

Bristol Fuel Poverty Action Plan 2020 –2030

A partnership approach to end cold homes in Bristol

Developed by the No Cold Homes Steering Group

Foreword

Bristol is committed to tackling fuel poverty and ensuring that the residents of this city have access to support services and the necessary energy efficiency measures to live in a warm and comfortable home. The impact of living in a cold home has a wide range of effects on physical and mental health that can have a lasting effect on individuals, families and our communities. With the impacts of COVID-19 and global energy crisis affecting many households in the city, this time presents an opportunity to act collectively as a city to tackle this issue to prevent further hardship.

The Fuel Poverty Action Plan provides the city with direction and a strategic approach for supporting vulnerable households across the city. The plan includes actions we can take as a city to support households in fuel poverty and preventative measures to ensure more people do not fall into it. As the city moves towards its goal of being carbon neutral and climate resilient by 2030, we need to consider how we will support households through an energy transition, where citizens are able to have access to affordable low carbon heating options and live in energy efficient homes. With involvement from the Health & Wellbeing Board, the Bristol Homes & Communities Board and the Environmental Sustainability Board, the Fuel Poverty Action Plan is an opportunity to utilise the One City Approach and bring together organisations to improve the lives of those living in cold homes and prevent further households from ending up in fuel poverty.

COVID-19 has presented a series of challenges and has resulted in financial hardship for many households. This is compounded by high inflation, the national insurance increase, and the increased cost essential goods such as food and petrol. The result of this is that managing finances and keeping homes warm more difficult than ever. We recognise that these are complex situations; however, we have an opportunity to galvanise action in the city and take collective action. The Health and Wellbeing Board sees this work as a chance to make progress on tackling issues on the wider determinants of health to improve the health and wellbeing of Bristol's residents.

Thank you to all the organisations that have supported the development of the Fuel Poverty Action and to those that are committed to taking this work further.

Bristol's Health and Wellbeing Board
October 2021

Contents

Bristol Fuel Poverty Action Plan 2020 –2030.....	1
Foreword.....	2
Executive Summary.....	5
1 Introduction	6
1.1 Fuel poverty and cold homes – definition	7
1.2 The harmful effects of living in a cold home.....	8
1.3 The national context	9
1.4 Bristol-specific challenges to addressing fuel poverty.....	10
1.5 Rationale for action.....	10
1.6 Opportunities - what enables us to confront challenges – include national enablers	11
2 Our partnership approach	12
2.1 Fit with One City Plan.....	12
2.2 Oversight and Delivery Responsibility	13
2.3 Outcomes focused action plan	14
3 Affordable, energy efficient housing	16
3.1 Oversight Board: Homes and Communities.....	16
3.2 Context.....	16
3.3 Planned Actions	17
3.4 Other ongoing activities.....	19
4 Affordable low carbon heating	20
4.1 Oversight Board: Environmental sustainability	20
4.2 Context.....	20
4.3 Heat networks.....	21
4.4 Heat pumps.....	21
4.5 Planned Actions	21
4.6 Other ongoing activities.....	23
5 An inclusive, affordable, smart energy system.....	24
5.1 Oversight Board: Environmental sustainability	24
5.2 Context.....	24
5.3 Planned Actions	24
5.4 Other ongoing activities.....	25
6 Specialist cold homes advice services and referral pathway.....	26

6.1	Oversight Board: Health and Wellbeing	26
6.2	Context.....	26
6.3	Planned Actions	27
6.4	Other ongoing activities.....	30
7	Align with broader work to counter poverty	31
7.1	Oversight Board: Health and Wellbeing	31
7.2	Context.....	31
7.3	Planned Actions	32
7.4	Other ongoing activities.....	32
8	Indicators and reporting	34
8.1	Primary indicators.....	34
8.2	Secondary indicators.....	35
8.3	Reporting progress.....	36
8.4	Supporting research.....	36
Appendix A	List of useful documents and resources	37
Appendix B	NICE Recommendations on Excess Winter Deaths and the Health Risks Associated With Cold Homes	38
Appendix C	Glossary.....	39
Appendix D	Improving the dwelling of Fuel Poor households in Bristol to EPC band C.....	42
Appendix E	: Summary of progress in Bristol against NICE Guidelines	45

Executive Summary

Bristol is committed to tackling fuel poverty and improving the lives of those currently struggling to adequately heat their home. COVID-19 has resulted in more financial hardship for many households in the city, in addition to rising energy prices caused by the global energy crisis.

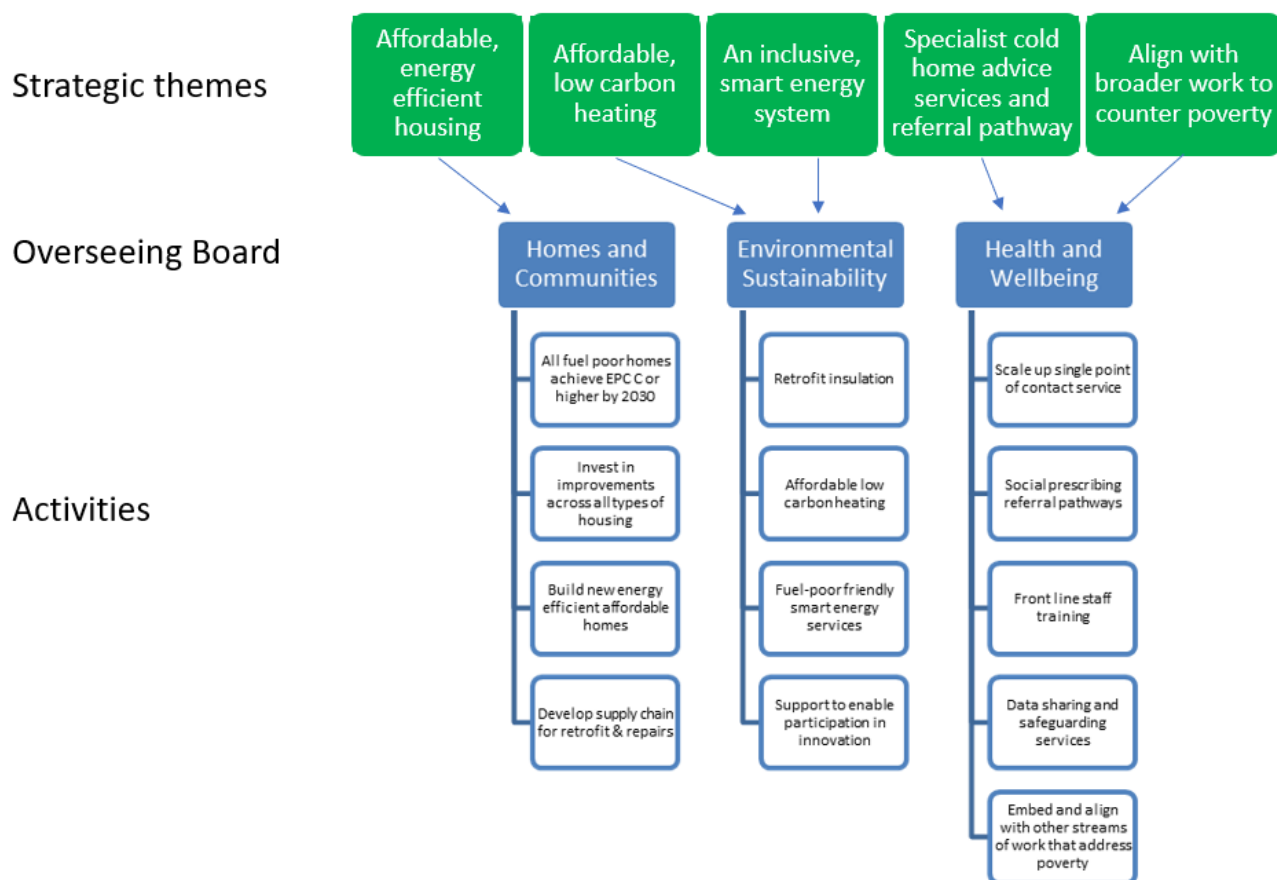
The Fuel Poverty Action Plan aims to galvanise action in Bristol to support vulnerable households. The aims of the fuel poverty action plan need to encompass three aspects. Firstly, it must ensure support for the acute and immediate need that arises of people as people are unable to heat their homes. Secondly, it needs to take a long-term preventative approach. Finally, many of the challenges in tackling fuel poverty would benefit from national policy intervention. Through strong cross-sector collaborative working and the creation of this action plan, Bristol should aim to become a national leader in terms of local authority action in this field.

It will require investment of over £20 million to install insulation, improved efficiency, low carbon heating measures and renewable energy measures in fuel poor homes across Bristol. Specialist health and housing advice and referral pathways integrated with income maximisation support will also contribute to wider health and wellbeing benefits, in line with the One City ambitions to embed health and wellbeing in all key policy development. The Fuel Poverty Action Plan aims to work alongside the [One City Climate Strategy](#), as it includes actions to tackle fuel poverty that will help achieve affordable warmth and improved health as well as carbon emission reductions. Furthermore, fuel poverty will be aligned and will contribute to other programs work to counter poverty in the city.

The production of this action plan was led by the voluntary No Cold Homes steering group. An event hosted at City Hall in November 2019 brought together partners from across Bristol and surrounding regions to identify the actions needed to achieve this goal, with further stakeholders helping to clarify the scale of action required.

Bristol's One City Plan provides the appropriate model to ensure a collaborative approach with various organisations to tackle fuel poverty. The Fuel Poverty Action Plan has five themes collating actions which will involve engagement and action from three boards of the One City. The Health and Wellbeing Board, the Homes and Communities Board and the Environmental Sustainability Board each have an oversight role for sections of the action plan.

Summary of activities overseen by One City boards



1 Introduction

In 2014, the government introduced a fuel poverty target for England to improve as many fuel poor homes as is reasonably practical to a minimum energy efficiency rating of Band C, by the end of **2030**.

More than 20,000 fuel poor homes in Bristol that are currently EPC band D or worse require improving to EPC band C or higher by 2030. The cost to make the necessary retrofit improvements is estimated at over £190 million. This would rise to £220 million if homes improved were retrofitted with low carbon heating measures instead of new gas boilers being installed.

The No Cold Homes steering group is a self-formed group that is committed to driving and co-ordinating action on tackling fuel poverty in Bristol, with active representatives from leading organisations, including Bristol City Council, private and voluntary sector energy organisations, local advice and support providers, clinical commissioning groups, health researchers and representatives from the community energy sector.

1.1 Fuel poverty and cold homes – definition

Fuel poverty is generally understood to refer to the situation where a low-income household is struggling to afford their energy costs. Fuel poverty may exist for a number of reasons including, if a low income household lives in a property that is not energy efficient and therefore expensive to keep warm; lives in a large home which is expensive to keep warm; uses a more expensive heating fuel increasing fuel costs; or has higher need to maintain a warm home resulting in higher fuel needs e.g. older people.

The definitions of fuel poverty are set nationally by the *Department for Business, Energy & Industrial Strategy*. This action plan uses the Low-Income Low Energy Efficiency (LILEE) definition to identify and monitor fuel poverty in Bristol, which is also the definition used in the national strategy set out in the government's *Sustainable warmth: protecting vulnerable households in England* presentation to parliament in Feb 2021. This defines a household to be fuel poor if:

- Their disposable income (after housing and energy costs) is below the poverty line **and**;
- They live in a property with an energy efficiency rating of Band D or lower.

It is also important to note that the official definition of fuel poverty is based on modelled fuel costs, however for many households the high cost of their energy tariff makes it hard for them to afford to keep their home warm. In the UK, space heating accounts for the majority of a household's energy usage. Fuel poor households are also likely to experience other forms of energy deprivation affecting a range of daily activities within the home, including cooking, bathing, cleaning, study, socialising and entertainment.

This measure considers the energy performance certificate (EPC) rating of a dwelling as an indicator of how affordable it is to heat a home. E, F & G rated homes are more difficult to heat and keep warm at an affordable cost, whilst homes that are rated C or above are more cost-effective to heat. However, EPC ratings can often be inaccurate due to issues with quality control in the industry, additionally the simplified RdSAP model can also overlook certain issues such as condensation. Also, if a heating system in a property is broken, faulty or not being used, this will not be reflected in the EPC rating. Finally, there is evidence of some very low income households living in EPC C rated homes still struggling to afford their fuel bills. These households face the same negative outcomes, but the root cause is related to a broader context of poverty, not specific to fuel. The action plan addresses this by linking with the wider work to counter poverty in the city.

This definition replaces the Low Income High Costs (LIHC) definition of fuel poverty, which defines a household to be in fuel poverty if:

- They have required fuel costs that are above average (the national median level) and;
- Were they to spend that amount they would be left with a residual income below the official fuel poverty line.

1.2 The harmful effects of living in a cold home

Fuel poverty and living in a cold home can cause multiple forms of harm to physical health, mental and health and social impacts. Fuel poverty is associated with cold and damp households, and poor internal air quality which can have a range of negative health impacts. These include respiratory conditions, circulatory conditions, exacerbating pre-existing chronic health problems, increasing incidence of heart attacks and strokes¹. It can also cause mental health effects from depression amongst all age groups as well as indirect risks of carbon monoxide poisoning. The World Health Organisation estimates that up to 30% of winter deaths are caused by cold housing. In the 2017/18 winter period, there were an estimated 50,100 excess winter deaths (EWD) in England and Wales.² Older people may be particularly at-risk of these direct health impacts. Living in a cold home can also have indirect health effects on educational and employment attainment. The [Bristol JSNA Chapter on Fuel Poverty](#) and [data profile](#) provides a full analysis of the significance of fuel poverty as a public health issue affecting people living in Bristol.

Additionally, a cold home intersects with multiple other aspects of poverty and deprivation. It is associated with a range of harmful economic and social impacts, including household debt, social isolation and loneliness. Many individuals and families may also have to face dilemmas between paying bills or cutting back on food (the so-called ‘heat or eat’ trade-off). People living in poverty may have less resource, capacity and access to facilities and infrastructure which allow them to cook nutritious food from scratch.

Children and young people are also at risk of direct impacts of living in cold homes, including asthma and mental health problems. Combining this with the impact on educational attainment and the overlap with other negative consequences of living in poverty, children exposed to fuel poverty face an increased lifetime risk of numerous negative health outcomes.³

The National Institute for Health and Care Excellence (NICE) guidelines identify the following groups as at greater risk of harm to health from living in a cold home:

- people with cardiovascular conditions
- people with respiratory conditions (in particular COPD and childhood asthma)
- people with mental health conditions
- people with disabilities
- older people (65 years +)
- young children (under 5)
- pregnant women
- people on a low income
- people who move in and out of homelessness
- people with addictions
- people who have attended hospital due to a fall

¹ Public Health England and UCL Institute of health equity (2014) Local action on health inequalities: Fuel poverty and cold-home related health problems.

² Julia Verne - Understanding and preventing excess winter deaths. Presentation

³ Harker, L. and Shelter (2006) Chance of a lifetime: The impact of bad housing on children’s lives. London: Shelter.

- recent immigrants and asylum seekers

1.3 The national context

The Department for Business, Energy and Industrial Strategy publish [annual reports monitoring](#) and forecast fuel poverty in England. In 2020, an estimated 3.12 million households in England (13.2%) were living in fuel poverty. Of these households, 40.3% were households with children, with lone-parents having the highest rates of 28%⁴. The highest level of fuel poverty was in the private rented sector with 25% of these households being fuel poor. However, in overall terms, 40.8% of fuel poor households are owner occupied, 35.4% are privately rented and 23.8% live in social housing. This reflects the fact that nearly two-thirds of households are owner-occupiers.⁵

Following a public consultation, the government published the *Sustainable Warmth: Protecting Vulnerable Households in England* strategy in February 2021, which:

- Updated the fuel poverty metric used for Government statistics from the Low Income High Cost (LIHC) metric to the Low Income Low Energy Efficiency (LILEE) metric, with the goal of shifting the focus on fuel poverty funding to energy inefficient homes. The strategy recognises that there will be households living in energy efficiency Band A, B or C homes who are unable to afford sufficient energy to keep warm which will not be considered as being in this measure of fuel poverty, and notes their needs should be considered under the vulnerability principle;
- Repeated the Government’s commitment to a target of reducing fuel poverty by ensuring as many fuel poor homes in England as reasonably practicable achieve a minimum energy efficient rating of band C by the end of 2030, with interim goals to improve as many fuel poor homes as is reasonably practicable to band E by 2020 and to band D by 2025;
- States the Government’s guiding principles in setting fuel poverty strategy as:
 - ‘Worst First’: the strategy identifies a strong correlation between the size of the fuel poverty gap and the energy performance of a home and confirms that policies should focus on upgrading the worst performing homes first;
 - Cost Effectiveness;
 - Vulnerability; and
 - Sustainability.

In October 2021 the Government published its *Heat and Buildings Strategy* which includes a commitment to:

- Extend the Energy Company Obligation (ECO), with the next iteration to run from 2022 to 2026 at a value of £1 billion per year, to focus on improving the worst-quality homes to achieve EPC band C;

⁴ Eat or heat: fuel poverty and childhood respiratory health (2022) [Eat or heat: fuel poverty and childhood respiratory health - The Lancet Respiratory Medicine](#)

⁵ [Annual Fuel Poverty Statistics LILEE Report 2022 \(2020 data\) \(publishing.service.gov.uk\)](#)

- Extend the Warm Home Discount to at least 2026, providing rebates off a winter energy bill for low income and vulnerable households;
- Invest £800 million in the Social Housing Decarbonisation Fund over 2022/23 to 2024/25, to upgrade a significant amount of the social housing stock that is current below EPC band C; and
- Invest £950 million in Home Upgrade Grant over 2022/23 to 2024/25 to support upgrades to the worst-performing off-gas grid homes in England.

Bristol City Council and other partners must work to ensure that fuel poor households in Bristol get their full share of this investment.

1.4 Bristol-specific challenges to addressing fuel poverty

Many of the challenges for tackling fuel poverty across Bristol are common to those in the rest of the country. The Bristol JSNA Chapter on Fuel Poverty compared the situation in Bristol with that in other core cities. Rates of fuel poverty in Bristol (13.8%) were higher than the national average (13.4%) but lower than in other core cities in 2019. Rates of excess winter deaths were also higher than England, but lower than in other core cities⁶. However, a growing proportion of housing in the city is in the private rented sector, and within this, a significant share comprises houses in multiple occupation (HMOs), which are generally in poorer condition than non-HMOs and currently not subject to the Minimum Energy Efficiency Standard (MEES) regulations.

Mapping fuel poverty across Bristol highlights how fuel poverty maps closely to areas of high deprivation, highlighting areas including Hartcliffe and Withywood, Lawrence Hill, Filwood, Ashley, Southmead and Easton. However, there are a few exceptions where we see high rates of fuel poverty in more affluent areas. Notably this is where there are large student populations, and areas with older and larger Georgian homes which are likely to have the highest total fuel bills, for example Cotham, Bishopston and Clifton. This demonstrates the importance of applying local understanding to development of action to tackle cold homes and associated harm to health in Bristol.

The JSNA highlights the inter-relationships between fuel poverty and poor quality housing, income poverty, debt, food, transport and health issues. Advice agencies report being at capacity and overwhelmed by demand. The need for more collaborative working and data sharing between support and health service providers is highlighted, as well as for research to inform the strategic direction of local efforts and resources within the health and social care sectors.

1.5 Rationale for action

The No Cold Homes steering group formed of representatives from various Bristol City Council departments, local charities, community groups and other organisations active in tackling fuel poverty and related social, economic and health challenges in the city came together to drive action to end cold homes in Bristol. The production in 2018 of a JSNA fuel poverty chapter for Bristol by the No Cold Homes steering group was an important first step in highlighting the importance of

⁶ Public Health Outcomes Framework, Office for Health Improvement and Disparities

tackling this preventable cause of ill health. The first recommendation from the JSNA was that the Health and Wellbeing Board facilitate the development of a fuel poverty strategy in collaboration with relevant organisations across Bristol.

The aims of the fuel poverty action plan need to encompass three aspects. Firstly, it must ensure support for the acute and immediate need that arises of people as people are unable to heat their homes. Secondly, it needs to take a long-term preventative approach. Through this, it will build resilience in the community to deal with such challenges in the future. Finally, many of the challenges in tackling fuel poverty would benefit from national policy intervention. Through strong cross-sector collaborative working and the creation of this action plan, Bristol should aim to become a national leader in terms of local authority action in this field. We should also aim to collaborate and work through the core cities network to make the case to influence national policy decisions.

1.6 Opportunities - what enables us to confront challenges – include national enablers

A number of national enablers provide the basis to confront the challenges faced:

- There is a new fuel poverty strategy for England, *Sustainably warmth: protecting vulnerable households in England*, which refreshes the commitment to reducing fuel poverty and ensuring everyone has a warm, safe home. It provides an opportunity to confirm and refresh commitments and associated action and investment. The COVID-19 pandemic highlighted the importance of safe, warm homes, but also increased the number of households struggling with their income, casting light on the challenge of fuel poverty.
- The government issued their [response](#)⁷ to the 2019 Department for Business, Energy & Industrial Strategy (BEIS) [select committee report on energy efficiency](#)⁸ which urged the UK government to follow the example of the devolved nations with respect to complementing Energy Company Obligation (ECO) funds with publicly funded programmes. The report is generally considered very coherent with a thorough evidence base. The government will have to reply to all of the committee's recommendations, so this may result in further opportunities at national level towards which the action plan can contribute.
- The Heat and Building Strategy sets out how the UK will decarbonise our homes, and our commercial, industrial and public sector buildings, as part of setting a path to net zero by 2050. It sets out the support available from government to 2025 to support local authority action.
- A Public Health England (PHE) e-learning module for front line health workers on recognising the health impact of cold homes has been developed, as a result of work by the BEIS fuel poverty and health working group. However, a more tailored module is likely to yield increased referrals to Bristol's own single-point-of-contact service.

⁷ House of Commons, Energy efficiency building towards net zero: Government response to the Committee's Twenty First Report of Session 17-19 (2019-20)

⁸ Business, Energy & Industrial Strategy, Energy Efficiency: building towards net zero (17-19)

2 Our partnership approach

2.1 Fit with One City Plan

In January 2019 Bristol published its first ever One City Plan and in February 2020 the One City Environmental Sustainability Board published the One City Climate Strategy. The Fuel Poverty Action Plan is an essential addition to guide cross-sector, city-wide collaboration to tackle the challenge of cold homes. It will contribute towards the One City Plan goal of making Bristol a fair, healthy and sustainable city by 2050.

Bristol's declaration of a climate emergency and subsequent publication of the One City Climate Strategy provide an important regional context within which actions to end cold homes must be delivered. This will bring both challenges and opportunities, with the potential city-wide investment in new heating systems and insulation but also the prospect that fuel poor households - as well as others - will require financial and other help to participate in this transition.

The target to end cold homes by 2030 will require a holistic approach to tackling the complex problem of fuel poverty. It will require a collaborative approach, led and overseen by the Health and Wellbeing Board, the Environmental Sustainability Board and the Bristol Homes and Communities Board. Activities driven and overseen by the Economy Board will also be important to tackling fuel poverty.

The action plan will need people and organisations from across the city to take action. It will need to interact with other city-wide collaborative initiatives (see Box 1) towards the wider goal of making Bristol a fair, healthy and sustainable city by 2050.

Box 1: Related cross-city collaborations and delivery strategies

- One City Climate Strategy: Sets out scale of ambition and actions needed to achieve Net Zero by 2030.
- Bristol City Funds - £10 million investment funding for solutions that target the causes and effects of inequality in Bristol.
- Thrive Bristol - 10 year programme to improve the mental health and wellbeing of everyone in Bristol, with a focus on those with the greatest needs. Fuel poverty is an important underlying cause of poor mental health.
- Healthier Together Integrated Care System for Bristol, North Somerset and South Gloucestershire - the Sustainability Transformation Partnership Long Term Plan 2020 – 2025 covering health care in Bristol and surrounding areas. The health sector needs to engage fully in actions to end cold homes as a cause of ill-health and prevent discharge from hospital into cold homes.
- Homelessness and Rough Sleeping Strategy 2019-24. Fuel indebtedness can push people towards homelessness. Equipping newly housed people to manage their bills can support them to regain independence in their own home.
- One City Food Equality Strategy 2022 – 32 is designed to recognise and tackle the issues of rising food inequality in Bristol.
- Belonging Strategy 2021-2024 is designed to set out how we can ensure this city is a place where children and their families can thrive.

2.2 Oversight and Delivery Responsibility

Oversight and governance of the Fuel Poverty Action Plan will be the responsibility of the Health and Wellbeing Board. However, due to the cross-sector nature of implications and potential actions associated with fuel poverty, the Bristol Homes and Communities Board and the Environmental Sustainability Board will both play a critical role in supporting and endorsing the Action Plan.

The key themes of the action plan are:

- Affordable, energy efficient housing
- Affordable low carbon heating
- An inclusive smart energy system
- Specialist cold homes advice services and referral pathway
- Aligning with broader work to counter poverty in the city

Each theme contains a number of activities and specific actions. Each planned action has a timeline, targets/measures of progress, and a responsible team who will own that action.

These activities are overseen as follows:

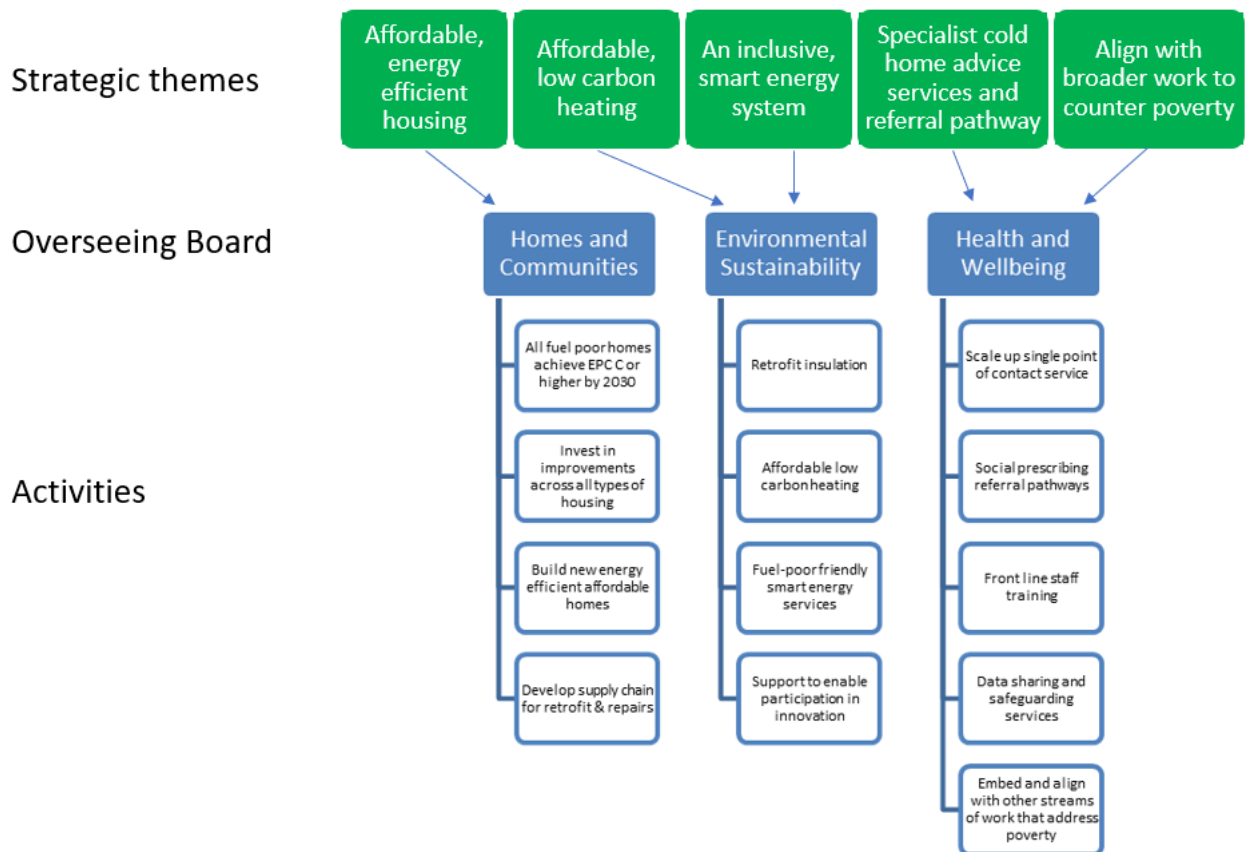
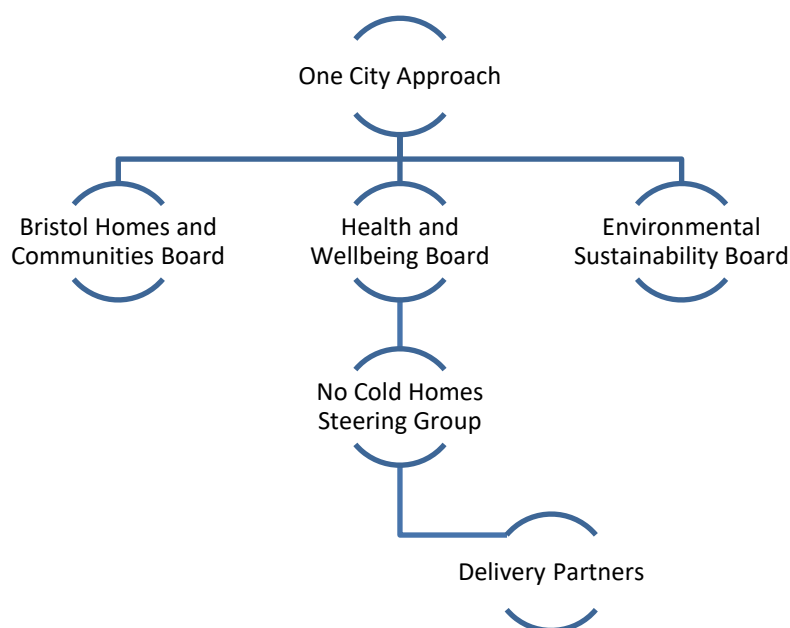


Figure 1: Delivery and reporting structure for Fuel Poverty Action Plan

The No Cold Homes steering group will support the oversight role of the boards, in the following ways:

- Co-ordinate the monitoring of activity by delivery bodies to the One City boards
- Compile data to enable reporting against key progress indicators
- Provide advice to boards and commission research on behalf of boards to underpin understanding of further action needed to accelerate progress and overcome barriers.

This will require dedicated funding, including additional budget to pay for any commissioned research. Whilst Bristol City Council and the Centre for Sustainable Energy will attempt to provide administrative support to the steering group, delivery of the Action Plan would benefit substantially from a project manager to oversee and co-ordinate work. Bristol City Council are investigating funding options for such a role.

A wider network of No Cold Homes delivery bodies will plan and deliver activities. This includes Bristol City Council teams, health providers, businesses, non-profit organisations, Voluntary and Community Sector (VCS) organisations and academic bodies.

2.3 Outcomes focused action plan

The action plan focuses on achieving outcomes. The main outcome is that:

- By 2030, nobody in Bristol will suffer from a cold home due to fuel poverty. This will be measured using the LILEE definition. As measured by: Number of households in Bristol with income 60% below median income living in a home with an energy efficiency rating of Band D or lower.

Intermediary outcomes are:

- Develop fuel poverty action plan for delivery from December 2020 onwards
- Health & Wellbeing Board reports regularly on progress towards completing all recommendations of the NICE guideline.
- Investment of £217 million to 2030 for retrofit of homes of fuel poor and those at risk of fuel poverty in line with One City Climate Strategy to reduce energy demand and costs, using existing and new funding mechanisms, including City Leap.
- Additional £2.3million revenue funding secured for City-wide single Point of Contact (SPOC) health & housing referral service commissioned beyond 2021 to deliver advice and support services to 2,500 fuel poor homes annually.
- Health & social care practitioners, social housing professionals, voluntary & faith sector front line workers trained to identify people in need of support & make onward referrals
- All vulnerable people with cold-related health risk factors discharged from hospital to a warm home by 2025
- Excess winter deaths and other morbidities closely related to cold homes reduced to minimal level by 2030.
- All social and private rented housing is improved to EPC C by 2028, as far as practicable

3 Affordable, energy efficient housing

3.1 Oversight Board: Homes and Communities

3.2 Context

The One City Plan aims to ensure that every person in Bristol will be able to live in a home that they can afford and which is secure and warm. There is a shortage of affordable housing in Bristol, with a 74.8% increase in average house prices over the last ten years, a housing affordability ratio of 9.12, higher than the national average, and one of the highest rates of rent increases in the country.^{9,10} The combination of high housing costs and low efficiency housing stock, particularly in the private sector, in addition to increased living costs (including fuel and food) contribute to continuing high rates of fuel poverty.

Current statutory energy efficiency commitments require all fuel poor homes by 2030 in England to be levelled up to the energy efficiency standards of a current new-build home (EPC C). There is also a national policy target for all private rented sector homes to achieve a minimum EPC C by 2028. To tackle fuel poverty and carbon emissions, major improvements must be made to housing in Bristol across all sectors (owner occupied, private and social rented sectors). Bristol's existing housing stock contains large proportions of old, inefficient homes. A quarter of housing has solid walls.¹¹ An estimated 22,000 fuel poor homes need retrofitting to achieve at least an Energy Performance Certificate (EPC) rating of C by 2030.¹² These inefficient homes cost 2-3 times more to heat than more efficient homes. In response, people living below the poverty line under heat their homes to save money, exposing them to the harm associated with living in a cold home – a key driver of fuel poverty.

Bristol must deliver a large scale energy efficiency retrofit response. The scale of investment needed is estimated at £190 - £220 million over the next decade (see Appendix D). For this Bristol will need to claim a significant share of the Government's energy efficiency schemes for low income households and social housing decarbonisation schemes.

Bristol has received funding for retrofit under the Energy Company Obligation (ECO) scheme, and has developed the Bristol City Council's Energy Company Obligation (ECO) Flex Statement of Intent, designed to ensure funding is targeted at fuel poor households.¹³

Bristol has also received around £2.5 million as part of the Green Homes Grant Local Authority Delivery scheme, which has installed 177 retrofit energy efficiency improvement measures to low-income households as of March 2022.

⁹ State of Bristol: Key factors 2019

¹⁰ <https://www.zoopla.co.uk/discover/renting/zoopla-rental-market-report/>

¹¹ https://tools.smartsteep.eu/wiki/Bristol_-_Housing_Stock_Assessment

¹² See APPENDIX D for more information

¹³ <https://www.bristol.gov.uk/documents/20182/33407/ECO+Flexible+Eligibility+Statement+of+Intent+v1.0/76a98415-e38d-a031-21ce-a8188ab41478>

A significant amount of investment will need to be targeted at the private rented sector, making best use of the minimum energy efficiency standard (MEES) regulations. Tightened regulations are being developed to achieve the trajectory of minimum EPC C by 2028.

The April 2020 budget committed £12.2 billion to creating 200,000 new affordable homes in England. New housing in Bristol will be required to meet tightened energy efficiency standards. In Bristol stakeholders responded to a recent consultation on Future Homes Standards. Bristol City Council is exploring the use of thermal imaging as a means to check that performance standards are met in new homes.

Temporary accommodation for homeless people and people at risk of homelessness needs to be improved to ensure that accommodation is safe, warm and appropriate for individuals and families to live in. This aspect of the plan needs to be more fully developed, planned and funded, interacting with delivery of the Homelessness and Rough Sleeping Strategy 2019-24.

Homes also need to be resilient to a warming climate. Energy efficiency improvements therefore need to be designed with overheating risk in mind to ensure this is minimised during a summer heatwave. Where this has not been considered and ‘passive’ cooling measures, such as windows that can be opened widely, are not available or safe to use, heavy use of electric fans or air conditioning in summer can lead to high electricity bills. Bristol City Council is developing a Heat Resilience Framework to set out the actions required to minimise overheating risk in the city.

3.3 Planned Actions

Action	Timeline	Status	Target / measure of progress	Delivery lead
Use discretionary licensing and minimum standards to drive improvements in energy efficiency of private rented homes via EPC, MEES & Housing Act	2020 /2025 / 2030	Extend / tighten rqts. to D / C	PRS homes improved to EPC E by end 2022/ D by 2025 /C by 2030	BCC Private Housing Team
Loans are available to private landlords either as a top up to Government initiatives or to help meet licensing and minimum energy efficiency (MEES) standards. Require improvements to EPC D by 2025 / to EPC C by 2030 – with supporting funding.	2019-2022	Ended	PRS homes improved to EPC E & higher by 2022	BCC Private Housing Team BCC Energy Service
Local authority-led mass retrofit investment in social housing to bring to C by 2030. Apply for	2021 - 2030	Scale up	Social housing improved to EPC C or better by 2030	BCC Housing Team BCC Energy Service

Social Housing Decarbonisation funding.				
Housing associations mass retrofit programme for fuel poor homes to bring to C by 2030	2021 - 2030	Scale up	Social housing improved to EPC C or better by 2030	Housing associations
Engage with Housing Associations to monitor and support reaching energy efficiency retrofit targets	2021-2030	New	Social housing improved to EPC C or better by 2030	Bristol City Council
Channel and support national government funding for low-income private owner energy efficiency retrofit measures and heating	2020 - 2028	New	Fuel poor owner-occupier homes improved to EPC C or better by 2030	BCC Private Housing Team BCC Energy Service
BCC Energy Service to deliver Green Home Grant and ECO funding and related programmes to focus on fuel poor households - private rented and owner occupied homes	2020 - 2022	Existing (Schemes are now closed to new applicants but delivery is ongoing)	Private Rented Sector and owner occupiers & households improved to EPC E & higher by 2022	BCC Private Housing Team BCC Energy Service
Develop local supply chain on low cost repairs, retrofit, low carbon heating, new build sustainable homes.	Futureproof 2019-2021 & Warm Up Skill Up 2021 onwards Building Bristol Partnership 2022 onwards	New	Number of contractors trained	The Green Register CSE Bristol Energy Network BCC Employment, Skills and Learning
Make best use of WECA funding to accelerate the retrofit of homes by investing in project to upskill local people to build to retrofit supply chain	2022 onwards	New	Number of contractors trained	BCC Employment, Skills and Learning
Develop 'affordable warmth' funded retrofit and subsidy package to	2022 onwards	NEW	10,000 fuel poor homes retrofitted with low carbon heating by 2030	No Cold Homes

pay for insulation and low carbon heating solutions for fuel poor households in Bristol from 2022/2023			Approx. 17,000 insulation type measures (see Appendix D)	Steering Group/Project Manager
Make best use of ECO4 funding for solid wall insulation in fuel poor homes to 2026 and government funding to 2030	2020 – 2022 / 2022-2030	NEW	1100 external wall insulation by 2030	No Cold Homes Steering Group/Project Manager
Make best use of Home Upgrade Grant funding for improving the energy efficiency of properties which are not connected to the gas grid in line with a retrofit assessment	2022-2025	NEW	150 homes across Bristol, North Somerset and BANES	BCC Energy Service
Build new affordable homes to C and above	2020 onwards	Scale up	# new affordable homes EPC C or higher in Bristol	BCC Housing Delivery
Financial support for private low income homeowners to make repairs to heating and carry out ancillary works to enable energy efficiency improvements (e.g. electrics, loft hatch installation, window repairs etc.) and minimise heat loss	Loans and in some cases grants, have been available since 2019 onwards	Existing / scale up		BCC Private Housing Team / WE Care

3.4 Other ongoing activities

Advice services also provide help to fuel poor households to identify their needs and help them access available funding for improvements to their homes. See section 5.4.

Futureproof was a market accelerator initiative facilitated by The Green Register and Centre for Sustainable Energy, intended to build the skills for low carbon retrofit delivery in Bristol and the surrounding area. The initiative was mainly aimed at the ‘able to pay’ market. An adapted version with a different funding model is needed to enable widened access to high quality workmanship by lower income homeowners wanting to make improvements to their home.

Roof Over My Head is a multi-agency three-day tenancy preparedness course for households who are homeless or in supporting housing moving to private rented accommodation. The course, delivered by WRAMAS (Bristol City Council Welfare Rights and Money Advice Service) and BCC

Learning Communities' Team covers landlord and tenant responsibilities, budgeting, welfare rights, and other topics. It supports around 180 households per year.

Bristol City Council is facilitating a forum for social housing providers operating in the city to discuss decarbonisation of their housing stock. Through sharing data and lessons learnt, and collectively taking action to tackle barriers it is expected that the sector will be able to decarbonise more quickly.

4 Affordable low carbon heating

4.1 Oversight Board: Environmental sustainability

4.2 Context

Affordable heating options are key to tackling fuel poverty. Upgrading the energy performance of the city's buildings described above would have a significant impact on reducing fuel poverty as well as carbon emissions to heat inefficient homes. Nevertheless, several factors influence a household's ability to keep affordably warm in winter e.g. income, building efficiency and heating practices.

Gas central heating is now a higher carbon option than electric heating. Heat pumps, if installed properly in reasonably insulated homes should cost broadly the same amount to run as gas boilers, less if combined with solar PV and using excess electricity to heat the hot water tank. However, it is important that insulation is installed properly and that householders are advised on the different operation of heat pumps (low level for longer periods) compared to gas boilers (high temperature for short periods).

The Energy Companies Obligation (ECO) is a government energy efficiency scheme in Great Britain to help reduce carbon emissions and tackle fuel poverty. Under ECO3, the policy which ran to March 2022, the Home Heating Cost Reduction Obligation (HHCRO) required obligated suppliers to promote eligible measures which improve the ability of low income, fuel poor and vulnerable households to heat their homes.¹⁴ The successor scheme, ECO4 (running 2022 to 2026), is proposing to extend this to a Home Energy Cost Reduction Obligation which will include measures such as lighting, water heating and electricity generation and storage. Where first time gas central heating systems are assessed to be the best option, there is also a proposal to ensure these are 'heat pump ready', so able to operate at lower temperatures.

The Heat and Buildings Strategy (Nov 2021) announced a £450m Boiler Upgrade Scheme to provide upfront grants to households and small businesses for low carbon heating from 2022 to 2025. Alongside this, the Home Upgrade Grant (HUG) has been introduced to support low carbon heating upgrades to the worst-performing off-gas grid low-income homes in England, with £950m between 2022 to 2025. The Government is also providing £288 million in funding via a Green Heat Network Fund to encourage new and existing heat networks to adopt low carbon heat sources.

¹⁴ https://www.ofgem.gov.uk/system/files/docs/2020/02/energy_company_obligation_2018-22_eco3_guidance_delivery_v1.4_1.pdf

4.3 Heat networks

District heating provides a low carbon alternative to gas central heating to deliver affordable heat. Homes and businesses receive heat from energy centres through a network of pipes. Bristol already has a major city centre heat network, with over 1500 properties (700 of them council-owned homes) already connected to it. It has been awarded £10 million by the government’s Heat Network Investment Project to expand this network to new areas of the city during 2020-2030.¹⁵ The expansion is ongoing in the Redcliffe, Temple, Old Market and Bedminster areas of the City, with new residential developments and existing social housing blocks being connected. Longer term activities to 2030 as part of the One City Climate Strategy will require heat networks across much of the city, particularly in areas with larger properties. The City Leap energy partnership (due to come into being in 2022) will accelerate the build-out of the heat network to other areas across the city.

4.4 Heat pumps

Heat pumps will also play a major role in decarbonising heat in Bristol, as set out in the One City Climate Strategy. Homes need to be well insulated before heat pump installation, and occupants given advice on how to use, maintain and repair them. The capital costs to install heat pumps are currently much higher than for gas boilers (around £7,000-14,000 compared to £2,000). A bulk purchasing scheme for heat pumps and a secure long-term pipeline of work for suppliers could help drive down costs without the need for additional grants. Bristol City Council is in the process of developing a Heat Decarbonisation Delivery Plan for the city. See Appendix D, Improving the dwelling of fuel poor households in Bristol to EPC band C (at minimum cost), for a detailed analysis of the cost of installing energy efficiency measures and a comparison of gas combination boilers and heat pumps as heating options.

4.5 Planned Actions

Recommended Actions	Timeline	Status	Target / measure of progress	Who has responsibility / who can influence
Expand heat network connections to social housing blocks and fuel poor homes as part of One City climate strategy	Already started	Scale up	Social/affordable homes connected to low cost heat network by 2030	BCC Energy Service
Influence government policy and secure funding for heat pumps to be installed in fuel poor homes from 2022. Trial most suitable delivery model.	From 2022	NEW	Up to 10,000 fuel poor homes retrofitted with heat pumps and insulation (where necessary) by 2030 (see appendix D)	Bristol City Council
Heat decarbonisation delivery plan needs to set out the strategy for supporting fuel	2022	NEW	10,000 fuel poor homes retrofitted with low carbon heating by 2030	BCC Sustainable City and

¹⁵ <https://environmentjournal.online/articles/bristol-has-recieved-10m-to-expand-their-low-carbon-heat-network/> 6th March 2020

poor homes to decarbonise their heating.				Climate Change Service
Core Strategy BCS14: major developments in 'Heat Priority Areas' should connect to existing heat networks, where available. Where not yet available, developments should incorporate infrastructure to connect in the future.	Adopted in 2011	Scale up	New-build social / affordable homes connected to existing heat networks (includes existing post 2011 new homes not yet connected)	BCC Energy Service
Monitor roll out of low carbon heating to ensure BCC tenant households are not pushed into fuel poverty	2020 - 2030	New	Static or reducing number of BCC tenant households in fuel poverty	BCC Housing Team
Test and adopt cost-effective techniques to monitor the actual heat loss performance of new build and retrofit homes	2022	NEW	Reduced performance gap of new and retrofit social & affordable homes	Bristol City Council
Warm Up Skill Up Train community thermal imaging champions to deliver surveys & low cost energy efficiency measures for fuel poor households. Run a series of DIY workshops, after thermal study, to be able to carry out basic energy efficiency measures in own home.	Already Started	Scale Up	# fuel poor households surveyed/yr & install measures. DIY workshop series running Jan-March 2022	Bristol Energy Network / Futureproof
Help with hoarding, temporary rehousing and other support to enable installation of insulation and heating measures in fuel poor properties.	Already started	New	# fuel poor HH helped to overcome barriers to affordable heat measures installation	BCC Energy Service / WE Care / CSE
Development of survey system used by all contractors to involve the Warm Up Skill Up thermal imaging service to access properties prior to undertaking major works that are overseen by retrofit coordinator and post surveys to ensure work is completed to standard	Developing with Bristol Energy Network partners. Paused due to COVID-19	New	# fuel poor households, energy assessments undertaken,	Bristol Energy Network
Creation of Community Energy Wallet membership scheme with Bristol Energy Network & Bristol Credit Union	Developing with Bristol Energy Network partners.	New	Membership scheme which helps to save and access energy measures	Bristol Credit Union & Bristol Energy Network

	Paused due to COVID-19			
Under Bristol’s Climate Change and Sustainability Practice Note, non-renewable electric heating remains excluded from the heat hierarchy for various reasons including that it is relatively inefficient compared to heat pumps and could end up with more residents in fuel poverty due to likely increase of running costs for users.	Updated in July 2020	New		BCC Planning

4.6 Other ongoing activities

Bristol City Council was awarded funding in 2019 to support the installation of central heating systems for fuel poor households. It is a collaborative project offered across Bristol, North Somerset and Bath & North East Somerset.

Bristol Energy Network provide ongoing activities that support people living in fuel poverty including educational events that promote energy efficiency retrofit, developing new innovative projects with its members such as Warm Up Skill Up to involve and empower communities with the highest levels of fuel poverty.

The Making Space project facilitated by WE Care provides practical and emotional support to hoarders. Hoarding can contribute to fuel poverty as it may be impossible to service a boiler or fit a new heating system, resulting in a cold home and/or financial hardship due to reliance on expensive electric space and water heating.

WE Care provide support for home repairs vital to help vulnerable householder stay safe and warm in their homes, including fixing or replacing heating, improving energy efficiency or making adaptations.

5 An inclusive, affordable, smart energy system

5.1 Oversight Board: Environmental sustainability

5.2 Context

Bristol is an entrepreneurial city at the forefront of smart city initiatives: it ranks in the top 10 European cities for technology. Bristol's Smart City Strategy as well as Bristol Community Strategy for Energy addresses how innovative solutions will change how people live in the city, address energy use challenges in the future and ensure that they are inclusive of the communities they serve. The council and city also benefit from a thriving community energy sector represented by Bristol Energy Network who have supported the involvement of fuel poor households in innovation projects, such as REPLICATE (see below) as well as developing new innovative projects such as the CHEESE project (new systematic thermal imaging survey of homes). The national smart meter rollout means that smart Time of Use tariffs will soon become more widely available: this brings with it a need to be attentive to the opportunities and risks for fuel poor households.

Bristol has leveraged EU innovation funding for the REPLICATE project that trials smart solutions to tackle fuel poverty, promote wellbeing and reduce carbon emissions. The project, led by Bristol City Council in partnership with the University of Bristol and the University of the West of England and other organisation ran from 2016-2021.¹⁶ The project aims to deploy integrated energy, mobility and ICT solutions in cities. One of the project aims is to explore the role of smart technology in tackling fuel poverty. It is trialling smart technology in areas of the city with high rates of fuel poverty: Ashley, Easton and Lawrence Hill.

5.3 Planned Actions

Actions	Timeline	Status	Target / measure of progress	Who has responsibility / who can influence
Replicate smart connected homes trial tests how smart appliances, demand side response (DSR) & associated tariffs enable low-income households to save energy & money on fuel bills.	2016-2021	Ended	Lessons for engaging fuel poor households in DSR.	REPLICATE Team -BCC & partners
Replicate trial retrofit of loft insulation, new boilers and solar PV in fuel poor homes.	2016-2021	Ended	Bill savings & energy savings achieved	REPLICATE Team
Integrate lessons from Replicate into city-wide installations (see One City Climate Strategy Delivery Theme 4: Electricity)	2021-2030	NEW	Fuel poor HH engaged in smarter energy solutions	BCC City Innovation CSE

¹⁶ Replicate (Renaissance in Places with Innovative Citizenship and Technology) Bristol partners include Bristol City Council, University of Bristol; Knowle West Media Centre; Bristol Energy Network, UWE; NEC; Bristol is Open; Zeetta Networks & others.

Community sector approaches & business models to enable fuel poor households to participate in smart tech e.g. solar PV or tariff pilots, building on e.g. Lockleaze Loves Solar.	2021	NEW	Contribute to 9600 solar PV on fuel poor homes. Also batteries and new tariffs	Bristol Energy Network (BEN) CSE
---	------	-----	--	----------------------------------

5.4 Other ongoing activities

The community energy sector in Bristol is engaged in a variety of initiatives to support people living in more deprived areas of Bristol to engage in innovative smart energy projects towards that help achieve reduced energy bills and make smart solutions work for fuel poor households. One such example is Lockleaze Loves Solar. This is an innovation trial which aims to install 1MW of solar PV across 300 roofs in the Lockleaze area at no costs to the householder. Target homes are social housing, lower income households and planned new housing in the area. The trial seeks to develop a viable business model for community groups to deliver rooftop solar projects in communities with fuel poor households.¹⁷

Bristol City Council is working with Knowle West Media Centre and University of Bristol on a Europe-wide project called Twinergy, to understand whether citizens could start playing a more active role in the energy market if they were aware of the technical possibilities offered by digital twin technology. Digital Twin technology creates a digital copy of a building and its energy use to allow the testing of new ideas or model scenarios in real time without interrupting the use of the building. In Bristol, the project is taking a co-design approach and is involving groups often underrepresented in the debate of emerging and future energy markets, including homes in fuel poverty.

¹⁷ <https://www.lockleazehub.org.uk/lockleaze-loves-solar>

6 Specialist cold homes advice services and referral pathway

6.1 Oversight Board: Health and Wellbeing

6.2 Context

Bristol has a strong economy and numerous cultural and natural assets, but the city faces a major challenge in the scale of inequalities that exist within it. 69,000 people in Bristol live in some of the 10% most deprived local communities in England. The city was ranked 55th in the country for the size of the inequality in employment between White British people and ethnic minorities.¹⁸ One form in which these stark inequalities manifest is as fuel poverty, which can have lifelong adverse effects on health, learning and income.¹⁹

The National Institute for Health and Care Excellence (NICE) guidance (NG6) on excess winter death and the health risks associated with cold homes sets out a clear set of actions aimed at health bodies and professionals, including Health and Wellbeing Boards. The guidelines recognise that health and other front line workers can play a valuable role in identifying clients whose poor physical and mental health is related to living in cold homes and facing unaffordable fuel bills. The Bristol JSNA 2018 chapter on Fuel poverty adopted the full set of measures as recommendations to take forward. At the heart of this is having in place a Single Point of Contact (SPOC) specialist health and cold homes specialist advice service, with effective referral pathways from the health, voluntary and community sectors.

See Appendix E for a summary of Bristol’s progress towards fulfilling the NICE guidance recommendations. Key outstanding challenges are to increase skills and capacity in the health and social care sectors to identify and refer onwards people with poor health who are most at risk from cold homes, as well as to extend and scale up the capacity and reach of specialist advice services.

Bristol, North Somerset and South Gloucestershire local authority areas come together under the ‘healthier together’ Integrated care system.²⁰ Integrated care systems (ICSs) are partnerships that bring together providers and commissioners of NHS services with local authorities and other local partners to collectively plan health and care services to meet the needs of the population in their geographical area. The central aim of ICSs is to integrate care across different organisations and settings, joining up hospital and community-based services, physical and mental health, and health and social care.²¹ The integrated care system is made up of three integrated care partnerships (ICPs) in Bristol, two in North Somerset and one in South Gloucestershire. This plan provides a key opportunity for giving greater importance to and recognition of the responsibility of partners for reducing cold homes in line with the NICE guidance recommendations, and for these developing organisations to embed warm homes within their priorities.

¹⁸ A Runnymede study, referenced in Bristol One City Plan

¹⁹ Chance of a lifetime. The impact of bad housing on children’s lives. Shelter 2006 pg 24

²⁰ [What is Healthier Together? - Healthier Together \(bnssghealthiertogether.org.uk\)](https://www.bnssghealthiertogether.org.uk)

²¹ [Integrated care systems explained | The King's Fund \(kingsfund.org.uk\)](https://www.kingsfund.org.uk)

Warmer Homes, Advice and Money (WHAM) is a multi-agency partnership which provides a comprehensive service to people living in fuel poverty and financial hardship in Bristol.²² It is currently funded by The Energy Redress Fund and The Warm Home Fund and previously by Bristol City Council and Bristol Energy's Fuel Good Fund. The project acts as a single point of contact for specialist energy advice and has partners who can support households with debt, income maximisation and home improvements.

CSE currently runs the Tenant Energy Advice (TEA) Service for Bristol City Council housing tenants. CSE's home energy advice line provides a free, local, and impartial energy advice service – it is the first point of contact for a range of other CSE services delivered by trained advisors. New partnerships enable delivery of tailored energy advice to particular interest groups. A recent new initiative is a specialist energy advice service for refugees and asylum seekers in Bristol.

6.3 Planned Actions

Recommended Actions	Timeline	Status	Target / measure of progress	Who has responsibility / who can influence
Extend funding of single point of contact hospital worker role to enable discharge of patients to warm home.	Funded post to 2023	Extend	Additional 1 FTE worker from 2020/2021 Reduction in 30 day re-admission rate for patients with relevant conditions [target number tbc].	BNSSG
Explore opportunities to secure ring-fenced funding to prioritise investment in improving energy efficiency of homes of people with existing health conditions.	2021	New	£ investment in improvements [target number tbc] homes improved of people with target conditions Reduction in 30 day re-admission [target number tbc]. Self-reported better mental health. This requires analysis to confirm target numbers.	BNSSG BCC
Trial & scale-up smart safeguarding service for older people with cold-related health conditions	2022	New	Reduced number emergency admissions by safeguarding participants. [target number tbc] This requires analysis to confirm target numbers.	Health trust / Bristol University (Sphere)/CSE / tech partner /

²² Centre for Sustainable Energy, Talking Money, Citizens Advice Bristol, Citizens Advice North Somerset, We Care Home Improvements, Bristol Energy Network, Bristol and North Somerset Council

Public health awareness campaign tied into e.g., flu vaccination / cold weather plan / other Winter resilience planning	Input for winter 2022	Scale up	Key messages included in winter health campaigns. Increased awareness of harm to health from cold homes amongst general public & re awareness of available services. 25% increase in people referred to Single Point Of Contact service during/following campaign	BNSSG STP / CCGs / Trusts / WHAM/
Analysis of value of single point of contact (WHAM) and hospital discharge case worker to justify health funding & continued funding from government / ECO / other sources for expanded scheme.	Start 19/2020 Interim findings spring 2021 Final spring 2022	New	Funded evaluation of single point of contact /discharge service Qualitative evidence of benefits. Reduction in emergency admissions & GP events. £ value of savings to NHS	Bristol Health Partners CLAHRC West – funded as Applied Research Collaboration West (ARC West), CSE, WHAM, CCGs & Trusts
Development activity to secure funding for expanded service (BCC; government, ECO, redress, other existing funding sources)	19/2020	Scale up	£2.3 million secured for fuel poverty advice services in Bristol 2020 – 2030 (£100/client, 23,000 clients)	CSE & BEN partners BCC
Continue and expand delivery of year-round integrated advice services - by phone, home visit, outreach (income maximisation, energy, repairs, measures, behaviours).	2021-2030	Scale up	23,000 fuel poor households reached by services: 2,500/year Improved self-reported ability to keep warm / manage fuel bills / reduced worry.	CSE / ACFA / BCC / advice agencies
Joint PSR, via data sharing under Digital Economy Act 2017 between BCC, WPD, water companies to enable planning & targeting of measures & support	Already started	Scale up	Joint PSR between BCC, Western Power Distribution & Wessex Water 15% increase PSR registered (against Western Power Distribution PSR). All PSR customers in Bristol contacted & checked every 2 years Target to be defined for PSR customers in Bristol referred for & received	Western Power Distribution, Bristol & Wessex Water, BCC

			support and/or funded measures.	
Bristol social prescribing pathway mechanism to generate referrals to specialist cold homes advice service.	Existing service ends March 2020	New	Target to be defined for referrals to Single Point of Contact service (WHAM/ TEA) from health providers / from VCS.	CCGs / Trusts/Sirona / WHAM/The Care Forum /WRAMAS/VOSCUR
Develop Bristol-specific front line training on cold home awareness & how to make referrals to WHAM/TEA/CSE advice service – for health workers & for voluntary & community sector (VCS).	2021	New	Funding secured for development of bespoke training module, launch, promotion & support. Completion of training on rolling basis by [target number tbc] health workers/year & [target number tbc] community voluntary sector workers /year 2020 – 2030.	WRAMAS VOSCUR ACFA BCC CSE / BEN/ WHAM partners Thrive
Link cold homes awareness training to Thrive mental health awareness training	Set up in 2020		[target number tbc] Health front line workers / community voluntary sector workers completed both mental health awareness & cold homes awareness training.	Thrive CSE / WHAM partners BCC BNSSG STP
Build on city best practice to facilitate robust referral systems between advice services. Increase collaboration to ‘Make every contact count’		Scale up	City-wide extension of referrals through adoption of common ‘protocol’. Fuel poor households access holistic service provision and can access all relevant help	BCC Public Health, BCC Adult Social Care
Extending funding to enable more energy champions and anchor organisations	Funded to 2020	Extend	Additional funding will be required to enable continuation & support from Bristol Energy Network to continue to train community facing staff and support them running ‘Energy Help Desk’ advice sessions.	BCC Energy Service, CSE and Bristol Energy Network

6.4 Other ongoing activities

Thrive Bristol, a ten-year programme launched in 2018, aims to improve Bristolians' mental health. The programme covers all ages and considers mental health in its broadest sense. It focuses on prevention and early intervention and works by using public, private and third sector co-operation, leadership, and resources across the city. Thrive offers collaborative training for workforces including housing officers, advice services and landlords on mental health awareness. The programme has several work streams that link with fuel poverty, and it supports social prescribing to Age Friendly Bristol. Making Every Contact Count training is available in Bristol, with training being available [online](#) and in person.

Bristol Water and Western Power Distribution (WPD) keep separate registers of their vulnerable customers in case of power or water outage, but they now share Priority Service Register (PSR) data to improve services for vulnerable people and are starting to share information so that households are offered support when they need it.

First Contact Bristol was a referral service for use by frontline workers supporting older people to access different support services, including specialist energy advice. Funding for the service ended 31 March 2020. North Bristol NHS Trust have been promoting the scheme with referral postcards in A&E and on hospital wards. The end of funding and the service, risks Bristol falling backwards in responding to the NICE recommendation for effective referrals.

7 Align with broader work to counter poverty

7.1 Oversight Board: Health and Wellbeing

7.2 Context

Fuel poverty does not exist in isolation and can both reflect and contribute to a broader range of inequalities experienced by some of the most disadvantaged areas and people in Bristol. A holistic approach needs to be taken to work together and recognise that fuel poverty links with various other challenges, such as welfare benefits, debt, employment, skills and learning and homelessness.

Having an established network of advice and support agencies that provide independent, impartial advice and support across a range of areas, such as welfare advice and employment support, is vital for fuel poor households do. Welfare benefits and debt advice services play a key role and can make a major contribution towards reducing fuel poverty by supporting residents to maximise income, providing advice on benefit entitlements, and reducing debt.

The Welfare Rights and Money Advice Service (WRAMAS) is a council service which takes referrals for assisted and specialist case work for individual clients to maximise their income from accessing welfare benefits, particularly disabled people, and full-time carers. Talking Money and Citizens Advice provide a range of money advice services to help people struggling with debt, bills, and money management. To scale up the support they provide and increase capacity to deal with peaks in immediate need, for example the cost of living crisis, will require further long term funding. These and other organisations maximise income for fuel poor households through a range of activities such as checking benefits entitlements, helping people appeal benefits decisions, helping with tariff switches, applying for discounts on utility bills, accessing essential goods/resources from charitable sources and clearing debt.

The specialist cold homes advice services fit within the network of advice and support agencies which is key to effectively reduce fuel poverty. Advisor knowledge and clear referral processes between services are crucial across the sector to make sure individuals' multiple advice needs are addressed. Robust data sharing and referral processes are also needed to [Make Every Contact Count](#).

There is also a well-established overlap between fuel poverty and food insecurity which may leave individuals and families facing dilemmas between paying bills or cutting back on food (the so-called 'heat or eat' trade-off). These householders may also have less resource, capacity and access to facilities and infrastructure which allow them to cook nutritious food from scratch.

Work will be undertaken to align this action plan with other workstreams working to counter poverty in the city, maximising support for people to access unclaimed welfare benefits, and provide financial support and grants schemes, as well as other measures to support income and wages. Work across council departments and through the one city boards will ensure fuel poverty is a key consideration in decision making across the city. Likewise, opportunities will be proactively identified to include aligned priorities into the fuel poverty work. Overall, fuel poverty and this action plan will be used to contribute to the broader work to address the root cause of poverty in the city.

7.3 Planned Actions

Actions	Timeline	Status	Target / measure of progress	Who has responsibility / who can influence
Advocate within Bristol City Council for adequate consideration of fuel poverty in all policy and decision making				No Cold Homes Steering Group and Bristol City Council
Align with specific other workstreams to counter poverty in the city.	2020-2030	Ongoing	Evidence of alignment in strategies and policies aiming to counter poverty.	Bristol City Council
Support the network of advice and support agencies	2020-2030			No Cold Homes Steering Group and Bristol City Council
Continue to develop strong links between cold homes advice and advice and support agencies e.g., work to maximise income for residents	2020-2030	Ongoing		No Cold Homes Steering Group and Bristol City Council
Advocate for action on fuel poverty and support for those in cold homes on a national level, including through networks such as Core Cities and the LGA	2020-2030	Ongoing		No Cold Homes Steering Group and Bristol City Council
Coordinate, publish and publicise responses to relevant Government consultations	2020-2030	Ongoing		No Cold Homes Steering Group and Bristol City Council

7.4 Other ongoing activities

The One City Bristol Good Food 2030 Action Plan is currently in development and follows Bristol's successful city-wide '[Going for Gold](#)' bid (in May 2021) to become only the second place in the UK to achieve the Sustainable Food Places Gold award. Fuel poverty and food equality will link closely with its strategy development.

The draft One City Food Equality Strategy 2022-32 has been developed in collaboration between Bristol City Council and Feeding Bristol and aims to significantly improve food equality in Bristol over the next decade, aligning with other key strategies for improving food systems and addressing poverty in the city. It will sit within the Bristol Good Food 2030 Action Plan and was developed with more than 70 organisations. It sets out five priorities: fair equitable access; choice; skills and resources; a sustainable local food system; and food at the heart of decision-making; and a set of strategic aims that are needed to achieve food equality in Bristol. A key priority theme is Skills and Resources and will work to develop an action plan which will include that: People and communities are equipped with knowledge, skills, and facilities, so that residents can foster a healthy food culture, have confidence in their ability to access and use food to meet their needs, as well as the facilities and fuel to cook with. A Food Equality Action Plan will follow that will set out clear and accountable actions to deliver the Strategy for food equality in the city.

[One Front Door](#) provides support for Bristol residents to find employment, skills and learning opportunities. The inclusive service is available to all residents of the City of Bristol, delivering a range of resources to assist individuals (particularly those that are isolated), employers and providers.

8 Indicators and reporting

Actions within the plan and associated projects will be measured against a series of outcomes and indicators. Primary indicators will measure the overall delivery and impact of interventions being delivered by collaborating partners across Bristol. Secondary indicators will provide feedback on how effectively funded interventions are delivered.

Reporting on these indicators will be included as part of an annual progress review of this Fuel Poverty Action Plan.

8.1 Primary indicators

Outcomes	Indicators	Baseline
Develop fuel poverty action plan in 2020	Action plan sign off by No Cold Homes steering group in 2020 Adoption / sign-off of action plan 2020	No Cold Homes workshop to identify activities Nov 2019 Draft action plan produced.
Funding for fuel poverty activity	<ul style="list-style-type: none"> • Single point of contact service commissioned beyond 2023 and service expanded to meet needs • Funding secured from government, ECO3 and/or other existing grant funding schemes • Additional capital funding secured for installation of measures benefitting fuel poor homes (£20 million over lifetime of action plan) • Additional £2.3 million revenue funding secured for services supporting fuel poor households over lifetime of action plan 	
Reduce the number of fuel poor homes in Bristol	Fuel poverty in Bristol (count/value/recent trend) Measured using: Annual fuel poverty statistics produced by BEIS. Mental health and wellbeing JSNA B17 - Fuel Poverty	Year: 2017 Count: 23,015 Value: 11.7 Trend:
Improve the energy efficiency of homes of people in or at risk of fuel poverty in Bristol in line with national targets.	Number of measures installed against modelled target to meet EPC band C and above by 2030 (see Appendix D) to value £217 million, improving approx. 22,300 FP homes.	

	<p>Number of fuel poor homes in</p> <ul style="list-style-type: none"> • EPC bands F&G (2022) • EPC bands E to D (2025) • EPC band C and above (2030) <p>Note: A home moved from EPC band G to EPC band C in 2020, for example, would contribute towards the 2030 target and interim milestones.</p>	
Downward trend in the rate of excess winter death and illnesses closely associated with cold homes and unaffordable fuel bills	<p>Ratio of extra deaths from all causes that occur in the winter months compared with the expected number of deaths – as single year / as 3-year aggregate</p> <p>Public Health Outcomes</p> <p>Framework E14 – Excess Winter Deaths Index</p>	<p>Year: 2017-2018</p> <p>Number: 296</p> <p>Value: 28.1%</p>

8.2 Secondary indicators

Outcomes	Indicator(s)
<p>Improved quality of life</p> <p>Quality of Life Survey Bristol</p>	<ul style="list-style-type: none"> • % satisfied with the cost of heating their home (by tenure) • % satisfied with the state of repair of their home (by tenure) • % who find it difficult to manage financially
<p>Improved health and wellbeing</p>	<ul style="list-style-type: none"> • % below average mental wellbeing (Bristol Quality of Life survey) • Self-reported question (ONS Wellbeing Indicator or Warwick-Edinburgh Mental Well-Being Scale) • Symptom severity - people with existing cold-related conditions • Use of planned and emergency health services by people with existing cold-related conditions • Ability to pay bills (level of worry about paying heating bills; extent to which avoid switching on heating due to concerns about costs) • Reduced food inequality
<p>Data is shared to identify people who are vulnerable to the health problems associated with a cold home</p>	<ul style="list-style-type: none"> • Energy and water utilities, suppliers, support organisations and health bodies share data to identify vulnerable people to plan city-wide services

Improved referrals by the health and social care sector and by the voluntary and community sector (VCS)	<ul style="list-style-type: none"> • Number of staff or volunteers completing training in awareness of cold homes (health/social care and VCS) • Number of trained staff reporting confidence to identify and make successful referrals to SPOC service (health/social care and VCS) • Numbers of successful referrals, broken down by referral route (health/social care and VCS)
Hospital admission rates and GP usage	Track the rates of service use for those who receive support, compared against control group and/or historical data.
Reduction in utility bills	<ul style="list-style-type: none"> • Reduction in energy bills, broken down by intervention (£/year) (TBC - estimated or reported). • Reduction in water bills, broken down by intervention (£/year). (TBC - estimated or reported).
Improved warmth in homes of fuel poor and vulnerable households	<ul style="list-style-type: none"> • Beneficiaries report improved warmth and comfort at home in winter
Income maximisation	<ul style="list-style-type: none"> • Number of successful referrals to income maximisation service • Amount of additional income secured per household • Reduction in fuel debt (£/hh)

8.3 Reporting progress

The No Cold Homes Steering Group will need to appoint responsibility for monitoring data collection and reporting by the different delivery bodies on a regular basis. Quarterly meetings will provide an opportunity to review progress.

The No Cold Homes Steering Group will be responsible for preparing an annual progress report to submit to the Health and Wellbeing Board. This will include collation of key indicators of progress, though it should be noted that national fuel poverty statistics are reported nationally a year in arrears. The Health and Wellbeing board will be responsible for providing overall oversight and scrutiny of progress against the target.

8.4 Supporting research

Further research will be required to support delivery of the action plan, including to understand the scale and feasibility of recommended actions, better understand the fit with the One City Climate Strategy and to evaluate the impact of actions.

Appendix A List of useful documents and resources

BEIS (2016) Affordable warmth and health impact evaluation toolkit.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/512555/Affordable_Warmth_Health_Impact_Evaluation_Toolkit.pdf

BEIS (2021) Heat and Buildings Strategy

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1044598/6.7408_BEIS_Clean_Heat_Heat_Buildings_Strategy_Stage_2_v5_WEB.pdf

BEIS (2021) Sustainable Warmth: Protecting Vulnerable Households in England

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/960200/CCS207_CCS0221018682-001_CP_391_Sustainable_Warmth_Print.pdf

Bristol City Council (2018) Bristol JSNA 2018 Fuel Poverty Chapter.

<https://www.bristol.gov.uk/documents/20182/34772/Fuel+Poverty+JSNA+Chapter+%282018%29.pdf/46359d3e-74cd-524e-819f-d27c86a692ae>

Bristol Open Data Quality of Life indicators

https://opendata.bristol.gov.uk/explore/dataset/quality-of-life-2018-19-citywide-trend/table/?disjunctive.ward_name

Citizens Advice and Cornwall Council (2018) Cold Homes toolkit. Local authority toolkit. Health professionals' toolkit.

<https://www.citizensadvice.org.uk/about-us/how-we-provide-advice/advice-partnerships/cold-homes-toolkit/>

Community Climate Action Plans from communities within Bristol including ACH, Ambition Lawrence Weston, Bristol Disability Equality Forum, Eastside Community Trust. Heart of BS13 and Lockleaze Neighbourhood Trust.

<https://bristolgreencapital.org/community-climate-action-plans/>

Nice Guidance (2015) NG6 'Excess winter deaths and illness and the health risks associated with cold homes'

<https://www.nice.org.uk/guidance/ng6>

Public Health England (2019) Helping People Living in Cold Homes. E-learning module.

<https://www.e-lfh.org.uk/programmes/cold-homes/>

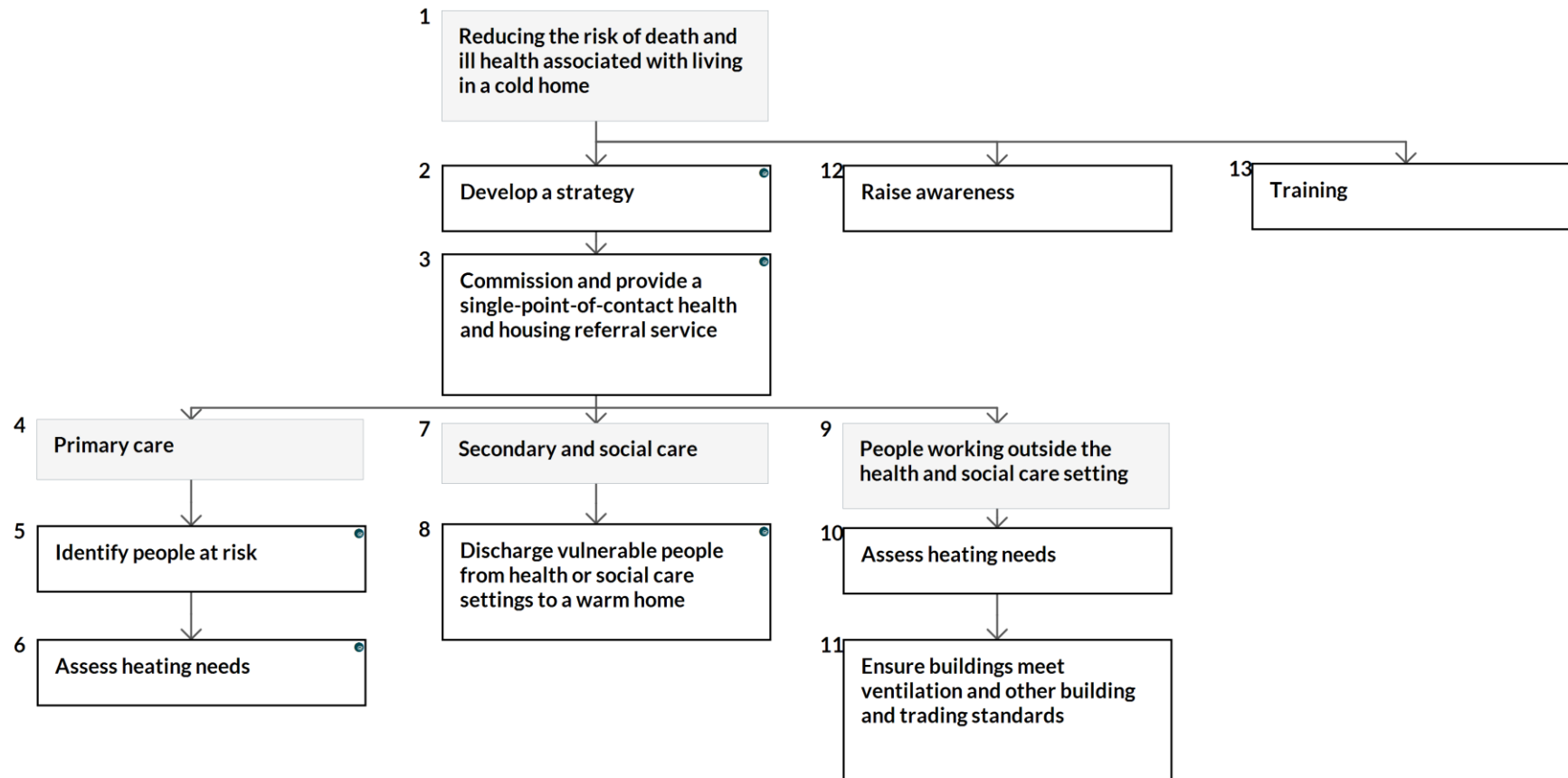
Public Health England (PHE) (2019) Data sources to support local services tackling health risks of cold homes.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/770963/data_sources_to_support_local_services_tackling_health_risks_of_cold_homes.pdf

Public Health Outcomes Framework

<https://fingertips.phe.org.uk/profile/public-health-outcomes-framework>

Appendix B NICE Recommendations on Excess Winter Deaths and the Health Risks Associated With Cold Homes



Appendix C Glossary

Term	Definition
Bristol City Funds	<i>City Funds is a partnership of organisations committed to securing and directing £10 million investment funding towards solutions that target the causes and effects of inequality in Bristol.</i>
Bristol City Leap	<i>City Leap is a series of energy and infrastructure investment opportunities in Bristol to build a citywide energy system that will help decarbonise the city and improve the quality of life for people in Bristol.</i>
Bristol Community Strategy for Energy	<i>The Bristol Community Strategy for Energy was developed through Bristol Energy Network by local community groups. The strategy sets out aims and steps for community level action on energy and seeks to enable local community groups to work in collaboration with local authorities, the private sector and third sector organisations on sustainable energy issues.</i>
Bristol Energy Network (BEN)	<i>Bristol Energy Network (BEN) is a network of community organisations established to develop grassroots energy projects across the city. The network provides a unique role in supporting community groups across the city and has helped build capacity for energy understanding in organisations.</i>
Centre for Sustainable Energy (CSE)	<i>Bristol based charity that deliver a range of energy advice services to residents of Bristol and England.</i>
Climate Emergency	<i>A climate emergency declaration is a statement that mandates a government or organisation to take urgent action to prevent climate change, often accompanied by emission reduction targets.</i>
Clinical Commissioning Group (CCG)	<i>Clinically led statutory NHS bodies responsible for the planning and commissioning of health care services for their local area.</i>
Committee on Fuel Poverty	<i>An advisory non-departmental public body that advises on the effectiveness of policies aimed at reducing fuel poverty in England.</i>
Energy Company Obligation (ECO)	<i>Government programme that requires energy suppliers to help lower-income households install heating and energy efficiency measures in their home to help reduce carbon emissions and tackle fuel poverty.</i>
Energy Performance Certificate (EPC) Energy Efficiency Rating	<i>When a home is built, sold or rented in the UK, it needs an Energy Performance Certificate (EPC). This includes a chart which displays the energy efficiency rating of the home. It shows how much a building will cost to heat and light, what its carbon dioxide emissions are likely to be and what improvements you can make to improve its energy efficiency. An EPC rates a property in bands from A (most efficient) to G (least efficient).</i>
Bristol is Gold	<i>Bristol is leading the way on more resilient approaches to food, in 2021 by becoming only the second city in the UK to achieve Gold Sustainable Food City status. This is a national programme that celebrates and supports communities that are making positive changes to their food system.</i>
Health and Wellbeing Board	<i>A forum in which key leaders from the local health and care system work together to improve the health and wellbeing of their local population. Health and wellbeing boards have a statutory duty, with clinical commissioning groups (CCGs) to produce a Joint Strategic Needs Assessment.</i>

Healthier Together	<i>This is the name of the Bristol, North Somerset and South Gloucestershire (BNSSG) Sustainability and Transformation Partnership (STP). The Partnership has produced a Sustainability Transformation Partnership Long Term Plan 2020 – 2025 for health care in Bristol and surrounding areas. The plan covers all aspects of NHS spending in the area, covering three headline issues: improving quality and developing new models of care; improving health and wellbeing; and improving efficiency of services.</i>
Houses in Multiple Occupation (HMOs)	<i>A house in multiple occupation is a property rented out by at least 3 people who are not from 1 'household' (for example a family) but share facilities like the bathroom and kitchen.</i>
Hybrid heat pump	<i>A combined heat pump and a gas condensing boiler create a domestic heating and hot water system. Hybrid heat pumps use a combination of gas and electricity. .</i>
Joint Strategic Needs Assessment (JSNA)	<i>The Joint Strategic Needs Assessment is used to assess the current and future healthcare and wellbeing needs of residents in a local authority. One chapter in the JSNA assesses needs relating to Fuel Poverty in Bristol.</i>
Local housing allowance	<i>The rates of housing benefit for tenants renting from private landlords who are eligible for support.</i>
Low Income High Cost (LIHC)	<i>An England-wide adopted measure of fuel poverty. It states that a household is in fuel poverty if they have above average modelled fuel costs and after spending that amount, they would have a residual income below the official poverty line.</i>
Low Income Low Energy Efficiency (LILEE)	<i>Proposed new fuel poverty definition for England. Under this definition, households will be deemed fuel poor if their disposable income (after housing and energy costs) is below the poverty line and they live in a property with an energy efficiency rating of Band D or lower. The LILEE measure would increase the number of households considered fuel poor by approximately 1 million, bringing the total number of fuel poor households in England up to over 3.6 million.</i>
Minimum Energy Efficiency Standards (MEES)	<i>Legislation that requires private rented (domestic and commercial) properties to have an EPC rating of E or higher. There is a cap of £3,500 on the amount of their own money that landlords are required to spend to improve the efficiency of a property. Enforcement of MEES is a local authority responsibility.</i>
National Institute for Health and Care Excellence (NICE) Guidance NG6	<i>This refers to guidance on 'Preventing excess winter deaths and illness associated with cold homes'. Clinical guidelines are recommendations on how healthcare and other professionals should care for people with specific conditions. NICE provides national guidance and advice to improve health and social care.</i>
Net Zero	<i>'Net zero' means that any greenhouse gas emissions are balanced by absorbing an equivalent amount from the atmosphere. Net Zero targets refer to policy targets to achieve net-zero greenhouse gases by a specific date. The UK has set a national target of Net Zero by 2050. Bristol has set itself a target of net zero by 2030.</i>
One City Climate Strategy	<i>Sets out scale of ambition and actions needed to achieve Net Zero by 2030.</i>

One City Plan	<i>A whole city plan and approach to reaching a shared vision of Bristol by focusing activity across sectors in the city.</i>
Single Point of Contact (SPOC)	<i>A person or organisation (with single contact phone number) that coordinates multiple services relating to health and housing for people at risk of living in a cold home. The creation and maintenance of a SPOC health and housing referral service is a key recommendation in NG6 to prevent harm to health from cold homes.</i>
Thermal imaging survey	<i>A survey that uses thermal imaging cameras to visually represent surface temperatures of an object.</i>
Thrive Bristol	<i>10-year programme to improve the mental health and wellbeing of everyone in Bristol, with a focus on those with the greatest needs.</i>
Universal Credit	<i>A means tested benefit replacing a number of other working age benefits in the UK. Migration to the new, online system started in 2019.</i>
Warmer Homes Advice and Money (WHAM)	<i>A multi-agency project led by CSE that provides a single point of contact (SPOC) service for cold homes support in Bristol.</i>
Welfare Rights And Money Advice Service (WRAMAS)	<i>Part of Bristol City Council, WRAMAS provides benefits and money advice, consultancy, information and training, to a range of clients, services and organisations throughout Bristol.</i>

Appendix D Improving the dwelling of Fuel Poor households in Bristol to EPC band C

Modelling conducted February 2020 by CSE in the National Housing Model (NHM) using a stock based on the English Housing Survey 2014. The results included here are estimates only and should be considered indicative rather than definitive.

Table 1 shows estimates from modelling at minimum cost –with over 7000 new gas or oil combi boilers installed. **Table 2** shows estimated costs for installing air source heat pumps instead of these new boilers as part of retrofit improvements. This was done outside the NHM model. This does not include assessment of whether air source heat pumps are suitable for properties. It is only to give an indicative low-carbon cost estimate. **Table 3** shows the resulting improvements in EPC band for fuel poor dwellings.

- Modelling does not include heat networks or ground source heat pumps.
- Modelling does not include detailed assessment of suitability for solar (e.g., roof size).
- Modelling does not exclude measures not suitable for properties in conservation areas.
- Modelling does not include replacement of all existing Gas Central heating in fuel poor homes.

Table 1: At minimum cost - includes install of new more efficient gas or oil combi boilers

Technology	All urban south west fuel poor		average.cost	Bristol scaled	
	number.of.installs	total.cost		bristol.number.of.installs	bristol.total.cost
Air Source Heat Pump (ASHP)	13,907	86,843,000	6,245	2,500	15,780,500
External wall insulation	6,299	45,645,016	7,246	1,100	8,294,300
Floor insulation	31,473	24,896,419	791	5,700	4,524,000
Hot Water Cylinder Insulation	16,109	724,905	45	2,900	131,700
Internal wall insulation	30,066	173,454,132	5,769	5,500	31,518,800
Loft insulation	48,497	23,750,312	490	8,800	4,315,700
Low energy lighting	50,294	8,344,675	166	9,100	1,516,300
MAINS_GAS Combi Boiler	35,755	107,912,000	3,018	6,500	19,609,000
OIL Combi Boiler	4,898	20,111,700	4,106	900	3,654,600
Secondary glazing	447	577,423	1,292	100	104,900
Solar DHW (solar thermal)	32,194	144,873,000	4,500	5,900	26,325,300
Solar Photovoltaic	52,798	385,919,900	7,309	9,600	70,126,500
Storage heater	6,181	22,225,000	3,596	1,100	4,038,600
Triple glazing	981	2,679,307	2,731	200	486,900
Wet Central Heating	11,187	21,740,750	1,943	2,000	3,950,600
All measures	341,086	1,069,697,539	3,136	62,000	194,377,600

(rounded to nearest million)

£194,000,000**Average cost/home improved****£8716****Table 2: Install Air Source Heat Pumps instead of new gas and oil combi boilers**

Technology	All urban south west fuel poor		average.cost	Bristol scaled	
	number.of.installs	total.cost		bristol.number.of.installs	bristol.total.cost
Air Source Heat Pump (ASHP)	13,907	86,843,000	6,245	2,500	15,780,500
External wall insulation	6,299	45,645,016	7,246	1,100	8,294,300
Floor insulation	31,473	24,896,419	791	5,700	4,524,000
Hot Water Cylinder Insulation	16,109	724,905	45	2,900	131,700
Internal wall insulation	30,066	173,454,132	5,769	5,500	31,518,800
Loft insulation	48,497	23,750,312	490	8,800	4,315,700
Low energy lighting	50,294	8,344,675	166	9,100	1,516,300
ASHP instead of MAINS_GAS Combi Boiler	35,755	107,912,000	6,245	6,500	40,589,595
ASHP instead of OIL Combi Boiler	4,898	20,111,700	6,245	900	5,620,098
Secondary glazing	447	577,423	1,292	100	104,900
Solar DHW (solar thermal)	32,194	144,873,000	4,500	5,900	26,325,300
Solar Photovoltaic	52,798	385,919,900	7,309	9,600	70,126,500
Storage heater	6,181	22,225,000	3,596	1,100	4,038,600
Triple glazing	981	2,679,307	2,731	200	486,900
Wet Central Heating	11,187	21,740,750	1,943	2,000	3,950,600
All measures	341,086	1,069,697,539	3,136	62,000	217,323,793

(rounded to nearest million)

£217,000,000**Average cost/home improved****£9745**

Table 3: Modelled resulting improvements in EPC (based on Table 1 modelling)

Bristol FP EPC profiles		
EPC band	before measures	after measures
C	720	17,860
D	12,550	3,250
E	5,330	1,340
F	3,300	570
G	1,120	0
All dwellings	23,020	23,020
Fuel Poor Dwellings improved		22,300

Appendix E: Summary of progress in Bristol against NICE Guidelines

*Achieved? symbols: ✓ = in delivery; ⬆ = partially in delivery; X = not current being delivered.
Timeframe of secured funding for activities in delivery is indicated where known.

Number	Recommendation	Achieved?	Actions
1	Develop a fuel poverty strategy	✓	This Action Plan has been produced in conjunction with the No Cold Homes Steering Group.
2	Ensure there is a single-point-of-contact (SPOC) health and housing referral service for people living in cold homes	✓	The Warm Homes and Money (WHAM) (funding to 2021) and the TEA (Tenant's Energy Advice) (funding to 2024) services enable many people to access support. WHAM will require further funding to continue beyond 2021 and to expand scope.
3	Provide tailored solutions via the single-point-of-contact health and housing referral service for people living in cold homes	✓	Six WHAM caseworkers work across multiple organisations to deliver the appropriate combination of money advice, energy, home repair and other advice and support needs, based on referrals from health, community and voluntary sector agencies.
4	Identify people at risk of ill health from living in a cold home	✓	Mapping analysis, as presented in the JSNA, to identify the scale and geography of the problem. First Contact Checklist being used for over 50s to identify people in need of support.
5	Make every contact count by assessing the heating needs of people who use primary health and home care services	⬆	First Contact Bristol Checklist aims to ensure older people in access services they need, including energy advice and home improvements. This is currently only aimed at people over 50.
6	Non-health and social care workers who visit people at home should assess their heating needs	⬆	First Contact Bristol is helping ensure older people are asked about relevant services they may need. This needs to be reviewed to generate more referrals and to be widened to other groups at risk of cold homes.
7	Discharge vulnerable people from health or social care settings to a warm home	⬆	A WHAM caseworker rotates between discharge units at major hospitals to provide support to people being discharged to cold homes.
8	Train health and social care practitioners to help people whose homes may be too cold	✓	From 2020 WHAM to deliver training to frontline health workers in Bristol. For some workers it will be obligatory training.

9	Train housing professionals and faith and voluntary sector workers to help people whose homes may be too cold for their health and wellbeing	Y	Thrive programme to deliver joint training on mental health awareness and fuel poverty training.
10	Train heating engineers, meter installers and those providing building insulation to help vulnerable people at home	X	This is not currently planned, but Bristol City Council Energy services and Futureproof could provide access to these groups. Priority activity for local action should be to: Train up heating engineers to explain how the system works in a way that occupants find easy to understand.
11	Raise awareness among practitioners and the public about how to keep warm at home	X	This is an action that should be delivered as part of cold weather planning. Advice agencies, including CSE, host and attend events throughout the year to raise awareness. This requires an online training module rolled out across the health service
12	Ensure buildings meet ventilation and other building and trading standards	X	Revised national Building Regulations are currently under review. These will increase the emphasis on ventilation.