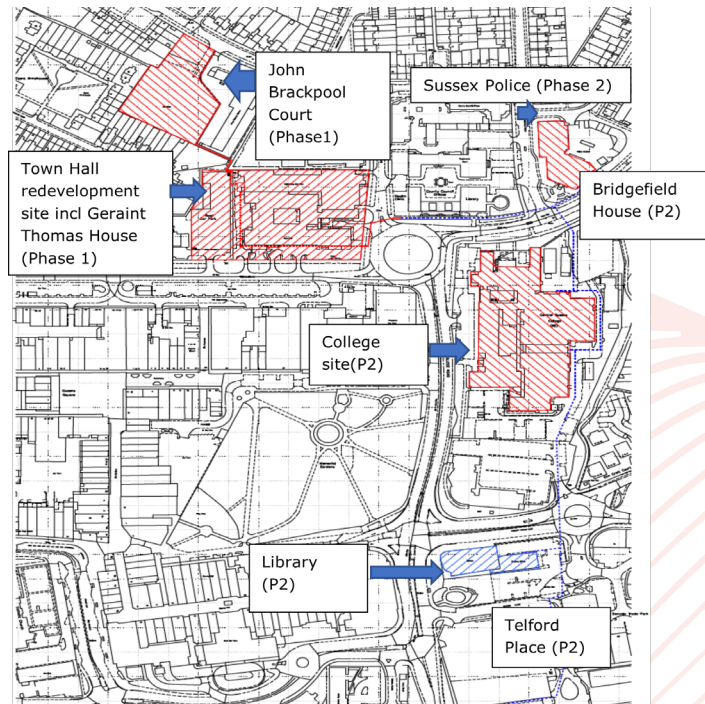


CRAWLEY TOWN CENTRE HEAT NETWORK

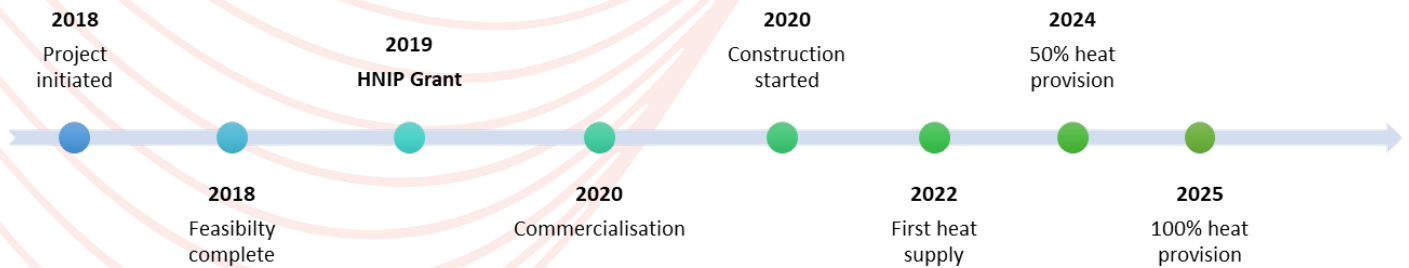


Funding beneficiary	Crawley Borough Council
Location	Crawley
Total project capex	£5,160,000
Funding awarded	£1,400,000 construction grant
Planned/estimated heat export at completion	Phase 1 - 1.4 GWh per annum Phase 2 - 11.6 GWh per annum
Heat source & technology	Gas Combined Heat and Power (CHP) plant
Thermal storage capacity	15m ³
Key anchor loads	Phase 1 (operational since May 2022): Residential buildings, new Town Hall and commercial offices. Phase 2 (in planning): new residential and commercial developments and existing residential block library, college, and the police station
Length of primary network	Phase 1 – 275m , Phase 2 – 1.1 km
Anticipated number of buildings and/or connections	310 residential units and 11,650 m ² commercial space
Annual carbon savings (average over first 15 years)	158 t/CO ₂ e



Crawley Borough Council and Development Manager Westrock constructed a new energy centre part funded by HNIP in the centre of Crawley, with the aim of installing a district heat network that supplies affordable heat and hot water for connected residents and businesses. The scheme has been designed to enable further connections of over 700 residential, commercial, and public buildings, with the network planning to introduce newer, greener technology as part of the Phase 2 expansion. Design & Build contract awarded to Kier. The network is operated by Pinnacle Power.

Project Milestones



The Story So Far*

Crawley Borough Council aims to achieve net zero by 2040 at the latest, and decarbonising heat is a key element to realising this target. With this in mind, the council set out to decarbonise some of the Crawley Town Centre building stock which was heated by gas. The heat network is part of the publicly supported Town Centre major redevelopment plans which reposition the town centre with commercial, business, and residential premises.

A three-phased approach to delivering heat through the heat network has been taken. The first phase was given the green light in December 2018 and is currently providing heat to consumers.



With Phase 1 of the project completed in May 2022, HNIP funding has helped provide over 600,000,000 kWh of heat to residents and businesses.

The network has so far connected the new Town Hall and commercial offices, two residential blocks (128 units) and another block with 182 residential units due to be completed in 2024. Further connections are planned in the Phase 2 expansion of the network to supply existing and new developments across the town centre including 700 homes, along with Crawley Homes flats which are District Heat Network ready, and the library, college and police station. New plans in Phase 2 will aim to incorporate newer and greener technology through a switch to a low carbon heat source as part of Crawley Borough Council's plans to bring greener energy to the town centre, moving away from natural gas.

Project Insights

Crawley Borough Council took proactive steps to minimise issues and challenges from the start. They engaged separate consultants for technical and economic modelling to support feasibility and business case evaluation. Through rigorous testing and scenario analysis, they aimed to optimise the heat network's deployment. While effective, it was noted that appointing a single consultant for both aspects could increase efficiencies.

The commercialisation and construction phase provided an opportunity to strengthen relationships with customers and stakeholders, enhancing commercial arrangements. The project faced complexities with regulations and experienced time delays during the installation of a new substation, causing a delay in network activation. However, through perseverance, these challenges were overcome, successfully connecting the network to customers. This experience served as a valuable learning opportunity for future similar situations.

Cllr Gurinder Jhans, Cabinet member for Environmental Services and Sustainability, said:

"This is an exciting development in such an important project. The council is committed to providing cheaper, greener energy and this project will contribute towards us becoming carbon neutral to help meet our climate emergency targets."

*Up to date as of March 2023