

Environment & Energy Board

Date	7 March 2024
Report title	Heat Network Zoning and Consultation response
Portfolio Lead	Environment, Energy and HS2 – Councillor John Cotton
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Report has been considered by	None

Recommendation(s) for action or decision:

The Environment Board is recommended to:

1. Acknowledge the emergence of heat network zoning and endorse the proposed next steps to develop a West Midlands Combined Authority heat network programme.

1.0 Purpose

- 1.1 To update the board on the progress made in developing a heat network programme across the West Midlands Combined Authority region and to inform the board about the West Midlands Combined Authority's recent response to the Government's consultation of heat network zoning proposals.

2.0 Background

- 2.1 Heat from buildings is one of the biggest sources of UK carbon emissions, with hot water, space heating and cooling contributing 21% of the UK's emissions in 2018. To achieve Net Zero emissions by 2050 in cost effective way, the Climate Change Commission estimates that at least 18% of the UK's heat demand will need to be served by heat networks by 2050.

- 2.2 Heat networks supply heat to end consumers via a series of underground pipes carrying hot water. They are 'heat source agnostic', meaning they can be served by any heat source, including renewable heat sources and heat pumps, which will become less and less emissions intensive as the UK electricity grid decarbonises. They also unlock the potential to make viable low carbon heat sources that only come at scale, such as waste heat from industry, or held within water bodies.
- 2.3 Heat networks are most likely to be economically viable in urban areas of high heat demand density¹. Initial modelling by government suggests heat networks could be an important provider of heat for heat users in the West Midlands and it is notable that there are already several heat networks operating in the region, such as in Birmingham and Coventry.
- 2.4 To deliver heat networks at the pace and scale required, the Government estimates that £60-80 billion is needed in investment. Private sector involvement to achieve this scale will be critical. However, once operational, heat networks present risks as they represent monopolies, and must therefore be regulated to ensure they provide affordable and fair heat access.
- 2.5 The Government also recognises that the private sector faces barriers to investing in heat networks. One of the most significant barriers is uncertainty about heat demand connecting to – and off taking from – the heat network. Without such certainty, it is hard or even impossible to justify the upfront capital cost of developing larger, strategic heat networks in particular. As a result, most heat networks to date have been small and self-contained.
- 2.6 The Government's new policy of Heat Network Zoning, which is currently under consultation, aims to reduce this uncertainty by requiring certain types of building to connect to the heat network where a zone is designated. The model is proven in Denmark, where a requirement to connect is common. 63% of Danish homes were connected to heat networks in 2015.
- 2.7 It is suggested in the consultation that the 'requirement to connect' to a heat network in a heat network zone is likely to apply to large heat consumers with a consumption of over 100 MWh/year. (For comparison, Ofgem estimates the average British household connected to the gas grid uses 11.5 MWh of gas each year.)
- 2.8 In principle Heat Network Zones should be located where heat networks represent the lowest cost option to the consumer for decarbonising heat in their area. It is therefore important to be able to compare options, which is where this links closely to the paper on Local Area Energy Planning, which would enable local verification of this analysis to be undertaken.

¹ This means many end users of heat are concentrated in a small area.

- 2.9 The 2023 Energy Act introduces a regulatory framework for heat networks. It gives government powers to propose secondary legislation to implement heat network zoning in England and appoints Ofgem as the regulator of heat networks. This will enable the regulation of heat network prices and the setting of low carbon requirements for heat networks ensure the sector contributes to deliver net zero in “the most cost-effective way”.
- 2.10 The Government is developing a National Zoning Model to identify strategic heat network zone locations. The outputs from the model – indicative heat network zones – would then be refined locally, before being formally designated as a heat network zone.
- 2.11 To implement Heat Network Zoning, the Government proposes to designate ‘Zone Coordinators’, tasked with working with central government to identify and implement specific zones. Zone Coordinators would be responsible for designating areas as heat network zones and enforcing requirements within them. This role is generally expected to be fulfilled by local government.

3.0 Consultation on Heat Network Zoning Proposals

- 3.1 Central government announced a consultation on heat network zoning proposals on 18 December 2023 with a deadline for responses of 26 February 2024. This consultation follows the February 2021 “Heat Networks: Building a Market Framework” consultation and subsequent response from government in December 2021.
- 3.2 It also builds on government studies and the initial insights from a pilot of the zoning methodology that is currently underway in 28 towns and cities across England including Birmingham and Coventry, known as the Heat Network Zoning Pilot Programme. Some of these pilot areas are now moving into the next phase to explore how heat networks might be implemented within identified zones known as the ‘Advanced Zoning Programme’.
- 3.3 The current consultation will inform the development of secondary legislation relating to heat network zoning, due to be set before Parliament in 2024, with a view to the legislation coming into force in 2025. The wide-ranging consultation consists of 80 questions, of which most are relevant to local government as potential future Zoning Coordinators.

4.0 Development of a position

- 4.1 The Energy Capital team has engaged with constituent local authority officers via
- A newly established Local Area Energy Planning - heat (Local Area Energy Planning Co-ordination Group-Heat) sub-group. This group will continue to meet after the consultation response has been submitted to coordinate and develop a low carbon heat programme for the region.
 - Seven drop-in sessions have been run for local authority officers on priority areas identified in the consultation. (See Appendix 1 for an overview of attendance.)

- A presentation has been given to the M10 net zero officers in January and an exchange with M10 officers developing their Combined Authority responses was held on the 15 February to gain further insight into how they are approaching the issues raised.
- Finally, the Energy Capital team has commissioned support from the consultancy Ramboll, to advise on the consultation response in the context of assisting the development of the wider heat network programme for the West Midlands Combined Authority.

4.2 The Energy Capital team has developed an ‘umbrella response’ for the West Midlands Combined Authority reflecting the consensus positions of officers of the West Midlands Combined Authority and its seven constituent local authorities. The purpose is not to replace individual local authority responses, and some have chosen to submit their own response [in addition to the West Midlands Combined Authority response]. A cover letter for our consultation response has also been developed, underscoring the critical cross-cutting issues that have emerged.

5.0 Key issues for our response

- 5.1 Through exchanges, we have identified the following as critical, cross-cutting issues:
- I. **Zone Coordinator resourcing:** the proposals require further exploration and elaboration of the resources needed for zoning coordinators to carry out their functions effectively at the various stages of the heat network zoning lifecycle. We are concerned that the current estimates do not represent a thorough examination of the activities required to carry out the role effectively, nor do they reflect the likely scale.
 - II. **Zone Coordinator skills and expertise:** the activities to fulfil the Zone Coordinator responsibilities will require Zone Coordinators have high levels of technical, commercial and legal expertise across different professional disciplines and policy areas. We therefore consider that the proposals need to be clearer on how the central authority will provide guidance, training and capacity building for zone coordinators, to ensure they are equipped with the skills and up to date knowledge necessary to carry out their role.
 - III. **Timescales for heat network zoning processes:** The proposals set understandably ambitious timescales for each phase of heat network zoning. However, timescales must balance the need for speed with the need for pragmatism and due care. We underline the need for more time to allow for engagement with impacted stakeholders during zone refinement and at other key stages of the heat network life cycle. Timescales must also reflect the time needed for local authority processes to ensure due diligence, such as to approve business cases when approving the designation of a zone coordinator, or to appoint a zone developer.
 - IV. **Communication and engagement needs:** throughout the consultation response, we highlight the need to recognise the necessity of, and properly resource communication with, impacted stakeholders. Failing to do so will increase resistance to zoning and may miss important information about the viability of the heat networks through higher rates of building misclassifications and exemption requests, undermining heat network roll out at pace and scale.

6.0 Next steps: developing a low carbon heat programme

- 6.1 We have commissioned Ramboll to produce recommendations of priorities for the future low carbon heat programme over the financial year 2024/5, including a definition of the resources required to deliver this and how it will support / be supported by other energy programmes.
- 6.2 The Energy Capital team will continue to work with constituent local authorities to explore what Zoning and Zone Coordination will look like across the West Midlands Combined Authority region, including where the zone coordinator role may appropriately sit or be shared across the region; the resources required to deliver this, how it will be governed and how it will be embedded into Local Area Energy Planning.

7.0 Financial Implications

- 7.1 There are no immediate financial implications within this paper, as any costs associated with the wider consultation will be covered from existing budgets.
- 7.2 Future development of heat networks may imply future investment needs, depending on the commercial delivery models chosen. Some of these needs may be covered by the successors of the current heat network funding opportunities (outlined in Appendix 2).
- 7.3 The resourcing needs for zone coordinators will require further investigation and the Government is currently consulting on its proposals. We are advocating for adequate support from government and a need to assess resourcing needs in our consultation response. We are also looking into resourcing needs as part of the ongoing development of our heat networks and wider heat decarbonisation programme, and will continue to engage with government on this issue.
- 7.4 We will keep the board updated and include future updates with financial assessments and priorities where recommended measures will require further funding to be sought and agreed.

8.0 Legal Implications

- 8.1 None.

9.0 Equalities Implications

- 9.1 There are an estimated 235,512 fuel poor homes in the West Midlands — the highest rate of fuel poverty in any English region at 17.5%, with some areas experiencing much higher rates of over 40%. Done right, heat networks offer the potential to increase access to affordable, secure and resilient heat, contributing to a potential reduction in fuel poverty.

10.0 Inclusive Growth Implications

- 10.1 There are a number of inclusive growth implications. Particularly if they are embedded in holistic, local area energy planning, heat networks and heat network zoning have the potential to impact the inclusive growth priorities around:
 - Health and wellbeing: access to affordable, clean heat has the potential to reduce health inequalities.

- Affordable and safe places.
- Power and participation: linked to localism in refining and implementing zones, supporting the principle of powerful communities through providing support to deliver change and create better places.
- Inclusive economy: by generating employment opportunities in the heat network supply chain.
- Climate resilience: by reducing total carbon emissions, energy intensity and fuel poverty rates.
- Equality: by reducing the numbers of people living in deprivation though improving access to affordable heat.

11.0 Geographical Area of Report's Implications

11.1 Heat networks and Zoning is likely to be relevant for all constituent local authorities. There is also potential to collaborate with non-constituent authorities adjacent to constituent authorities on zoning and heat networks will not necessarily be limited to local authority boundaries.

12.0 Other Implications

12.1 None.

13.0 Schedule of Background Papers

13.1 Appendix 1: Table outlining attendance at LAEP-heat and ad hoc discussion on the heat network zoning consultation response.

Appendix 2: An overview of current heat network funding

- Consultation response – available on request
- Cover letter for Heat Network Zoning Consultation Response – available on request
- Presentation containing key economic metrics relating to the heat network opportunity across the West Midlands (developed by Ramboll) – available on request

Appendix 1

The below is provided for information in case you wish to reach out to colleagues about discussions that have been held so far on heat networks.

Meeting	B'ham	Coventry	Dudley	Sandwell	Solihull	Walsall	W'hampton
Attendees	Steve Pimlott	Adam Yarnall, Bret Willers, Lowell Lewis Dhaivat Joshi	Harjot Rayet, Lorna Walker	Mark Taylor	Ann Marie Attfield, Liz Alston, Harleen Chima	Alan Bowley	Gordon Telling
LAEP CG - heat							
ZC responsibilities							
Zone Identification and refinement							
ZC resourcing							
Building Connection requirements							
Commercial delivery models							
Just transition							
Building connection requirements continued							

Appendix 2

Funding for heat networks in England.

- i. Most currently available funding is focused on the development of heat network infrastructure, rather than its regulation and the coordination of heat network zones. The Government's proposals and the accompanying impact assessment as part of the consultation on Heat Network Zoning recognise the need to resource zone coordinators for their role and we will continue to engage with government on this as we await further information.
- ii. The Heat and Buildings Strategy sets out how the government will invest £338 million over 2022/23 to 2024/25 into a broader Heat Network Transformation Programme to scale up low-carbon heat network deployment and enable local areas to deploy heat network zoning. The available funding comprises:
 - The Green Heat Networks Fund: a 3-year £288 million capital grant fund to support the commercialisation and construction of new low and zero carbon heat (and cooling) networks and the retrofitting and expansion of existing heat networks in England. The scheme launched on 14 March 2022 and will run until 29th November 2024.
 - The Heat Network Efficiency Scheme: this £32 million scheme provides grants for existing heat networks and communal heating systems to part-fund the installation of improvement measures, as well as to carry out optimisation Studies.
 - Support from the Heat Networks Delivery Unit in Department for Energy, Security & Net Zero: this provides funding to local authorities under Section 31 of the Local Government Act for early-stage heat network development, including techno-economic feasibility and detailed project development. 13 rounds have been run so far since 2013, averaging at just over one round per year.
- iii. We anticipate further funding schemes will be announced for the period from 2025 onwards, as indicated in the consultation.