



Bristol's Warm Homes Plan

A Bristol City Council and Bristol City Leap joint action plan for decarbonising homes



Sustainable City and Climate Change Service, April 2025

Cover image credit: West of England Mayoral Combined Authority



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Executive summary

We are facing a climate emergency. As a city, we need to act now to reduce greenhouse gas emissions to net zero.

Homes are the second highest emitter of greenhouse gases in the City of Bristol, after transport. This is predominantly from burning gas to heat our homes, which makes up just over a fifth of the city’s emissions. A further 8% of the city’s emissions are from burning fossil fuels to generate the electricity used in homes.

Tackling carbon emissions from homes is vital for Bristol to become a carbon neutral city, but there are other benefits as homes will be warmer, healthier, and should be cheaper to heat.

There are approximately 206,800 homes in Bristol. Homeowners, landlords and Bristol City Council have been working to reduce the carbon emissions from the city’s homes. Since 2005 gas use has reduced by a third due to increased boiler efficiency and improved insulation, and the carbon impact of electricity use has reduced by two thirds as a result of increased renewable energy generation supplying the electricity grid. However, we need to go further and faster.

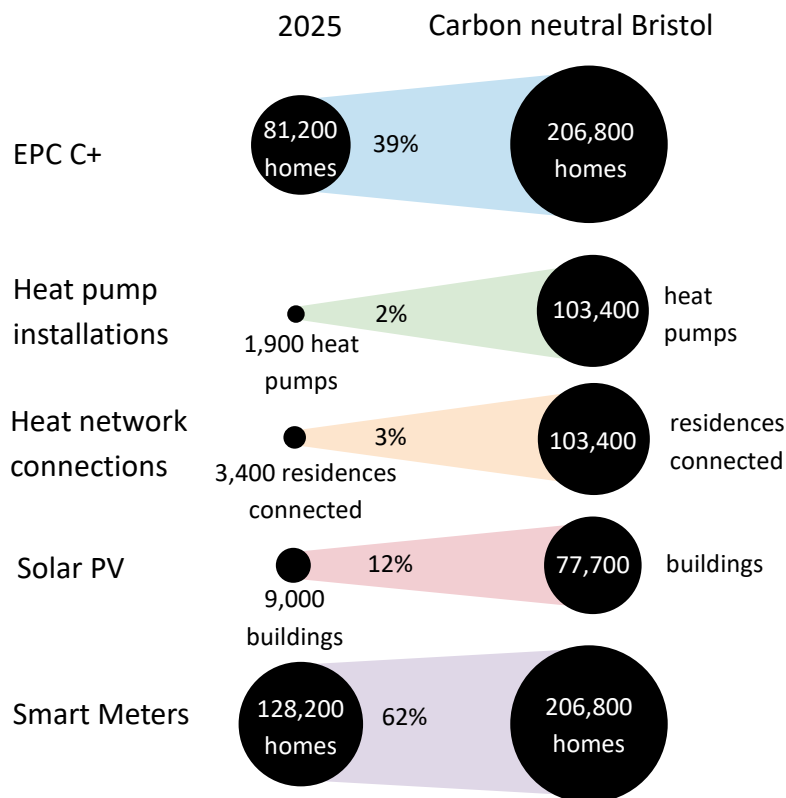


Figure 1: Where Bristol is in 2025 vs what is needed to decarbonise homes and reach carbon neutrality. Illustrative example where half of homes have a heat pump and half connect to a heat network, however in reality the numbers will be different.



Decarbonising homes means reducing carbon emissions from fossil fuels to zero by removing gas completely. This will involve an incredible effort and will require a huge amount of investment by building owners. The One City Climate Strategy includes six objectives that set out what needs to happen to the city's homes. These include improving energy performance of homes through insulation to minimise heat demand, replacing individual gas boilers with either individual heat pumps or connections to heat networks, building new buildings to be highly efficient with renewable generation, adopting smart electricity solutions and maximising renewable electricity generation through solar panels.

This action plan assesses the roles that Bristol City Council and Bristol City Leap can play to contribute to this challenge and accelerate progress towards carbon neutral homes. The plan looks at our roles across:

1. Social housing (homes owned and managed by Bristol City Council and other social housing providers)
2. Private housing (including private rented homes and owner-occupied homes)
3. New build housing
4. Heat network and energy planning
5. Skills and supply chain
6. Coordination, governance and citizen involvement

Some of these roles include delivering decarbonisation projects on our own housing stock or building the city's district heating network where Bristol City Council or Bristol City Leap are directly involved. However, many roles indirectly lead to action by other stakeholders and households in the city, through planning, showcasing, coordinating and engaging.

Importantly, the plan articulates how we want to respond to this challenge, following best practice with a focus on:

1. A Just Transition – for example through maximising delivery of bill-saving measures to low-income households and ensuring there are improved and inclusive skills pathways into jobs in this sector
2. Good quality work – for example through upskilling installers and commissioners, monitoring outcomes and ensuring households have access to good advice
3. Inclusive engagement – for example through upskilling Bristol City Council and Bristol City Leap staff on inclusive engagement and ensuring we are continuously learning how best to engage with our council tenants on retrofit programmes
4. Holistic and place-based approaches – at ward or street level, for example through linking delivery programmes across housing tenure, working with local community organisations and supporting local upskilling opportunities



Introduction

Home is a very personal place and somewhere we should be able to feel safe and comfortable. Living in a warm home that can be heated affordably is vital for our health and wellbeing, as well as our pocket. The same goes for cooking, washing, relaxing in front of the TV and all the other important ways we use energy in our home. But as we face a climate emergency, it is becoming increasingly urgent that living in our homes is good for the planet too.

Improving the warmth of homes, by taking steps like draughtproofing or installing loft insulation, is the most important thing that can be done to reduce the cost of heating and it contributes to making a home a healthy place to be.

However, the way we heat our homes will need to change. Over a fifth of the city's carbon emissions come from heating homes and hot water with gas boilers and cooking with gas. Bristol is on an ambitious journey to transition towards a city that is carbon neutral and climate resilient. So, a monumental shift is required to lower carbon forms of heating, like heat pumps and district heating networks, and lower carbon forms of cooking, like electric induction hobs.

A smaller, but still important, 8% of the city's carbon emissions come from using electricity in homes. Generating renewable energy locally using rooftop solar panels is one of the ways to reduce the climate change impact of electricity use.

This shift to decarbonised heating and electricity use will be felt in every home and will involve the whole city, from the neighbour sharing their home renovation story, to the person training to install heat pumps as their new job, to the community group promoting solar panels. Bristol City Council aims to ensure that this transition happens in the right way so that no one is disadvantaged as a result.

There will be challenges and Bristol City Council cannot do everything on its own. There are things the council can influence and change, and things it has no control over at all.

Why this action plan is needed

Following Bristol's declaration of a climate emergency, Bristol's One City Climate Strategy set an ambition for decarbonising the city's homes and how they are heated - a key pillar of Bristol's wider goal to become a carbon neutral city. Bristol City Council has a several key roles to play and this action plan sets out how it intends to play these roles, working with



Figure 2: An air-source heat pump installed in the back garden of a terraced home in Easton. Image credit: West of England Mayoral Combined Authority.

the many stakeholders involved, including all the city's residents and supporting a Just Transition.

If Bristol City Council does not take action to support the city to decarbonise homes, not only do we risk not meeting the city's climate goals, we also lose the opportunity to improve the state of the city's housing, making homes warmer and healthier and reducing the risk of people being unable to afford their energy bills. If Bristol City Council does not get involved in managing this transition, there is a greater risk that the transition will not be fair or just.

Therefore, this action plan sets out the challenge of decarbonising all the homes in Bristol and provides a delivery plan for the domestic aspects of the heat and buildings themes of the One City Climate Strategy. It assesses the roles that Bristol City Council and Bristol City Leap can play to accelerate progress towards carbon neutral homes, whilst ensuring a Just Transition. Within these roles, it identifies broad objectives and specific actions for Bristol City Council and Bristol City Leap to take forward over the next five years.



Background

The climate impact of Bristol's homes

Homes are the second highest emitter of greenhouse gases in the City of Bristol, after transport (Figure 3). This is predominantly from burning gas to heat our homes and a smaller amount of gas is used for providing hot water and cooking (Figure 4). In total, gas use in homes makes up just over a fifth of the city's emissions. A further 8% of the city's emissions are from burning fossil fuels to generate electricity which is used in homes. Electricity is mostly used to power home appliances (e.g. the fridge, television and washing machine), provide lighting and, in some homes that do not use gas, provide heating and hot water.

Decarbonising homes means reducing carbon emissions from fossil fuels to zero by removing the use of natural gas completely and generating electricity from renewable sources, either locally on homes themselves or through the decarbonisation of the UK's electricity grid. We cannot continue to burn natural gas as it contributes to global warming and the climate emergency. We also cannot replace natural gas with biogas as it is not possible to produce enough biogas for this to be a mainstream solution.

Decarbonising homes will involve an incredible effort and will require a huge amount of investment by building owners. However, tackling carbon emissions from homes is vital for Bristol to become a carbon neutral city, and there are lots of other benefits too. Homes will be warmer, healthier, and should be cheaper to heat.

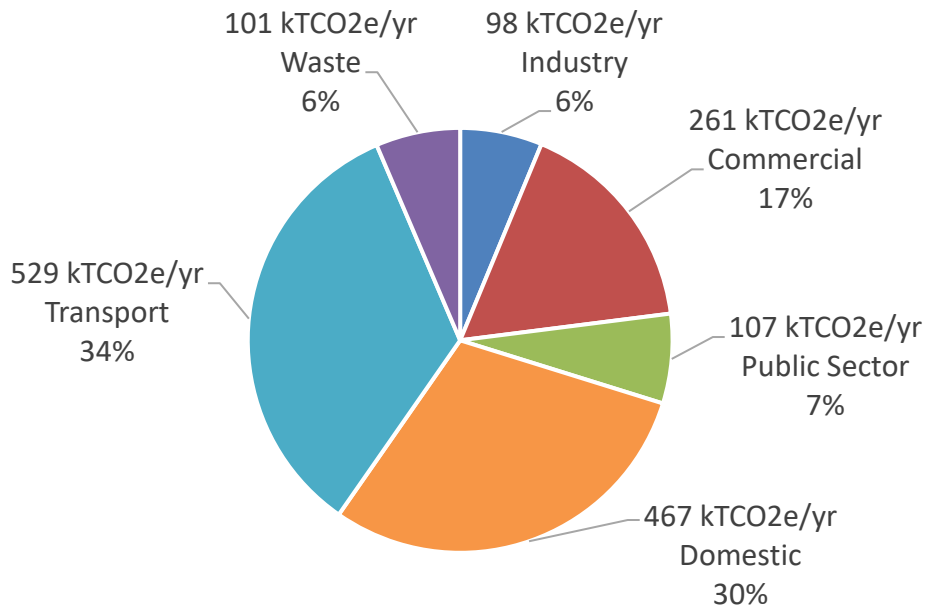


Figure 3: Greenhouse gas emissions from homes are the second highest source of emissions in Bristol. Bristol's greenhouse gas emissions by sector in 2022. UK Greenhouse Gas Statistics from Department for Energy Security and Net Zero.

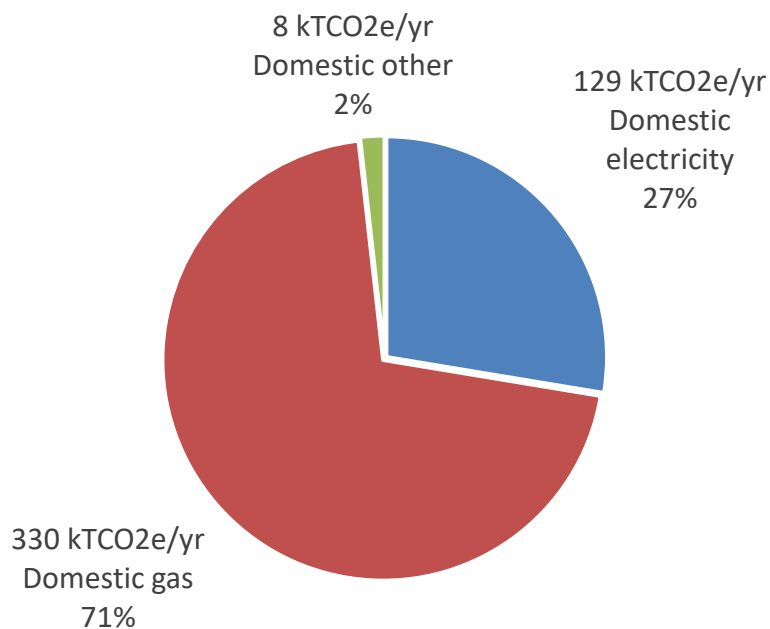


Figure 4: Gas use makes up the majority of the greenhouse gas emissions from homes in Bristol. Bristol's greenhouse gas emissions from homes in 2022 (a breakdown of the domestic sector in Figure 3). UK Greenhouse Gas Statistics from Department for Energy Security and Net Zero.

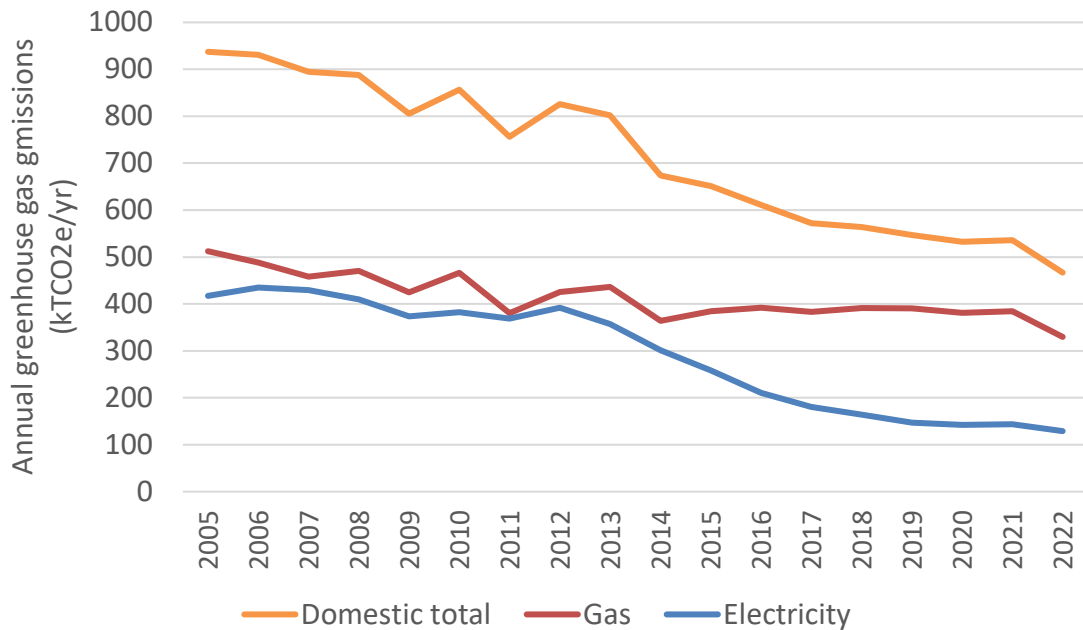


Figure 5: Greenhouse gas emissions from domestic electricity use have declined more than domestic gas use since 2005, Reduction in Bristol's greenhouse gas emissions from homes between 2005 and 2022. UK Greenhouse Gas Statistics from Department for Energy Security and Net Zero.

How homes can be decarbonised

Reducing carbon emissions from homes involves:

1. reducing the energy needed to heat the home
2. replacing fossil fuel heating sources, such as gas boilers, with a low carbon alternative
3. generating renewable electricity or buying renewable electricity

The term “retrofit” is often used to describe the action of renovating an existing home to decarbonise it, involving the installation of a combination of energy efficiency measures (such as insulation), low carbon heat and possibly also solar panels, potentially in several stages.

When building new homes, it is much more cost effective to ensure they are fit for the future and do not need to be retrofitted later on.



This addresses what is known as the 'operational carbon' of a home, the amount of carbon the home produces as it is being lived in. However, homes also have 'embodied carbon', the amount of carbon produced in the manufacture of the materials used to build it or renovate it, the process itself of building or renovating the home, and the disposal of waste.

Embodied carbon is not the focus of this document, it is addressed in the [upcoming Local Plan](#) in Policy NZC3: Embodied carbon, material and circular economy (currently under review). However, consideration of low carbon processes and materials, and re-use or recycling of waste should be incorporated into the approach taken to decarbonise homes.

Reducing the energy needed to heat a home

Reducing the energy needed to heat a home can be achieved by making homes more energy efficient, for example through draught-proofing, insulation, double or triple glazing, and improving the efficiency of heating appliances. Every home is different and can benefit from different combinations of these measures.

Energy Performance Certificates (EPCs) are an indicator of energy efficiency. A home rated EPC C or above is generally regarded as having an adequate level of energy efficiency.

Replacing fossil fuel heating sources with a low carbon alternative

There are a variety of low carbon heating technologies to replace fossil fuel heating. The most widespread solutions will be heat pumps in individual homes and heat networks that are heated by large-scale heat pumps.

Heat pumps, both for individual homes and large-scale ones for heat networks, use electricity as the energy source and are typically over three times more efficient than the most efficient gas boilers or electric heaters.

Individual heat pumps circulate hot water to radiators to heat a home and need a hot water tank (or equivalent technology, for example a thermal battery containing phase-change material) to provide hot running water. They work most efficiently when they provide heat to the home steadily throughout the day, rather than providing short periods of heat as is common practice with gas boilers. This also improves home comfort.

The most common heat pumps for homes are air-source heat pumps (see Figure 2 and 6). These use a fan unit on the outside of a building to draw in the surrounding air. The heat pump technology uses the heat from the air to produce a higher temperature heat, which is transferred into the building, usually via a central heating system.

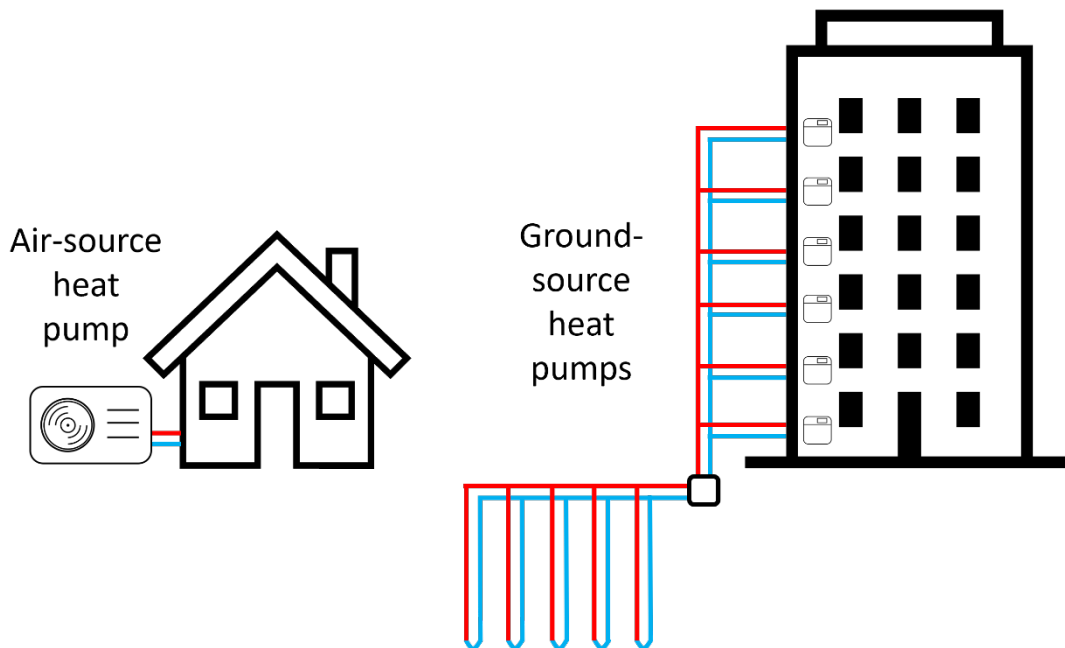


Figure 6: Individual air-source heat pumps have a fan unit on the outside of a building. Shared-loop ground source heat pumps have an appliance inside the home and a series of pipes that collect heat from the ground.

Another type is a ground-source heat pump. These use pipes underground to draw heat out of the ground and have a box for the technology either inside or outside the building. Ground-source heat pumps require access to land to install the underground pipes, either vertically in a deep borehole or horizontally dug into shallow trenches over a large area. Since garden space is constrained in a city, it is most likely that ground-source heat pumps in Bristol would be used for communal heat pump systems (see Figure 6), where one set of underground pipes installed beneath a public outdoor space (such as a car park) provides heat to more than one ground source heat pump, for example in a block of flats or a terrace of homes. This type of heat pump system is also common in new build developments.

A third type of heat pump is an air-to-air heat pump, which has the same outdoor unit as an air source heat pump, but instead of using radiators to distribute the heat around the home, fan units are installed in each room, which blow warm air into the space. Air-to-air heat pumps can also be used for cooling.

Heat networks, also known as district heating (see Figure 7), have the potential to be another low carbon form of heat. They use a single source of heat, called an energy centre, which produces hot water that is piped into many buildings through a network of pipes buried beneath the streets. A heat exchanger, which for a home is a similar size to a gas boiler, takes heat from the heat network's water pipes and transfers it to the heating

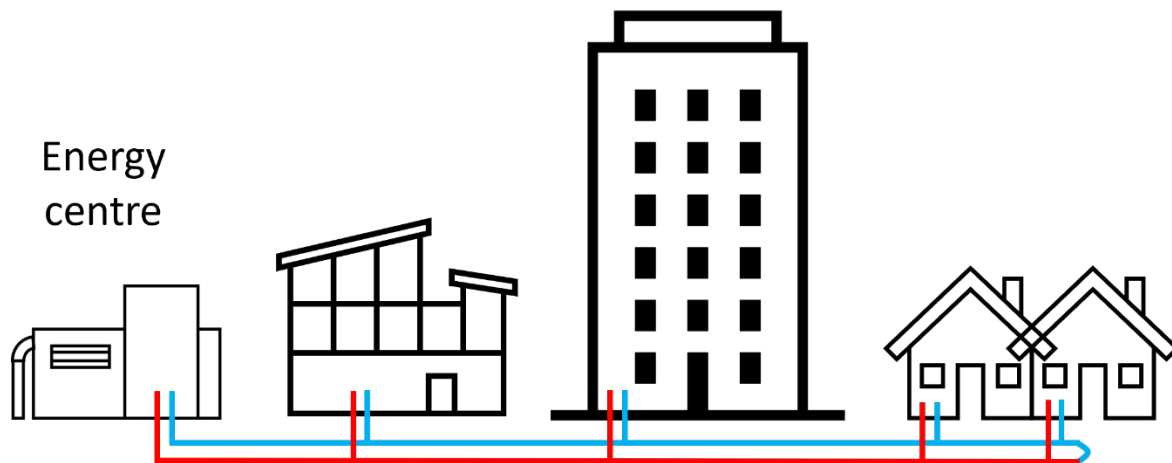


Figure 7: A heat network generates heat from a central energy centre which is then piped to multiple buildings.

system in the home to heat the radiators. The source of heat is interchangeable so for a heat network to be a low carbon form of heat the heat source needs to be low carbon, most commonly a large-scale heat pump (like the water source heat pump installed in Castle Park – see Figure 8) or using waste heat from industrial processes. Heat networks are a particularly effective way to heat buildings where there are lots of large buildings close together, for example blocks of flats and office buildings. Heat networks could also be a solution in Bristol for tightly packed terraces of houses.

Electricity is already being used to heat some homes in Bristol with direct electric panel heaters and night storage heaters. Whilst electrification is the necessary pathway to decarbonise heat, these types of electric heaters are at least three times less efficient than heat pumps, which makes them very expensive to run. It means they also require more electricity to be generated and put additional strain on the electricity grid. Therefore, this type of electric heating is not considered a mainstream solution to decarbonising heat in homes, however it may have a small role where retrofitting an alternative low carbon solution into existing homes is particularly challenging or costly.

The [UK government's Heat and Buildings Strategy](#) produced by the previous Government suggests that hydrogen could be used to heat homes by replacing natural gas in the gas network. The UK government is due to consult on the role on hydrogen in home heating in 2025. However, Bristol's One City Climate Strategy does not plan for hydrogen as a future heat source because there is not yet a clear national approach. Bristol City Council will review this as national policy develops.



Figure 8: Energy centre in Castle Park, producing heat for the heat network using a large-scale water source heat pump

Improving energy efficiency before installing low carbon heat means that the heat pump or heat network will not need to provide as much heat to the home to bring the same level of comfort, making the home warmer and energy bills cheaper. It also means that heat pumps and heat network energy centres do not need to be as big and do not need to use as much electricity. From a UK wide perspective, this reduces the amount of renewable electricity the UK must generate and reduces the cost of upgrading the electricity network, which saves costs for all electricity customers.

On the other hand, if the priority is to decarbonise the home and not reduce the cost of heating, installing low carbon heat alongside some basic energy efficiency improvements will be the fastest and most impactful route, and further energy efficiency improvements can be made later.

Generating renewable electricity

Renewable electricity can be generated for homes by installing solar panels on the roof. Not every roof is suitable for solar panels, it depends on the direction the roof faces and how much sun it gets. The solar panels convert energy from the sun to electricity, which is either used instantly in the home (providing free electricity) or is exported to the electricity grid (who will pay a small amount to receive this electricity). This means the upfront cost of solar



Figure 9: Three Bristol City Council homes (one green and two lilac) that have received a full suite of insulation measures and solar panels in Brentley, delivered by Bristol City Leap.

panels pays back over time if the person or organisation who purchased the solar panels is benefitting from the lower bills; this pay back could be in the region of 6 to 12 years.

To maximise the cost benefit of solar panels, electricity use in the home should be shifted, where possible, to times where the sun is shining and the panels are generating electricity. This can be done manually or smart appliances will do this automatically. Solar panels can also be combined with a battery which will store electricity generated by the solar panels during the day and can be used later on.

Smart meters are a very important component of a decarbonised electricity system as they make it easier to make best use of renewable generation, either in the home or in the wider electricity network. Smart meters monitor gas and electricity usage and send this information anonymously to the energy supplier, as well as display this information in the home. They have several benefits:

- helping households to reduce their energy usage by raising awareness of how much energy different appliances consume



- enabling households to access flexible “time-of-use” electricity tariffs, which make it cheaper to use electricity when there is less demand or a lot of renewable energy available, which could reduce energy bills overall
- helping the electricity network to better predict how households will use energy and incentivise households to use energy at times of lower demand or high renewable generation (through time-of-use tariffs), making the network more efficient

Batteries can help to further lower bills and aid decarbonisation through their interaction with flexible time-of-use electricity tariffs, as households can charge the battery when electricity is cheap and use power from the battery when electricity is more expensive. Batteries also present an opportunity to generate income by selling energy back to the electricity grid when it is experiencing high demand.

The climate resilience of Bristol's homes

Alongside urgent steps to reduce Bristol's contribution to climate change, Bristol recognises the need to better prepare the city for the growing impacts of climate change. It is crucial that our homes are able to withstand the future climate, including heatwaves and heavy rainfall, so they can be safe places to live. By the end of the century, Bristol could experience 30 to 80 days where the temperature reaches 25°C or higher per year, compared to just 12 at the start of the century.

In 2023, Bristol City Council published “[Keep Bristol Cool: a framework for urban heat resilience](#)” which includes goals for future-proofing new buildings for a warmer climate and tackling overheating risk in people's homes. The framework calls for an integrated approach to decarbonising homes, that takes the opportunity to implement measures to reduce overheating risk at the same time. These measures could include shading on windows and ensuring windows can open wide enough for sufficient airflow.

The multiple benefits of decarbonising homes

Besides the carbon reduction benefits of improving energy efficiency, installing low carbon heating and installing solar panels, there are many other reasons to take these steps, the main ones being that homes are warmer and cheaper to heat, leading to improved health and wellbeing for the occupants:

- improving energy efficiency means that the cost of heating the home is reduced, saving households money on their energy bills and reducing the risk of people being unable to afford their energy bills, otherwise known as fuel poverty. Reducing fuel poverty can improve health as well as educational attainment and wellbeing



- insulating homes means that they feel warmer, they hold heat for longer and are much more comfortable. When a home has the right balance of insulation and ventilation and these have been well installed, homes will avoid problems with damp and mould, making them healthier to live in. This will also help to avoid over-heating in summer, alongside specific measures to reduce over-heating. Living in a cold, damp, mouldy home has significant negative impacts on mental wellbeing and can cause or exacerbate many health conditions such as asthma
- installing solar panels reduces the cost of energy for the household, especially where electricity use coincides with times of high electricity production from the solar panels
- carrying out measures to decarbonise a home provides an opportunity for general maintenance at the same time and can improve the general look and feel of a property. It also provides an opportunity to make homes more resilient to future climate, for example taking steps to avoid over-heating risk
- heat pumps are around three times more efficient than direct electric heating, significantly reducing energy bills in these homes. Compared to gas boilers, a heat pump should be cheaper to run, particularly if the household are benefitting from specific electricity tariffs designed for heat pump users
- whilst electricity prices are high at the moment compared to gas prices, UK government is considering how to rebalance the relative cost of gas and electricity over the next decade. If this happens, the price of electricity would reduce compared to gas and make heat pumps and heat networks the cheaper option
- more broadly, carrying out these works on the many homes in the city and developing the infrastructure which supplies them with heat and electricity will create jobs in installation, design, engineering and commissioning as well as other supporting roles such as education and planning. It is important that the benefits of this opportunity are maximised in the local area to ensure a Just Transition

It should be noted that the upfront costs related to heat pumps are property specific and running costs depend on the electricity tariff and the particular design of the heat pump system. Heat pumps cost more to install than a gas boiler, however there are various offers and grants available that could make the costs comparable.

Bristol City Leap

In 2023, Bristol City Council signed a world-first partnership, known as Bristol City Leap, that aims to secure over £1 billion of investment to help make Bristol carbon neutral.



This joint venture with Ameresco Limited, and Vattenfall Heat UK as an essential subcontractor, is rapidly increasing the scale and pace of investment in low carbon energy infrastructure. This includes wind energy, solar energy, low carbon heat networks as well as other energy efficiency measures and smart energy systems.

Bristol City Leap will therefore play a major role in the decarbonisation of homes in the city and is included in this action plan alongside Bristol City Council.

Mission Net Zero

Bristol City Council is a member of the European Union's Climate Neutral and Smart Cities Mission which is supporting cities to accelerate climate action and secure the necessary investment. As part of this process we have developed the One City Climate Action and Investment Plan in collaboration with partners. This action plan reflects the relevant priorities set out in those documents. It is hoped that the participation in this initiative will facilitate access to private finance through the newly created European Capital Hub.

The Mission initiative's approach has also provided the inspiration for Bristol City Council's wider Mission Net Zero Programme. This is extending the city level planning to both the neighbourhood level, with the creation of three Community Climate Investment Plans, and to the regional level with the West of England Climate Investment Plan. In this way, we will create a suite of plans owned by the relevant key communities and stakeholders that can facilitate investment into everything from community buildings and street retrofit projects to regional scale infrastructure. As part of the programme we are also developing innovative finance mechanisms which may unlock new ways to finance the decarbonisation of homes.



How Bristol's citizens think we should decarbonise homes

Bristol's Citizens' Assembly

Bristol City Council commissioned a Bristol Citizens' Assembly in early 2021, which brought together 60 residents from Bristol - reflective of Bristol's local diversity in terms of age, sex, disability, ethnicity, geography, deprivation, and employment. One of the questions that the assembly was asked was "How do we rapidly reduce the impacts of Bristol's homes on climate change?". The recommendations were:

Bristol Citizens' Assembly Recommendation 1:

Council is to lead on training and upskilling the workforce by securing investment, ensuring high standards, harnessing innovation and making the most of local creativity and entrepreneurship such that the green industry is measurably prepared to carry out required improvements within 5 years. Do this by:

- Supporting people currently in relevant industries (building, energy, advice, etc.) to reskill through accredited and subsidised training courses, on the job training.
- Prioritising support to local (focus within Bristol) companies and SMEs – incentives for training, with reskilled companies becoming ambassadors of change.
- Collaborating with other organisations to set high quality green standards for companies and require approval/accreditation on retrofit/energy improvements.
- Encouraging new people to come into the industry – develop, organise and promote a BTEC/accredited course for people to be trained in conjunction with each new policy and innovation; including quality apprenticeships and outreach activities; focus promotion at under-represented groups (but don't exclude anyone).
- Learning from other cities and countries where green technologies are the norm and report on what regulatory frameworks and investment plans could be applied to the Bristol region.

Bristol Citizens' Assembly Recommendation 2:

Council to take leadership and responsibility for meeting its emissions targets in the city's housing stock by working in partnership with the business, education and community sectors, creating a programme of implementation to drive community changes. Do this by:



- Initiating talks with business, education and community partners and work with them to establish and deliver a plan on achieving the targets on home improvements (net zero), ensuring it's not left to individuals.
- Focussing support in areas of high deprivation, fuel poverty and poor quality housing, to ensure fairness, while promoting successful schemes as good practice.
- Identifying a singular, independent, existing non-profit agency to take on oversight.
- Monitoring performance and publicly reporting on progress against targets, every 6 months, with the opportunity for Council scrutiny: reporting must be something visual and easy to understand.

Bristol Citizens' Assembly Recommendation 3:

Create innovative financing options including grants, and/or loans to support homeowners and landlords to improve the energy efficiency of every home in Bristol. Do this by:

- Providing interest free loans for home sustainability improvements. With repayment over the long term, possibly linked to council tax. Principles should be similar to a student loan, only paid back when you earn over a certain threshold.
- Providing grants for lower income households. Prioritise grants to ensure equality (means tested). Set clear and transparent criteria around the grant system. Assure safeguards are in place for fair accountability.
- Bristol City Council defining, creating and regulating different levels of financial options for home efficiency improvement. The standard option should be for home improvement to achieve the target of net zero by 2030. Beyond this there will be a range of interest charged options as a choice for those that wish to make improvements past the base level.
- Providing a central channel/platform for tenants to communicate with the council that they want to make sustainability improvements so that the council can require and support the landlord to do this.
- Bristol City Council exploring the establishment of a centralised green housing fund to supply the above.

Bristol Citizens' Assembly Recommendation 4:

Reduce the fragmentation of all the different sustainability schemes and initiatives by creating and promoting an independent One Stop Shop that contains objective, trustworthy information, in order to provide support right through the process. Do this by:

- Creating a One Stop Shop for sustainability improvements that is both a website and physical shop with showrooms.



- Creating a staged approach to achieving sustainability improvements, beginning with a home survey (like the Cold Homes Energy Efficiency Survey Experts thermal imaging survey). Results to be integrated into the One Stop Shop process.
- Marketing the One Stop Shop through a city wide marketing campaign. Promote the One Stop Shop as part of the wider Net Zero brand/identity. Have an annual festival, or presence/stall, touring van with volunteers from each community at local community events.
- Involving young people in the One Stop Shop through creating an education pack for information to bring the One Stop Shop and its principles into schools.

Bristol Citizens' Assembly Recommendation 5:

The Council should introduce a set of tiered Bristol standards (tiers from minimum requirements to best practice aspiration standards) relating to energy consumption and efficiency for all retrofits, building improvements, developments and new builds (domestic and commercial) that are clear and well communicated, and linked to planning regulations.

Do this by:

- Developing and introducing standards for all existing properties (e.g. for home-owners, landlords, and social housing) and to be incorporated into new building regulations.
- Implementing a set of standards which are required of all landlords and rented properties; these should be higher than current standards i.e. to rent a property out it should have to meet a minimum environmental standard.
- Establishing a system for the council to conduct checking and signing-off that the standards have been met.
- Communicating independent and trustworthy information about different types of energy and environmental improvements, their impacts on the environment and the investment costs, running costs, and savings to allow comparison of different options and possibilities. (The One Stop Information Centre could do this.)
- Creating a 'green dot' or similar branding/logo to show you meet the standards as a trader, landlord, property owner or builder, with builders being trained to understand and meet these.

Bristol Citizens' Assembly Recommendation 6:

Develop a pilot programme for a street or neighbourhood to showcase what could be achieved if a citywide approach to reaching net zero was taken, with control, coordination and cooperation at a local level. Do this by:



- Introducing an awareness campaign so that local people can understand what is proposed and can come forward and bid to be the pilot project – the enthusiasm and desire to do it has to come from them. Consult local people as a key element in getting everyone together and working with them, identifying small and big wins, and what is realistic for people, including clear information about the investment costs, running costs and savings.
- Selecting a street / neighbourhood that enables a combination of owner occupied, social housing and private rental buildings to showcase what can be achieved across all of these types of property. Use existing methods of energy saving and have a clear timeframe for implementing the changes (e.g. 2 years). Provide financial assistance to make it affordable for people to participate to achieve this.
- Appointing someone accountable with an oversight role, to avoid 'contracts to mates' and ensure there is learning from previous 'renewal areas' (e.g. Easton, Totterdown, St Werburgh's.)
- Going beyond energy to look at the wider environment, looking at on-street charging for electric cars, tree cover, with the aim of creating the 'ideal environmental neighbourhood' 'future street' and making it a visually stimulating, lovely, liveable place.
- Holding a big party and week-long open event at the end of every street improvement pilot, to celebrate and also open it up for others to come and see, create a buzz, ensure it is joyful and fun, people are excited to do it, and that these kinds of changes are ambitious but doable.

This plan directly responds to these recommendations and incorporates them where possible. Note that Bristol City Council only has the ability to implement Recommendation 5 on council new builds and through planning policy.

Community Climate Action Plans

The Bristol Climate and Nature Partnership is leading a National Lottery funded project to develop Community Climate Action Plans for the areas served by community anchor groups in the city. Ten groups have completed plans so far: Bristol Disability Equality Forum, ACH, Eastside Community Trust, Heart of BS13, Lockleaze Neighbourhood trust, Ambition Lawrence Weston, Southmead Development Trust, Windmill Hill City Farm, Knowle West Media Centre and BRICKS.

Actions related to decarbonising homes in these ten plans can be summarised as follows:



Figure 10: Bristol Energy Network delivering a DIY draughtproofing workshop for Eastside Community Trust.

Community Climate Action Plans Theme 1: Insulate existing homes to save money on bills and reduce damp and mould

- Empower residents to have the knowledge and skills to improve their own homes and have a Net Zero plan for their home.
- Support private renters and social housing tenants to work with landlords and social housing providers to ensure homes are warmer in the winter.
- Upskill local social housing residents to become estate management volunteers, this group will be empowered to raise and progress issues to Bristol City Council and other social housing providers.
- Provide access to technologies that save residents money, e.g. solar panels.
- Create a dialogue between Bristol City Council and other social housing providers on how they will implement renewable energy generation that benefits the tenant, including microgrids.
- Carry out a street-level residential pilot including a community microgrid, bulk purchase and installation of residential renewable energy sources.
- Create an example home that is fully accessible, future-proofed and uses energy that is good for the planet. Use it to inspire other people to do the same.



- Continue provision of community warm spaces.

Community Climate Action Plans Theme 2: Provide opportunities for people to learn more about energy and retrofitting homes

- Support 'energy literacy', where residents are provided with easy-to-understand help and information to make their homes more energy efficient, including provision of advice around energy bills, providers, and smart meters, and how to access funding.
- Set up local 'Energy hub' learning spaces which share best practice, model what is possible and offer advice and support.
- Establish peer networks and ambassadors/energy champions to share information, learn from others at Green Open Doors days, and help scale efforts. In particular, hire a Disabled Energy Champion to engage and inform Disabled people on home energy.
- Raise awareness about actions taking place locally through storytelling and using local magazines, radio and film.
- Arts and creative programmes to explore the cultural and energy transition.
- Specific learning opportunities, information and access to funding and support for household renewable energy installation and courses around community energy generation and ownership.
- Develop area-specific info booklets with infographics for households to help them understand energy saving changes they could make for their specific building.
- Hold DIY training courses on easy, low-cost steps people can take to make their home warmer (e.g. draughtproofing).
- Ensure all information is given out in an accessible format and advice providers are trained in accessibility needs.

Community Climate Action Plans Theme 3: Ensure residents can benefit from funding opportunities

- Financial and practical support for people on lower incomes or with barriers to participating to make their homes more energy efficient, ensuring that it's not just home-owners and those with more income that benefit.
- Support for people (particularly private renters and landlords) to access grants.
- Set up group bulk buying schemes to bring down the cost of insulation and low carbon technologies.
- Explore a city-wide community energy offer.



- Creation of a platform and bank account connected to Bristol Credit Union that allows residents to benefit from all eligible funding opportunities, grants and micro payments towards their household energy use and retrofit plans.
- Grants given to Disabled people to help them access sustainable energy in their home.
- Build new housing that is Net Zero, affordable to maintain and minimises heat loss and heat gain:
- Connect community groups with local planning groups in Bristol to learn from them.
- Lobby developers and improve accountability.

Community Climate Action Plans Theme 4: Build new housing that is Net Zero, affordable to maintain and minimises heat loss and heat gain

- Connect community groups with local planning groups in Bristol to learn from them.
- Lobby developers and improve accountability.

Community Climate Action Plans Theme 5: Change policies and introduce new standards

- Lobby government and the local council for incentives for warmer homes discounts or other initiatives.
- Campaign for change in pay as you go metering to protect poorest customers from volatile price rises.

Community Climate Action Plans Theme 6: Grow local understanding of and equitable access to green jobs

- Hold green jobs fairs, networking events and information sessions at community hubs, which provide clear communications on what green jobs are and how people can access and benefit from them.
- Develop more opportunities for young people and children to learn about nature, climate and green career pathways, for example a green curriculum that starts in early years and extends through all key stages, into adult education.
- Create opportunities for residents to develop skills for green employment via community building retrofit schemes (e.g. heat pump installation, solar panel installation, electric charging point construction).



- Develop an energy learning zone under the community-owned wind turbine in Lawrence Weston that will educate people, including young people, on renewable energy. Link this with the MMC skills academy that will be based with the new Lawrence Weston Community hub.
- Create local hiring schemes and recruitment drives in partnership with community groups.
- Create a directory of local trusted traders for small and medium sized jobs to help improve home energy efficiency.
- Support local tradespeople in accessing training and accreditation around retrofitting, modern high quality building techniques and green trades, and have contracts lined up on leaving the training. Ensure training considers the neurodiversity of trainees.
- Explore what developers are offering to local people in terms of apprenticeships, training and skills.
- Work with job creators and communities to enable Disabled people to access jobs that are created around climate change. Make these jobs accessible.



The challenge

The current situation and how this needs to change

There are approximately 206,800 homes in Bristol. Homeowners, landlords and Bristol City Council have been working to reduce the carbon emissions from the city's homes. Since 2005 gas use has reduced by a third and resultant annual carbon emissions have reduced from 512,000 tonnes to 330,000 tonnes. This is mainly due to increased efficiency of heating systems and improved insulation. In the same time period electricity use has reduced by a quarter. However, the annual carbon emissions of electricity use have reduced by two thirds (from 417,000 tonnes to 129,000 tonnes) as a result of increased renewable energy generation supplying the electricity grid nationally.

The [One City Climate Strategy](#) includes six objectives that set out what needs to happen to decarbonise the city's homes:

1. The energy performance of existing buildings is improved to minimise heat demand, whilst preventing overheating, through tailored retrofit solutions
2. Individual electric heat pumps installed in 93,000 homes which have been well insulated to support the phase out of gas heating in Bristol
3. 62,000 residential buildings (around 113,800 residences) connected to heat networks to support the phase out of gas heating in Bristol
4. New buildings are carbon neutral and climate resilient (aligning heat provision to the city's heat decarbonisation programme)
5. Decarbonisation of the national grid will be supported by the extensive adoption of smart electricity solutions in Bristol
6. Renewable generation within the city will be maximised, including approx. 350MW solar. The Evidence Base supporting the One City Climate Strategy suggests this should include solar PV installations on 50% of residential buildings

Note that the number of individual heat pumps and heat network connections is highly uncertain so throughout the rest of this document an illustrative example is used where heat pumps will heat half of all homes (103,400 homes) and heat networks the other half (103,400 homes), however in reality the split will be different.

Whilst these objectives do not specify, EPC C is often used as an indicator of 'adequate' energy efficiency. According to data from Parity Projects, accessed in March 2025, 39% of the city's homes are EPC C or above, meaning at least 61% of homes would benefit from further energy efficiency improvements.



In 2022, 13.8% of Bristol's households were in fuel poverty (Sub-regional fuel poverty statistics, UK government), higher than the England average of 13.1%, so poor energy efficiency of Bristol's homes and high energy costs are having an impact on a significant proportion of households. This is based on the Low Income Low Energy Efficiency (LILEE) definition used by Bristol City Council, which considers a household to be fuel poor if their home is EPC D or below, and their residual income after the cost of heating their home is below the official poverty line. The proportion of households who simply cannot afford to heat their home is likely much higher.

EPCs are not an exact indicator of the energy required to heat a home, so space heating demand is another metric that can be used. There is not currently an agreed target heat demand that signifies a 'good' level of insulation and in reality this will vary for different building types. As an example, the Low Energy Transformation Initiative (LETI) recommend a maximum heat demand of 60kWh/m²/year for homes that are more difficult to insulate. This level of heat demand is currently met by 43,000 (21%) of Bristol's homes. Figure 11 shows how the heat demand of Bristol's homes varies.

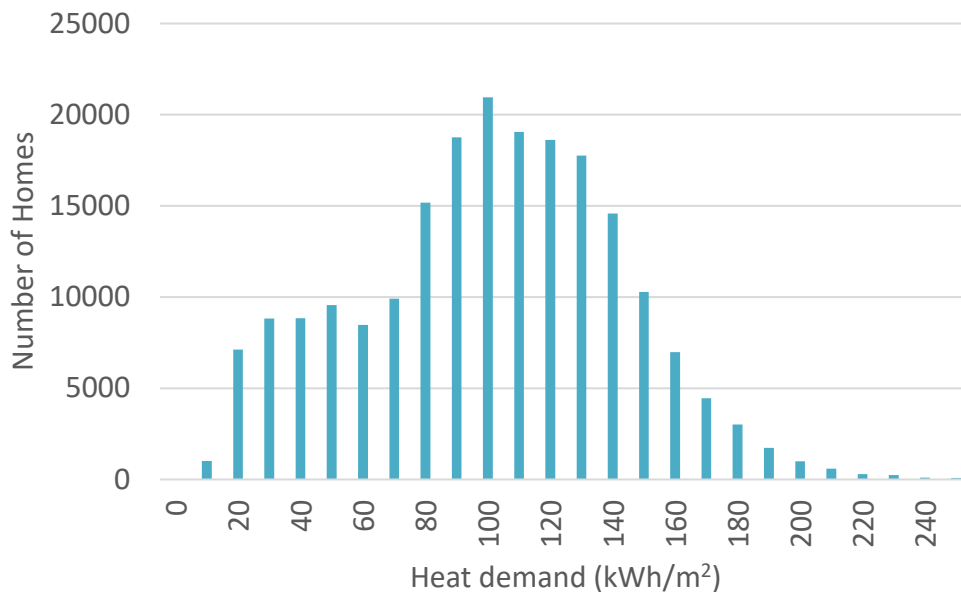


Figure 11: The majority of Bristol's homes have a heating demand above 60kWh/m²/year, the maximum recommended by the Low Energy Transformation Initiative. Heating demand of Bristol's homes. Data from Parity Projects, 2025.

Uptake of low carbon heating technologies is growing. From available data sources (including the Micro-Generation Certification Scheme, and Bristol City Council housing energy data), we know of around 1,900 heat pumps that have been installed in homes in Bristol since 2010. Roughly 500 of these heat pumps have been retrofit into social housing,



600 retrofit into private homes and 800 installed in new build homes. Around 80% of heat pumps in private homes have been installed since 2021, so momentum is rapidly building. The total number of heat pumps installed in new build homes is likely much higher as available data sources do not routinely capture these installations.

In the last few years Bristol City Council has been building heat networks in the city centre (in Old Market, Redcliffe, Bedminster and Temple) and building low carbon energy centres to heat them, such as the water-source heat pump in Castle Park (see Figure 8). In 2023, the network transferred to Vattenfall Heat UK as part of the Bristol City Leap partnership. Vattenfall now continue to expand this network, which at time of writing is providing heat to 33 commercial and residential buildings. In total, there were 27 district heating networks and 91 communally heated buildings (meaning there is one heat source for a whole building) in Bristol registered under the Heat Network Metering and Billing Regulations in 2022 (according to UK government statistics). Over 3,400 homes are connected to Vattenfall's heat network and other networks in the city. The majority of these networks are not low carbon, they are running off a mixture of gas boilers, gas combined heat and power plants, biomass boilers and a water source heat pump; however, energy centres can be replaced over time with a low carbon alternative (e.g. large scale heat pumps).

Solar panels have been installed on around 9,000 homes since 2010 from Micro-Generation Certification Scheme statistics. The Bristol Net Zero by 2030: The evidence base suggested that roughly half of Bristol's 155,300 domestic buildings are suitable for solar panels, so current installations represent 12% of suitable buildings. These panels have a total generation capacity of around 22MW.

The UK government's Smart Meter rollout has resulted in energy suppliers installing smart meters in 62% of Bristol's homes so far (UK government smart meter statistics, 2023).

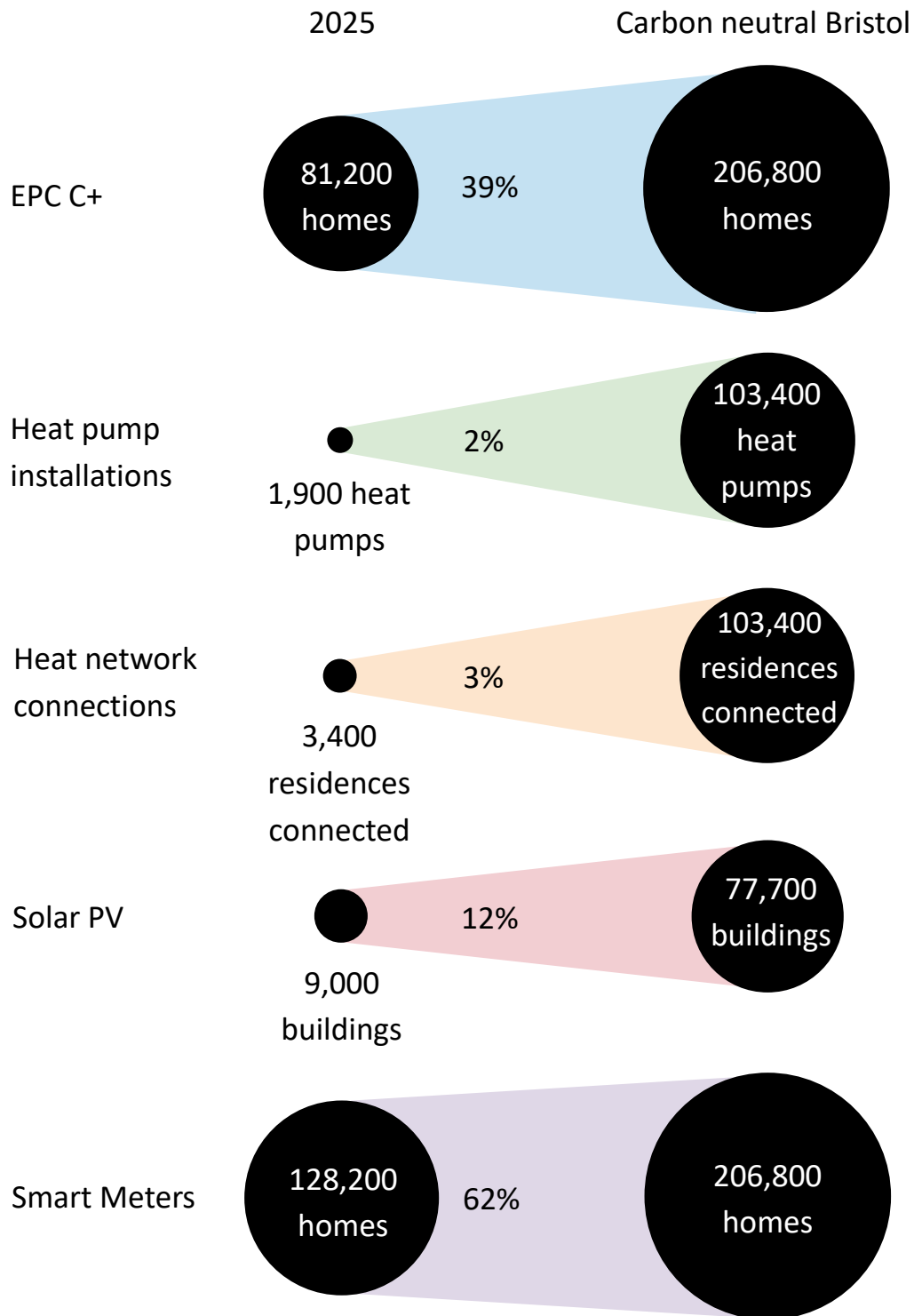


Figure 12: Key indicators of the transition to decarbonised homes, showing where Bristol is in 2025 and what is needed for carbon neutrality. Data from Parity Projects, Micro-generation Certification Scheme, Bristol City Council Housing Energy Data, UK Gov Heat Network Statistics, UK Gov Smart Meter Statistics. Note this is an illustrative example where half of homes have a heat pump and half connect to a heat network, however in reality the split will be different.

The existing housing stock can be broken down in many different ways to understand how homes may be decarbonised. For example, a block of flats or a tight terrace of houses may be more suited for connection to a heat network or a shared-loop ground source heat pump system, while air-source heat pumps may be better suited to houses with slightly more external space available. As another example, cavity wall insulation can only be installed in homes with cavity walls, typically built after 1930, whereas to insulate the solid walls of older homes, external wall insulation may be needed.

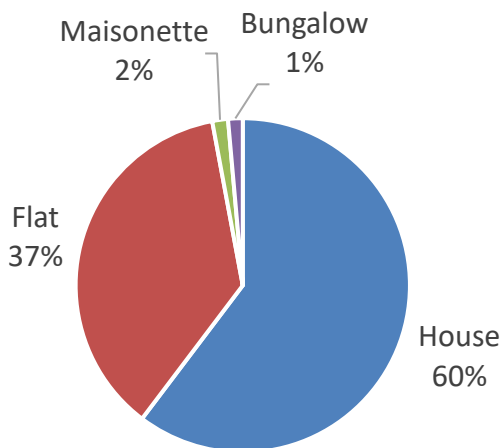


Figure 13: The majority of Bristol's homes are houses. Bristol's homes by property type from Parity Projects, 2025.

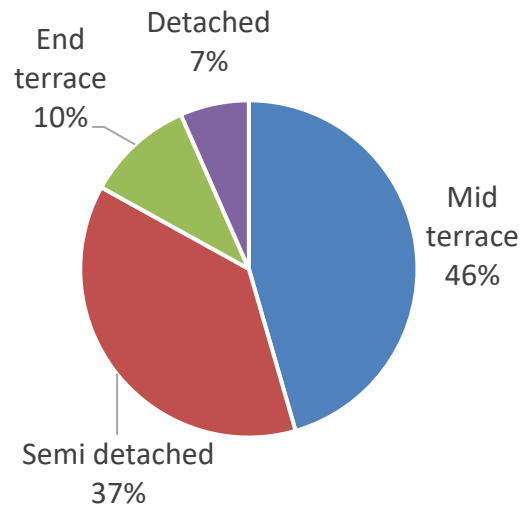


Figure 14: Most of Bristol's homes are mid-terrace. Bristol's homes by type of attachment, from Parity Projects 2025.

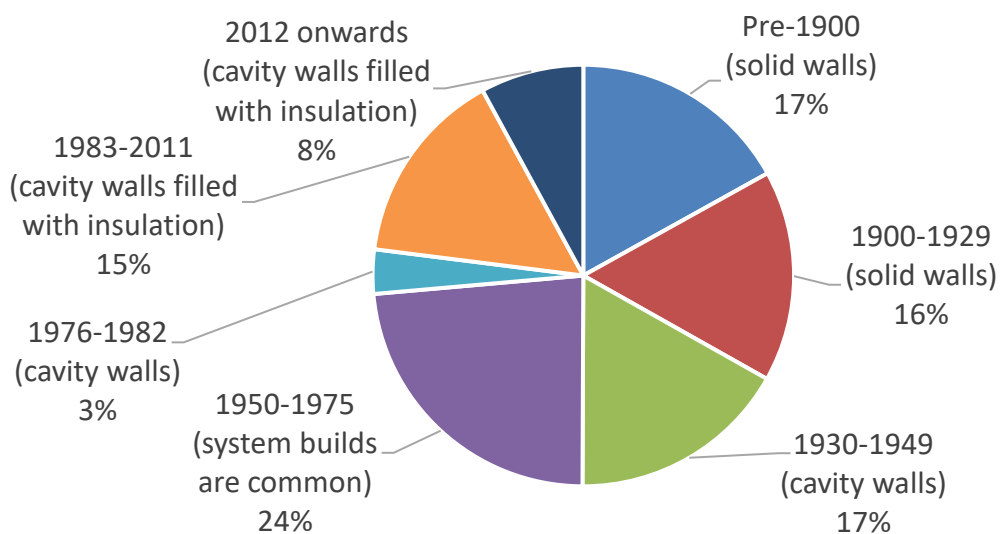


Figure 15: Bristol's housing stock is made up of a range of ages and construction type. Bristol's homes by age from Parity Projects 2025.

The following sections explore the housing stock broken down by tenure to better understand who is involved and what is required for them to take action.

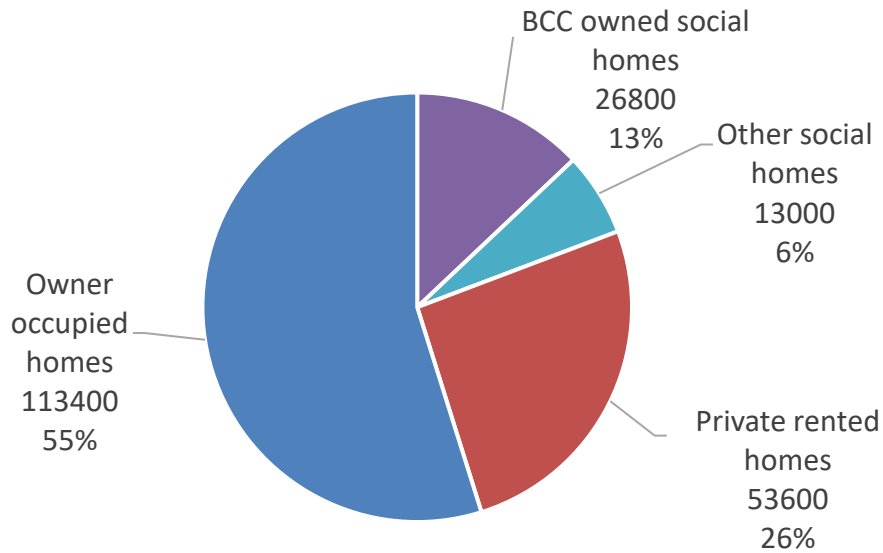


Figure 16: The majority of Bristol’s homes are owner-occupied. The number of Bristol's homes broken down by tenure. Data from UK government on dwelling stock, 2023, and Census, 2021.



Figure 17: A greater proportion of socially rented homes have adequate energy efficiency (EPC C or above) than privately owned homes. The percentage of homes at EPC C or above broken down by tenure. Data from Open EPC Database (so only represents homes with an EPC certificate) and BCC Housing Energy Data, both 2025.



Homes that Bristol City Council owns and manages

Bristol City Council owns and manages around 26,800 homes, 13% of all homes in the city. Over many years, programmes of insulation and improvements to windows and doors in Bristol City Council's own homes have brought 74% of our social rented homes to EPC C or above. However, we need to go further and have adopted a target to improve all our homes to EPC C or above by 2030.

Around 700 Bristol City Council homes are heated with a heat pump, and 750 are heated by a district heat network. A further 2,450 homes are electrically heated. The remaining 85% of homes are either heated by gas fired communal heating or individual gas boilers and need to transition from fossil fuel heating to a form of low carbon heat.

Bristol City Council can set the strategy for how and when to decarbonise these homes, with the consent of its tenants and subject to availability of funding. Bristol City Council published an [Energy Efficiency Strategy for its homes in 2024](#) and is developing a strategy for decarbonising heat in its homes, which will be considered by Committee in 2025.

Bristol City Leap, Ameresco and Vattenfall are important delivery partners. The Department for Energy Security and Net Zero has committed grant funding to support the decarbonisation of social housing and the South-West Net Zero Hub has been helping social housing providers to access this funding, including Bristol City Council. The West of England Mayoral Combined Authority has innovation funding for social housing, which has supported Bristol City Council to pilot full decarbonisation of a certain type of home that is difficult to retrofit, known as 'Easiform' (see Figure 9 and 18).

Homes owned and managed by other social housing landlords

Around 13,000 homes, 6% of all homes in the city, are owned and managed by 41 Registered Social Landlords. Over three-quarters of these homes are owned by just six social housing landlords (Brighter Places, LiveWest, Places for People, Sovereign, Brunelcare and Curo).

According to the EPC database, 64% of all social housing in Bristol is EPC C or above (note that not all homes have an EPC so this data represents a subset of social housing). Small numbers of homes owned by non- Bristol City Council social landlords are heated by heat pumps and heat networks.

Decisions over how and when to decarbonise these homes lie with the social housing landlords, with their tenants' consent, and many are aiming to get all of their homes to EPC



Figure 18: External wall insulation being installed on a Bristol City Council home.

C by 2030 in line with the UK government's ambition. Bristol City Council provides a network for social housing landlords to learn from each other as they make plans and deliver decarbonisation projects. As for Bristol City Council's own social housing, the Department for Energy Security and Net Zero, the South-West Net Zero Hub and the West of England Mayoral Combined Authority are all providing either funding or support for social housing landlords to decarbonise their homes.

Homes owned by private landlords and occupied by tenants

Over a quarter of Bristol's homes, 53,600, are owned by private landlords and rented to tenants. The energy efficiency of private rented homes is generally worse than social



housing and better than owner-occupied homes, with 43% rated EPC C or above. Minimum energy efficiency standards in the private rented sector require homes to be at least EPC E.

Bristol City Council is responsible for enforcing minimum energy efficiency standards and licensing certain private rented homes. The council also keeps in contact with private landlords who have signed up for the Landlord Bulletin or who attend various landlord groups. Therefore, there are several available channels for influencing landlords, however standards set by central Government are the strongest driver in this sector. Some of the grants described in the next section are available to landlords as well as owner-occupiers.

Homes owned and occupied by households

The majority of homes (113,400, 55%) are owner-occupied and these homes have the worst average energy efficiency with only 32% of homes with an EPC of C or above. There is a broad spectrum of households in these homes, from households in fuel poverty who cannot afford to turn on their heating, to households with savings they are willing to invest in retrofitting their home.

Each homeowner is responsible for any changes they make to their own home. For this segment of homes Bristol City Council's principal role is to engage with homeowners on their aspirations for future-proofing their homes, demonstrate potential solutions and communicate the support that is available.

There is currently a complex landscape of support for owner occupiers (subject to change):

- For households struggling to pay their energy bills, [the Centre for Sustainable Energy is funded to provide energy advice and support for anyone living in Bristol](#)
- For households on incomes under £36,000, there are fully funded government grant schemes to help with energy efficiency, heat pumps and solar panels (for example Warm Homes: Local Grant and Energy Company Obligation). Some of these schemes are delivered by [Bristol City Leap through Bright Green Homes](#), others are delivered by energy suppliers
- For households in properties in council tax bands A to D, [there are grants available from the Great British Insulation Scheme](#) to fully or partially fund energy efficiency measures, delivered through energy suppliers.
- For households who need help with the upfront costs involved, Bristol City Council's Private Housing Service offer [low-interest loans of up to £20,000](#) for eligible homeowners to make energy efficiency improvements in their homes
- There is a government grant, the [Boiler Upgrade Scheme](#), to partially cover the upfront cost of a heat pump.

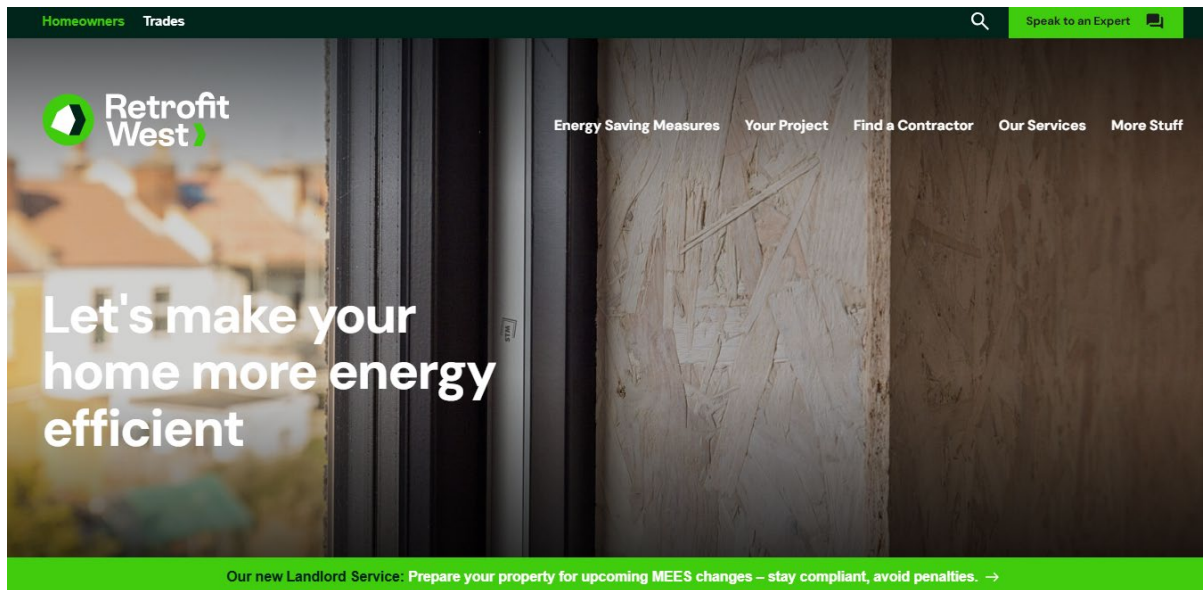


Figure 19: Screenshot of the Retrofit West website, offering advice for homeowners to make their homes more energy efficient.

Partly to help navigate these complex arrangements, Retrofit West CIC have been appointed by the West of England Mayoral Combined Authority [to provide energy efficiency and decarbonisation advice](#) targeted at 'able to pay' homeowners, including a free phonenumber, discounted home energy assessments, support with decarbonisation plans and a pathway to connecting homeowners with an installer to get the work done. The Combined Authority is also funding local business and skills support to help train and encourage more local companies to enter or expand into the domestic retrofit market

West of England Mayoral Combined Authority has also coordinated [a group-buying scheme for solar panels](#), with independent experts iChoosr, called Solar Together.

Energy suppliers are starting to make cheaper offers on heat pumps, which may make them more accessible to households who would find it difficult to afford the upfront costs, for example OVO, Octopus, E.ON and British Gas.

Community groups are supporting households in their neighbourhoods to improve the energy efficiency of their homes (e.g. providing advice, talks, local surveys, homeowner and supplies events, and a range of Green Open Home event programmes where neighbours can visit retrofitted homes to see and learn first-hand about the technology and experience of retrofitting).



Figure 20: Innovative, low-carbon, new build housing using modern methods of construction. In partnership with Bristol City Council and Bristol Housing Festival.

New homes

Bristol has ambitious plans to build new homes. These homes can be built in a way that minimises their impact on the climate and ecological emergency. Bristol City Council is responsible for setting and enforcing local planning policy and [has proposed a new Local Plan](#) (expected to come into force in 2025) that will require new homes to be highly energy efficient, heated sustainably and generate renewable electricity. There is and will continue to be a requirement for new housing developments to connect to a heat network where feasible and viable, or otherwise use individual heat pumps. The Local Plan applies to all buildings that require full planning permission, new or existing, however for smaller renovation projects that only require a Householder Planning Application, the home would not be required to meet the same standard as new buildings.

Central Government sets Building Regulations, which are minimum design standards covering elements of a building such as ventilation, conservation of fuel and power and overheating. Compliance with Building Regulations is a legal requirement and Bristol City Council is one organisation that assesses compliance in Bristol, through its Building Control function. The UK government plan to bring in the Future Homes Standard in 2025, which will update Building Regulations to ensure new homes produce less carbon emissions. This is expected to be less stringent than Bristol's upcoming Local Plan and require homes to be of a similar energy efficiency as those already being constructed in Bristol. Building Regulations



also apply to existing buildings where they are being extended or upgrading fabric elements such as insulation or windows.

Bristol City Council is responsible for building its own homes and owns Goram Homes, a housing development company. Some housing developers, including social housing providers and Community Land Trusts, are trialling innovative ways of building new homes that meet or exceed the upcoming requirements of the Local Plan. Bristol Housing Festival is showcasing these innovations to promote new techniques. Bristol City Council works in partnership with Registered Providers of social housing across the city through HomesWest Bristol, the City's affordable housing delivery partnership, and with Registered Providers at a strategic level through the Bristol Housing Partnership, which is open to all Registered Providers with homes in the City.

Enabling the decarbonisation of homes

The previous section set out the changes needed in different types of homes; however, the city needs a number of things in place for those changes to happen, otherwise known as 'enabling conditions'. The One City Climate Strategy identifies six enabling conditions for change: engagement, funding, skills, infrastructure, data and national action.

Engagement

Engaging with citizens over the transition to a carbon neutral city and specifically on decarbonising their homes is crucial to understand what matters to people and to gain their consent for the disruptive changes it will involve, as without this, the changes will not be possible. This then needs to guide how the council communicates with people, how we design projects and services, and how we empower people to take action themselves. Whilst Bristol City Council is able to plan engagement activities and messaging, such as through the [Bristol Climate Hub](#), it does not have the resources for substantial campaigns.

[Mission Net Zero](#) is a project being led by Bristol and is working with three communities to engage residents and plan the decarbonisation of their neighbourhoods, including homes.

For those homes connecting to heat networks, there is a clear role for heat network operators, for example Vattenfall, to engage with their customers. For housing developers, there is also a role for Bristol City Council as the Planning Authority to engage with applicants on including heat network connections in their plans.

Other organisations who are involved in engaging and communicating with citizens on decarbonising homes are [Retrofit West homeowner advice service](#) (funded by West of



Figure 21: Roy explained the benefits of his heat pump in a Bristol Climate Action video telling his story.

England Mayoral Combined Authority), Centre for Sustainable Energy, Bristol Energy Network, Bristol Climate and Nature Partnership and local community groups. Additionally, social housing providers have a responsibility to engage their tenants on how they plan to decarbonise their homes. In terms of communication campaigns, the UK government has previously launched a national media campaign on home energy use to promote energy efficiency and is launching a new campaign about heat pumps.

Funding

According to analysis by Parity Projects, it is estimated it will cost between £3.5 billion and £4.3 billion to decarbonise all of the homes in the city (this estimate does not include other costs involved, for example cost to engage with citizens, cost to build a heat network, costs to deliver services). It is anticipated that this will be a combination of investment by homeowners and landlords (both private and social) willing to invest in retrofitting their homes, and government grants and loans.

The UK government is currently the largest source of grant funding and Bristol City Council has no control over how much funding is made available and how it is allocated. Some grant funding is made available via the West of England Mayoral Combined Authority where Bristol City Council has more influence over how it is spent.



Figure 22: Two people installing solar panels on a Bristol City Council home in Brentry. Image credit: West of England Mayoral Combined Authority.

Green mortgages are also on offer to help the purchase or improvement of energy efficient homes. These mortgages typically offer benefits such as lower interest rates or cashback for properties with high EPC ratings, usually A or B. Several high street lenders provide these green mortgage options. Additionally, some lenders offer incentives for homeowners who undertake energy-efficient improvements, such as installing solar panels or upgrading heating systems.

Lendology administers a low interest loan pot on behalf of Bristol City Council which is available for people improving the energy efficiency of their homes.

The council can explore options for private investment, Bristol City Leap is one such example and there are many other ways private investment could support decarbonisation of homes in the city. BBRC is one local organisation looking into this, as well as the South-West Net Zero Hub.

Skills

To improve the energy efficiency of Bristol's homes, install heat pumps, build heat networks and install solar panels, the skilled workforce will need to grow considerably. Analysis for



the West of England region (Bristol, South Gloucestershire and Bath and North East Somerset) describes the huge increase required in the number of insulation and low carbon heat installers to meet the pace and scale of demand if we are to transition to decarbonised heat in homes (Retrofit skills market analysis, a report for the West of England Mayoral Combined Authority, 2021).

Bristol City Council delivers employment, skills and learning services for people at various life stages and a variety of sectors. The council works in partnership with the West of England Mayoral Combined Authority, who also deliver employment and skills services, including the [Skills Connect](#) website that sets out retrofit skills pathways. Schools, further education colleges and universities clearly have an important role to play, as well as independent training providers, plumbing and construction merchants and manufacturers. Networks of contractors are also an important forum for peer-to-peer learning, for example the [Retrofit West Business Support programme](#) (funded by the West of England Mayoral Combined Authority) and the Black South West Network's Diverse Contractors Network. The UK government is making some grant funding available for skills related to decarbonising heat in homes.

The Mission Net Zero project is working with schools, communities, training providers and businesses to promote and deliver the skills required to decarbonise homes, and support businesses to move into the home retrofit supply chain.

Infrastructure

The infrastructure required to decarbonise homes includes building new heat networks and increasing the capacity of the local electricity network which is likely to involve reinforcing and building more network. Both activities will involve digging up roads across the city. As homes transition away from gas boilers towards electric forms of heating, the role of the gas network will change.

Bristol City Council has entered into partnership with Vattenfall, who now own Bristol's heat network. UK government provides some funding to grow heat networks and is in the process of designing a policy for [Heat Network Zoning](#) that will require certain existing buildings to connect to heat networks in specific areas of the city, which will help heat networks to grow faster.

National Grid Electricity Distribution is responsible for serving the electricity distribution needs in the city and ensuring that the local network can meet future demand from heat pumps and heat network energy centres as this demand increases. Wales and West Utilities operates the gas distribution network.



Figure 23: Heat network pipes being installed in Redcliffe.

Data

Good data underpins decisions on what, when and where projects and services are needed. To decarbonise homes, data will be important across a range of scales. From citywide, to understand how the whole energy system will need to evolve to accommodate a shift to electric heating and more localised energy generation, to the data collected about energy use in a single home. Data is also the key to understanding whether the actions we are taking are having the impact we want.

Bristol City Council has access to many useful datasets but some data are restricted or expensive. There are also limited resources for the council to gather and analyse data. The Mission Net Zero project is seeking to improve data relevant to home decarbonisation in Bristol and across the West of England.

National Action

The UK government has a statutory target to be net zero by 2050 and to reduce emissions by 68% by 2030 compared to 1990 levels and by 81% by 2035 compared to 1990 levels. A key component of this is the mission for clean energy by 2030, decarbonising electricity



through increased renewable generation. The UK government have also committed to delivering a Warm Homes Plan, which includes £6.6 billion of investment in decarbonising homes in the current parliament through grant funding, and changes to minimum standards. In addition, the UK government have signalled an intention to devolve more powers to local government. Some of the important policies that the UK government has recently put in place or intends to put in place are:

- The Clean Heat Market Mechanism, introduced in 2025, requires heating appliance manufacturers to meet targets for annual heat pump sales as a proportion of fossil fuel boiler sales
- The Future Homes Standard, expected in 2025, will ensure new homes are future proofed with low carbon heating and high levels of energy efficiency
- Heat Network Zoning, expected in 2025, will identify and designate zones where heat networks provide the lowest-cost, low carbon heating option and require certain buildings within zones to connect
- Reforms to the energy performance of buildings regime, expected in 2026, will update Energy Performance Certificate metrics to better provide information about how to improve the energy performance of a building to lower fuel bills and reduce carbon emissions.
- Raising Minimum Energy Efficiency Standards for privately rented homes against the new EPC metrics to a level roughly equivalent to EPC C (as it is today) from EPC E. Private landlords would need to meet this standard by 2028 for new tenancies and by 2030 for all tenancies. There is also a proposal to introduce the same Minimum Energy Efficiency Standards for socially rented homes by 2030.

Bristol City Council maintains a dialogue with the UK government on issues directly, with the combined authority and through local authority groups such as Core Cities.

In addition, Ofgem is an important regulatory body. Ofgem sets the rules for how National Grid Electricity Distribution and Wales and West Utilities can invest in their networks and the level of service they need to provide to their customers. Ofgem will also become the regulator for heat networks from 2025.



The role of Bristol City Council and Bristol City Leap

Bristol City Council has many different functions and, within these functions, varied abilities to change the way things are done. These can be described as the council's 'spheres of influence'.

Bristol City Leap has been set up by Bristol City Council, in a 20-year partnership with Ameresco and Vattenfall UK, to bring additional investment and capacity to increase the pace and scale of decarbonisation projects in Bristol. Bristol City Leap has a very clear remit and its own spheres of influence. Over the next few years, Bristol City Leap will be focussed on decarbonising Bristol City Council's estate, which includes its office buildings and schools as well as the council's social housing and expanding Bristol's heat network. It will also be delivering grant schemes to improve the energy efficiency of owner-occupied homes and making sure it is adding value to Bristol by creating local jobs, supporting community organisations and inspiring young people into careers in green energy.

The following list sets out the different spheres of influence of Bristol City Council (BCC) and Bristol City Leap (BCL), and the specific roles that each could play to accelerate progress towards decarbonisation of homes. The objectives and actions related to these roles are set out in the Action Plan section. It should be noted that a role for Bristol City Leap does not mean that Bristol City Council could not be involved, and vice versa. The extent to which Bristol City Council and Bristol City Leap can perform these roles depends on the funding and resources available.

In order of higher levels of influence to lower levels of influence:

1. Own and manage homes and other assets
 - Decarbonise existing Council homes (Owner: BCC and BCL)
 - Build new council housing that is in line with net zero (Owner: BCC)
 - Build and operate the heat network (Owner: BCL)

2. Procure and deliver services
 - Manage Bristol City Leap contract for energy projects (Owner: BCC)
 - Enable new housing delivery by Goram Homes (Owner: BCC)
 - Deliver retrofit schemes (Owner: BCL)
 - Deliver services to support citizens to develop relevant skills and businesses to grow (BCC)
 - Deliver high quality work and social value through continual upskilling of delivery staff and robust procurement policies and processes (Owner: BCC and BCL)



3. Use place-shaping powers
 - Set and enforce planning policy in line with net zero (Owner: BCC)
 - Grant planning permission for changes to existing homes (Owner: BCC)
 - Assess compliance with building regulations (where contracted to do so) (Owner: BCC)
 - Enforce energy efficiency standards in private rented homes (Owner: BCC)
 - Potential future role as Heat Network Zoning Coordinator (Owner: BCC)
4. Showcase solutions
 - Trial innovative approaches to decarbonising homes and building new homes in line with net zero (Owner: BCC and BCL)
5. Enter partnerships and coordinate activities
 - Work with partners to administer funding and incentives (Owner: BCC and BCL)
 - Work with stakeholders to do strategic energy system planning for the local area (Owner: BCC)
 - Facilitate partnerships with Registered Social Landlords to build new homes in line with net zero and decarbonise existing homes (Owner: BCC)
 - Work with partners to guide and contribute to coordination of the regional approach to decarbonising homes, including skills provision (Owner: BCC)
 - Work with local actors to tackle fuel poverty (Owner: BCC)
 - Coordinate BCC and BCL's homes decarbonisation activities and monitor progress (Owner: BCC)
6. Involve, engage and communicate with citizens and stakeholders
 - Engage BCC tenants (Owner: BCC and BCL)
 - Provide citizens with information (Owner: BCC and BCL)
 - Engage with citizens on the approach (Owner: BCC and BCL)



Taking the right approach

This action plan responds to the One City Climate Strategy and Action Plan, setting out the approach we want to take. The city has other equally urgent priorities, and the work of this action plan needs to align with them too.

We want to follow best practice with a focus on:

1. A Just Transition – for example through maximising delivery of bill-saving measures to low-income households and ensuring there are improved and inclusive skills pathways into jobs in this sector
2. Good quality work – for example through upskilling installers and commissioners, monitoring outcomes and ensuring households have access to good advice
3. Inclusive engagement – for example through upskilling Bristol City Council and Bristol City Leap staff on inclusive engagement and ensuring we are continuously learning how best to engage with our council tenants on retrofit programmes
4. Holistic and place-based approaches – for example at ward or street level through linking delivery programmes across housing tenure, working with local community organisations and supporting local upskilling opportunities

Fairness and Just Transition

There are a limited number of technical options for decarbonising homes, but there are many ways of managing the transition. Bristol City Council is just one of several bodies influencing how the transition is managed in Bristol, along with the UK government and the West of England Mayoral Combined Authority.

As listed in the 'Multiple benefits of decarbonising homes' section, this transition can have an overwhelmingly positive impact on communities, through reduced energy costs, warmer, healthier homes, and local job creation. Done well, this transition should contribute to reducing fuel poverty and improving the health and wellbeing of Bristol's citizens, which have further knock on benefits, for example of improved educational attainment and reduced impact on the National Health Service, see the next section on 'Health'.

However, there are potential negative impacts on Bristol's most vulnerable residents if the transition is not done in a fair way.

In 2023, Bristol City Council adopted a [Just Transition Declaration](#) and aims to embed the declaration's ten principles into its work to ensure the transition can happen in a fair way. This plan endeavours to respond to these ten principles, especially through the actions



focussed on how we want to engage with citizens and get input on decision making and how we design an inclusive approach to skills and supply chain development. The execution of the plan will need to be guided by these principles.

Bristol City Council also has specific plans and strategies to address fuel poverty and job creation.

With rising energy costs and poor energy efficiency of some of the city's homes, an increasing number of people are falling into fuel poverty. Bristol's [Fuel Poverty Action Plan](#) takes a One City approach and sets out how Bristol can achieve its goal to bring everyone out of fuel poverty by 2030.

The transition to a carbon neutral future will create new jobs and the benefits of this can be maximised by ensuring these jobs are created locally and that people in disadvantaged communities are supported into these jobs. [Bristol's One City Economic Recovery and Renewal Strategy](#) sets out the city's priorities including creating opportunities for better employment, particularly in green industries, and building skills and improving pathways to work for young people and groups disadvantaged in the labour market.

Health

The [Bristol Joint Local Health and Wellbeing Strategy](#) highlights the vision "for citizens to thrive in a city that supports their mental and physical health and wellbeing" and reduced inequalities in health outcomes across the city.

Housing is a major driver of health inequalities across the life course, with our homes influencing our health and wellbeing in many ways. Creating healthy places and housing which enable good health and wellbeing and prevent ill-health is a key priority.

Improving the energy efficiency of homes, alongside adequate ventilation, will help to reduce fuel poverty, damp and mould and create healthier homes. A study from the London School of Hygiene and Tropical Medicine suggests retrofitting homes could contribute to 836,000 additional years lived in England and Wales by 2050. Healthy, warm homes will also reduce the burden on the NHS as the Building Research Establishment has estimated that cold homes cost the NHS £550 million a year.

Ensuring the transition is fair and just, and that work carried out is of high quality, is key to reducing health inequalities, and preventing potential negative impacts on communities.



Building safety

Decarbonising homes through good quality installations of insulation and low carbon heat should not undermine the safety of a building. Building safety can be defined in two ways. Firstly, through a holistic view by ensuring the safety of residents and buildings regardless of the height of the building, and secondly, using defined legislation.

Bristol City Council must comply with the Building Safety Act 2022 which places obligations and criteria on landlords of high-rise buildings (those which are 18 metres in height and above, or 7 storeys and above) to meet. This is achieved through the production of resident engagement strategies, ensuring buildings are constructed appropriately, maintained and made safe, and through the creation of building safety cases and reports. These building safety cases contain a documented history of all decisions affecting the structure, integrity, and material make up of a building from original build through to present day. To further enhance building safety, the Building Safety Regulator has been created to oversee the safety and performance of all buildings. Any high rise building which requires building works to be completed, which includes retrofitting devices and improvements, is subject to a new building control process and approval from the Building Safety Regulator.

Communicating and engaging with citizens

Earlier in this document we outline some of the engagement we have had to date with citizens on decarbonising homes, including the Bristol Citizen's Assembly and the Community Climate Action project. This engagement has provided critical insight into the actions citizens would like to see in the transition to a carbon neutral city and how they would like to see those actions taken in a just and fair way. This is just the beginning, and meaningfully engaging citizens in a way that reflects the diversity of the city will need to happen on an ongoing basis.

As Bristol City Council and Bristol City Leap set out to deliver this action plan, we must put in place measures to listen to citizens, both proactively prior to launching communications and then reactively in response to communications or engagement that citizens may have with us or other organisations. This engagement needs to be inclusive and take steps to involve those citizens that have not previously been reached.

As we communicate with citizens about the challenge to decarbonise homes, it is important that Bristol City Council and Bristol City Leap are clear about their intention to help people. We must work with citizens for them to be advocates and create content focussed on them as the user, for example using quotes and images of people.



Through our approach, we hope to build consent from citizens to make changes in their own homes or allow their landlords to do so.

There are five key communication activities related to this action plan:

1. Inform people what Bristol City Council and Bristol City Leap are doing to decarbonise homes
2. Raise awareness of the benefits of decarbonising homes
3. Dispel myths of new technologies, acknowledge genuine issues, and ultimately normalise these technologies
4. Raise awareness of the support that exists to decarbonise homes
5. Raise the profile of jobs in retrofit and low carbon heat as an attractive career path

Actions related to communications and engagement are woven throughout the action plan.



Action plan

This action plan is organised into six themes. These are:

1. Social housing (including homes owned and managed by Bristol City Council and other social housing providers)
2. Private housing (including private rented homes and owner-occupied homes)
3. New build housing
4. Heat network and energy planning
5. Skills and supply chain
6. Coordination, governance and citizen involvement

Actions in this plan fall into three categories:

- Existing activity which shall be continued and where appropriate be expanded as resources permit
- New actions for which the funding is in place
- New actions for which the council intends to seek funding



Social Housing

The roles of Bristol City Council and Bristol City Leap related to social housing include:

- Decarbonise existing Council homes
- Engage Bristol City Council tenants
- Facilitate partnerships with Registered Social Landlords to decarbonise existing homes

Objective 1.1: Set strategy and budget for decarbonisation of Bristol City Council housing stock

- **Action:** Develop a Heat Decarbonisation Plan for Landlord Services which sets out the most suitable low carbon heating solution for all existing Council homes, including how properties will be prioritised and the approach to hard to treat homes. Note: action within Landlord Services' Energy Efficiency Strategy.
- **Owner:** Landlord Services and Bristol City Leap
- **Status:** Planned – funded

Objective 1.2: Improve building fabric to reduce heat demand

- **Action 1:** Continue a programme of fabric improvements for Council homes, to include high and low cost interventions, prioritising the remaining uninsulated and poorly insulated homes below EPC C and submit bids to Warm Homes: Social Housing Fund to support this programme. Note: action within Landlord Services' Energy Efficiency Strategy and Bristol City Leap 5 year business plan (2024).
- **Owner:** Landlord Services and Bristol City Leap
- **Status:** Already happening
- **Action 2:** Strive to adopt PAS 2035 in retrofit projects in Council homes, where appropriate. Note: action within Landlord Services' Energy Efficiency Strategy.
- **Owner:** Landlord Services and Bristol City Leap
- **Status:** Planned – funded



Objective 1.3: Install low carbon heat to decarbonise (and maintain)

- **Action 1:** Following the completion of the Landlord Services' Heat Decarbonisation Plan, create a deployment programme for low carbon heat in existing Council homes that steadily ramps up over time.
- **Owner:** Landlord Services and Bristol City Leap
- **Status:** Funding to be sought
- **Action 2:** Implement the actions that arise from the Heat Network Regulations Readiness Review ahead of the introduction of heat network regulations in early 2026.
- **Owner:** Landlord Services
- **Status:** Planned – funded

Objective 1.4: Ensure residents are engaged throughout, including energy advice and education

- **Action 1:** For each Council housing retrofit project, develop a holistic and inclusive programme for engaging residents that is joined up with the engagement related to other programmes of work. The engagement should cover the whole lifecycle of retrofit works to residents' homes, from initial 'warming up' and raising awareness of the benefits, to updates during works and education about how to use new technologies. Put in place measures to listen to residents throughout.
- **Owner:** Landlord Services and Bristol City Leap
- **Status:** Funding to be sought
- **Action 2:** Develop an approach to engage Council tenants most at risk of fuel poverty through provision of targeted energy advice.
- **Owner:** Landlord Services
- **Status:** Already happening



Objective 1.5: Monitor and evaluate success of approaches and integrate learning

- **Action 1:** Incorporate a strategy for monitoring and evaluation of projects in the Landlord Services' Heat Decarbonisation Plan.
- **Owner:** Landlord Services and Bristol City Leap
- **Status:** Planned – funded
- **Action 2:** Embed monitoring, evaluation and learning into Council housing decarbonisation projects.
- **Owner:** Landlord Services and Bristol City Leap
- **Status:** Already happening – aim to expand

Objective 1.6: Learn from and facilitate joint working amongst Registered Social Landlords

- **Action 1:** Collect data from Registered Social Landlords on the decarbonisation progress of their existing stock and future plans.
- **Owner:** Sustainable City and Climate Change
- **Status:** Already happening – aim to expand
- **Action 2:** Explore potential for delivery partnerships for place-based (e.g. within a ward or street) decarbonisation of social housing.
- **Owner:** Landlord Services and Bristol City Leap
- **Status:** Already happening – aim to expand



Private housing

The roles of Bristol City Council and Bristol City Leap related to private housing include:

- Enforce energy efficiency standards in private rented homes
- Grant planning permission for changes to existing homes
- Work with partners to guide and contribute to coordination of the regional approach to decarbonising homes, including skills provision
- Provide citizens with information
- Work with local actors to tackle fuel poverty
- Work with partners to administer funding and incentives
- Trial innovative approaches to decarbonising homes
- Deliver retrofit schemes

Objective 2.1: Facilitate and enforce compliance with minimum standards for private rented homes

- **Action:** Provide information to private landlords about the regulations and the benefits of improving energy efficiency towards EPC C.
- **Owner:** Private Housing
- **Status:** Already happening – aim to expand

Objective 2.2: Assess applications for planning consent and certificates of lawfulness for retrofit works

- **Action:** Develop materials to support planning officers assess household planning applications for retrofit works (e.g. case-studies, site visits, internal/external training).
- **Owner:** Planning
- **Status:** Funding to be sought



Objective 2.3: Contribute to a joined-up approach for retrofit across all tenures in the West of England Region

- **Action:** Participate in West of England Mayoral Combined Authority's Retrofit Strategic Steering Group, contributing expertise from delivery of programmes and learning from innovation projects.
- **Owner:** Sustainable City and Climate Change
- **Status:** Already happening

Objective 2.4: Raise awareness of co-benefits of decarbonising homes and normalise new technologies

- **Action:** Develop a communications plan for an ongoing campaign focused on homes decarbonisation and linking to Bristol City Leap.
- **Owner:** Sustainable City and Climate Change
- **Status:** Funding to be sought

Objective 2.5: Promote schemes and funding opportunities

- **Action 1:** Use data sources to gain insights of energy efficiency of Bristol's homes and how to segment and target different archetypes.
- **Owner:** Sustainable City and Climate Change
- **Status:** Already happening – aim to expand
- **Action 2:** Promote funding/advice schemes to the relevant residents/landlords.
- **Owner:** Sustainable City and Climate Change and Policy, Strategy and Communications
- **Status:** Funding to be sought

Objective 2.6: Ensure access to energy advice services, in particular those in fuel poverty

- **Action:** Subject to resources provide support to the city's residents in fuel poverty.



- **Owner:** Sustainable City and Climate Change and Public Health
- **Status:** Funding to be sought

Objective 2.7: Ensure access to retrofit advice for property owners

- **Action:** Work with the West of England Mayoral Combined Authority and Retrofit West to promote the retrofit advice service and contribute local insights and learning into service development.
- **Owner:** Sustainable City and Climate Change
- **Status:** Already happening – aim to expand

Objective 2.8: Provide access to financial support

- **Action 1:** Explore options for maximising the benefits of Lendology loans for retrofit of private homes.
- **Owner:** Private Housing and Sustainable City and Climate Change
- **Status:** Funding to be sought
- **Action 2:** Create innovative funding and financing mechanisms for retrofit through the Net Zero Investment Co-Innovation Lab and Bristol's Innovate UK Pathfinder Places project 'Mission Net Zero'.
- **Owner:** Sustainable City and Climate Change
- **Status:** Planned – funded

Objective 2.9: Trial innovative approaches to retrofit

- **Action:** Create community-led neighbourhood decarbonisation plans matched with investment for three neighbourhoods (via the demonstration phase of Bristol's Innovate UK Pathfinder Places project 'Mission Net Zero').
- **Owner:** Sustainable City and Climate Change
- **Status:** Planned – funded

Objective 2.10: Deliver retrofit schemes

- **Action 1:** Deliver grant funded programmes for retrofit of private homes occupied by households on low incomes (e.g. Warm Homes: Local Grant).



- **Owner:** Bristol City Leap
- **Status:** Planned – funded

- **Action 2:** Work up future business plans for retrofit activity in the private market, including support for existing activity by other actors and where possible, integration with delivery across other tenures to adopt a place-based approach (e.g. within a ward or street).

- **Owner:** Bristol City Leap
- **Status:** Already happening – aim to expand



New build housing

The roles of Bristol City Council related to new build housing include:

- Set and enforce planning policy in line with net zero
- Build new council housing that is in line with net zero
- Enable new housing delivery by Goram Homes
- Facilitate partnerships with Registered Social Landlords to build new homes in line with net zero

Objective 3.1: Set planning policy for all new homes in the city in line with net zero

- **Action:** Adopt new local plan with intention to require highly energy efficient development with low carbon heating (prioritising connection to heat networks in appropriate areas), maximising on-site generation and offsetting for residual emissions (pending examination from Planning Inspectorate).
- **Owner:** Planning
- **Status:** Already happening

Objective 3.2: Enforce planning policy for new homes in line with net zero

- **Action 1:** Develop an engagement plan for developers (including social housing developers) to prepare for the standards in the new Local Plan.
- **Owner:** Sustainable City and Climate Change and Planning
- **Status:** Funding to be sought
- **Action 2:** Develop a practice note and accompanying checklist to enable developers to demonstrate compliance with the standards in the new Local Plan.
- **Owner:** Sustainable City and Climate Change and Planning
- **Status:** Planned – funded



Objective 3.3: Where Bristol City Council commissions or builds new homes, they should be built in line with net zero

- **Action:** Review the process for setting the specification of new Council housing developments to ensure the process results in a specification that meets energy targets as well as the needs of maintenance and capital replacement teams. It should seek to standardise the technologies and systems used.
- **Owner:** Housing Delivery
- **Status:** Funding to be sought

Objective 3.4: Work with Registered Providers to build homes in line with net zero

- **Action 1:** Add energy targets to the existing monitoring framework for housing delivery of Registered Providers.
- **Owner:** Housing Delivery
- **Status:** Already happening – aim to expand
- **Action 2:** Engage with both the HomesWest Bristol Affordable Housing Partnership and the Bristol Housing Partnership to facilitate exchange of good practice and learning on highly energy efficient affordable development with low carbon heating and renewable electricity generation. Ensure Registered Provider partners are well informed about requirements in new Local Plan.
- **Owner:** Housing Delivery
- **Status:** Already happening – aim to expand

Objective 3.5: Support and enable Goram Homes to deliver homes in line with net zero

- **Action:** Support and enable Goram Homes to deliver against their business plan objectives to build sustainable homes that are EPC A.
- **Owner:** Housing Delivery and Shareholder Liaison
- **Status:** Planned – funded



Heat network and energy planning

The roles of Bristol City Council and Bristol City Leap related to the heat network and energy planning include:

- Work with stakeholders to do strategic energy system planning for the local area
- Set and enforce planning policy in line with net zero
- Manage Bristol City Leap contract for energy projects
- Potential future role as Heat Network Zoning Coordinator
- Build and operate the heat network
- Engage with citizens on the approach

Objective 4.1: Develop system-wide 'energy plan' for Bristol

- **Action 1:** As part of the West of England Climate Investment Plan develop an energy plan for Bristol that links to a pipeline of investable projects
- **Owner:** Sustainable City and Climate Change
- **Status:** Planned – funded
- **Action 2:** Engage closely with National Grid Electricity Distribution on evolution of decarbonisation plans, including sharing data and working together as part of Mission Net Zero and beyond.
- **Owner:** Sustainable City and Climate Change, Bristol City Leap and Vattenfall
- **Status:** Already happening – aim to expand
- **Action 3:** Engage closely with Wales and West Utilities on the future of the gas network in Bristol
- **Owner:** Sustainable City and Climate Change
- **Status:** Already happening – aim to expand

Objective 4.2: Set strategy for heat networks

- **Action:** Develop strategy for heat networks, including coordination with neighbouring authorities



- **Owner:** Sustainable City and Climate Change, City Leap Client Function, Bristol City Leap and Vattenfall
- **Status:** Funding to be sought

Objective 4.3: Set and enforce planning policy for heat network connections

- **Action 1:** Define the interaction between the upcoming Heat Network Zoning Policy and the new Local Plan with respect to homes.
- **Owner:** Sustainable City and Climate Change and Planning
- **Status:** Funding to be sought
- **Action 2:** Ensure Bristol City Council has adequate planning resources to enable heat network development at the pace and scale required, to secure land for heat generation and permission for the network, collaborate across Bristol City Council departments and ensure developers include plans to connect.
- **Owner:** City Leap Client Function
- **Status:** Funding to be sought

Objective 4.4: Govern Bristol City Leap

- **Action:** Manage contract with Bristol City Leap and Vattenfall to expand heat networks in City of Bristol and other KPIs as part of the business plan.
- **Owner:** City Leap Client Function
- **Status:** Already happening

Objective 4.5: Potential future role as Heat Network Zoning Coordinator

- **Action:** Participate in the Advanced Zoning Programme and prepare for potential future role as Heat Network Zone Coordinator by assessing readiness to deliver zonal scale heat networks and the decision-making processes required to establish the Zone Coordinator.
- **Owner:** City Leap Client Function
- **Status:** Planned – funded



Objective 4.6: Plan the heat network

- **Action 1:** Create a clear timeline for build out of the heat network across central areas and potential islanded networks.
- **Owner:** Vattenfall
- **Status:** Planned – funded

- **Action 2:** Assess opportunities and need to develop heat networks in further areas of the city (outside planned networks). Note: action within Bristol City Leap Business Plan (2024).
- **Owner:** Vattenfall
- **Status:** Funding to be sought

Objective 4.7: Build the heat network

- **Action 1:** Support heat network delivery and secure land for heat generation through convening essential stakeholders within Bristol City Council (e.g. Planning, Property Development, Harbour Master), Vattenfall and externally (e.g. NGED, ENA, Marine Management Organisation).
- **Owner:** City Leap Client Function
- **Status:** Already happening – aim to expand

- **Action 2:** Select and appoint a Heat Network Installer Framework to attract suppliers to the UK heat network market and establish a new industry in Bristol. Note: action within Bristol City Leap Business Plan (2024).
- **Owner:** Vattenfall
- **Status:** Planned – funded

- **Action 3:** Expand and link-up city centre heat networks and submit bids for grant funding to support this programme of work. Note: action within Bristol City Leap Business Plan (2024).
- **Owner:** Vattenfall
- **Status:** Planned – funded



Objective 4.8: Connect homes to the heat network

- **Action 1:** Engage with social housing providers on benefits of connecting buildings to the district heating network.
- **Owner:** Vattenfall
- **Status:** Already happening – aim to expand

- **Action 2:** Engage with Goram Homes on benefits of connecting new housing developments to the district heating network. Note: action within Bristol City Leap Business Plan (2024).
- **Owner:** Vattenfall
- **Status:** Already happening – aim to expand

- **Action 3:** Carry out a pilot for connecting a residential street to the heat network, including public engagement and consultation process.
- **Owner:** Bristol City Leap, Vattenfall and Sustainable City and Climate Change
- **Status:** Funding to be sought

- **Action 4:** Ensure the Bristol heat network is prepared for incoming heat network regulations.
- **Owner:** Vattenfall
- **Status:** Already happening – aim to expand

Objective 4.9: Ensure citizens are engaged throughout the process of designing, connecting to and using heat from the heat network

- **Action 1:** Chair and manage an effective Heat Network Advisory Panel to feed into strategy and decision-making for heat network projects.
- **Owner:** Vattenfall
- **Status:** Already happening – aim to expand

- **Action 2:** Develop strategy for public and community engagement around the build-out of the heat network, embedding inclusive engagement practices.



- **Owner:** Vattenfall
- **Status:** Planned – funded



Skills and supply chain

The roles of Bristol City Council and Bristol City Leap related to skills and supply chain include:

- Work with partners to guide and contribute to coordination of the regional approach to decarbonising homes, including skills provision
- Deliver services and opportunities to support citizens to develop relevant skills and businesses to grow
- Assess compliance with building regulations (where contracted to do so)
- Deliver high quality work and social value through continual upskilling of delivery staff and robust procurement policies and processes

Objective 5.1: Ensure there is coordination of retrofit skills and supply chain activities

- **Action 1:** Establish regional and local roles and responsibilities for coordinating retrofit skills and supply chain activities.
- **Owner:** Employment, Skills and Learning
- **Status:** Already happening – aim to expand
- **Action 2:** Continue to work with partners to support Bristol's supply chain to deliver on Bristol City Leap's social value commitments.
- **Owner:** Bristol City Leap and Vattenfall
- **Status:** Planned – funded

Objective 5.2: Create and point to growing demand for heat networks, heat pumps, insulation services and solar PV

- **Action:** Deliver a programme of engagement with the supply chain, including skills providers, on the opportunities offered by Bristol City Leap and Vattenfall. Note: action within Bristol City Leap Business Plan (2024).
- **Owner:** Bristol City Leap and Vattenfall
- **Status:** Already happening – aim to expand



Objective 5.3: Promote inclusive skills pathways into heat network, heat pump and insulation jobs through education opportunities and advice

- **Action 1:** Deliver an inclusive programme of local skills and supply chain support for retrofit and low carbon heat (via Innovate UK Mission Net Zero project).
- **Owner:** Employment, Skills and Learning
- **Status:** Planned – funded

- **Action 2:** Work with partners to create inclusive opportunities for apprenticeships, training opportunities and skills development within Bristol City Leap and Vattenfall.
- **Owner:** Bristol City Leap and Vattenfall
- **Status:** Already happening – aim to expand

Objective 5.4: Help businesses to form and grow

- **Action 1:** Develop and deliver programmes for business support, subject to government funding
- **Owner:** Employment, Skills and Learning and Economic Development
- **Status:** Already happening – aim to expand

- **Action 2:** Develop a proposal to support smaller and micro-businesses to participate in Bristol City Leap projects and consider interaction with other retrofit schemes in the city (e.g. Retrofit West)
- **Owner:** Bristol City Leap
- **Status:** Funding to be sought

Objective 5.5: Support growth of high-quality local supply chain through procurement and building regulations

- **Action 1:** Review the requirements of Bristol City Council's Healthy and Sustainable Procurement Policy for construction, retrofit and low carbon heat, to ensure it is promoting decarbonisation and high-quality installation.



- **Owner:** Procurement and contract management
- **Status:** Already happening – aim to expand

- **Action 2:** Ensure partners working with Bristol City Leap commit to delivering social value (e.g. paying Real Living Wage, signing Bristol Equalities Charter, offering training opportunities). Note: action within Bristol City Leap Business Plan (2024).

- **Owner:** Bristol City Leap
- **Status:** Already happening – aim to expand

- **Action 3:** Build awareness of roles and responsibilities under building regulations into communications around retrofit advice.

- **Owner:** Planning
- **Status:** Funding to be sought

Objective 5.6: Manage delivery of work as “intelligent clients” to ensure good quality

- **Action:** Carry out a skills need assessment and develop a culture of continuous learning for those involved in delivery and commissioning to increase understanding of new technologies, materials and techniques for retrofit and new homes built in line with net zero and improve the ability to assess quality of design and installation.

- **Owner:** Sustainable City and Climate Change/ Landlord Services/ Bristol City Leap/ Housing Delivery/ Building Control/ Planning/ City Leap Client Function
- **Status:** Already happening – aim to expand



Coordination, governance and citizen involvement

The roles of Bristol City Council and Bristol City Leap related to coordination, governance and citizen involvement include:

- Coordinate Bristol City Council and Bristol City Leap's homes decarbonisation activities and monitor progress
- Manage Bristol City Leap contract for energy projects
- Provide citizens with information
- Engage with citizens on the approach

Objective 6.1: Track delivery against actions in the plan and report to decision making structures

- **Action:** Develop a process for monitoring progress of the Bristol City Council and Bristol City Leap Action Plan for Decarbonising Bristol's Homes.
- **Owner:** Sustainable City and Climate Change
- **Status:** Planned – funded

Objective 6.2: Track City Leap KPIs

- **Action:** Regularly review process for Bristol City Council oversight and sign-off of Bristol City Leap projects and progress.
- **Owner:** City Leap Client Function
- **Status:** Already happening – aim to expand

Objective 6.3: Track city-wide progress towards homes decarbonisation

- **Action:** Collate data on city-wide homes decarbonisation and create and regularly update an internal dashboard of the data.
- **Owner:** Sustainable City and Climate Change
- **Status:** Already happening – aim to expand



Objective 6.4: Contribute to governance of related action plans

- **Action:** Report progress on the One City Climate Strategy to the Bristol One City Boards and Bristol Advisory Committee on Climate Change.
- **Owner:** Sustainable City and Climate Change
- **Status:** Already happening

Objective 6.5: Communicate progress to citizens and stakeholders

- **Action:** Publish progress on city-wide heat decarbonisation (e.g. on Bristol City Council website or Bristol Climate Hub) and link to Climate View.
- **Owner:** Sustainable City and Climate Change
- **Status:** Funding to be sought

Objective 6.6: Involve citizens in the approach to decarbonising homes

- **Action 1:** Continually upskill Bristol City Council and Bristol City Leap teams on inclusive engagement and building increased levels of involvement from residents in actions that effect their homes, bills and livelihoods.
- **Owner:** Sustainable City and Climate Change / Landlord Services/ Bristol City Leap
- **Status:** Funding to be sought
- **Action 2:** Establish Bristol City Leap Community Forum to advise on Bristol City Leap's non-heat network activities, embedding inclusive engagement practices. Note: action within Bristol City Leap Business Plan (2024).
- **Owner:** Bristol City Leap
- **Status:** Planned – funded
- **Action 3:** With Bristol's Transition Team develop an approach to inclusive citizen engagement on climate action, including homes decarbonisation.
- **Owner:** Sustainable City and Climate Change
- **Status:** Funding to be sought