needs of the groups targeted, underpinned by a better understanding of those groups.
Spatial components can impact uptake, such as the distribution of rented vs privately owned homes.	Ensuring mixed tenure policies for areas with multiple types of housing, so scaled approaches can be taken. Landlord engagement by local authorities is essential.
People with disabilities may struggle to engage, due to the disruption cause by retrofit process, inflexibility of retrofit timescales and measures, or inadequate solutions. Also due to a lack of influence on decision-making.	Greater engagement with communities to ensure retrofit policies are accessible to them.
Inflexible or high household costs associated with caring responsibilities or health conditions.	Greater engagement with communities to ensure retrofit policies are accessible to them and do not disrupt caring or health routines.
Lack of digital skills or confidence.	Digital support for communities, including retrofit support teams.
Digital exclusion may compound the lack of access to trusted information.	Training on the effectiveness of retrofit measures and support schemes for digital inclusion for residents, alongside retrofit rollout.
Household compositions, including households with complex dependencies.	Financial and social support to help with disruptions to the home.

In our [interim report](#) (The Young Foundation, 2025) we outlined our approach to engaging people with the protected characteristics that this programme focuses on. In this final report, we provide insight into the current challenges faced by these groups in their homes – and how a just transition in retrofit provides an opportunity to address these challenges.

The current housing experience of individuals with protected characteristics

This project focused on the experience of housing adaptation of individuals with protected characteristics - particularly younger and older people, those with disabilities including mental health and long-term illness, minoritised ethnic and cultural identities, and women and non-binary residents.

To understand the experiences of individuals belonging to one or more of these groups in housing adaptation, it's essential to consider their current housing conditions and the challenges that they already face. These challenges, summarised below, point to a clear need to take a tailored approach, recognising that these people are already a vulnerable group in housing, and that there is risk that housing adaptation could deepen these vulnerabilities.

Age

Across the UK, one in six young adults (aged 18 to 24) are living in poor-quality housing (Resolution Foundation, 2023) defined as homes that are not in a good state of repair, where heating, electricals and plumbing are not in good working order, and where damp or mould is present. This is felt most acutely by private renters, who are more likely than any other tenure to live in a household that does not meet the Decent Homes Standards, live in a home with a HHSRS Category 1 Hazard, and more likely to live in a home with damp ([Ministry of Housing, Communities and Local Government, 2024](#)). With just over 1m private renters in [London alone](#), and young adults being the most prevalent in this tenure (Department for Levelling Up, Housing and Communities, 2023), this issue demands urgent attention from policymakers, landlords, and community-led initiatives. Addressing poor-quality

housing isn't just about improving living conditions, it's about ensuring people can look forward to a healthier, fairer, and more sustainable future.

Additionally, [older people are at a specific risk](#) of health harm from poor-quality housing, including winter deaths caused by living in cold homes, or accidents and falls caused by hazards. Across England, 30% of non-decent homes are headed by someone aged 65 or older, and the vast majority (78%) of these are owner-occupied (Independent Age, 2024). Unlike renters, who rely on landlord decisions and timelines, many older homeowners have the agency to adopt home retrofit measures. Their challenge is often a lack of financial [means](#) to make necessary repairs and improvements (Age UK, 2023). As the number of older people continues to grow, ensuring safe, warm, and accessible housing is critical for preventing strain on health and social care services, and therefore pivotal in creating a more equitable and sustainable future.

Disability and difference

Disabled people are too often frustrated by the [housing system](#), faced with a significant shortage of accessible homes, and delays and bureaucracy in installing home adaptations (The Equality and Human Rights Commission, 2018). While the Disability Facilities Grant exists to help people adapt their homes, delays in administration are leaving countless individuals in homes that fail to [meet basic accessibility needs](#), exacerbating health risks, financial hardship and emotional distress (The Big Issue, 2024). Housing across all tenures – private renting, social housing, and homeownership – is [failing disabled people](#) (The Levelling Up, Housing and Communities Committee, 2024):

- **one in three disabled private renters live in unsuitable accommodation.**
- **one in five disabled people in social housing face the same issue.**
- **Even homeownership doesn't guarantee accessibility – one in seven disabled homeowners live in homes that don't meet their needs.**

With only 7% of homes in the UK meeting minimum accessibility standards, this is not just an issue for today – it's a long-term, structural crisis that will

worsen as demand grows. Without strong action, disabled people will continue to be left behind, unable to access safe and suitable homes. Home retrofit is not just about bricks and mortar, it's about realising the opportunity of a just transition to prioritise accessibility to promote basic rights and dignity.

Ethnicity

More than four in 10 households (44.9%) from [minority ethnic backgrounds experience a housing problem](#), compared with 28.6% of people of white ethnicity (The Health Foundation, 2024). These households are twice as likely to face multiple housing problems, compounding the challenges they experience.

Furthermore, while we recognise that the experience of Black, Asian and minoritised households is not homogenous, and varies between boroughs, these communities generally – particularly in London – are [more than three times as likely to live in overcrowded households](#) compared to White British households (Department for Levelling Up, Housing and Communities, 2023). This significantly increases the complexity of decision-making, and exacerbates disruption, when adopting home retrofit measures. There is a greater presence of Black, Asian and ethnic minority households in the private and socially rented sector too, and these groups are more likely to be housed in the low-quality end of the private rented sector, often living in 'Houses in Multiple Occupancy' (HMOs) (Bouzarovski et al, 2022) where insecurity and unsafe conditions are most common.

Where these unsafe conditions are being addressed, they are not being addressed [equally](#):

- **A third of non-decent homes occupied by White people have been improved.**
- **A quarter of non-decent homes lived in by Asian people have been improved.**
- **Just one fifth of non-decent homes occupied by Black households have been improved (Ministry of Housing, Communities and Local Government, 2024).**

This creates a cycle of vulnerability where many ethnically minoritised households have little or no choice but to endure unhealthy and unsafe living conditions. Housing campaigner Kwajo Tweneboa highlighted their concerns (House of Commons, 2023) around damp and mould in social housing following [the death of Awaab Ishak](#) in 2022 caused by the conditions he was living in, and whose parents' concerns were ignored (Weaver, 2022). This is not just an unfortunate one-off case – but reflects a systemic issue where minority ethnic communities are at greater risk. Safe, secure and high-quality housing should not be a privilege, it should be a right for everyone regardless of ethnicity.

Sex and gender

Women's housing experiences differ from men's, with [single women and lone-parent households disproportionately affected](#) by poor-quality, unaffordable and insecure housing (Women's Budget Group, 2022). Lower incomes, caring responsibilities, and limited housing options leave many women struggling to access safe and stable homes. On the other hand, local authority renters across England show a gender disparity that affects men more than women, with 14% of men living [in non-decent homes compared to 9% of women](#) (Ministry of Housing, Communities and Local Government, 2024). Studies suggest that cis-women, non-binary people and trans people experience [worse health outcomes](#) from damp, mould and overcrowding, particularly those who spend more time at home due to caring responsibilities (Vasquez-Vera et al, 2022). Despite this, home retrofit policies in the UK rarely address gendered housing inequality. Without targeted interventions, these inequalities will be exacerbated, and inequalities will be widened.

The opportunity: a just transition in retrofit

A just transition in retrofit is essential to ensure that green housing adaptation does not deepen existing inequalities, but instead creates fair, inclusive, and accessible conditions for all. Without targeted intervention, groups already facing housing challenges – young and older people, disabled people, underrepresented ethnic communities, and non-male gender identities – risk being further disadvantaged by retrofit policies that fail to account for their specific needs.

For young adults, who are overrepresented in poor-quality private rentals, and older people, many of whom own non-decent homes but lack financial means to retrofit, a just transition must provide accessible funding, incentives, and support. Disabled people, who already face a severe shortage of accessible housing, must be prioritised in retrofit efforts, to ensure that adaptations address both energy efficiency and accessibility.

Ethnic minority households, particularly Black and Asian communities, are more likely to live in overcrowded and unsafe housing, often in the private or social rented sector. With fewer improvements made in non-decent homes occupied by these groups, retrofit policies must be proactively designed to address racial disparities in housing quality and access to funding. For example, Hackney Council used carbon offset funding from the London Legacy Development Corporation to add solar panels to fixed accommodation on traveller sites. For women, non-binary and trans people, who experience greater housing insecurity and worse health outcomes from poor conditions, a just transition must ensure that gender-specific needs are considered, including support for single women, lone-parent households and individuals with caring responsibilities.

A just transition in retrofit means ensuring that housing improvements do not reinforce existing inequalities, but instead create safe, healthy and sustainable homes for those who need them.



What we did

Our approach to this research was to bring Londoners and retrofit professionals together in collaboration, as equal partners in change. Our research delivery programme was designed around a series of relationship-building, insight-gathering and evidence-sharing activities, on which we hoped trust, understanding and impact could be built and realised.

Timeframe	Participatory research activity	Purpose
June and July 2024	Building awareness and engagement in the project	Engage a diversity of voices and lived experiences in this project
August 2024	Selecting and training the peer research cohort	Build relationships, establish ways of working and provide support to enable participation
August 2024	Engagement of retrofit professionals through semi-structured interviews	Engage the lived experiences of retrofit professionals to ensure this project is grounded in the reality of the retrofit landscape
September and October 2024	Engagement of Londoners in four target boroughs through peer interviews	Capture insights and experiences of how London homes are currently being experienced
October and November 2024	Engagement of wider Londoners through resident workshops	Capture challenges and hopes for the future of home retrofit
November and December 2024	Collaborative analysis	Ensure a diversity of perspectives in analysis – respectfully challenging assumptions



One of our peer researchers, Jennifer Ukachukwu Amarachi from Barking and Dagenham, shares her reflections on the peer interview process:



This journey as a peer researcher has reinforced to me the importance of listening to those most affected by policy decisions and recognising the interconnected challenges they face. Moving forward, I urge companies, policymakers, and actors in the retrofit sector to take a more active role in addressing these barriers. By building capacity within their organisations, reducing fragmentation, and fostering collaboration, they can create a system that is both inclusive and effective.

Through these changes, we can bridge the gap between ambition and reality, ensuring that retrofitting becomes not just a lofty goal but a practical and accessible solution for all.

Alison Hendry, a peer researcher from Haringey, shares her reflections on the resident workshops:



Bringing people into the space allowed them to collaborate to reach potential solutions and let them reside with their fellow peers. It was evident that, although the peer interviews allowed for individual in-depth conversations, the workshops permitted The Young Foundation to engage with the local community. Additionally, they allowed me to bring back a sense of the human element into the process of gathering data... This reinforces how people in the community are the centre of this research and that they are the people we need to reach and make retrofitting accessible. The community's role in the research is crucial and it was encouraging to see their active participation in the workshops.

Further reflections from Jennifer and Alison can be found in the appendix to this report, along with a detailed breakdown of our methodology.

What we found

How London homes are currently being experienced

Firstly, it is important to understand the conditions that individuals and households with protected characteristics are experiencing their homes. We had no expectation that the research participants would have prior knowledge about climate change, net zero, energy efficiency, or home retrofit, and we invited participants to share their current living conditions, needs and priorities with peer interviewers and through a household collage in resident workshop one.



So, I live in my home with my partner. It's a home that we bought at the beginning of the year, it's an affordable housing step and we're very lucky to be able to buy. But I did spend every last pound and penny in my bank account, as one does. Now we're in a situation where every time that I get a letter through the post, I look at it and I see pound signs, you know. I'm feeling a little bit stretched. Because this is a building, I have to pay a service charge, and a council tax that is higher than I anticipated. Then, I need to pay energy to a supplier, and the heating comes from something called heating interface. I wasn't familiar with this, but the way I understand it is kind of like a thing that sends the heat through everyone's radiators, kind of like shared between all the flats and this is how we get hot water and stuff. I moved into the flat in July, and I still haven't gotten a bill from the fitting interface unit – and I'm just dreading it, because it's, you know, the uncertainty

Anonymous workshop participant

This section presents a selection of household profiles, as described verbally in peer interviews, or through written form or collage in the workshops. They have not been selected to represent the overall sample of participants in this project, but do reflect how Londoners with protected characteristics relating to age, disability, ethnicity and sex are currently experiencing their homes, illustrating their routines, coping mechanisms and household dynamics:



I rent from [the local council] ...the house is a 1900s house, which means it's very old, so there's no insulation, and what I was told [is] because of the brick and everything else – it cannot be insulated. So, my energy bills are high, I'm considered as one of the high users – according to Octopus Energy. It's not even too hot in the summer, the attic was converted into a bedroom, so the attic is the only place that's mega hot in summer. But the house is cold, takes a lot of heating ... the only place I'd move is probably into one of those sheltered accommodation type things so, unless somebody can come up with some sort of magic thing where they can work out as how to make it warmer - there must be something.

Anonymous workshop participant



LOVO HOUSE

Household name



Household portrait (please draw)

Age: 21
 Gender: FEMALE
 Background: BLACK AFRICAN
 Health: GOOD
 Tenure: RENTAL (HOUSING ASSOCIATION)
 Employment status: PART TIME
 Superpower: USE OF INTERNET, VERY CRAFTY/ RESOURCEFUL
 Resistance: Having a limited income source
 Energy bills: £2000+
 Source of income: UNIVERSAL CREDIT

* Lived in for 15 years
 About your home & No community.
 * 3 bedroom house - very overcrowded (8 people)
 * 2 floors
 * Poor insulation - very cold + damp
 * People working from home
 * Use of a lot of electronic devices
 * High energy bills - on gas and electric metres
 * In a very well connected area (transport, entertainment + food)
 * A lot of wear and tear, not being fixed.

Anonymous workshop participant



My home is a house, I think it's quite old, but we've done some like renovations and all those, like the garden we've renovated so that we've basically made it bigger in comparison to what it was like when we first moved in[...] they [my parents] are currently working towards owning it, so you know when you get a mortgage and you're paying it off, like that... as of right now, there's five of us... my mum and my dad, they're the main decision-makers, but mostly my mum... I stay in the loft, so I experience everything like ten times more – so when it's cold, it's really cold, and when it's warm, it's really warm.

Anonymous workshop participant



Thankfully, my house is well insulated, so it's feeling still quite warm. So I don't have to turn it [the heating] on very much, and it feels like it keeps the heat. But to get ventilation into the house, I have to open up these big windows, it's like a window that goes all the way up. For instance, I cook a lot, and if I want to ventilate, I have to open up these big windows – and I lose all of my heat right out the window. I feel like I'm closed off from any sort of oxygen – the outside world, you know. And it's a north-facing flat, and that means I don't get a lot of natural light. So that means I have to turn on my lights a lot if I want to feel cheerful.

Anonymous workshop participant



HOME SWEET HOME

Household name

Age: 69
Gender: M
Background: WHITE / BRISH
Health: PRETTY GOOD (NEARLY!)
Tenure: HOMEOWNER
Employment status: RETIRED
Superpower: GOOD TECHNICAL KNOWLEDGE OF BUILDINGS + GOOD DIY SKILLS
Resistance: MONEY
Energy bills: £1800/YR
Source of income: PENSION + SAVINGS

Household portrait (please draw)

About your home

3 BED, 1890'S VICTORIAN / BRICK BUILT SINGLE SKIN SLATE ROOF. PARTLY REBUILT REAR EXTENSION WITH KITCHEN / BEDROOM + BATH UPSTAIRS / DOWNSTAIRS INC GAS CENTRAL HEATING / HOT WATER STORAGE CYLINDER HIGH EFFICIENCY BOILER WITH CLIMATE CONTROL. WATER + ELECTRICITY REWIRED 30YRS AGO. LOFT UNCONVERTED BUT HEAVILY INSULATED / DOUBLE GLAZING TIMBER WINDOWS / DRAFT PROOFING. NEEDS GROUND FLOOR SHOWER ROOM (FOR OLD AGE) UNDER FLOOR INSULATION / GROUND FLOOR / ROOF REBUILT (SEE)

Anonymous workshop participant



'I don't have a prepayment fee, but[...] I think someone came for an energy check from the Housing Association. They gave all these suggestions, and they said turn your radiator thermostat to here and leave it. I just haven't used it, but with me I've got a long-term illness, I've got arthritis and all these other stuff going on. I've got my hot water bottle on my back, so I don't need to turn my heating on. And my kids – they all want a hot water bottle as well – they copy me... but, it's the electricity and the showering – showering everyday teenagers, day and night – they just want to shower. I have a cat, she doesn't cost me nothing, just her litter and food, she's just a baby, I don't mind spending on her – she gives me so much love, she's my support.'

Anonymous workshop participant

The experiences and needs of individuals and households with protected characteristics are varied but are often more complex than those of the average consumer, from which retrofit programmes have been developed. The 'average' consumer typically has more choices for home retrofit available to them – and more agency to implement their preferred changes.

For example, the majority of homeowners who are planning retrofit works (81%) are using personal savings to finance them. This demonstrates a significant national demand for energy-efficiency from the able-to-pay market in the UK (MCS Foundation, 2024).

However, if we consider how this will be experienced by individuals with protected characteristics relating to age, many of the older people (aged 65 or older) who live in 30% of non-

decent homes across England (78% of which are owner-occupied) have seen their savings depleted by low fixed incomes and high energy bills. Headlines tell us '[millions of older people are struggling to keep their heads above water](#)' (Age UK, 2023). This may make them more vulnerable to being left behind in the transition to net zero.

A just transition in retrofit means tackling net zero emissions goals while reducing inequality, improving housing conditions, and protecting vulnerable communities. It recognises these existing inequalities, and responds to them, to ensure that decarbonisation doesn't deepen injustices, but instead creates a fairer, healthier, and more resilient society.

Person-centred transition planning

[Our journey to net zero](#) (The Young Foundation, 2024) underscores the need for a person-centred and place-based approach to policy, ensuring a just transition that accounts for the unique risks and opportunities faced by different communities.

Person-centred transition planning responds to the complex journeys that individuals and households face when net zero measures, such as domestic retrofit, are introduced. Each stage needs to be accounted for, recognising that this journey will look different for different people.

Applying a person-centred and place-sensitive framework to retrofit brings together Londoners and key retrofit stakeholders – including policymakers, delivery partners, and borough retrofit leads – to

examine how the transition affects Londoners with protected characteristics related to age, disability, ethnicity, and sex.

An effective approach relies on robust evidence of the needs of households and communities. This means engaging and listening to residents at all stages of the retrofit journey, and seeking their input to decision-making. Opportunities to do this include consulting communities on programme design, residents sitting on programme boards, and seeking customer feedback from people whose homes have been retrofitted. In addition to making retrofits more sensitive to a range of needs, this person-centred approach can make funding programmes more effective by creating a better experience for all, while helping to built trust in the process.

The person-centred retrofit journey (source: The Young Foundation, 2025)



What we found about the retrofit journey

The section below outlines research findings identifying the biggest barriers faced by individuals whose identities are reflective of those this project seeks to understand, mapped against the retrofit journey in person-centred transition planning.

This section also presents opportunities for support or innovation to overcome the identified barriers, based on insights and

experiences shared by London's residents – alongside The Young Foundation's toolkit to support those delivering retrofit.

Finally, we present our recommendations, with a call to action for policymakers on how all of London's residents can be supported to engage in a just transition in retrofits.

The five stages of households' retrofit journey

The retrofit journey in person-centred transition planning	Key challenges faced at this stage of the journey
1. Awareness	i. Lack of information ii. Inaccessible information iii. Lack of trust in sources of information iv. The perception that information is not relevant
2. Accessibility	i. Affordability i. Limited agency over changes to the home ii. Lack of approachability in retrofit measures
3. Acceptance	i. Inconvenience and disruption ii. Lack of trust iii. The benefits 'return' on retrofit measures iv. Complex decision-making
4. Adoption	i. Navigating disruption ii. Lack of accountability iii. Reimagining homes and building habits
5. Adaptation	i. Financial, health and environmental impacts of retrofit measures ii. Barriers to living with home adaptation

1. Awareness

In this stage, households find out about potential green adaptations to the home. This might include learning through social interactions or finding information another way. It is the entry point to the housing adaptation journey, and therefore crucial to get right.

i. Lack of information

Lack of information is the most important barrier in this stage, and is also the most frequently cited barrier overall. It is therefore the most crucial barrier to overcome, as it could severely limit the funnel of people who proceed through the journey if not addressed.

Overall, participants often said there isn't enough information 'out there' about home adaptations, ranging from smaller to larger changes. This perception is stopping individuals from engaging in changes to how they use their home. Participants saw this as a missed opportunity, as they shared the desire to educate themselves and their household.



[I'd like] more information as an education on little things that can have even ...just a small impact that could be change. Maybe even just their routines, or maybe one material over another material in terms of small changes to the house.

Peer interviewee from Barking and Dagenham

Regardless of lower levels of baseline awareness, participants expressed a desire to participate in small housing adaptation measures, which may lead to benefits to the home, particularly lower bills.



At the moment I can't think of any [changes I can make] yet at the moment, but maybe in the near future if there are any changes I think to make the bills low, of course I can adhere to it.

Peer interviewee from Brent

A perceived lack of information is also stopping individuals from making larger retrofit changes to their home. Barriers to information are especially relevant to some groups, including those with lower digital literacy (often older people) and those with lower English proficiency (often people from ethnic or cultural minority backgrounds). As such, these groups are disproportionately excluded from the retrofit journey, limiting their chances of reaping the benefits of housing adaptation.



I haven't read anything, or I didn't... hear anything, but obviously, you know, everybody wants to save money, and everybody wants to reduce the energy bills.

Peer interviewee from Barking and Dagenham

This is compounded by low awareness of the kind of benefits that individuals might reap from participating in housing adaptation. There is a perception that these benefits are not sufficiently highlighted in communications or information about housing retrofit. This is partly due to a current focus on the process of retrofit adaptation rather than the outcomes. There is an opportunity to increase awareness of potential benefits of housing adaptation, particularly amplifying the benefits for individuals. Interestingly, benefits to people's health and finances were found to be more motivating than environmental benefits.

Information about home retrofit is currently disjointed, with often conflicting messages coming from a range of different sources. Overall, the perceived lack of information was found to be fed by a combination of factors, including i. lack of accessibility in how information is presented, ii. lack of trust in sources of information, and iii. the perception that information is not relevant.

ii. Inaccessible information

There's a widely-held view that information about housing adaptation is not easily accessible due to its perceived technical nature, compounded by inaccessible language and formats, and unsuitable channels. This leads to the perception that information about housing adaptation is difficult to come by or understand, which might stop individuals engaging - even when accessible formats might exist. Information needs to reach individuals in formats that speak to them, through channels they're already accessing, and with content that is not overly difficult to engage with, slotting into already busy lives.

Language is vital in addressing this. Participants feel information about housing adaptation is 'jargony' and therefore difficult to understand. There is a perception that high literacy and subject expertise is required to understand what changes a household might make. That isn't just about technical language, but also baseline terms that are not easily understood. For instance, the term 'retrofit' is not immediately associated with the household, and the term 'transition' may confound potential participants due to the association to school transitions.

The perception of inaccessible terminology was especially relevant for participants with lower levels of literacy and speakers of English as a second or other language. Additionally, terminology around technology was described as especially difficult for older participants. This may also impact intergenerational households, where decisionmakers might range in ages.



[On what is needed] No jargon, simple language that everyone can understand.

Anonymous workshop participant

Further, participants shared barriers in accessing digital information due to low digital literacy or lack of familiarity with digital channels of communication. This was especially relevant to older people, who favoured 'traditional' formats, including printed flyers, newsletters, and in-person information sessions.



It's hard for everyone - new homeowners, elderly, children. There's a language barrier, which is dependent on the local borough offering interpreters/translation.

Anonymous workshop participant

Boroughs across London have sought to address the challenges around engagement to address the lack of buy and increase local awareness and the positive outcomes retrofit can deliver. The most common approaches taken to engage with residents focus on by door-knocking, letters (in both English and translation services), and community meetings. While this may work within allocated budget, boroughs have identified that a more targeted campaign is needed to ensure greater outreach and inclusivity. Haringey Council are developing multi-language videos on the types of technologies being proposed, and a retrofitted show home, so that tenants can visit and see what the completed home will look like. These activities are more resource intensive than traditional mechanisms, yet feedback shows that more work is needed like this to scale up awareness and understanding around the retrofit agenda across London.



iii. Lack of trust in available information

To ensuring that information about housing adaptation is accessible, it must be perceived as trustworthy. Yet more than half of participants expressed confusion about where to access trusted information on housing adaptation, and shared fears they might fall prey to a scam or low-quality works. In some cases, especially amongst older participants, 'traditional formats' were favoured, such as local government communications channels.



[On what people might need to participate] Provide information in traditional formats and through sources that are possibly more trustworthy.

Anonymous workshop participant

Participants shared the sources of their lack of trust, which ranged from bad experiences with construction providers and handymen, to lack of trust in government-backed housing adaptation technology. Participants cited past events, such as changing guidance on housing adaptation technology, as a reason for low trust. The Grenfell Tower fire remains in people's minds, and is associated with housing adaptation due to the cladding technology that caused the uncontrolled spread of the fire. This is more relevant to certain groups, such as individuals that reside in social housing and people from black and Caribbean backgrounds, who may have experienced the Grenfell Tower fire as 'closer to home'.



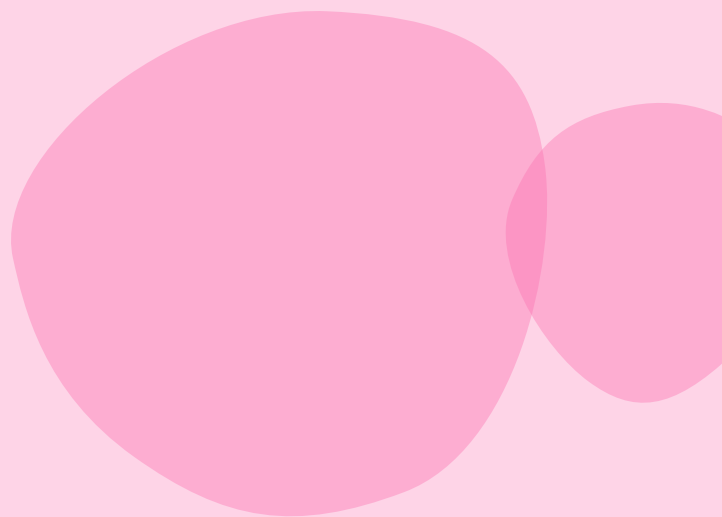
God forbid all these fires and these high rises, the things that they use back then was cheaper...

Anonymous workshop participant



[The challenge is] pre-existing issues haven't been solved... post Grenfell legacy- struggles, lack of accountability, perception of quality of rebuilds

Anonymous workshop participant



Additionally, some communities across London might be more mindful of potential scams due to a history of falling prey to them. This includes young people, who are more likely to be at risk of online fraud (Local Government Association, 2021), and older people, who may be more susceptible to scams due to living in isolation (Independent Age, 2024).



Not everyone opens doors to cold callers. Calling beforehand to get access to homes - those reluctant to speak. Certain communities are mindful of scams. Trust-building [is needed] with individuals.

Anonymous workshop participant

There is an opportunity for local authorities to play an active role in vetting, centralising and mobilising information about home adaptation. Regardless of persistent challenges of trust in government, local authorities are perceived as a neutral source of information, with potential power to hold retrofit providers accountable.



[On what people might need to participate] Trust in suppliers. Accurate information on timeframes, delivery. No accountability, no professional body. There should be certified people, mayor/council endorsed/accredited, deposit held by mayor/council.

Anonymous workshop participant

For national government, there is a role to play in sharing trusted information on housing adaptation, providing legitimacy, and consistency between places. Several participants mentioned national government as a trusted source of legitimate information.



[We need] clear, consistent messaging, a central information hub. [Who should be delivering this message?] National government for legitimacy.

Anonymous workshop participant

An additional opportunity arises for intergenerational households, where young people can help parents who may be less digitally literate or have less time available to engage with information. Young people in the workshop called for resources that might support conversations about housing adaptation with their parents.



I feel like if I had more information and if I can actually explain it to them in a way that makes sense that they would, they would consider it.

Anonymous workshop participant

Lastly, there may be an opportunity for employers to act as a trusted channel of information for employees. This is especially relevant for people with less time available to scrutinise and engage with information on housing adaptation, such as parents or those with caring responsibilities.



As for people that are the same age or similar age bracket as my parents, I'll say probably through the workplace, a bit like how we have discounts for like cinemas and stuff like workplaces should or could offer these services where they, yeah, where they tell their employees, hey look, we have this offer if you're interested about this. Learn more and that way they're not having to sacrifice any more time 'cause oftentimes they're busy with kids and work and stuff.

Anonymous workshop participant



iv. Information not perceived as relevant

A final barrier to accessing information was the perception that information on housing adaptation is not relevant. This was cited by fewer than half of participants, fed by assumptions about who can participate in housing adaptation. Individuals with low income or little disposable income to invest in housing adaptation, and those with little agency over decisions about adapting their home, tended to assume information was not for them. Additionally, there was a widespread perception that home adaptation requires a large upfront investment, and that support from government might not be available (discussed in the following section).

Various incorrect assumptions were shared by participants, including assumptions about what technology exists or might be suitable for different homes. This is compounded by a perceived lack of personalised information, or information that is specific to types of housing and types of tenure. Because of the relatively low uptake of retrofit measures to date, individuals might not see examples around them and may therefore assume that housing adaptation is not relevant to their location or type of home.



Solar panels? I don't really know how effective it is for us here in London. And that does sound silly, but...when I look outside the window, there's not many neighbours that have solar panels- I know a few people in our neighbourhood, so I don't know if that's because it's not effective, or because it's too expensive or people don't know.

Anonymous workshop participant

This points to a potential route to increase public participation in housing adaptation, which was mentioned frequently by participants – a collective approach. Individuals may not think that housing adaptation is relevant to them until they see it happening around them and/or they receive information that is targeted to their location or type of home. This may be especially relevant

for individuals from ethnic or cultural minority backgrounds, for whom cultural representation may increase the perception that retrofit is relevant to them. An anonymous peer interview participant pointed out there is value in the opportunity of 'getting knowledge from people who have done [retrofit]', as a trusted source of information.

Individuals with lower agency over their home, including social and private renters and people who are not household decisionmakers, often share the perception that housing adaptation is not for them. This perception leads to disengagement with information on housing adaptation, limiting participation on the retrofit journey. Additionally, individuals with lower agency over their home may have limited information on their current home conditions, such as their source of energy, limiting their motivation and ability to engage with changes. This is particularly relevant for individuals in houses in multiple occupation (HMOs) and individuals in student housing, who tend to pay their bills in bulk and therefore have little or no information about their energy and water use and sources. This points to an opportunity to include energy and water use and source transparency as a requirement for landlords of HMOs and providers of student housing.



It would be interesting if it were like solar-powered energy or like wind-powered, you know, renewable resources and having... that as an option and knowing exactly where all this energy comes from because we have no idea because we don't control like who the suppliers are....I think the [housing providers] could do better with being really clear on that, where the energy is coming from because they don't tell us anything about that.

Anonymous workshop participant



However, some individuals with low decision-making power in their homes still want to engage with information about efficient home energy use and make changes where possible. This points to an opportunity to target individuals with lower agency including social or private renters and young people living with their parents, with information about low impact housing adaptation and efficient use of water and energy in the home. This is a way of ensuring that a range of people beyond homeowners can reap the benefits of home adaptation through smaller adaptations. We found examples of participants who are already taking this approach, particularly young people with limited agency over larger changes.



A four-person household where everyone works, it's difficult convincing and adapting family members to changes. I'm constantly trying to research and embed little changes.

Anonymous workshop participant

2. Accessibility

The accessibility stage of households' retrofit journey is impacted by factors including affordability of measures; suitability of available models; agency to undertake home retrofit measures; time; life dependencies; emotional energy; and vulnerabilities and barriers to participation (inclusion).

As retrofit professionals seek to accelerate the rollout of retrofit across London's homes, there is a risk that individuals and households with the protected characteristics this research seeks to understand, will be left behind in transition to net-zero carbon. Our research finds that 'accessibility' impacts individuals in different ways but is felt acutely by disabled people – individuals with a physical or mental health that has a 'substantial' and 'long-term' negative effect on their ability to do normal daily activities - whose needs are currently overlooked by the planning system.

i. Affordability

Our research found that, across all protected characteristics, perceived unaffordability was not only the most common barrier for Londoners seeking to access home retrofit, but also a key barrier throughout the entire journey. This may have a 'ripple effect' of stopping individuals engaging with information about retrofit altogether.

While not surprising, this is a significant accessibility consideration found across the data. Recognising this, the [Warmer Homes London programme](#) (launched in February 2025) will see the Mayor of London and London Councils working in partnership with London boroughs to 'unlock millions of pounds from a national pot of £1.79bn to spend on energy-saving measures for the most vulnerable residents in the capital'.

In our research, a peer research interview participant identified the challenge of accessing existing financial support schemes to support home retrofit:



I believe there is a package of £7,500 at the moment, but not all companies are offering that. I have had about three companies look at the property, and none of them have offered the Government grant.

Peer interviewee from Haringey

Additionally, challenges were raised in not only accessing the finances to undertake home retrofit, but costs associated with the ongoing maintenance of existing measures:



I'm looking into the solar panels. Yeah, you can buy them for X amount. But what does the maintenance look like when installing them? Are they going to cause more damage, which is going to cost more money to fix? It's all these things that I need to, like, consider.

Peer interviewee from Croydon



There's going to be costs, and they might be unanticipated costs, so I have to make sure, you know, that I like set a fund aside for things like that, or you know, maybe you have to wait and save – to do something, or nothing. It could do with a buy one window and get one free.

Peer interviewee from Brent

Without financial schemes to support home retrofit, and clear, accessible information on how to reach these schemes, many London residents will be left behind in the transition to net-zero carbon emissions of London's homes, instead opting for smaller shifts that emphasise behaviour change and put the responsibility on the household:



If there is a need for it [home retrofit] in the near future, of course I'll go with the small changes... the large changes are much more expensive. Cost is very important when it comes to these kinds of things, and so far, the small changes can give me what I want, I think it's better to stick with them.

Peer interviewee from Barking and Dagenham

To support households in overcoming this barrier, the Mayor of London can amplify its trusted suppliers (as in the retrofit accelerator programme), listing credible energy service companies that commit to offering this financial support where the household is eligible.

ii. Limited agency over changes to the home

The next most common barrier is lack of agency over the home, coming up about half as much as perceived unaffordability. A lack of agency to implement structural changes is reported particularly among young people (aged 18 to 34), a demographic that sees high levels of private renters.. At the same time, young people's motivation to undertake home retrofit is high, but they are reliant on small, short-term changes to improve their living conditions and energy efficiency:



I wouldn't be able to do anything permanently changing. I could do the draught exclusions, but I couldn't put insulation in the walls or like change the windows or anything because it's not my property ownership to do that. You know, you're going to need permission. Like the owners of the building that would take that on and make those changes as we don't have the power to do that.

Peer interviewee from Haringey

This is exacerbated by this demographic feeling decision-making structures are not in their control, but that they are reliant on landlords and estate agents to access more permanent measures:



Because we are renting, we need to go through the agent first, then they consider the landlord. If they both agree then we will go through with anything. But, like, we are suffering in this condition, they are just taking our rent.

Peer interviewee from Barking and Dagenham

To overcome this, local councils, who are responsible for overseeing private tenure dwellings in their boroughs, could integrate home retrofit assessments into health and safety standards for rented homes (HHSRS). These assessments are regularly undertaken, and mandate action by the landlord as part of their licensing requirements – which will reduce the burden on individuals within this tenure.

iii. Lack of approachability in retrofit measures

A final barrier faced by individuals and households at the accessibility stage is a lack of approachability, expressed as fear and lack of trust. This was cited around half as much as perceived unaffordability, and similarly to lack of agency – but was still considered a significant barrier for some groups.

The lack of approachability is driven by both anticipated challenges including disruption, and negative past experiences that they fear will be mirrored when accessing home retrofit. It is linked with psychological safety, which is a non-negotiable requirement for participants to open their home to adaptation. This barrier is felt particularly by women (from all ethnic and cultural backgrounds) and those with a disability or long-term health condition, who feared that they might have bad experiences with tradespeople.



I am happy to project manage it, but will tradespeople respect me as a woman?

Anonymous workshop participant



There's always that fear of like, are they going to rip you off or leave the job half finished – that sort of thing.

Peer interviewee from Croydon

Participants pointed out that working with multiple suppliers or tradespeople compounds disruption and increases the risk that something will not be delivered to high standards. This points to a potential opportunity to integrate multiple tradespeople, co-ordinating planning and delivery, rather separating responsibility for different aspects of adaptation, could reduce disruption and construction time, and could support greater accountability for the end-to-end process. This may be particularly relevant to people with disabilities and long-term illness, who are more susceptible to the impacts of disruption due to managing their conditions.



[When talking about support] All these companies doing the work don't want to do everything holistically, so then there needs to be more companies doing project management – farming out to each company individually, but with an overall eye on the design – how it works, where it goes, how it looks, and fitting everything together properly – rather than each one making a hash of each job and not caring about what the follow on job has to be.

Peer interviewee from Haringey

Positive testimonials from those who have undergone similar works can support households and help put fears to rest, as well as providing demonstrator homes. But overcoming this barrier will be difficult, as it is informed by negative past experiences. A 'way out' may be through creating opportunities for retrofit providers and households to come together, building trust and mutual understanding over time.

3. Acceptance

The acceptance stage of the retrofit journey is about managing expectations, navigating decision-making roles, acknowledging trade-offs, negotiating a fair responsibility burden, trusting the technology, financing, and leadership. Our research finds that this stage is where most residents 'drop-out' of the retrofit journey, reaching a point in which the complexity of understanding and acceptance is no longer 'worth it' in the short term, despite having an appreciation for the benefits that undergoing home retrofit could offer in the long term.

Our research finds that, at this stage of the journey, individuals from minority ethnic and cultural backgrounds are faced with the most barriers, due to the anticipated disruption to life and routines, complex decision-making structures, and a lack of trust in retrofit providers and new technologies.

i. Inconvenience and disruption

Depending on the model required, retrofit is likely to be because disruption to routines, finances and homes. This is a significant, coming up as the most frequent barrier for household. This is particularly relevant for those from underrepresented ethnic and cultural backgrounds, or those with a disability or long-term health condition, who shared concerns about the flexibility of retrofit processes and the potential to work sensitively around their needs. However, this concern was not exclusive to construction works, but extended to other processes such as applying for grants and switching energy companies, which were perceived as burdensome processes.



It requires like a lot of construction; I just don't think my parents want that many people in our house.

Peer interviewee from Barking and Dagenham



You don't want too many steps, basically. If it's like government support, the government should be able to just streamline the process.

Anonymous workshop participant



Switching energy companies is difficult, there's long wait times, a lack of human interaction – chat bots – it's frustrating.

Anonymous workshop participant



ii. Lack of trust

When supporting individuals and households to accept home retrofit measures, building trust is a priority. Grosvenor's 2019 report [Building trust](#) found that trust in the planning system is almost non-existent. In planning for large-scale developments, just 2% of the public trust developers, and only 7% trust local authorities (although 34% trust local government more generally). Our research found that trust in planning for home retrofit is just as low, highlighted as a significant barrier in acceptance, cited by participants just as much as convenience and disruption. Lack of trust came up as the second most common barrier in the acceptance stage, closely behind convenience and disruption. And as home retrofit requires residents to open their front doors, this lack of trust tells a powerful story about the need to support individuals and households to forge a social contract with the retrofit workforce.



Often acceptance means compromise, which is not acceptable or workable for me. Rejecting this is seen negatively on me – no options are provided.

Anonymous workshop participant



It's not fear, it's happened to me so many times. I've had enough honestly, had enough.

Anonymous workshop participant



I just don't trust the retrofit workforce.

Anonymous workshop participant



We live in a queer, multiracial household – we fear people coming into the home.

Anonymous workshop participant

Participants shared the factors that contribute to their lack of trust, including being 'nervous about scams', and a language barrier faced by individuals whose first language isn't English, in which warranties, documents and contracts are provided, without the provision of interpreters.

There is also a lack of trust in the materials or technology used to retrofit homes that is difficult to overcome when accepting home retrofit measures:



I think just trusting that the technology is good enough.

Peer interviewee from Croydon



Wasn't it on the news the other day? About insulation that went wrong in people's homes, I don't know – there was something about it has to all be redone. Yeah, they were a company recommended through the government that was insulating.

Anonymous workshop participant



When we went here [moved into the home] then they ask us, like go on the smart meter – it might be easy for you to calculate your energy. We go through with this thing, but the energy is still the same. There is nothing change.

Peer interviewee from Barking and Dagenham

For many, building trust seems unimaginable – and, at this stage, accepting home retrofit measures is no longer a viable option:



God forbid, all these fires, and these high rise, the things that they used back when were cheaper products that would have lasted 50-60 years – they have done it, served their purpose. But in this day and age now, where there's so much technology, and you know so much more now to do with materials, I think that the only way forward is like when you do get new build houses to insulate them straight away. So it's all done at once.

Peer interviewee from Barking and Dagenham



iii. The benefits 'return' on retrofit measures

To complete a home retrofit process, individuals and households must reach a point where the short-term disruption – to routines, to finances, to their homes – is accepted, with trust that the upheaval is 'worth it' in the long-term. The disruption and convenience barrier is cited around half as much as trust, particularly by older people, who may be less motivated by the environmental and social benefits of home retrofit:



You get the feeling that, um, the minimum is done for the most profit, and people lose. You would have to think about whether it's cost effective, if it's a big adaptation that you need to make, um, you're going to have to work out – is it worth doing that in the long-run?

Peer interviewee from Barking and Dagenham



I've found out about various options – but I just say, what am I looking at? Is it going to work?

Anonymous workshop participant



The payback period is so long that it doesn't make any financial sense. Why would you invest that money [in your home] when you could invest it elsewhere and get a better return for it. Personally, I don't care about the environment per se.

Peer interviewee from Croydon

iv. Complex decision-making

A final barrier identified was complex decision-making, which was highlighted particularly by young people of all ethnic and cultural backgrounds, either due to their tenure status as private renters, or because they hold less power to make decisions in intergenerational households. At the acceptance stage, this barrier was highlighted less frequently – cited by less than half of participants than in the accessibility stage:



There's mould and damp, the boiler is in my room so it's always warm in there but cold everywhere else. Not very energy efficient, but the landlord doesn't care about our wellbeing. Any acceptance would need to come through each housemate and also my landlord and letting agent – it's hard to get all to agree.

Anonymous workshop participant



There's a lot of people in the house, so it's hard to change it.

Anonymous workshop participant



Eight people in a three bedroom house. But, most likely everyone would agree, sustainability is important to us.

Anonymous workshop participant

This links to our findings about a lack of agency in the accessibility stage, with an understanding of what options might work for individuals – but with challenges around navigating responsibility and burden.



4. Adoption

From the perspective of individuals or households, the adoption stage of the retrofit journey is when changes are made in the home; adopting timeframes and processes; navigating disruption to the home or community; and the ongoing management of expectations. From the perspective of retrofit delivery, this is where skills and capabilities are deployed. However, there is a huge shortage of individuals with the skills to deliver home retrofit. By 2030, dependent on the pace of retrofit roll-out, [a workforce of between 19k and 28,000 skilled workers will be required to deliver retrofit in central London alone. Currently, in a city with 8.8m people, only 4k of those are working in retrofit.](#)

Our research finds the barriers to adopting home retrofit are navigating disruption (including timeframes); accountability; re-imagining the home, and building habits. These barriers are felt by individuals across all the protected characteristics – but particularly those who have a disability or long-term health condition, or adults (aged 35 to 55) with caring responsibilities for children or relatives, across all ethnic and cultural backgrounds.

i. Navigating disruption

There is no one-size-fits-all model to home retrofit. However, this stage of the retrofit journey is likely to be disruptive to all households, to varying degrees. To individuals and households, this is not solely the physical disruption of the property, but the disruption to routines, relations, and ways of living. This barrier was cited as the most important at the adoption stage of the journey:



My physical and mental health issues would make someone working in the house impossible.

Anonymous workshop participant



If it's not making my life any harder to access these resources or any more difficult then I'll be happy to do it, but if it interrupts my schedules, then – and I was thinking about my parents, anything that requires a lot of paperwork is just long.

Peer interviewee from Barking and Dagenham

This is particularly pertinent as more people are working from home:



One of the questions that I've asked the workmen who were going to come in is, you know, how long is this going to take? Because I work from home, right? Um, how long is it going to take? And are you doing to be doing loud drilling? Because I've got meetings that I need to take.

Peer interviewee from Croydon



My husband works full-time from home, he's very busy.

Anonymous workshop participant



It would just be an inconvenience, isn't it? If you've got like noise going on at home, especially nowadays people work from people, they'd have like loud noise of insulation or the windows. It's just an inconvenience.

Peer interviewee from Barking and Dagenham

ii. Lack of accountability

This barrier was cited about half much as disruption. This includes a lack of accountability around timeframes and costs, making the disruption of adopting home retrofit feel even bigger. Individuals and households highlight feeling 'passive', that home retrofit was a 'gift' they received. Some participants said they didn't have one, single point of contact when adopting home retrofit, which left them navigating the process on their own with feelings of vulnerability:



Even if you've got trusted suppliers, you know, maybe not all the people that they've employed are going to do a good job or have integrity... [when talking about support] so yeah, just ways to make it even more accountable and even more, um, transparent.

Peer interviewee from Croydon



I want to feel supported in sorting things out, I need a central point of contact for accountability.

Anonymous workshop participant



Whoever the contractor is, they need to be under some kind of licence so that, you know, your valuables and all of that are protected.

Peer interviewee from Croydon

Accountability would support individuals through this stage of the retrofit journey, are also provide some quality assurance:



If it doesn't work, who is responsible?

Anonymous workshop participant



For them, it's not important to have it looking reasonable, it's more important to have it in, because they don't look at it from the point of view of aesthetics all the time, so I think the improvements have to be in conjunction with um, the aesthetics of the property.

Peer interviewee from Haringey



It feels risky, when things go wrong, it's very expensive.

Anonymous workshop participant



Well, there's always unexpected issues, isn't there?

Anonymous workshop participant

iii. Re-imagining homes and building habits

Sometimes, we don't see change until it is right in front of us. At the adoption stage, it starts to become apparent how a home might work differently, and what habits might make a home more sustainable. Difficulty imagining this future is a barrier highlighted by a handful of participants, but was significant for individuals with neurodivergences.



Even if it's a small change, maybe just to routines, or maybe one material over another material.

Peer interviewee from Barking and Dagenham



It's hard to imagine what it might look like.

Anonymous workshop participant



Building a habit because like we are not used to doing that. Like turning off all the electricity you need or turning off the light if we don't require it. We are not used to it. So, we might need to change. Build a new habit that is helpful for saving energy.

Peer interviewee from Barking and Dagenham



5. Adaptation

The last stage of the journey, adaptation, is about living with changes after undertaking home adaptations. This might include acclimatising to different technologies, changing lifestyle and work practices to accommodate the use of different energy sources, and navigating changes to household budgets. Although it is the last stage of the journey, it does not represent an ending, because households will continue living in this stage in the long term, and may face novel challenges such as climate change impacts and further shifts in home technology and energy sources.

Throughout the peer interviews and the workshops, the adaptation stage came up least frequently, potentially due to the difficulty of imagining the end of a journey that participants have not been on. Participants struggled to identify any barriers at this stage, instead identifying imagined benefits. This demonstrates the desirability of the outcomes of housing adaptation, and points to an opportunity to communicate these in the promotion of retrofit, rather than focusing on the processes which are viewed as more challenging.

i. Financial, health and environmental impacts of retrofit measures

Participants imagined positive improvements to home finances through adaptation. They highlighted this as a motivation, partly due to the current strain of households' high energy bills. There's an opportunity to forefront reduced running costs of adapted home as a motivator for participation.



Awareness of the savings, awareness of just the benefits of energy efficiency but probably on a wider scale as well in terms of the environment. And probably any kind of aesthetic benefits as well that might come about from that. The smart meter that we have, it's small, it's not ugly or anything. Even something like that could encourage people.

Peer interviewee from Barking and Dagenham

However, it is key to note that environmental impact is secondary to financial and health benefits, and is unlikely to be a strong motivator if it is not aligned to financial and health benefits. This points to an opportunity to forefront the areas of housing adaptation that have a natural alignment between these three motivators, or at least two of them.

Additionally, but to a lesser extent, participants were motivated by potential improvements to living conditions as a result of adaptation. This includes health benefits, which are particularly relevant for people with children, older people, and those with limited mobility, who reported worrying about the impact of poor living conditions on health. Additionally, improved living conditions were seen as a tool to overcome social isolation, creating opportunities to host friends and family. This was particularly relevant to households with migrant backgrounds.

Lastly, participants were motivated by the positive environmental impact of living with housing adaptations. However, it is key to note that environmental impact is secondary to financial and health benefits, and is unlikely to be a strong motivator if it is not aligned to financial and health benefits. This points to an opportunity to forefront the areas of housing adaptation that have a natural alignment between these three motivators, or at least two of them. Communications about environmental impacts on their own may not be enough of a motivator for participation, particularly for participants with limited income or health concerns.



Of course it will save my save some money as I need to pay the bill. And also I am thinking about my, uh, future generation like my son future.

Peer interviewee from Barking and Dagenham

ii. Barriers to living with home adaptation

Regardless of these clear motivations, some potential barriers come up, which might limit individuals' ability to perceive the full benefits from home adaptation.

The first and most common barrier that came up amongst participants was difficulty reimagining the home. Many had a hard time picturing what changes to the home might look like, and were reluctant to sacrifice the current look and feel of their home. They were particularly worried about the potential impact of new technologies on the home environment, including concerns about the amount of space that might be taken up by them. This points to an opportunity to demonstrate what adaptation technologies might look like in the home, to reduce fear.



It's hard to imagine what it might look like.

Anonymous workshop participant



Additionally, participants shared concerns about the costs of snagging or redecoration processes after retrofit. For instance, they worried about having to repaint walls or restructure parts of the home to fit new technology in. There were questions about whether support for home adaptation might include budget for snagging or redecoration. This highlights an opportunity to include small budgets for redecoration in grant funding, or to provide low-interest loans for redecoration after housing adaptation. This is crucial to ensure home environments remain attractive for participants, and to avoid poor living conditions for households that don't have the budget for basic redecoration.

The other barrier that came up consistently in this stage was a lack of trust in new technology that might be part of home adaptation. Participants expressed fears about changing guidelines around technology, rendering their investments obsolete. They pointed to negative past experiences and changing guidance on technology as sources of mistrust.



Wasn't it on the news the other day about insulation that went wrong in people's homes was that the news? I don't know, but I think there was something about they have to all be redone. Yeah, they there was a company recommended through the through the government that was insulating.

Peer interviewee from Barking and Dagenham



Additionally, participants shared concerns about accountability around technology for home adaptation. Participants worried about absorbing costs related to poor or improper installation. Due to negative past experiences with construction workers, participants shared concerns about what would happen if something goes wrong. Additionally, participants worried where the costs of maintaining new technology might lie. This was particularly relevant for households with low income or high costs (which limit disposable income).



Feels risky- cost when things go wrong, very expensive! Grand designs, maintenance, responsibility, payment, knowledge! I want to feel supported in sorting things out... [I want a] central point of contact for accountability.

Anonymous workshop participant

Participants expressed a desire for clear and ideally centralised accountability. This points to an opportunity for local authorities to play a role vetting retrofit providers, and giving residents support and solutions in case something goes wrong.

The lack of trust in new technology is compounded by barriers to the use of technology, such as lack of information on how to use, maintain or fix new technologies. This is relevant for people with lower digital literacy, particularly older people. It is crucial to address this, because otherwise households may not reap the full benefits of technology, or may experience negative impacts on their living conditions due to improper use. Workshop participants pointed to an opportunity for tailored information and training, running in parallel to installation or construction processes. They saw an opportunity for education on home technology through a range of sources, including community skills courses, technology skills in education, and training aimed at older adults. This would not only enable people to use their home technology correctly, but could also create capacity in communities to maintain and repair technology in the long term.



Solutions: identifying skills in the community that can be enhanced and skilling up...Weekly workshops, educating beyond primary schools, focus on older generations, helps with being tech savvy. Reduce skills gap... Technological education but in relation to the environment. Public education on technology, projects that incorporate technology in the basic curriculum. Technical support, e.g. buying a new device and it comes with support.

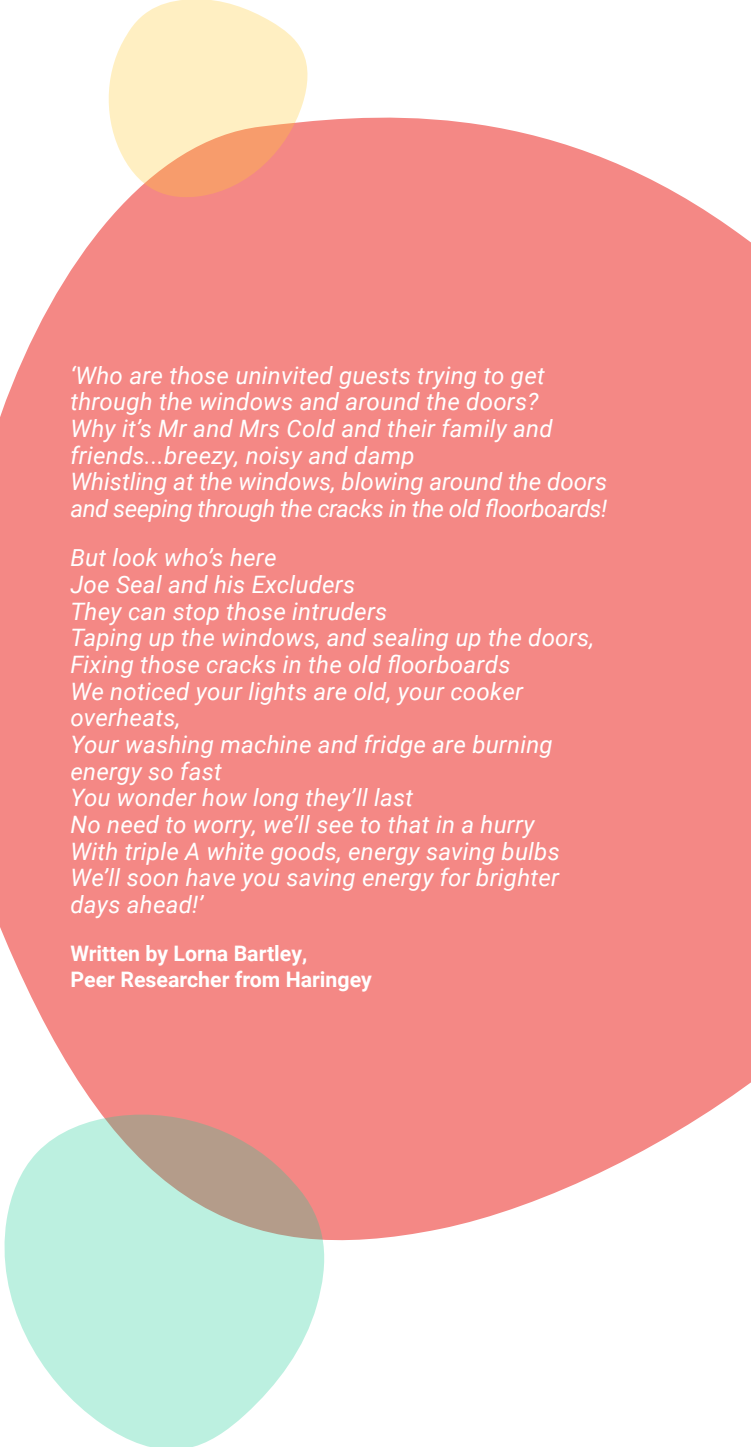
Anonymous group contribution during workshops

Producing a toolkit to support a just transition in retrofit

Based on the findings from this report, The Young Foundation has produced a toolkit aimed at organisations funding and/or delivering retrofit. The toolkit is directly informed by individuals who took part in this research, particularly by the peer researchers as well as retrofit professionals and borough officials: [Retrofit for all: a toolkit supporting greener, healthier homes](#)

While we hope the insights in this report and the supporting toolkit will go some way in addressing barriers to inclusion of individuals with protected characteristics in housing retrofit, opportunities remain to tackle the barriers preventing inclusion, as outlined in our recommendations and opportunities for innovation. Particularly, there is an opportunity to continue working with individuals with protected characteristics to design, test and refine mechanisms, tools and approaches to support their participation in housing retrofit.

Knowing the barriers to inclusion is only the first step in addressing them. Crucially, the barriers will remain until all stakeholders in the retrofit ecosystem prioritise their removal and invest the necessary resources and time into tackling them. Until the incentives are in place and align with the inclusion of individuals with protected characteristics, it is unlikely that meaningful action will be taken. However, increasing inclusion in retrofit is likely to positively impact not only individuals with protected characteristics but everyone, as all households could benefit from the accommodation of a variety of needs.



*'Who are those uninvited guests trying to get through the windows and around the doors?
Why it's Mr and Mrs Cold and their family and friends...breezy, noisy and damp
Whistling at the windows, blowing around the doors and seeping through the cracks in the old floorboards!*

*But look who's here
Joe Seal and his Excluders
They can stop those intruders
Taping up the windows, and sealing up the doors,
Fixing those cracks in the old floorboards
We noticed your lights are old, your cooker overheats,
Your washing machine and fridge are burning energy so fast
You wonder how long they'll last
No need to worry, we'll see to that in a hurry
With triple A white goods, energy saving bulbs
We'll soon have you saving energy for brighter days ahead!'*

**Written by Lorna Bartley,
Peer Researcher from Haringey**

Annex 1: Methodological approach

Our approach to this research was grounded in participatory action methodology, bringing Londoners and retrofit professionals together in collaboration as equal partners in change. We recruited, trained and paid 10 London residents with lived experience of the protected characteristics focused on in this project to interview their peers about their experiences and perceptions of home retrofits. Instead of selecting those with technical knowledge, we focused on engaging individuals who were curious, non-judgmental, and interested in engaging their peers in conversations about what retrofit means to them. Our research delivery programme was designed around a series of relationship-building, insight-gathering and evidence-sharing activities, on which we hope trust, understanding and impact could be scaffolded and realised.

During this process we engaged a total of 79 London residents whose lived experiences is reflective of the protected characteristics that this project seeks to understand, not including the peer researchers, through the peer interviews and resident workshops.

Timeframe	Participatory research activity	Purpose
June and July 2024	Building awareness and engagement in the project	Engage a diversity of voices and lived experiences in this project
August 2024	Selecting and training the peer research cohort	Build relationships, establish ways of working and provide support to enable participation
August 2024	Engagement of retrofit professionals through semi-structured interviews	Engage the lived experiences of retrofit professionals to ensure this project is grounded in the reality of the retrofit landscape
September and October 2024	Engagement of Londoners in four target boroughs through peer interviews	Capture insights and experiences of how London homes are currently being experienced
October and November 2024	Engagement of wider Londoners through resident workshops	Capture challenges and hopes for the future of home retrofit
November and December 2024	Collaborative analysis	Ensure a diversity of perspectives in analysis – respectfully challenging assumptions

Underpinning our approach was peer research methodology. Peer research, sometimes referred to as community research, aims to reveal authentic insights into people's lives and experiences. It is about research being done with them rather than to them. A peer researcher is someone who has had similar experiences of something to the people they are researching – which could be based on place, or it could be based on experience.

At The Young Foundation, we have [10 Principles](#), which have guided the design and delivery of this programme. Peer research aims to be accessible to all, and we had no assumptions of prior knowledge about net zero in our recruitment of the peer researchers.

An emerging evidence base calls for a [rethinking of the word retrofit](#) when talking about the transformation needed to adapt our existing building fabric. We showcased the peer research project as [Powering sustainable London homes](#), in which London residents aged 18+ could receive training, payment in line with the London Living Wage and flexibility to engage with the opportunity. This was supported by our organisational infrastructure, which provides wrap-around guidance for peer researchers that is grounded in our comprehensive, interactive Peer Research Network.

An example of project recruitment materials for the peer researcher role

Powering sustainable London homes

We're looking for ten residents aged over 18 from four London boroughs to join our team of peer researchers.

- Do you live in Haringey, Barking and Dagenham, Croydon or Brent? We'd love to hear your thoughts and ideas on 'green' home adaptations.
- Receive training from The Young Foundation to work as a peer researcher in your community. No prior experience is required.
- Earn the **London Living Wage** speaking to your peers.
- Work flexibly over 20 days between June 2024 and February 2025.

The deadline for applications is **Friday 12 July 2024**. Find out more at bit.ly/45hTBGR

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SUSTAINABLE DEVELOPMENT
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Foundation**

Selecting our research locations

Recognising that the experience of individuals with protected characteristics varies between places, the programme focused the initial research in four London boroughs: Barking and Dagenham, Brent, Croydon and Haringey. The rationale for selecting these boroughs was focused on exploring areas where a) retrofit need is high; b) where known barriers to retrofit (that may be non-specific to those with protected characteristics) may intersect strongly with known disadvantages for those with protected characteristics, and c) where research into barriers to retrofit was limited

- Fuel poverty levels: the first phase, saw the team use a data-led approach, to highlight all the boroughs with a high percentage of households living in fuel poverty (in the four boroughs selected between 13% and 15.5% of households are living in fuel poverty, compared to the London average of 10%), recognising that the primary social aims of retrofit are to alleviate fuel poverty and energy insecurity, alongside reducing households environmental impacts.
- Housing stock: for the second phase, the research team reviewed housing stock across London boroughs. With the aim of selecting boroughs that reflect areas with a mixture of housing stock, requiring different retrofit approaches, and with different tenure types, necessitating different decision-making powers.
- Geographic spread: for the third phase, the research then reviewed the boroughs identified and ensured that they were reflective of the experiences across the city (North, South, East and West London). Though the boroughs selected are more reflective of outer boroughs than inner boroughs, this is because fuel poverty rates tend to be higher in outer boroughs.
- Demographic data: the final phase of analysis focused on demographic data indicates, ensuring that the boroughs selected would reflect a diversity of experiences of the protected characteristics that this research seeks to engage, creating the conditions to allow for a range of peer researchers and interviewees to engage in this work.



Peer interviews

Peer research does not claim to get at one, true knowledge, but can provide a new way to envision experience and provide a more nuanced understanding of complex lives. Peer interviews have the potential to discover knowledge that may otherwise go unnoticed by researchers without lived experience. [Evidence](#) suggests that in these instances, peer-interviewers can improve the quality of data; participants will respond more genuinely to someone they know is familiar with their life circumstances.

In August 2024, the peer researchers were supported by staff at The Young Foundation to develop a peer interview guide ([attached as an annex in the interim report](#)), and encouraged to reach out to friends, family and neighbours in their boroughs to explore how home retrofit is currently being experienced. This exercise heard from individuals and households reflecting the protected characteristics this project seeks to engage.

These interviews were conducted in the four target boroughs (Barking and Dagenham, Brent, Croydon and Haringey), and focused on how energy efficiency in homes is currently experienced, and what challenges and opportunities these homes foresee when undergoing home retrofit.

A total of 45 peer interviews were conducted in September and October 2024. A full demographic breakdown of all research participants is found in the 'Whose voices did we engage in this process?' section of the report.



One of our peer researchers from Barking and Dagenham, Jennifer Ukachukwu Amarachi, shares her reflections on the peer interview process below:

'As a peer researcher, I embarked on a journey to explore the perspectives of individuals in my community on retrofitting their homes. This project unfolded against the backdrop of COP29 in 2024, a year where global conversations around mitigating climate change intensified. In London, retrofitting homes became a focal point in the city's ambitious pursuit of net-zero emissions. Yet, beyond the grand policy announcements and climate targets lay the everyday realities of individuals whose lives and homes would be directly affected. My task was to delve into these lived experiences, uncovering their understanding of retrofitting, the barriers they faced, and how their circumstances shaped their approach to this vital climate solution.

The process of gathering these insights was quite enlightening and personal. Over several weeks, I conducted interviews with neighbours and friends, engaging individuals spanning a range of ages from their early twenties to forties. The majority of participants fell within the 21 to 40 age bracket. The interviews were designed not as a formal question-and-answer exercise but as dynamic conversations, with prompts serving as starting points to facilitate open dialogue. The topics we explored included participants' awareness of retrofitting, their knowledge of home renovations aimed at reducing energy bills, their considerations for retrofitting, and the challenges they anticipated.

One particularly memorable in-person interview involved a participant's mother joining the conversation. The dynamic between parent and child, both adults in their thirties plus, was fascinating to observe. It echoed a recurring theme throughout the interviews: the interplay of generational dynamics in the retrofitting journey. Younger participants often acted as intermediaries, gathering information for their families but lacking the decision-making power to implement changes. While decision-making power ultimately rested with the older generation. Even in this specific case, where the parent and child were of comparable maturity, the same pattern emerged.

Across all the conversations, this division of roles in the retrofit journey became distinct. Younger participants demonstrated a stronger ability to access and share information about retrofitting, often tailoring insights they had gleaned from sources such as school science lessons to their home's context. Their enthusiasm for gathering knowledge was evident, yet their limited financial input and lack of authority in decision-making left them largely powerless in the later stages of the process. Meanwhile, older participants—those who owned their homes and were the primary decision-makers—showed greater focus on the practicality of implementing retrofits.

However, they struggled with the initial phases of the journey, particularly in acquiring relevant information and navigating the fragmented system of support.

The barriers participants described were varied and interconnected, revealing a complex web of challenges that hindered progress. Fragmentation emerged as the most pervasive issue (finance was a great issue also but I will delve into that later), affecting every stage of the retrofit process. Information about retrofitting was scattered across different sources, with no clear or trusted points of contact. I found that many participants expressed frustration at the disjointed nature of the process, with multiple actors—contractors, financiers, and advisors—operating independently and often providing conflicting advice. This lack of cohesion undermined trust and made the prospect of retrofitting seem daunting, even to those who were otherwise willing to consider it.

Accessibility was another significant issue. While the participants I interviewed widely acknowledged the benefits of retrofitting, but many found it challenging to dedicate the time and effort needed to learn about it, let alone initiate and manage the process. For households with children or multiple occupants, the demands of accommodating retrofitting—such as relocating during extensive renovations—were often too much and put people off completely. Financial barriers only worked to exacerbate these issues, with participants expressing uncertainty about funding options like loans or grants and fears of debt.

The emotional and physical stress associated with retrofitting was also a recurring concern. Participants described the upheaval it could cause in their daily lives, from disrupting work-from-home setups to affecting homes designed to accommodate specific medical needs. For families with young children or crowded living spaces, the decision-making process became particularly fraught. Even when participants expressed interest in retrofitting, the prospect of navigating such a fragmented and intrusive process made them hesitant to proceed.

Interestingly, climate change, while acknowledged as a critical issue, was not the primary motivator for most participants. Instead, financial considerations—such as reducing energy bills—dominated their reasoning. This highlighted a gap for me between the ideals often associated with retrofitting and the practical realities that people face. Many participants felt that while tackling climate change was important, it remained an abstract, long-term goal that they were not particularly equipped to fight or manage. The immediate barriers they encountered in the retrofit process overshadowed their ability to act on these broader environmental concerns.

Reflecting on these findings, I was struck by the depth of fragmentation in the retrofit landscape. Having personally experienced home renovations and energy-saving measures such as using smart meters and energy-efficient lightbulbs, I could empathize with the participants' frustrations. The lack of a centralized or cohesive system made it difficult for individuals to navigate the journey, particularly for households with complex needs or multiple decision-makers.

For example, in larger households with five or more members, aligning schedules and accommodating everyone's needs became a logistical nightmare. Participants expressed concerns about how even small-scale changes could ripple through the household, let alone the disruption caused by major retrofitting projects. This was particularly true in homes where space was already at a premium. The current system, with its fragmented practices and vague timelines, left many feeling unsupported and wary of pursuing retrofitting.

These conversations underscored the need for a more integrated approach to retrofitting. A centralized, regionally tailored support system could address many of the barriers participants described. By establishing clear points of contact and creating a streamlined process, such a system could build trust and foster greater engagement. Incorporating community feedback and local expertise into this framework would ensure that solutions are both practical and contextually relevant. Initiatives like dedicated retrofit consultants or comprehensive online hubs could provide individuals with the guidance and resources they need to navigate the journey with confidence.

Another key takeaway was the importance of bridging generational divides in the retrofitting process. Younger generations excelled in gathering and disseminating information, while older generations brought practical insights and decision-making authority. Creating opportunities for collaboration between these groups could help address the gaps in both knowledge and implementation.

Finally, the interviews highlighted the need for a shift in how retrofitting is communicated. Rather than framing it solely as a climate change solution, messaging should emphasize practical benefits such as financial savings and improved living conditions. By aligning retrofitting with the immediate priorities of individuals and families, we can make it a more accessible and appealing option.

This journey as a peer researcher has reinforced to me the importance of listening to those most affected by policy decisions and recognizing the interconnected challenges they face. Moving forward, I urge companies, policymakers, and actors in the retrofit sector to take a more active role in addressing these barriers. By building capacity within their organizations, reducing fragmentation, and fostering collaboration, they can create a system that is both inclusive and effective.

Through these changes, we can bridge the gap between ambition and reality, ensuring that retrofitting becomes not just a lofty goal but a practical and accessible solution for all.'

Resident workshops

The Young Foundation, alongside our cohort of peer researchers, hosted a series of three workshops for London-wide residents whose lived experiences were reflective of the protected characteristics that this project seeks to engage. The workshops were hosted at Toynbee Hall in autumn 2024.

Participants were recruited through a multi-channel approach, utilising trusted, established networks across London, The Young Foundation’s social media platforms and Peer Research Network. Participants were invited to express their interest through an online form, with a total of 110 eligible responses.

A sample was constructed from the expressions of interest, maximising variability across the protected characteristics and seeking to engage participants whose identities intersected with two or more of the target demographics (for example, a young person living with a disability or an older person from an underrepresented ethnic or cultural group).

The workshop had a participation of 34 London-residents, with a low attrition rate across the workshops (workshop 1: 27 participants, workshop 2: 28 participants and workshop 3: 25 participants). This points to a high-level of engagement in the workshops, with limited ‘drop-off’.

There was no expectation of prior knowledge from participants about home retrofit, climate change or energy efficiency. Instead, the workshops used a range of creative and participatory exercises to forefront the lived experiences of participants, promoting agency by allow participants to engage with the workshops in a way that was meaningful for them.

Workshop	1	2	3
Aim	Explore the end-to-end journey of retrofit from the perspective of a panel of residents with different protected characteristics and intersectional identities.	Understand how to adapt retrofit provider existing measures, engagement practices and retrofit solutions to meet the needs of people with different protected characteristics.	Identify and collaboratively develop inclusive solutions for each stage of the retrofit journey.
Key activities	• Socialising key concepts • Initial exploration of home adaptation and how this is affected by different protected characteristics, tenure and household types	• Mapping the end-to-end retrofit journey for people with different protected characteristics • Capturing the housing conditions of participants • Mapping sources of support	• Identifying key barriers across the retrofit journey • Identifying and developing solutions for a stage of the journey, with input from retrofit providers

One of our peer researchers from Haringey, Alison Hendry, shares her reflections on the resident workshop process below:

'Initially, in the first workshop, I was unsure how it would go. Specifically, I was worried about how participants would engage with the tasks. After each workshop we had a debrief to discuss how it went, allowing us to quickly act on things as a group. Being a cofacilitator, I could voice any comments or concerns the participants brought up, ensuring they were heard. One notable observation was the overwhelmingly positive impact of providing physical copies of instructions or examples they missed from the previous workshop. This simple strategy not only allowed participants another way of understanding or referencing an instruction but also reassured them, especially if English was not their first language or if they had accessibility requirements. It made the session more accessible to myself and everyone else partaking, creating a supportive environment.

Overall, people engaged well with activities. This was helped by the choice of different ways to complete a task - for example, one could use newspaper clippings to make a collage, write things on post-it notes or work directly on the worksheet. Additionally, it was ensured that those with protected characteristics could participate equally. Initially, there was a possible worry that people would disengage or lose interest because the workshop was a few hours long. However, the tasks I facilitated were completed with high enthusiasm, often finishing early and doing more than required. This usually led to activities lasting longer than intended as people enjoyed the task. It was evident that many people struggled to get beyond money being a key barrier; even hypothetically this could not be avoided, bringing up a key issue with the cost of living as the price is at the centre.

The increased engagement of the participants was a testament to the success of the workshop. People were more open to more extended discussions that went further into depth partly because of the environment towards the end – participants were comfortable in the space and familiar with the peers and the structure of the sessions.

The online interviews consist of the participant and interviewer. Bringing people into the space allowed them to collaborate to reach potential solutions and let them reside with their fellow peers. It was evident that, although the peer interviews allowed for individual in-depth conversations, the workshops permitted The Young Foundation to engage with the local community. Additionally, they allowed me to bring back a sense of the human element into the process of gathering data, which is very hard to achieve over the Internet. This reinforces how people in the community are the centre of this research and that they are the people we need to reach and make retrofitting accessible. The community's role in the research is crucial and it was encouraging to see their active participation in the workshops.'

Collaborative analysis

In November and December 2024, we conducted a collaborative analysis of all primary data collected through this research, including peer interviews and workshop data. Collaborative thematic analysis is a research approach where multiple researchers work together to analyse data, which involved peer researchers and staff from The Young Foundation. We mapped key findings against each stage of the retrofit journey, identifying barriers and opportunities that consistently emerged in the data.

On Monday 2 December, peer researchers from the project joined the Deputy Mayor of London for Environment and Energy, Mete Coban; businessman, Syed Ahmed; and staff at The Young Foundation to share our interim findings to retrofit stakeholders as equal partners in change. This process supported peer researchers to take ownership of their own lived experiences and observational insights from the project, and encouraged self-reflection, allowing small stories to emerge – an important perspective in narrative and identify analysis.

Whose voices have we engaged in this process?

We recruited and trained 10 residents as peer researchers from our four target London boroughs: Barking and Dagenham, Brent, Croydon and Haringey, who undertook 45 peer interviews and supported us as peer facilitators in the resident workshops.

To support and ground the participatory research, we undertook 18 interviews with a range of stakeholders to gain insights into existing approaches to inclusion for people with protected characteristics. The aims were to assess gaps in provision and identify unanswered questions about how to offer and conduct retrofit inclusively.

Interview participants can be broken down into three groups:

- National stakeholders including policymakers or CEO/Directors of national organisations
- Regional stakeholders including borough retrofit leads, London-focused policymakers, key London-focused organisations
- Practitioners including retrofit providers, community energy organisations and those working with London communities

The insights from these interviews are extensively presented in our [interim report](#) (The Young Foundation, 2025), and although we have not duplicated them in our final report, they inform the recommendations presented.

Age	
18-24	 (18)
25-34	 (23)
35-44	 (14)
45-54	 (11)
55-64	 (6)
65+	 (7)

Disability and difference

Participants were asked to share whether they had a disability, defined in-line with the Equality Act 2010 as a physical or mental impairment that has a 'substantial' and 'long-term' negative effect on your ability to do normal daily activities.

Disability and difference	
Affected by multiple disabilities/ differences	 (5)
Mobility limitations (such as walking short distances or climbing stairs)	 (8)
Physical disability	 (9)
Deafness or partial hearing loss	 (3)
Blindness or partial sight loss	 (1)
Mental health condition	 (3)
Neurodivergence	 (3)
Learning difficulty	 (3)
No disability reported or prefer not to say	 (44)

Ethnicity	
Asian or Asian British	 (29)
Black, Black British, Caribbean or African	 (21)
White or White British	 (23)
Mixed or multiple ethnic groups	 (11)
Other ethnic group	 (1)
Prefer not to say	 (3)

Gender	
Female	 (54)
Male	 (13)
Non-binary or prefer to self-describe	 (2)

Annex 2: Reference list

- Age UK, 2023. Millions of Older People Borrowing Money, Using Credit and Not Able to Pay Bills Due to the Cost of Living Crisis. Available at: <https://www.ageuk.org.uk/wp-assets/globalassets/gloucestershire/about-us/information-publications-and-guides/publications/housing-facet/home-improvements-and-repairs.pdf> (Accessed: 6 March 2025).
- Andre, P., Boneva, T., Chopra, F. et al. Globally representative evidence on the actual and perceived support for climate action. *Nature Climate Change*. 14, 253–259 (2024). Available at: <https://doi.org/10.1038/s41558-024-01925-3> (Accessed: 8 May 2025).
- Bonfield, P., 2016. Each Home Counts. Available at: https://assets.publishing.service.gov.uk/media/5a7f1384e5274a2e8ab49f6b/Each_Home_Counts_December_2016_.pdf (Accessed: 6 March 2025).
- Bouzarovski, S., et al., 2022. Gender-based Differences in the Meanings and Uses of Housing for Health and Everyday Life: An Intersectional Approach. Available at: <https://www.sciencedirect.com/science/article/pii/S2214629622002201> (Accessed: 6 March 2025).
- Conway, H. and Carr, M., 2025. Social Housing Crisis. Available at: <https://www.bbc.co.uk/news/articles/c203rnepzexo> (Accessed: 6 March 2025).
- Department for Energy Security and Net Zero, 2024. Warm Homes Social Housing Fund Wave 3. Available at: <https://www.gov.uk/government/publications/warm-homes-social-housing-fund-wave-3> (Accessed: 6 March 2025).
- Department for Levelling Up, Housing and Communities, 2023. English Housing Survey 2021 to 2022: Private Rented Sector. Available at: <https://www.ethnicity-facts-figures.service.gov.uk/housing/housing-conditions/overcrowded-households/latest> (Accessed: 6 March 2025).
- Energy Element, 2022. Analysis of a Net Zero 2030 Target for Greater London. Available at: https://www.london.gov.uk/sites/default/files/nz2030_element_energy.pdf (Accessed: 7 May 2025).
- Equality and Human Rights Commission, 2018. Housing and Disabled People: Britain's Hidden Crisis. Available at: <https://www.equalityhumanrights.com/housing-and-disabled-people-britains-hidden-crisis> (Accessed: 6 March 2025).
- Equality and Human Rights Commission, n.d. Protected Characteristics. Available at: <https://www.equalityhumanrights.com/equality/equality-act-2010/protected-characteristics> (Accessed: 6 March 2025).
- HM Government, n.d. Energy Company Obligation. Available at: <https://www.gov.uk/energy-company-obligation> (Accessed: 6 March 2025).
- HM Government, n.d. Green Deal Energy Saving Measures. Available at: <https://www.gov.uk/green-deal-energy-saving-measures> (Accessed: 6 March 2025).
- House of Commons, 2023. Housing Conditions. Available at: <https://committees.parliament.uk/oralevidence/12661/html/> (Accessed: 6 March 2025).
- Independent Age, 2024. The Impact of Poor Quality Housing on Older People. Available at: <https://www.ageing-better.org.uk> (Accessed: 6 March 2025).
- MCS Foundation, 2024. Ramping Up Retrofit. Available at: <https://mcsfoundation.org.uk/wp-content/uploads/2024/08/MCSF-Ramping-Up-Retrofit-Report-FINAL.pdf> (Accessed: 6 March 2025).
- Ministry of Housing, Communities and Local Government, 2024. English Housing Survey 2022 to 2023: Housing Quality and Condition. Available at: <https://www.gov.uk/government/statistics/english-housing-survey-2022-to-2023-housing-quality-and-condition> (Accessed: 6 March 2025).

- Polanski, Z., 2023. London's Retrofit Revolution: What's Going Wrong. Available at: <https://www.london.gov.uk/who-we-are/what-london-assembly-does/london-assembly-members/publications-zack-polanski/londons-retrofit-revolution-whats-going-wrong> (Accessed: 6 March 2025).
- Rankl, C., 2024. Spray Foam Insulation and Mortgages. Available at: <https://commonslibrary.parliament.uk/spray-foam-insulation-and-mortgages/> (Accessed: 6 March 2025).
- Resolution Foundation, 2023. One in Six Young People Live in Poor Quality Housing and It Is Worsening Their Physical and Mental Health. Available at: <https://www.resolutionfoundation.org/press-releases/one-in-six-young-people-live-in-poor-quality-housing-and-it-is-worsening-their-physical-and-mental-health/> (Accessed: 6 March 2025).
- The Association for Decentralised Energy, n.d. A World-Class City, but Its Buildings Lag Behind. Available at: <https://www.theade.co.uk/resources/a-world-class-city-but-its-buildings-lag-behind> (Accessed: 6 March 2025).
- The Big Issue, 2024. Disabled People and the Housing Crisis. Available at: <https://www.bigissue.com/opinion/disabled-people-disability-facilities-grant-housing-crisis/> (Accessed: 6 March 2025).
- The Greater London Authority, 2025. London Energy and Greenhouse Gas Inventory (LEGGI) 2022 data. Available at: <https://data.london.gov.uk/dataset/leggi#:~:text=The%20London%20Energy%20and%20Greenhouse,Change%20and%20Forestry%20sector%20activities>. (Accessed: 8 May 2025).
- The Health Foundation, 2024. Inequalities in Housing Affordability. Available at: <https://www.health.org.uk/evidence-hub/housing/housing-affordability/inequalities-in-housing-affordability> (Accessed: 6 March 2025).
- The Mayor of London, 2018. Fuel Poverty Action Plan. Available at: <https://www.london.gov.uk/programmes-and-strategies/environment-and-climate-change/environment-publications/fuel-poverty-action-plan> (Accessed: 6 March 2025).
- The Mayor of London, 2022. Zero Carbon London Pathways to Net Zero Carbon 2030. Available at: <https://www.london.gov.uk/programmes-strategies/environment-and-climate-change/climate-change/zero-carbon-london/pathways-net-zero-carbon-2030> (Accessed: 6 March 2025).
- The Mayor of London, 2024. Energy Team Budget 2024-2025. Available at: <https://www.london.gov.uk/md3245-energy-team-budget-2024-2025> (Accessed: 6 March 2025).
- The Mayor of London, 2025. Warmer Homes London Launches to Help Vulnerable Londoners Heat Their Homes and Save Money. Available at: <https://www.london.gov.uk/Warmer%20Homes%20London%E2%80%AFlaunches%20to%20help%20vulnerable%20Londoners%20heat%20their%20homes%20and%20save%20money> (Accessed: 6 March 2025).
- The Young Foundation, 2024. Our Journey to Net Zero. Available at: <https://www.youngfoundation.org/our-work/publications/our-journey-to-net-zero/> (Accessed: 6 March 2025).
- The Young Foundation, 2025. A Just Transition in Retrofits: interim report. Available at: <https://www.youngfoundation.org/our-work/publications/a-just-transition-in-retrofits/> (Accessed: 6 March 2025).
- Vasquez-Vera, H., et al., 2022. Gender-Based Differences in the Meanings and Uses of Housing for Health and Everyday Life: An Intersectional Approach. Available at: <https://www.sciencedirect.com/science/article/pii/S2214629622002201> (Accessed: 6 March 2025).
- Weaver, C., 2022. Awaab Ishak's Death Shed Light on a Social Housing Scandal. Now We Have a Brief Chance to Fix It. Available at: <https://www.theguardian.com/commentisfree/2022/nov/16/awaab-ishak-social-housing-scandal-death> (Accessed: 6 March 2025).
- Women's Budget Group, 2022. Housing and Gender. Available at: <https://wbg.org.uk/wp-content/uploads/2022/03/Housing-and-gender-PBB-Spring-2022.pdf> (Accessed: 6 March 2025).

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