

## **Appendix A1: Summary of Bristol Heat Pump Ready Innovation Project**

### **Key information:**

Project Funders: Department for Business, Energy and Industrial Strategy

Responsible Service: Economy of Place, Sustainable City and Climate Change Service

Start/Finish Date: January 2023 - January 2025

Budget: Up to £3.3m total value

Sub-Contractors: Bristol City Council (Lead), Buro Happold, Centre for Sustainable Energy, The Green Register, Veritherm, Build Test Solutions

### **Objective of the BEIS Heat Pump Ready Programme:**

- Develop and trial solutions and methodologies for the optimised deployment of domestic heat pumps, at high-density, in the UK.
- Install heat pumps in 25% of homes on one or more electricity feeders – for example this is roughly 25 out of 100 homes in a couple of neighbouring streets.
- Target owner-occupiers in on-gas grid homes.
- £5k grant funding available per heat pump install and homeowner needs to fund the rest of the total cost.

### **Summary of Bristol's project:**

“Bristol Heat Pump Ready” is a collaborative initiative with Bristol City Council, Buro Happold, Centre for Sustainable Energy, The Green Register and technology companies Build Test Solutions and Veritherm to develop a UK wide approach to stimulated mass uptake of heat pumps and deliver on our national carbon targets, but with a local focus.

The City of Bristol is a leader in UK climate action. Building on this momentum the project will focus on working with local communities and supply chain to develop a cohesive approach that will ensure consumers are fully supported in the transition to low carbon heat.

The outputs will ensure affordability, quality and confidence. It will develop a service model which is fully replicable UK-wide. New approaches to establishing the right product for the right home will be developed. Innovative planning using the latest in digital twin technology will help enable our electricity networks to be readied for the transition to a zero carbon future. New methods of training will be developed to encourage and support the development of a skilled workforce in the supply chain

which will create jobs. Community engagement will be at the heart of our approach bringing the industry to the consumer and ensuring consumers have everything they need to make the decisions they need to, in decarbonising their homes.

**Key project objectives:**

1. Understanding the community and developing a strong interest in heat pumps
2. Ensuring households have a really great service and high quality of HP install
3. Generating a cohort of skilled local installers
4. Minimising the impact of heat pumps on the electricity network

**Westbury-on-Trym** has been chosen as the target location because:

- This is outside likely future heat network zones
- A good proportion of households are likely to be able to make a significant contribution to the total cost of installation,
- The population are engaged in sustainability issues with an active sustainability group making engagement easier and uptake more likely.
- Housing stock is larger (semi-detached and detached) meaning there is likely space to install heat pumps in gardens and hot water tanks inside the home.
- The homes in this area have higher than average energy use so will enable a strong contribution per household to decarbonisation targets

**Project plan:**

- Use Buro Happold's digital twin to map out project area and target specific clusters of homes for engagement.
- Train up supply chain to survey homes for a heat pump and build a hub of vetted heat pump installers.
- Engage with the community through heat pump drop in sessions and open homes events with heat pumps.
- Interested residents complete an EOI and receive a follow up screening call.
- ~280 residents continue to get a heavily discounted survey of their property to establish whether insulation is needed and this enables the design of an efficient heat pump system.
- ~200 residents continue to heat pump installation. Installations take place in Jan – Nov 2024.

- **NOTE:** To progress to installation stage, BEIS need appropriate reassurance that we will install heat pumps in 25% of homes on each electricity distribution feeder that we are targeting. If we are not successful we will support households to get funding via the publicly available Boiler Upgrade Scheme. However there is no risk of clawback if we do not meet this target.

### **Key outcomes/benefits:**

- Decarbonising the heating of up to 200 high energy using homes in the city. The project will lead to small reductions in the city's carbon emissions but more importantly will increase the knowledge and capability of the city to implement the heat pump goals of the One City Climate Strategy.
- Creating new skills and jobs within the local supply chain heat pump installation and associated activities sector.
- Providing planning tools to deploy heat pumps in areas of the city not planned to be covered by the heat network expansion.
- Supporting community organisations to deliver on their priorities around heat decarbonisation.
- Generating trust in heat pumps that can lead to greater uptake.
- Engaging communities in the design of the programme to ensure it meets the needs of all citizens.
- A methodology for delivering a greater number of heat pumps in the city that is self-sustaining through bulk-buy discounts on heat pump equipment.
- A model for a supply chain hub that champions best practice in building retrofit and heat pump install and grows the local supply chain.
- Longer term, through City Leap there are plans in place to decarbonise the housing stock via heat pumps so the project would provide a pathway to supporting that transition.
- If proved to be successful, the business model would be rolled out across the city for private housing stock and make a surplus that could be reinvested.
- Building trust in heat pump technology to increase long term rate of uptake.