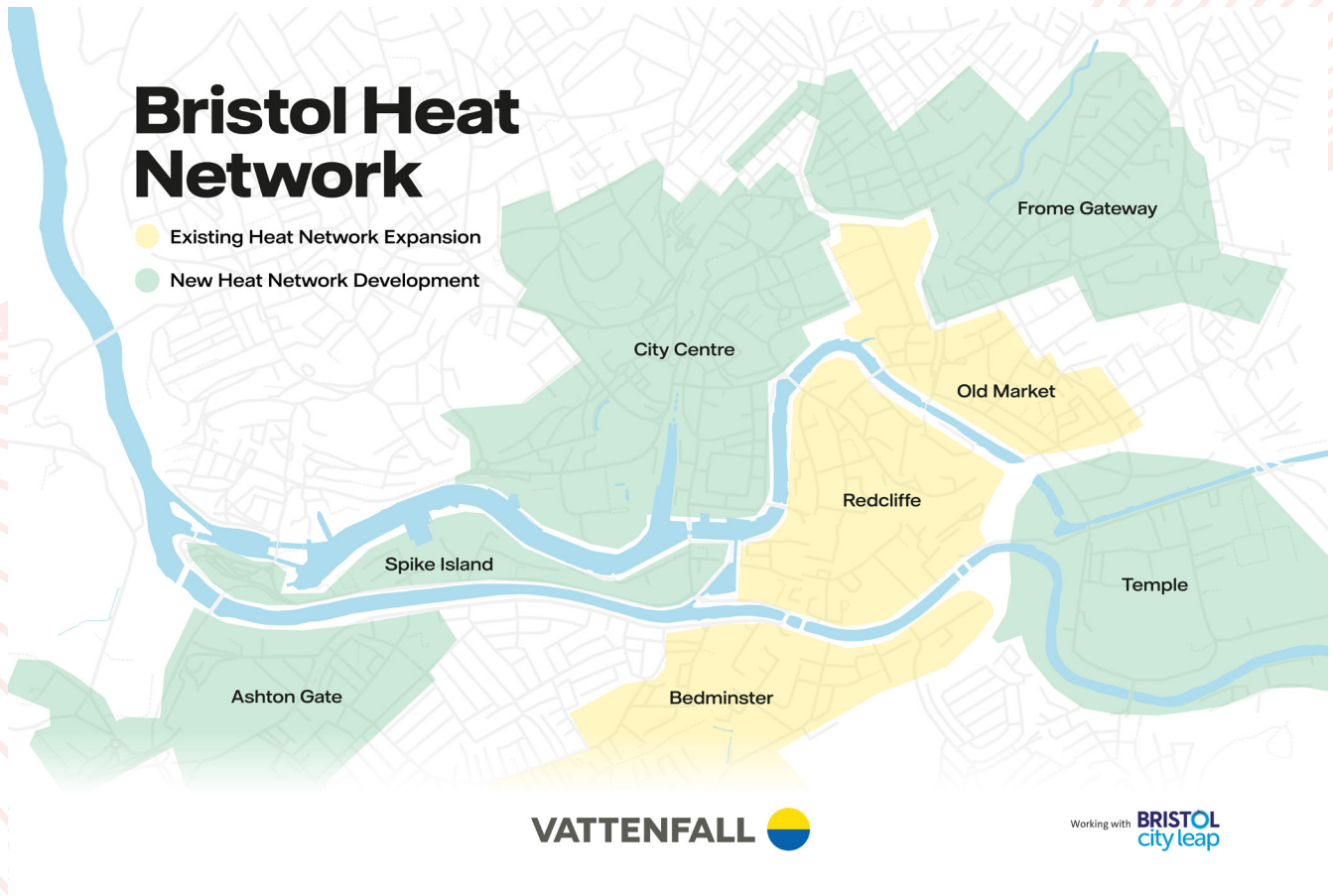


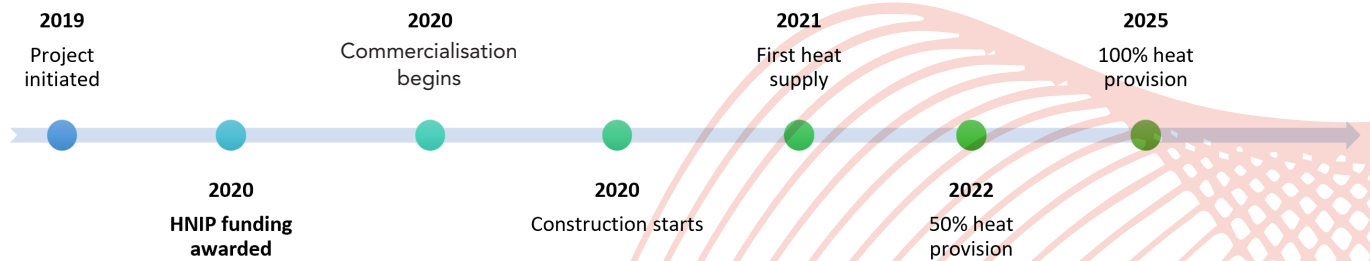
# BRISTOL OLD MARKET



Funding beneficiary	Bristol City Council
Location	Bristol
Total project capex	£18,200,000
Funding awarded	£6,594,000 commercialisation and construction grant
Planned heat export at completion	19.1 GWh
Heat source & technology	3MW Water Source Heat Pumps with Peak & Reserve Gas boilers
Key anchor loads	Castle Park View and Linear Park
Length of primary network	5.5km
Anticipated number of buildings and/or connections	25 buildings including 4 residential blocks, 10 office blocks, 2 hotels and 2 schools
Annual carbon savings (average over first 15 years)	3073 tCO <sub>2</sub> e

The Old Market Heat Network (OMHN) was initiated by Bristol City Council with delivery of the water source heat pump being carried out by Vital Energi and Star Renewables in partnership with Goram Homes to help the Council deliver on its city-wide carbon neutral aspirations. The energy centre, located at the current Castle Park Council Depot site, has a Water Source Heat Pump (WSHP) which provides low carbon heat whilst meeting high demand across the city centre. The project also includes back up and reserve Gas boilers. This is part of a multi-heat network approach to decarbonising Bristol City. HNIP granted funding for Phase 1 of the scheme, which helped to fund the new district heat network across the East of Bristol City Centre.

## Project Milestones

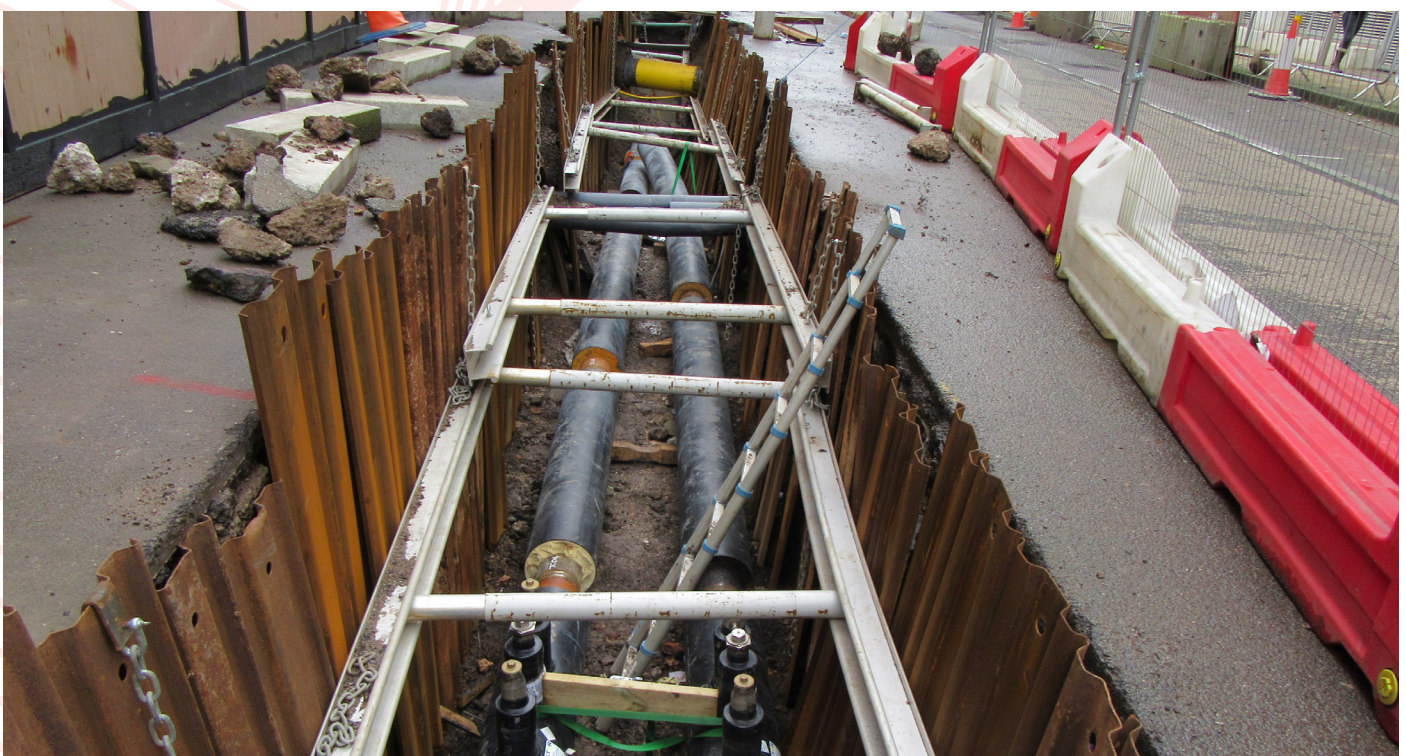


## The Story So Far\*

Bristol City has so-far installed heat networks that supply over 2,000 homes and businesses with low carbon heat in a bid to decarbonise the city. This followed the declaration of a climate emergency and pledge for carbon neutrality by the Council in 2018, and ambition to transform the city into a low-carbon jurisdiction. The Bristol Old Market Heat Network is playing a key role to realising this target.

The Old Market heat network currently supplies 8 buildings, including 4 large residential blocks, 3 office blocks, a school and health clinic with an annual demand of 20.09MWh, through 2.6km of DH pipe with the help of HNIP funding. The newest extension of the project connected Old Market East and Old Market West, both to the WSHP in Castle Park. This will begin to connect 751 new apartments to a low carbon source of heat. Over the next 25 years, the Old Market Network Phase 1 project will save around 76,911 tonnes of carbon.

The network has progressed well and will continue to extend to new developments and homes across the council. There are more connections planned throughout 2023, including residential buildings, schools and universities.





## Experience

Vattenfall Heat UK are working with Bristol City Leap to expand the existing network, develop new networks and ultimately interconnect them to create a single Bristol Heat Network. The company acquired the networks as part of the City Leap transaction and continue to build out new networks as well as put in place a comprehensive plan to decarbonise the heat network by 2030.

Vattenfall Heat UK bring investment and proven experience in large scale, resilient heat networks across Europe. Within five years, over 120 GWh of low carbon heat will be delivered to customers in Bristol through over £200 million of investment into high-quality, long-term infrastructure across the city.

The City Leap Energy Partnership is a twenty-year joint venture that is 50% owned by Bristol City Council and 50% owned by Ameresco, with their essential subcontractor, Vattenfall Heat UK – a coming together of global partners from the UK, the USA and Sweden.



## Project Insights

The implementation of new technology in the heat network's expansion provided valuable lessons, particularly when dealing with the installation of pipes in congested highways. Through innovative approaches during the installation and design stages, the team successfully improved efficiency and effectiveness. Utilising vacuum excavators proved to be transformative, significantly expediting pipework installation and optimising operations.

Building upon this success, the project has established a well-tested customer journey for future expansions, setting a positive precedent for future endeavours.

## Councillor Kye Dudd, Cabinet Member for Energy Transport Said:

*"Our Bristol heat network has such a vital role to play in our city's journey to carbon neutrality. The council has invested over £12 million in this infrastructure over the last five years and will continue to expand the network to serve new communities with low-carbon heat. This new funding from BEIS is so welcome to support the growth of the network and will enable us to innovate with new technology that will provide zero carbon heat to a number of new developments in the city. It's also very exciting to see old fossil fuel infrastructure like the Bedminster coal mine being considered for use to provide zero carbon heat for the future – another example of Bristol's ability to find pioneering ways to tackle the climate emergency.*

*"It's exciting to be replacing old technology with greener solutions and great to be supporting public sector partners with their own efforts to decarbonise. Developing the heat networks has so many benefits for the city including the reduction in fuel poverty, cutting carbon emissions and creating thousands of jobs to support the local economy."*

\*Up to date as of March 2023