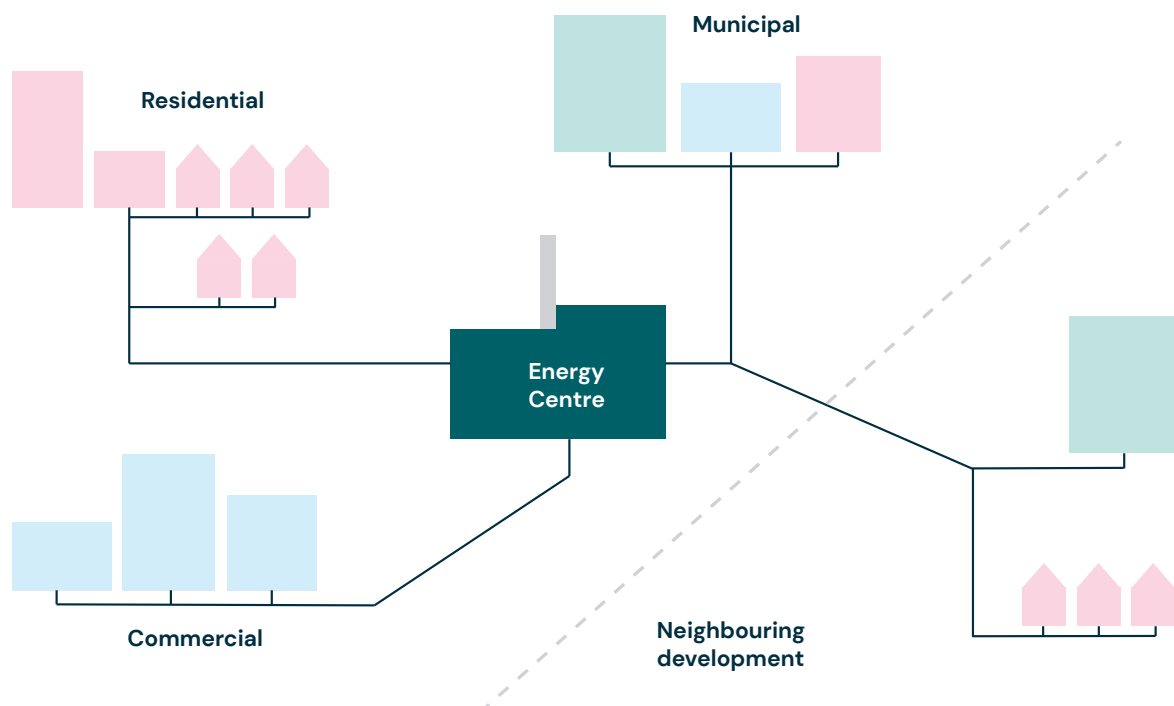


# Heat networks – back to basics

Heat networks are gaining popularity across a wide range and size of sites and are recognised as not only a more efficient solution for heat but also an essential part of the UK’s net zero strategy. In this briefing we go back to basics and provide an overview of what a heat network is, key benefits and key challenges.

## What is a heat network?



A heat network is a system that typically uses a central source (an ‘energy centre’) to distribute heat to consumers. The energy centre generates hot water or steam, which is then pumped through underground pipes to provide space heating and hot water. Often heat is supplied alongside cooling and private wire electricity.

There are two main types of heat network:

**Communal heat network:** the supply of heat and hot water to a number of properties within a single building. This is currently the most commonly used form of heat network in the UK.

**District heat network:** the supply of heat to more than one building – this can range from small building complexes to entire cities.

## What are the key benefits of heat networks?

**Cost and efficiency:** For new developments, a single heat substation can be a cost-effective and more efficient alternative to installing individual boilers. With a single heating system, savings can be made not only on capital expenditure but also on operations and maintenance. There is also a replacement cost to factor in with the UK government due to ban new gas boilers in new homes from 2025. The economies of scale are even more relevant for larger heat networks and the case for interlinking smaller heat networks.

**Low carbon heating:** Heat networks can use a variety of heat sources and by design are generally more efficient than individual heating systems, which makes them in turn less carbon intensive. Carbon savings increase where heat sources are low carbon (please see some alternatives below). Heating and cooling often represent a significant portion of the energy consumption of both public sector bodies and businesses. These entities, especially where they have net zero commitments, should consider heat networks as a means of decarbonising their energy demand.

## What are the key challenges?

**Decarbonisation:** Heat networks are fuel source agnostic, ie, independent of fuel type, but the majority of existing networks use fossil fuels as a heat source. There is increasing pressure on the industry to move away from natural gas to lower carbon alternatives such as heat pumps, biomass, recovered heat, geothermal heat, and hydrogen.

**Regulation:** The heat networks sector has been largely unregulated which has created challenges around investor confidence and consumer protection, particularly with respect to pricing. The introduction of the Energy Act 2023 will establish a much-awaited regulatory framework for heat networks, which will be supplemented by secondary legislation. Some key upcoming changes include:

- **Heat network zoning:** The government will be able to introduce designated 'heat network zones', areas where heat networks are expected to be the lowest cost solution for decarbonising heat. Certain types of buildings within these zones may be required to connect to a heat network. The government recently ran a [consultation](#) (outcome pending) for zoning proposals in England which closed on 26 February 2024.
- **Consumer protection:** Ofgem ran a [consultation](#) last year on consumer protection requirements. On 30 April 2024, the government published its [response](#) to the consultation which sets out how the Government plan to take the proposals forward. This includes the scope of regulation, and the roles of key organisations in the framework.
- **Ofgem will be established as the regulator for heat networks, with the powers to establish an authorisation regime, and the ability to enforce these rules. The Office for Product Safety Standards will have a role in relation to meter standards, with the Energy Ombudsman establishing a heat network alternative dispute resolution scheme.**
- **Technical standards and decarbonisation targets:** The government and Ofgem also plan to consult on minimum technical standards and decarbonisation targets for heat networks.

## Our team

Heat networks can be complex and challenging projects, with multiple stakeholders involved. Our specialist heat networks lawyers have extensive experience advising businesses on all types of heat network arrangements. Our team have acted for clients including public sector bodies, property developers, ESCOs, landlords and industrial businesses. Please reach out to the heat networks team below if you have any queries.

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## Awards and accreditations

