

TRANSFORMING HOMES

Illustrated Storybook



The Home 100 Years Ago

Welcome to our 1925 home. It was constructed as part of Britain's large-scale council housing campaign following World War One, when there was a drive to create better places for people to live. These 1920-1940 estates are located all over the UK – there were almost 1.5 million homes like this built across England and Wales.

It is important to understand why homes and estates were designed in the way they were, how buildings were constructed and with what materials. Learning about the social history behind these homes and places helps us plan and design how they can be transformed for today and for the future.

1. Design of the home – These homes might look different from the outside, but they have similar layouts on the inside. This was to enable the homes to be built quickly enough to meet demand, whilst ensuring high quality. The 1918 Tudor Walters Report included guidelines where layouts, construction techniques and even 'the proper' way to live in homes were recommended! These similarities help us design transferable solutions for today.

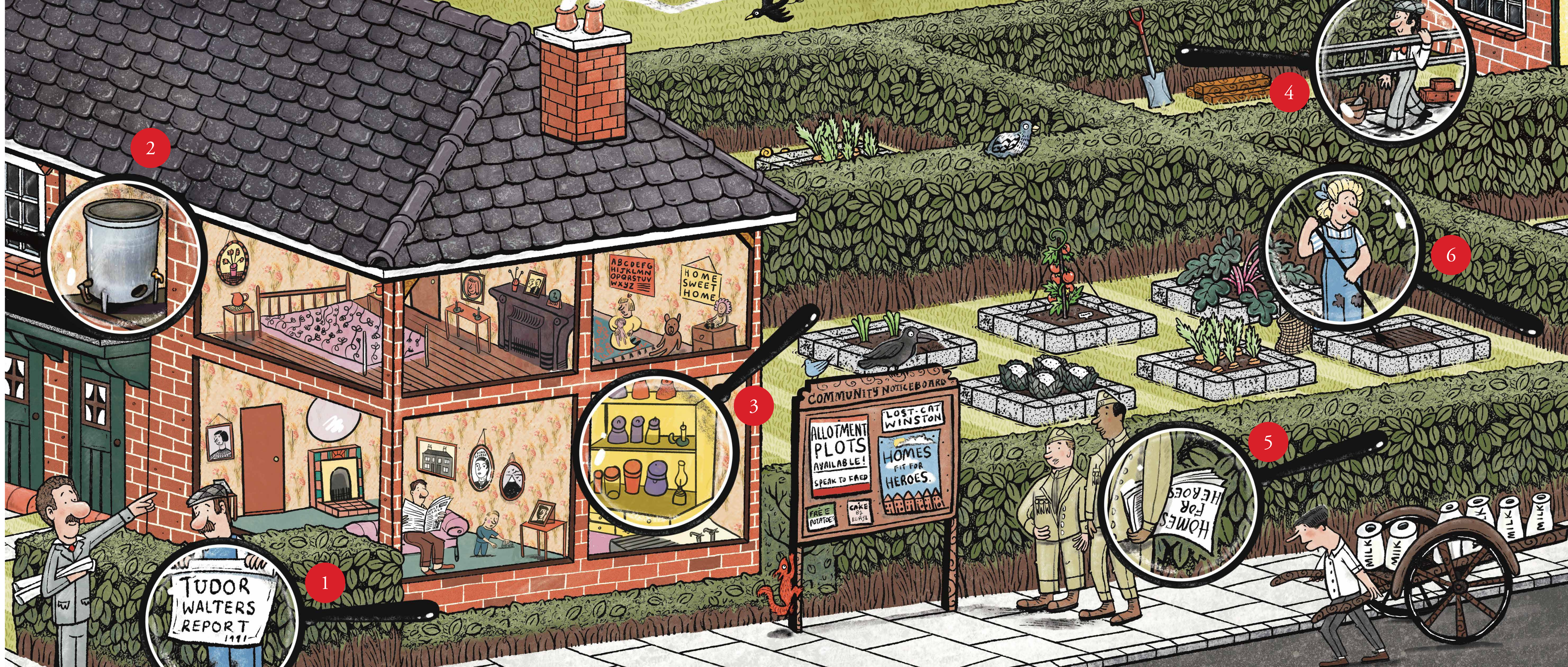
2. Keeping warm – In the 1920s living rooms and bedrooms had fireplaces with hearths. Hot water was heated in a 'copper' – usually found in the scullery – and pumped to the bath. This was considered a luxury at the time.

3. Family life – Life was very different 100 years ago and the layout of homes reflects this. The scullery, a small, functional space with running water was very different from the fitted kitchens of today but a big improvement on what people had before these homes were built.

4. Construction – Estates were constructed by councils from around 1920. Differences in construction techniques and materials can be observed across the period. For example, homes built later were smaller, with one reason for this being a shortage of materials.

5. Homes for people – These estates were built to respond to the housing crisis that followed World War One and you might have heard them referred to as 'Homes for Heroes'. Set in law by the 1919 Addison act, they were critical in solving the housing and health crises associated with poor quality housing of urban slums.

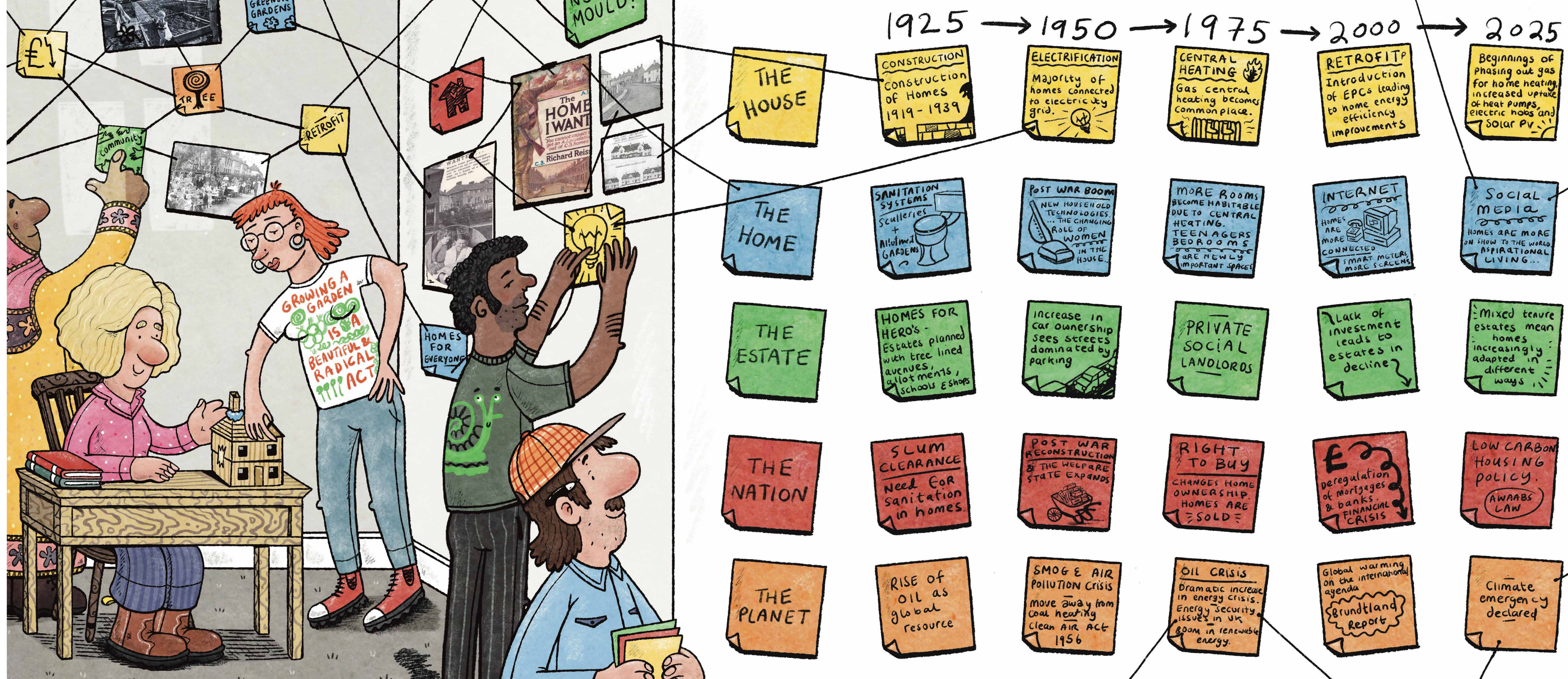
6. Outdoors – Large gardens are a key feature of these estates and were often used for growing food. The layout of estates was inspired by the Garden Cities movement designed to bridge the gap between city and country – what we might think of as the 'suburbs' today.



The Evolution of Homes Over 100 Years

Through our research we have been trying to understand how buildings, people, society and the planet have changed since these homes were built. When they were constructed, between 1920-1940, few homes had electricity or inside toilets, and baths were often in the kitchen. Telephones did not become common in the home until the 1960s and gas central heating was only rolled out across the country in the 1960s and 1970s.

- THE HOUSE**
The House – the physical building and its technology and systems.
- THE HOME**
The Home – how people live and use spaces.
- THE ESTATE**
The Estate – how streets and community life has changed.
- THE NATION**
The Nation – how the national political landscape has changed in relation to housing.
- THE PLANET**
The Planet – how our world has changed and how we are changing it.



The Home Today

Welcome to our home built in 1925 as it is today. Whilst the basic structure and layout is similar, life is very different. Spaces designed as sculleries are now modern kitchens full of essential gadgets – we certainly have a lot more stuff than we did 100 years ago! Our homes are now heated by boilers and radiators instead of open fires, and TVs are the focal point of our living rooms. Outside has changed too – streets are full of cars and infrastructure like power and telephone cables, and cracks are beginning to show.

Through our research we are gathering data to understand how the homes perform and how people live in them today. It looks busy – and that’s because it is! We’re trying to understand the challenges people face, test the homes to see how they work, and ensure people in the community can have a voice in the process.

1. Design of the home – In many 1920-1940 homes overhanging eaves were part of the original design, to give the homes a ‘cottage’ feel. Our research has shown that heat is lost in this area of the home, as the roof is difficult to access and therefore insulate. As a result, mould is common on the ceilings in upstairs bedrooms due to the difference in temperature inside and outside.

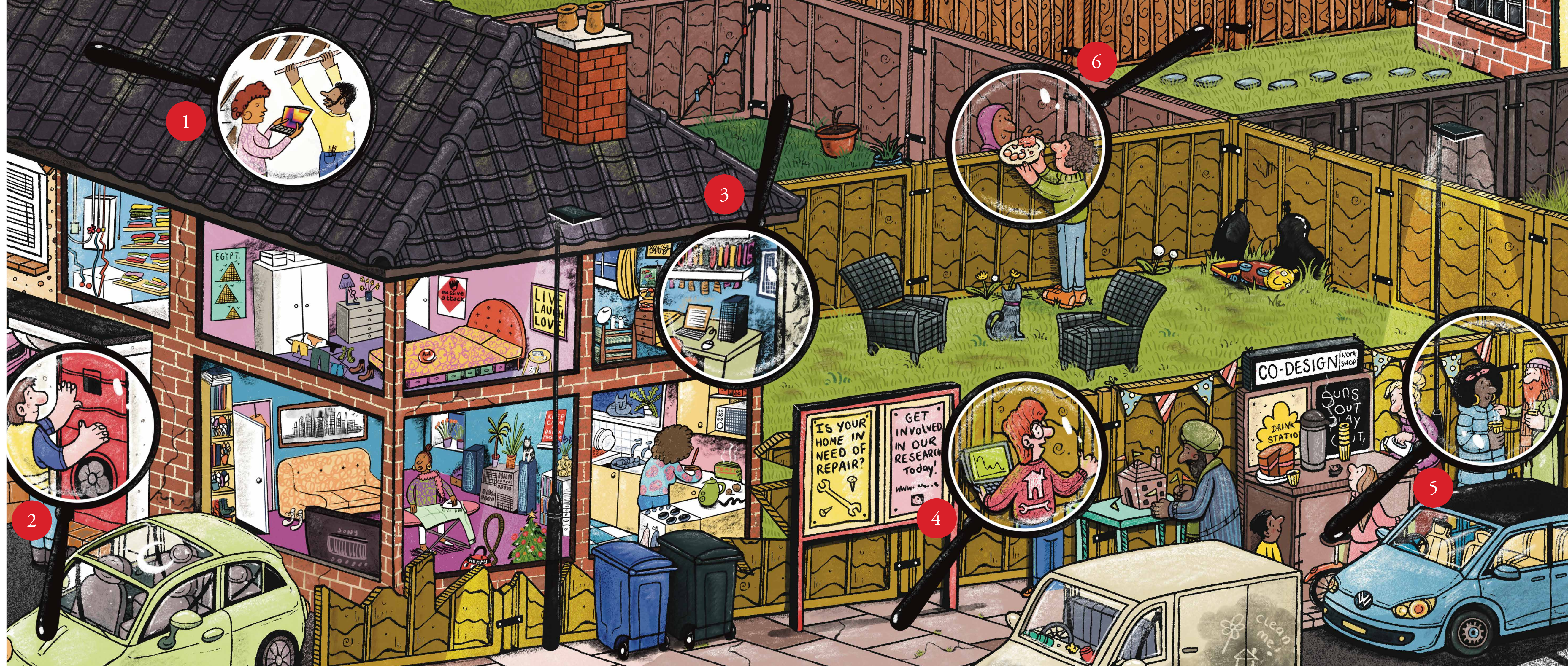
2. Keeping warm – Our team of researchers have been testing how energy efficient the homes are. Here you can see an airtightness test taking place, which shows where heat is being lost – around doors and windows, through cracks and holes. When leaks are repaired homes will be warmer and bills lower.

3. Family life – Conversations with residents have been important to help us understand how people live in their homes, and the issues residents face. For example, resident input has highlighted spatial challenges relating to dining areas: “There’s no seating area to sit and have food. That’s a big thing about family, to sit and have food together. Because of the shape of the houses you can’t get tables and chairs in, so a lot of our children don’t actually sit at a dinner table.”

4. Understanding construction – Here you see one of our researchers modelling how the home will perform when changes are made. They gather a wide range of data from who lives in the home, the way the home is built and the weather, and use this to predict how insulation, for example, could improve comfort and energy bills in the future.

5. Homes for people – People who live in a home know it best and can provide valuable information about what challenges exist. Co-designing with residents means that we can find challenges that are experienced across many homes. Our co-design workshops have been important spaces for residents to learn about possible solutions, engage with their neighbours, and have a voice in changes to their homes.

6. Outdoors – With changes in lifestyles – including shift working and longer working hours – it is difficult to find time to maintain gardens. Many front gardens have been converted to provide off-road parking. At the same time, these areas offer important extra storage and spaces to play.



Opportunities and Challenges for Change to Homes Today

Finding the solution to a challenge with your home is easy, right? DIY is rarely straightforward – it can feel like a roll of the dice. There are so many options available to choose from and it is hard to know what is right for your home and your family. Technologies and government funding keep changing. It's difficult to know where to look and who to ask.

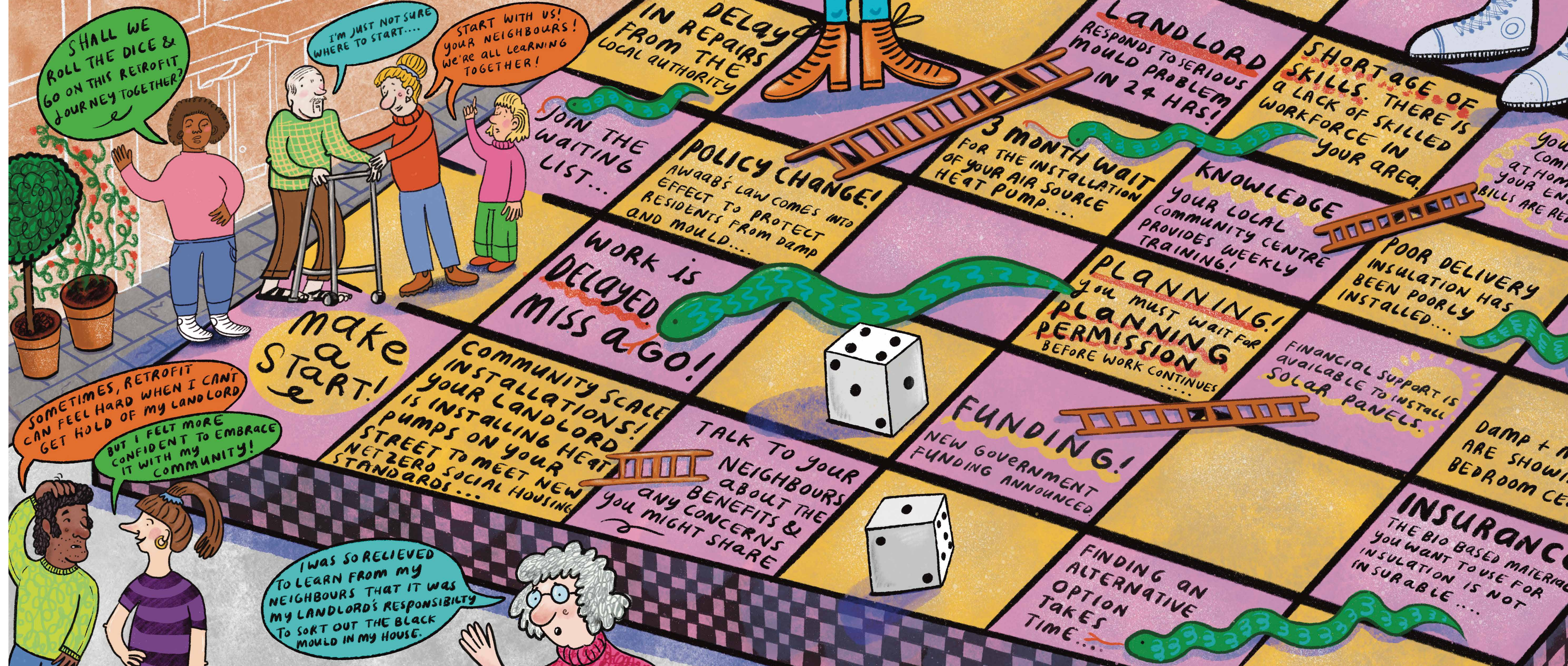
Through our research we have been trying to understand how the current systems to retrofit homes work for people – or don't! This snakes and ladders board documents some of the opportunities and challenges we have learnt about through speaking to a wide range of people including residents, policy makers, and trades people. By understanding this, we are working to find clearer pathways forward.

Challenges

- Planning – you must wait for planning permission before continuing work. Work is delayed by 5 months.
- Insurance – the bio-based material you want to use for insulation is not insurable. Looking for an alternative option takes time.
- Poor delivery – Insulation has been poorly installed. Damp and mould are showing on bedroom ceilings.
- Delays in repairs – You finally got through to the local authority. You have to join the waiting list for repairs, which may take 5 months.
- Shortage of skills – There is a lack of skilled workforce in your area. There is a 3 month wait for your new air source heat pump to be installed.

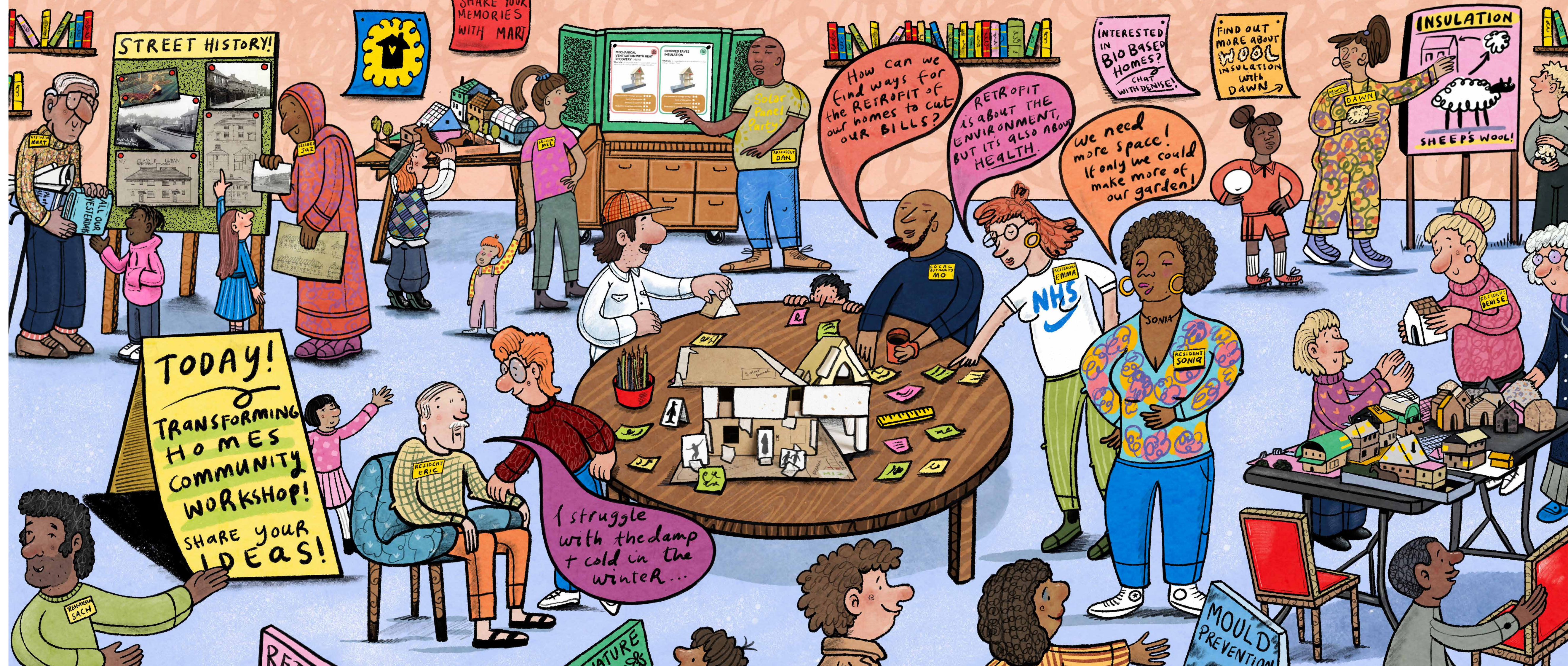
Opportunities

- Funding – New government funding announced. Extra financial support is available to install solar panels.
- Community scale installations – Your landlord is installing heat pumps on your street to meet new net zero social housing standards. You can talk to your neighbours about the benefits and any of your concerns.
- Policy change – Awaab's Law comes into effect to protect residents from hazardous damp and mould. Landlord responds to serious mould problem within 24 hours.
- Knowledge – Your local community centre provides training on Wednesday evenings. You are more comfortable at home and your energy bills are reduced.



Transforming Existing Housing with, and for, Communities

How can we address the challenges that residents face in their homes? Everyone has a valuable role to play in understanding how our homes should be designed for today and for future living. Co-design workshops, where communities come together to collaboratively discuss challenges and design solutions, are a core part of our research. We have held workshops with residents living in 1920-1940 built homes across England and Wales, as well as talking with a range of people professionally involved in housing, including politicians, building and technology experts, and social landlords, among others. Together we have been exploring solutions for homes and communities, thinking about how well these solutions will work in practice, and how they can be applied for many homes.



The Transforming Home

We have been discussing opportunities to transform the whole home – the spaces that make up a home, the systems for power and heat, and the materials it is made of, as well as the way people live day-to-day. We believe transformation should include all of these. That's why you will spot a lot of activity across the whole house and a whole range of people involved in the transformation process. The transformations we are carrying out will support better quality homes, lower bills, improved health and wellbeing, and lower carbon emissions.

Through our research we are transforming real homes, with real people living in them, in two estates in Bristol and Swansea. Some of the interventions you see here will be taking place in these homes. However, we can't test everything in these two estates. Other solutions presented here are part of the design ideas we are exploring in our guide to what is possible for 1920-1940 built homes.

1. Design of the home – Remember those uninsulated eaves that were causing issues with damp and mould? Our team are designing a range of solutions for insulating the eaves of 1920-1940 homes. These solutions use bio-based materials, which are not derived from plastics and have a lower impact on the environment and atmosphere.

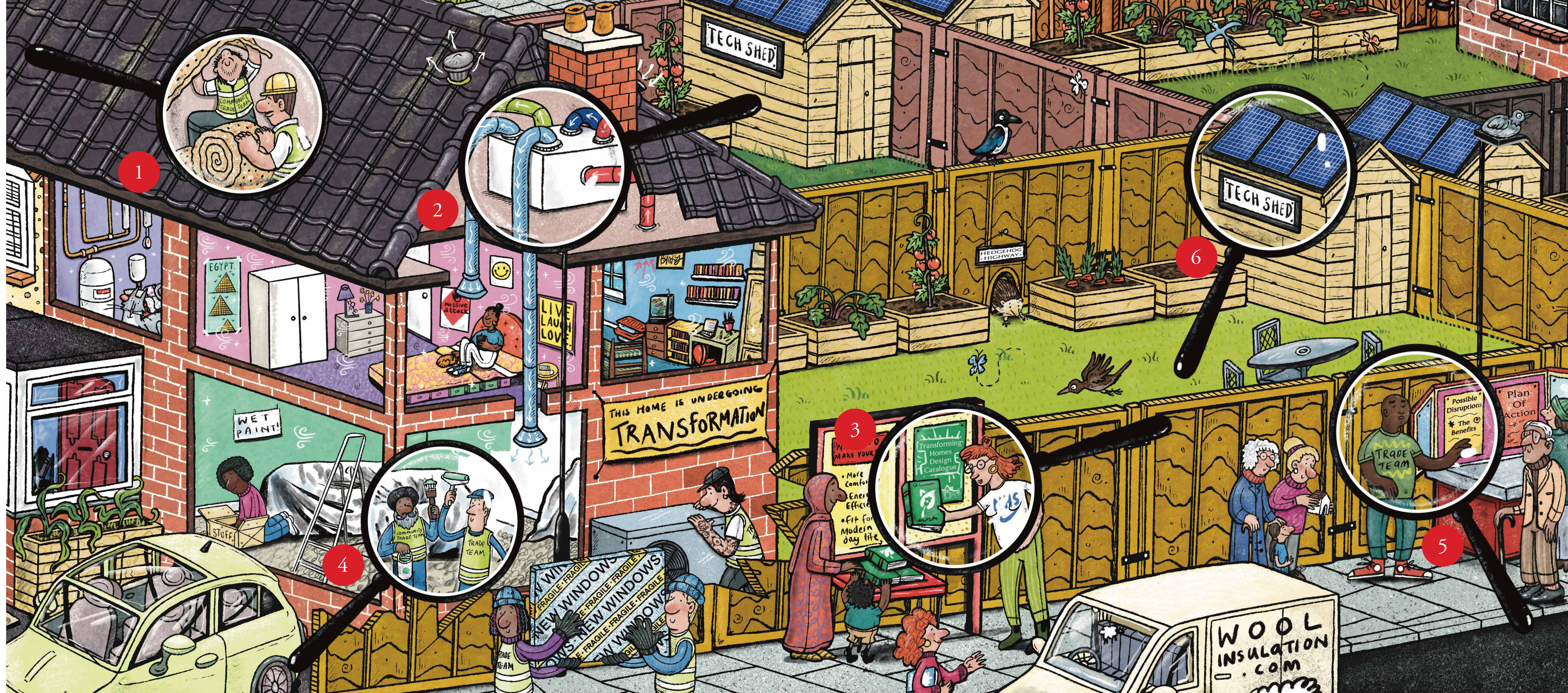
2. Keeping warm – Draughty homes are a real problem. We are insulating homes and replacing windows and doors to solve these problems and keep warmth in, using bio-based materials wherever possible. When we stop draughts, we also need to ventilate homes to get rid of moisture, smells and pollutants that can build up. Ventilation units allow fresh air to be brought into the home in a controlled way.

3. Family life – Remember the challenges residents faced finding space for dining tables? Our team are developing a design guide for 1920-1940 built homes that suggests a range of solutions to make homes like these more comfortable, energy efficient, and fit for modern day life – including creating space for dining. The guide is based on the 1918 Tudor Walters house types and was created through design workshops with communities across England and Wales.

4. Doing construction – It is important that tradespeople who come into homes are trusted and care for the homes and the people who live in them, carrying out works to a high standard. In Bristol and Swansea, local people are being trained to work with bio-based materials and new technologies, bringing new skills and jobs to the local area.

5. Homes for people – Making changes to homes can be disruptive for residents. We've been working hard with residents to ensure they understand the possible disruption and what will be happening in their homes. We're also working with tradespeople to ensure caring and open communication takes place throughout the transformation. This will enable residents to understand what is being done to their home and what the benefits will be.

6. Outdoors – New systems like air source heat pumps and batteries for energy storage can mean more equipment, which can take up valuable storage space in our homes. Our research team are looking at ways homes can be designed to increase space and provide extra storage in gardens to minimise the impact of this extra kit.



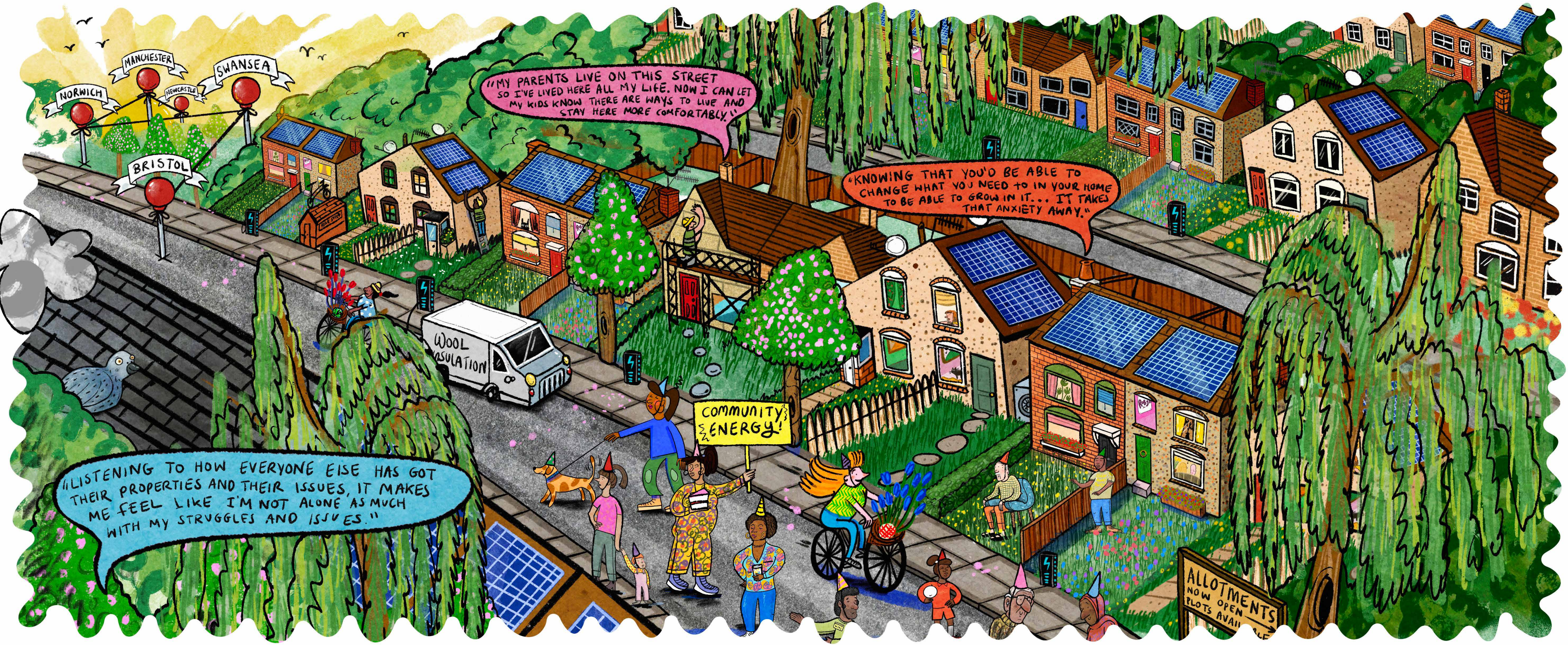
The Bigger Picture, Future Directions

Throughout this illustrated storybook, we've taken you on a journey through the transformation of a home built in 1925. But the picture – and the solutions needed – are much bigger than this. We need to transform whole terraces, streets, and estates across the country to provide healthier, happier, more sustainable places to live.

Transformation is more than an individual effort; it's a collective process. It doesn't just involve homes, but the streets and estates that surround them – trees and green spaces, transport and infrastructure, community spaces and local shops. There's a whole host of people who need to contribute.

We also know these changes won't happen overnight, and they won't be the same everywhere – different solutions are needed for different homes and families, for different places with their histories and local policies, and for different local climates and weather. Through our research we have seen how important these differences are – it's why we are working with real families, it's why we have been travelling the country to visit a range of estates, it's why we are exploring a range of transformations – to try to meet as many people's needs as possible.

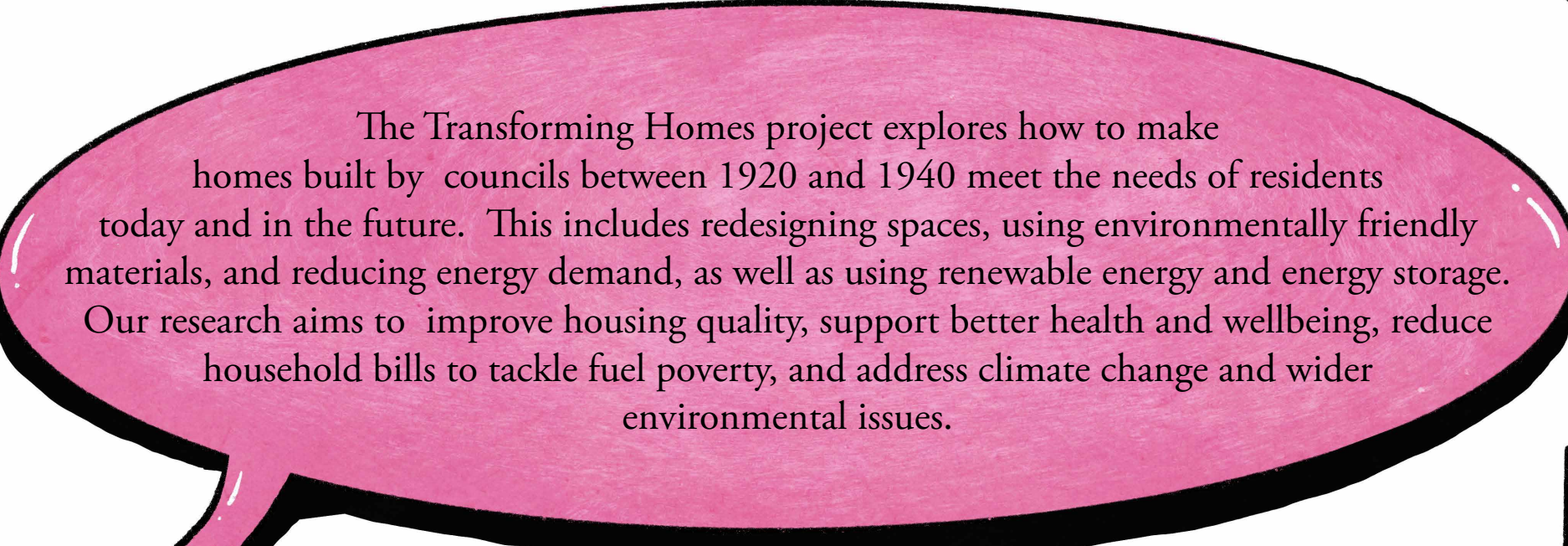
On this page you can view this patchwork picture across our imaginary estate and explore some of these collective solutions and different approaches.



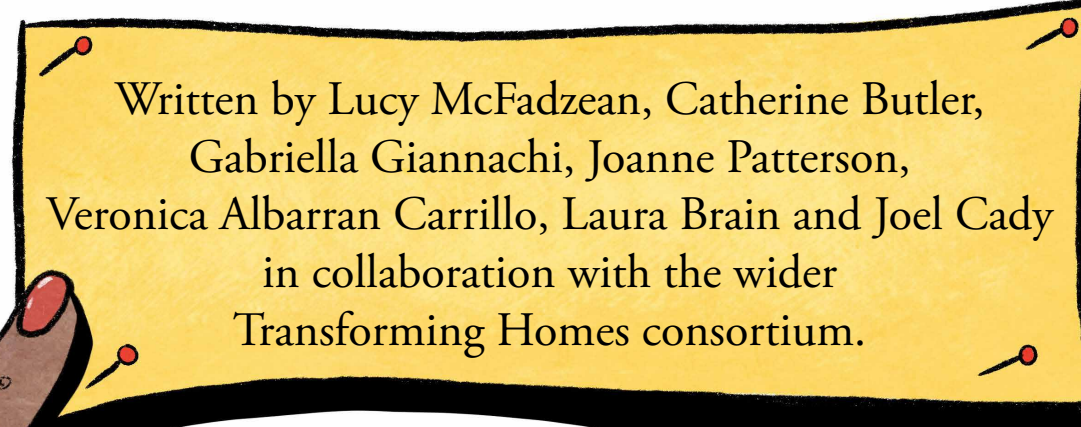
INDEX

1. History – Tudor Walters Plans 1918.
Image Credit: Manual on the Preparation of State-Aided Housing Schemes, published by the Local Government Board in 1919.
2. History – Hillfields Park, Bristol circa 1930
Image Credit: Paul Townsend made available under a Creative Commons licence
3. Homes today – York exterior
Image Credit: Joel Cady
4. Homes today – Inside a kitchen
Image Credit: Francesca Jones
5. Homes today – Townhill Estate from above
Image Credit: Francesca Jones
6. Research – The Transforming Homes Team
Image Credit: Jo Patterson
7. Research – Thermal image of Bristol home
Image Credit: Francis Moran
8. Research – Airtightness testing
Image Credit: Francis Moran
9. Co-design – Transformed model home
Image Credit: Francesca Jones
10. Co-design – Using retrofit cards
Image Credit: Ibi Feher
11. Co-design – The cart and model street
Image Credit: Francesca Jones
12. Co-design – Bristol street party
Image Credit: Ibi Feher
13. Transformation – Tech shed designs initial drawings
Image Credit: Laura Brain and Joel Cady
14. Transformation – Eaves design detail initial drawings
Image Credit: Emma Taylor
15. Transformation – Using bio-based materials
Image Credit: Ibi Feher
16. Transformation – The Trade Team
Image Credit: Ibi Feher
17. Illustrator's impression of a 1950s family of an interwar home.
18. Homes today – A resident's dog.
Image Credit: We Can Make

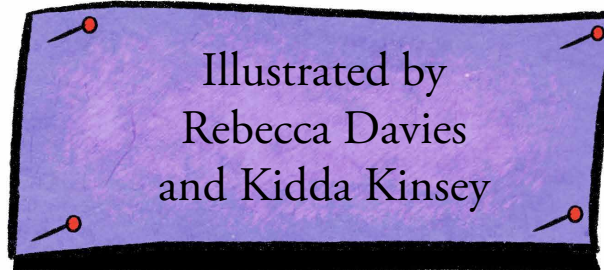




The Transforming Homes project explores how to make homes built by councils between 1920 and 1940 meet the needs of residents today and in the future. This includes redesigning spaces, using environmentally friendly materials, and reducing energy demand, as well as using renewable energy and energy storage. Our research aims to improve housing quality, support better health and wellbeing, reduce household bills to tackle fuel poverty, and address climate change and wider environmental issues.



Written by Lucy McFadzean, Catherine Butler, Gabriella Giannachi, Joanne Patterson, Veronica Albarran Carrillo, Laura Brain and Joel Cady in collaboration with the wider Transforming Homes consortium.



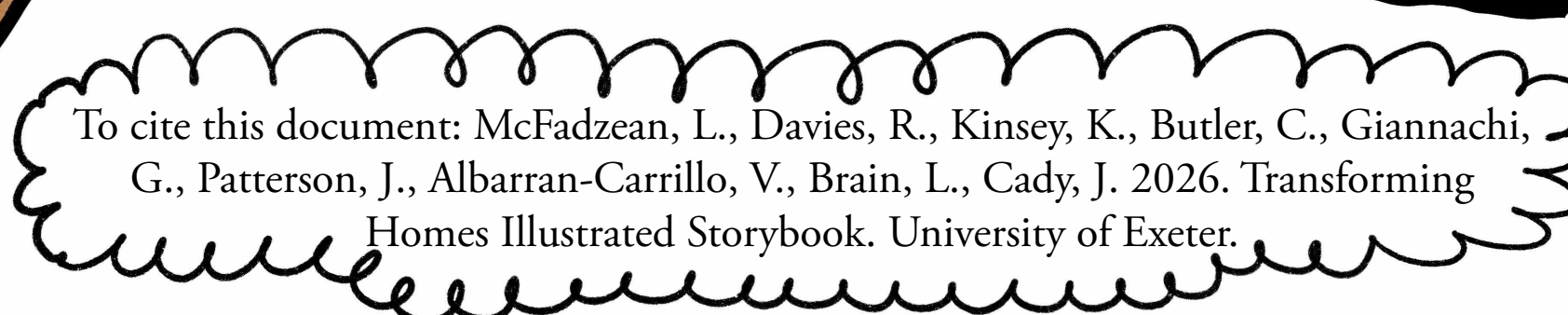
Illustrated by Rebecca Davies and Kidda Kinsey



This Illustrated Storybook offers an opportunity to learn more about our research and collaborative approaches to transforming homes.



This research is part of Transforming Housing and Homes for Future Generations project funded by the Arts and Humanities Research Council (AHRC) Green Transitions Ecosystem (GTE) which is part of the UK Research and Innovation - Award Refs - AH/Y003861/1 and AH/Y003861/2.



To cite this document: McFadzean, L., Davies, R., Kinsey, K., Butler, C., Giannachi, G., Patterson, J., Albarran-Carrillo, V., Brain, L., Cady, J. 2026. Transforming Homes Illustrated Storybook. University of Exeter.



**TRANSFORMING
HOMES**



Arts and
Humanities
Research Council

ISBN 978-1-915961-14-3