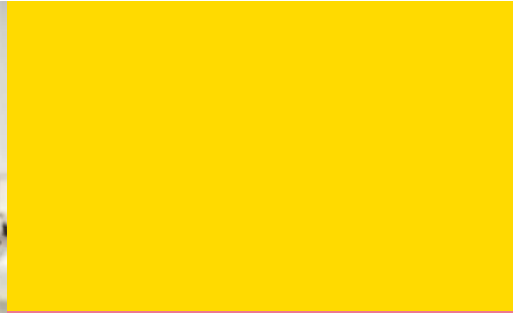


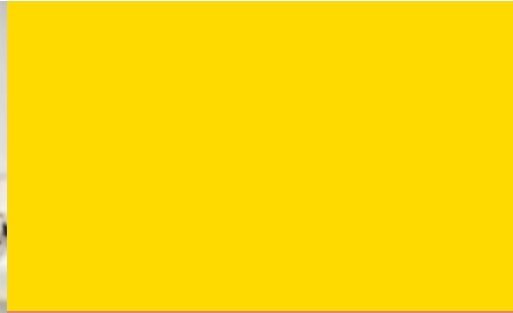
# South West Net Zero Hub

## 5i Heat Network Project - Implementing



# The 5i Heat Network Project

Sam Moore  
Project Manager  
SW Net Zero Hub



# Housekeeping

1. Today's 2 hour session will be recorded for sharing
2. There will be three dedicated sessions for questions
3. Q&A is allowed during speaker presentations in the chat function
4. Any unanswered questions please raise your virtual hand in the Q&A session at the end of all of the presentations and I will come to you in turn
5. All presentations will be shared with all attendees as a pack
6. Follow up support is available from the Net Zero hubs

# Agenda

## 1500: Welcome, Introductions, Setting the Scene

- Liz Warren, SE2
- Channa Karunaratne, AECOM
- Q&A session

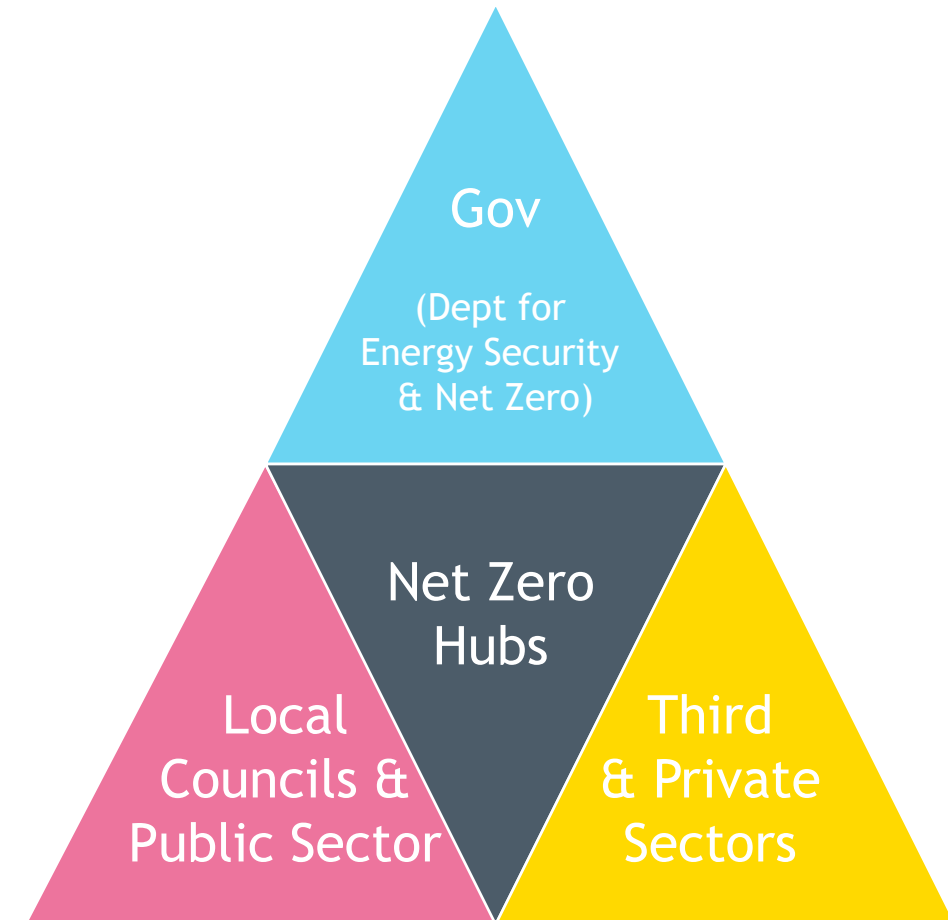
## 1600: Restart

- Matt Caville, Energy Systems Catapult
- Jim Lott, Net Zero Go
- Q&A
- Wrap up discussion

## 1700: Finish

# South West Net Zero Hub

The South West Net Zero Hub provides impartial advice, technical support and funding to public and not-for-profit organisations, to develop projects that accelerate emission reductions and enable the transition to a more sustainable future.



# South West Net Zero Hub

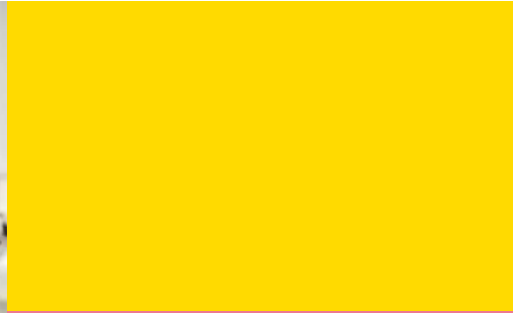


Government Net Zero Strategy established 5 regional hubs with core objectives:

1. **Attract commercial investment** and help LAs and other local public sector bodies to develop investment models which accelerate progress to net zero
2. Continue to **increase the number, quality, and scale of local Net Zero projects** being delivered across the region in line with national targets and strategies, including supporting the early-stage development and delivery of projects.
3. **Collaborate** with the Department of Energy Security & Net Zero to develop & support Net Zero elements to wider programmes & initiatives including Levelling Up
4. Support a national **knowledge transfer programme** to improve information sharing, training & evaluation
5. **Raise local awareness** of opportunities & benefits of local Net Zero investment

# SE2 Ltd The Seven C's of Implementation

Liz Warren  
Director





# Implementing heat networks

Liz Warren, SE<sup>2</sup> Ltd  
19 November 2024





# 1. Commitment

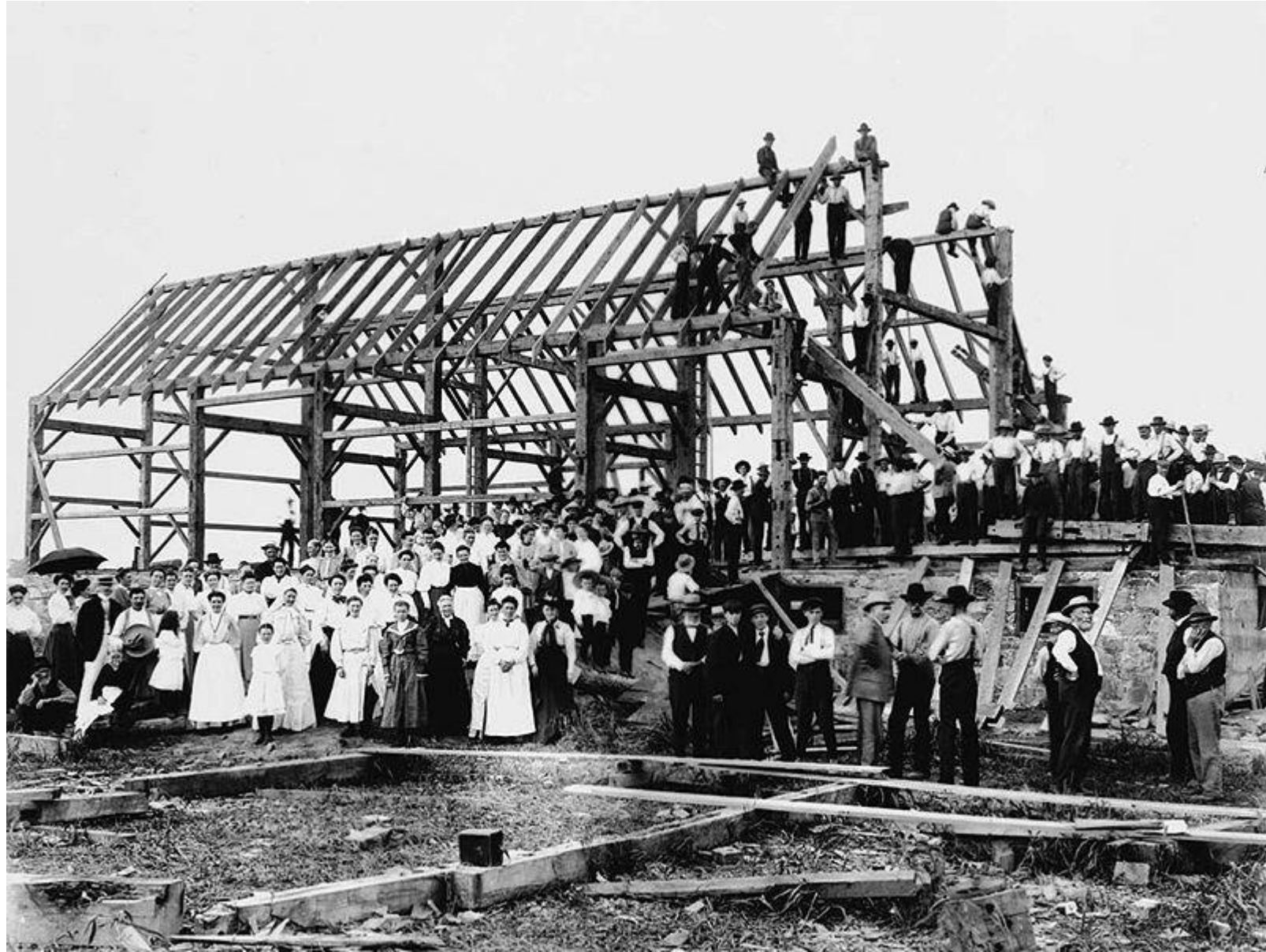
- i. the state or quality of being dedicated to a cause or activity
- ii. an engagement or obligation that restricts freedom of action



Source: Oxford Languages

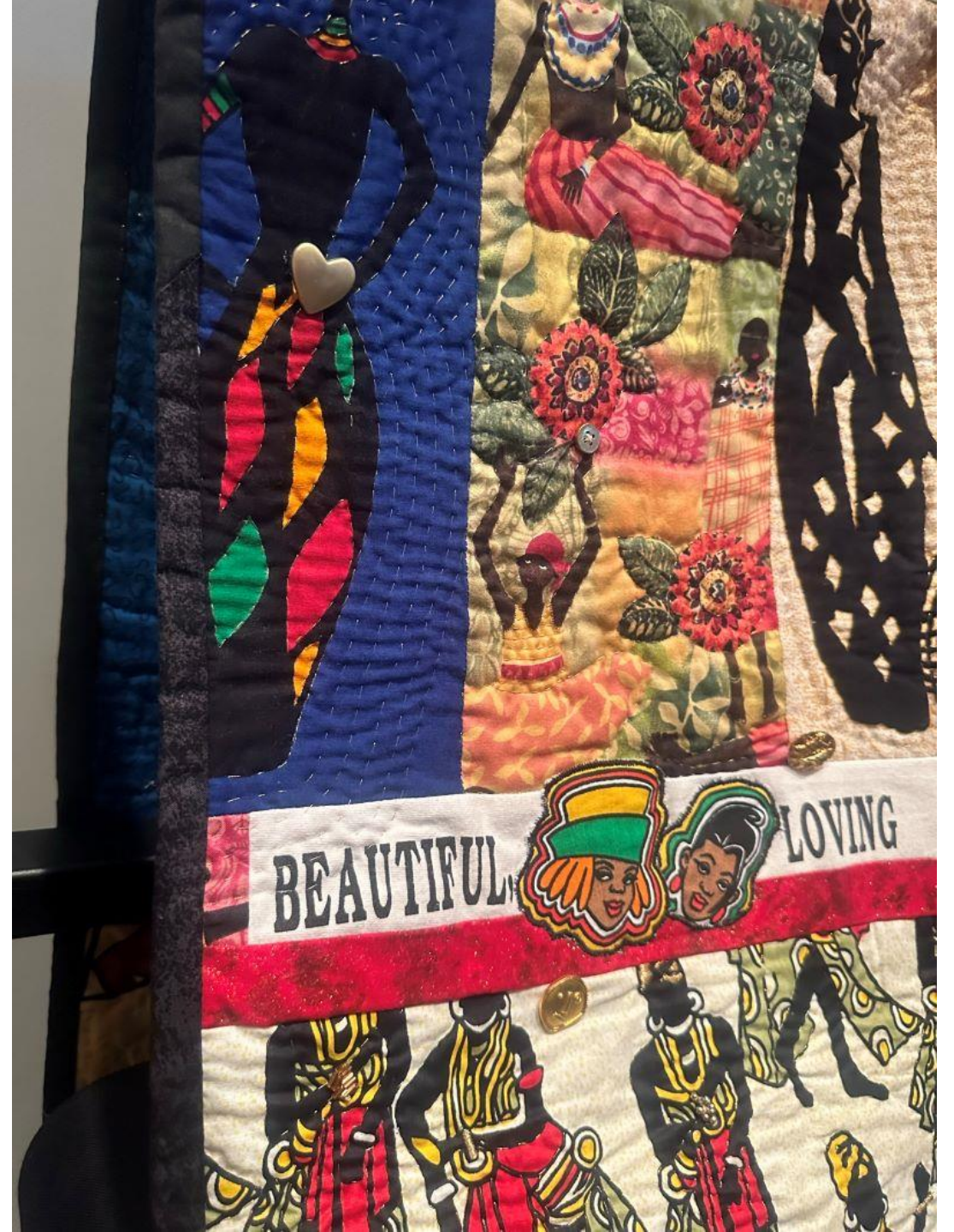


## 2. Collaboration

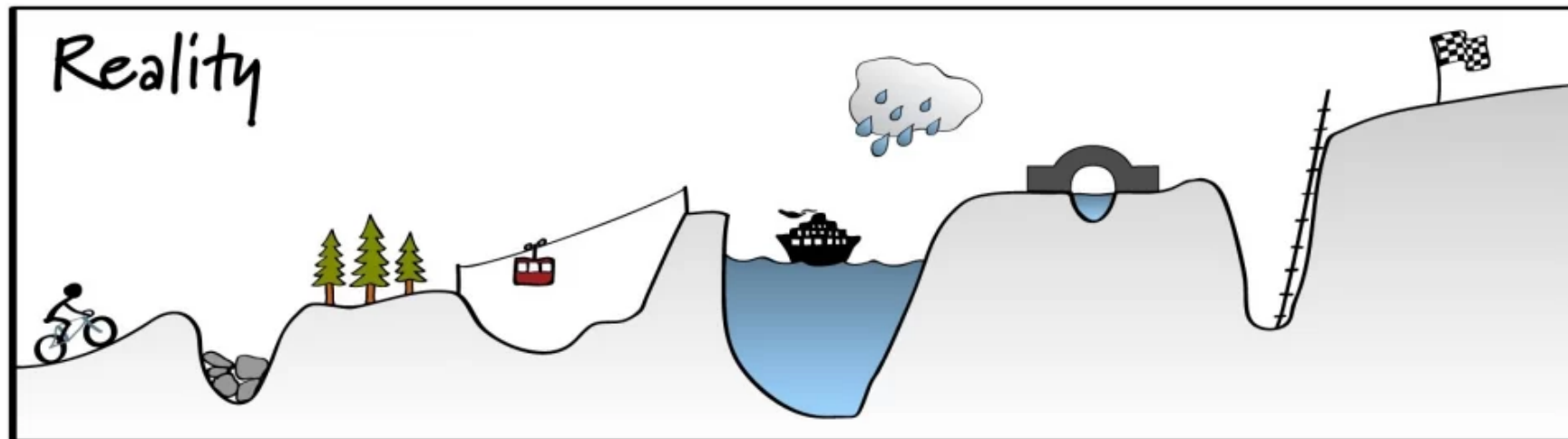


# 3. Continuity

- Time
- Fabric
- Memory



# 4. Contingency



# 5. Communication



- Good news and bad news
- Over a long time period
- Internal / external
- Keep telling your story



# 6. Community



- There will be a lot of “what” and “how”
- Always remember “why” and “who”



7.



# The 7 Cs



1. Commitment
2. Collaboration
3. Continuity
4. Contingency
5. Communication
6. Community
7. Coffee







# Thank you!

Liz Warren, SE<sup>2</sup> Ltd  
liz.warren@se-2.co.uk



# AECOM: Heat Networks in the UK

Channa Karunaratne  
Market Sector Lead - District Energy  
Europe and India  
AECOM



# Heat Networks

Heat Network in the UK – Policy, Regulation  
and Business Case Development

Channa Karu - CEng, FIMECHE  
Market Sector Lead – Europe

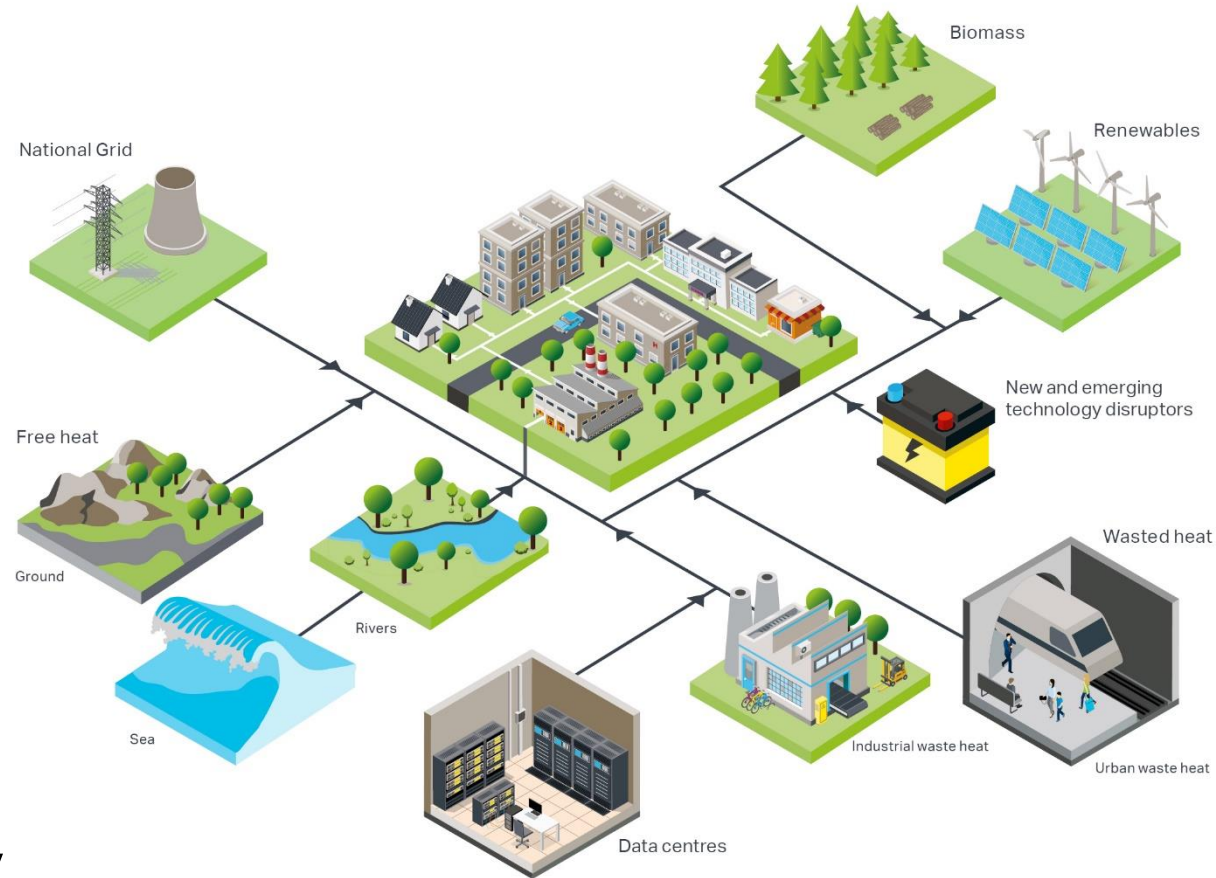
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# Agenda

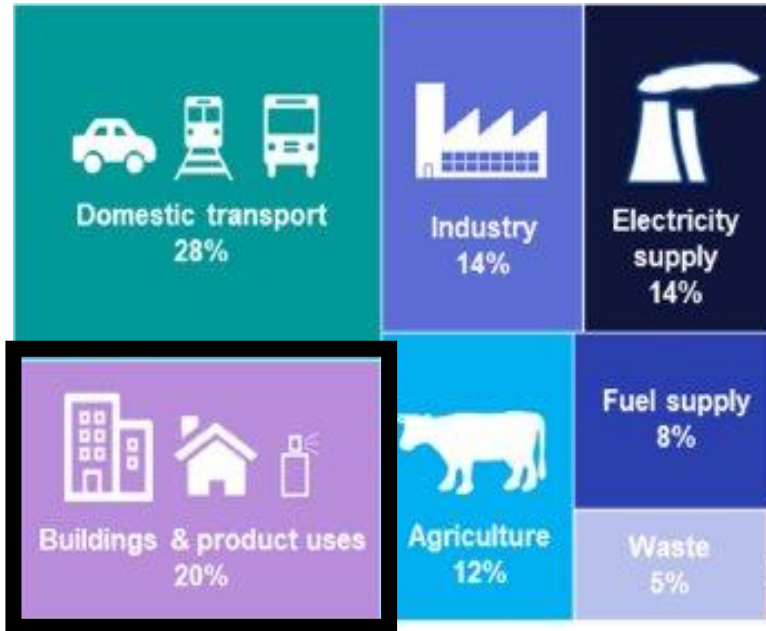
1. Introduction to District Energy
2. Overview of the heat network market
3. Heat network zoning
4. Better Business Cases
5. Examples

# District Energy & Heat Networks

- Delivers otherwise wasted heat to buildings
- Can help decarbonise
- Can connect to any building
- Part of the Energy Transition
- Enables energy security and independence
- Increases resilience
- Access to low carbon heat sources otherwise cost prohibitive.
- Reduced electricity grid reinforcement costs
- Reduced impact on space take
- Improvement in noise considerations and air quality
- Can reduce long term OPEX and replacement costs for buildings



# Heat Networks

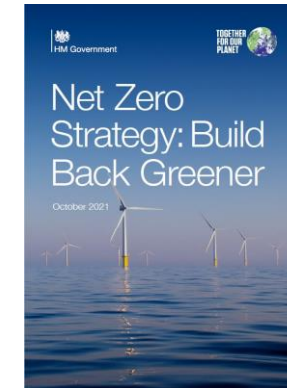


## 2022: 20% of total UK emissions relates to buildings:

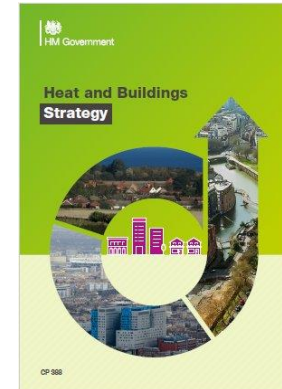
- 67% from residential buildings
- 15% in commercial buildings
- 10% in public sector buildings



**2020: Committee on Climate Change (CCC)** – balanced pathway envisages around 1/5th of heat distributed through heat networks



**2021: Net zero strategy** envisages up to 20% of UK heat demand by 2050 delivered by heat networks.



**2021: Heat and Buildings Strategy** supportive of CCC recommendations. “We also believe that developing the market for low-carbon heat networks will be a no-regrets action ”



**2023: Net Zero Growth plan.** Maintains view that Heat Networks might provide up to 20% total UK heat demand by 2050



**2023: Second National Infrastructure report** states that to move away from gas boilers heat networks are the solution

# Overview of the heat network market

## New Policy and Regulations:

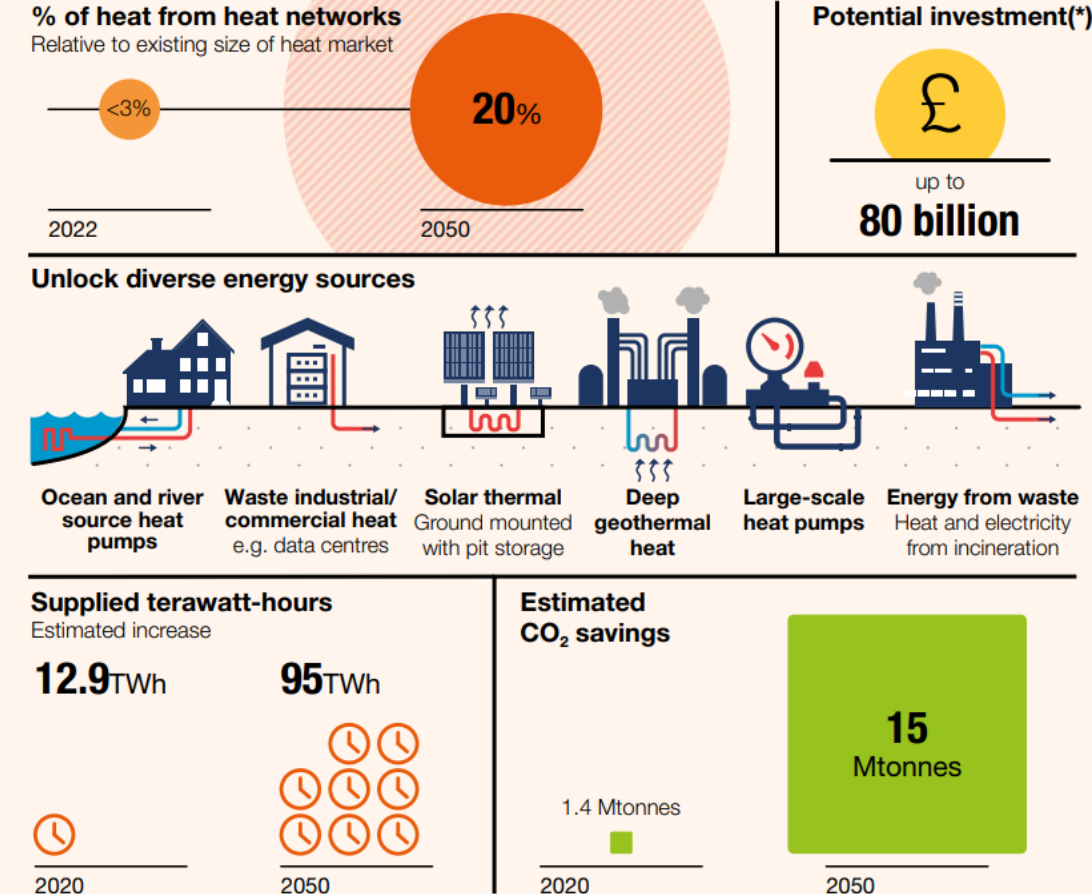
- Primary Legislation received Royal Ascent in Late 2023
- **Zoning** – Policy in development to help identify and designate key areas suitable for heat networks across the UK. Aims to designate areas for heat networks within which local authorities and heat network developers would have greater powers
- **OFGEM** – appointed as regulator for heat, bringing heat in line with natural gas and electricity, bringing them in line with other utilities.

Heat as a service will become a regulated market

Statutory Instrument on secondary legislation planned for Spring/Summer 2025

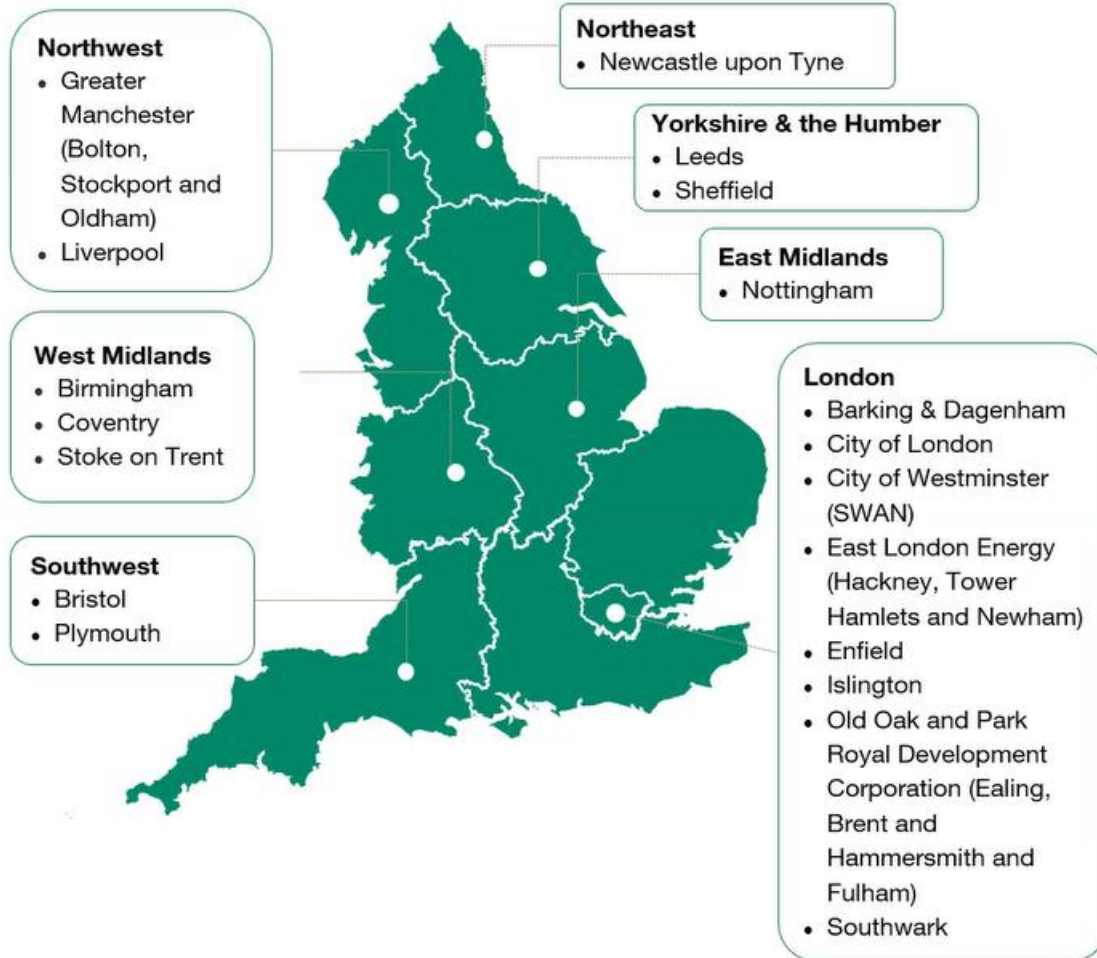
## The 2050 vision

We are committed to developing a self-sustaining heat market by 2050. Investment, innovation and infrastructure support our vision for the future of the market:



# Zoning

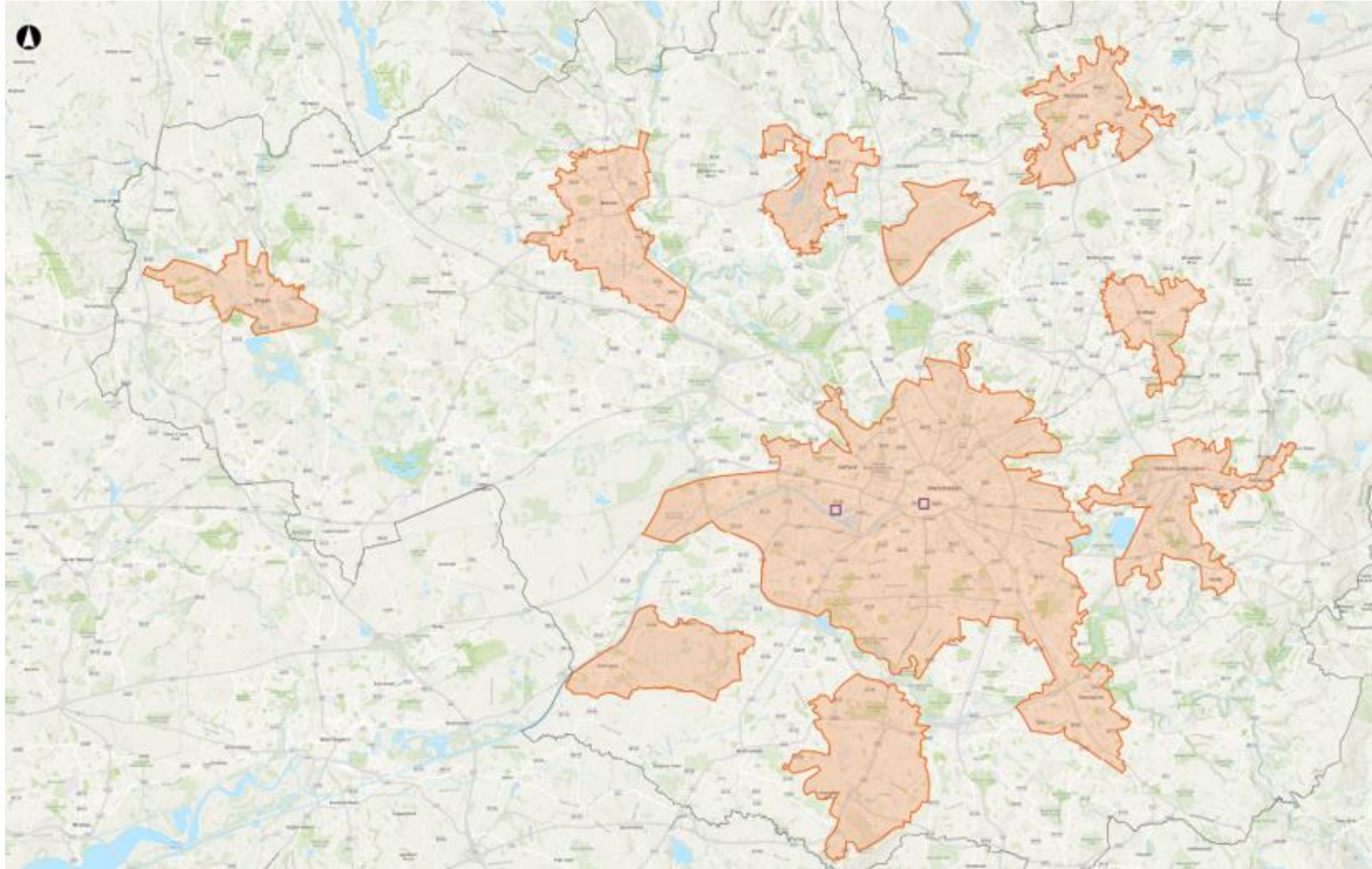
## 19 areas make up the Advanced Zoning Programme



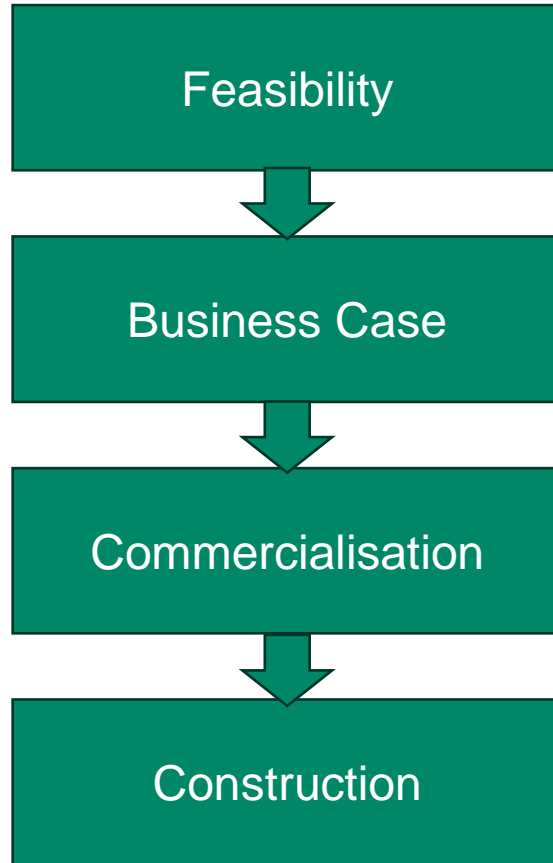
Future roll out across rest of country



# Example of Heat Zones from the Pilot Scheme

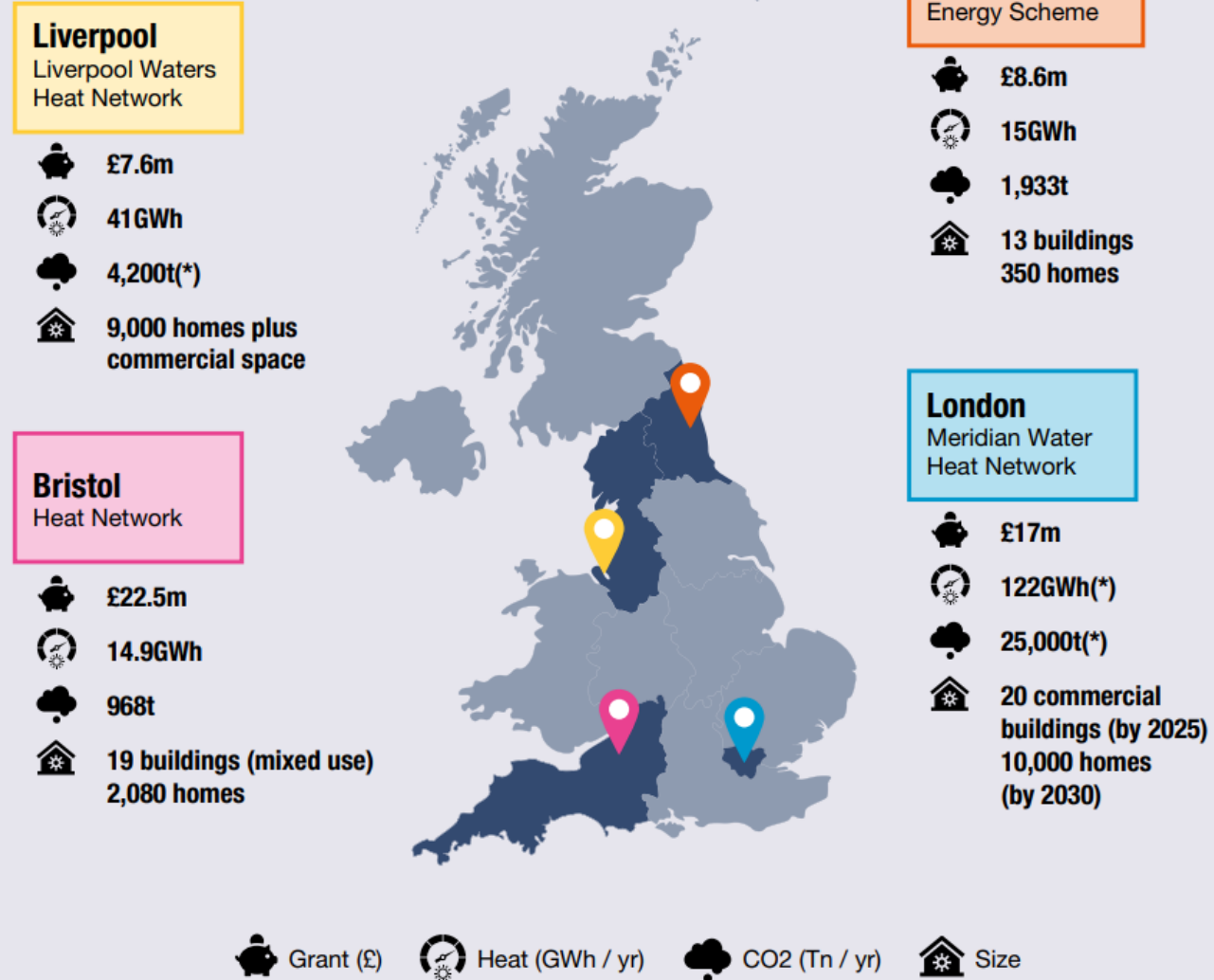


# Better Business Case

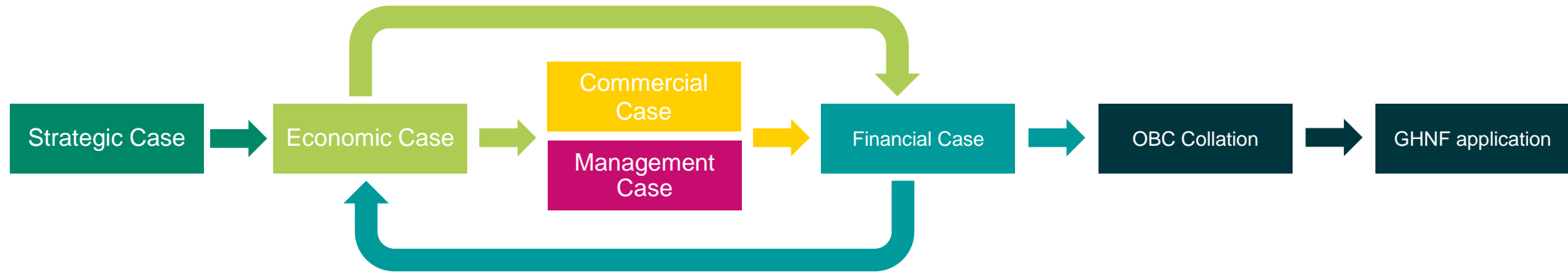


## Case study of heat networks being built across the UK

Examples of projects that have been developed with the support of HNDU development and HNIP capital support.



# Typical Content of the OBC



## Strategic Case

- Scope & Objectives
- Benefits & Purpose
- Interdependencies, assumptions and constraints
- High Level Risks and Mitigation

## Economic Case

- Objectives and CSFs
- Longlist and Shortlist Options
- Full TEM & Cash Flow
- Benefits Appraisal of Options
- Optimism Bias
- Risks and Sensitivity
- Preferred Way Forward

## Commercial Case

- Commercial Strategy Paper
- Procurement Strategy Paper
- Heat Price Paper
- Delivery Vehicle Paper
- Contractual Arrangement Paper
- Risk Transfer
- Governance Paper

## Financial Case

- Analysis of finance options
- Analysis of Preferred Option and Cashflow
- Analysis of Returns on Investment
- Review of Exit Strategy
- Contractual Arrangement Paper
- Preferred solution for financing
- Optimism Bias, Tax and Risk

## Management Case

- Governance Paper
- Programme
- Roles and Responsibility
- High Level Risks and Mitigation
- Design & Procurement Next steps
- Construction & Operation Next steps

# Example – Leeds PIPES

- The Leeds PIPES network went live in 2019
- Utilising low carbon heat from the city's Recycling and Energy Recovery Facility (RERF)
- The network is owned by the Council and supplies council flats and commercial businesses
- Phase 2 expansion completed in 2021 and Phase 3 began construction in autumn 2022.
- Creation of new job opportunities and skills growth
- Phase 3, will deliver long-term carbon savings of over 20,000 tonnes per annum, vital to reaching the local net-zero target.

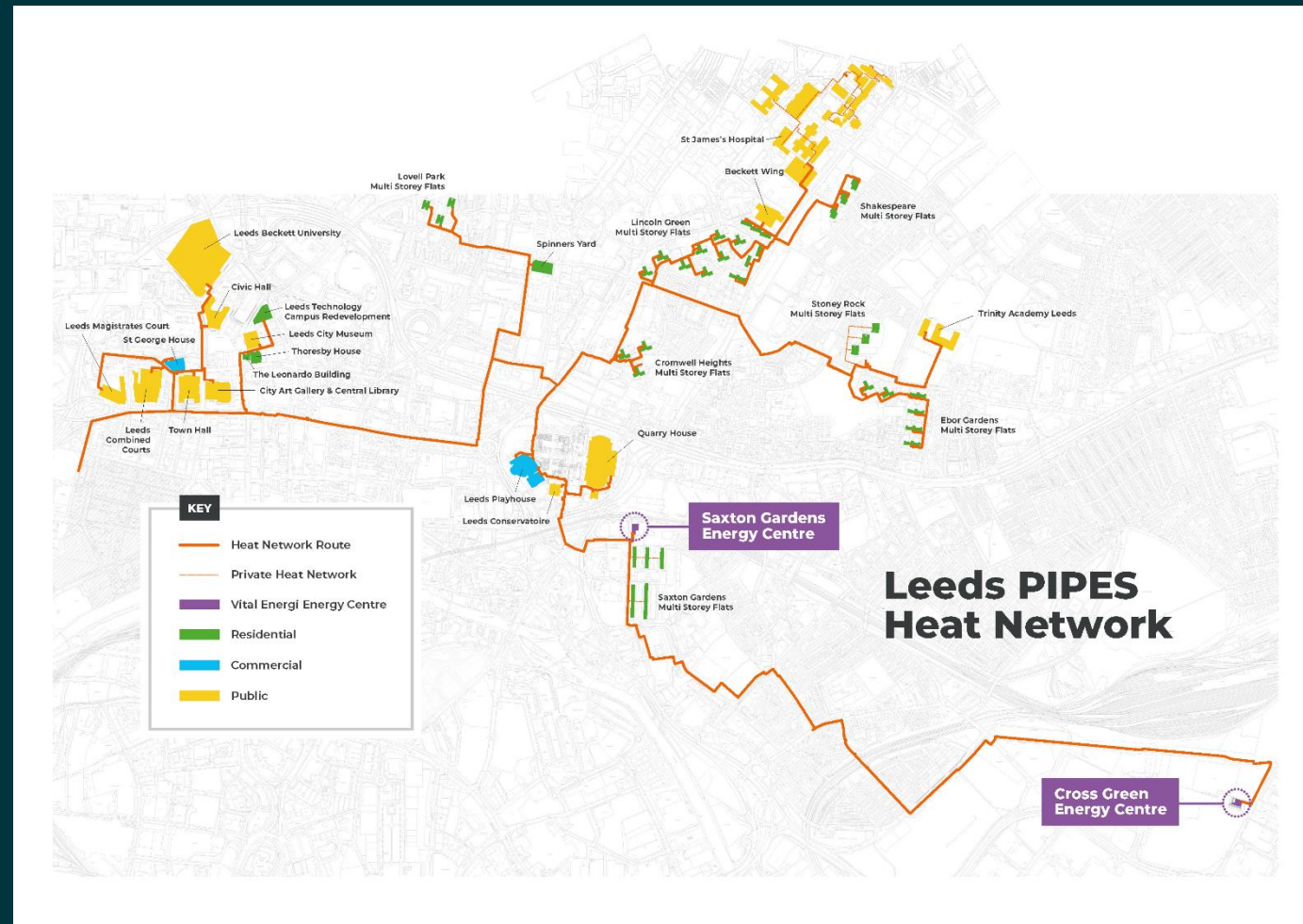
**26 GWh** Annual Heat Demand

**1800** Flats

**1,905 tCO<sub>2</sub>e** Carbon Saving

**c. £ 54m** CAPEX

**c. 18 km** Pipework Length



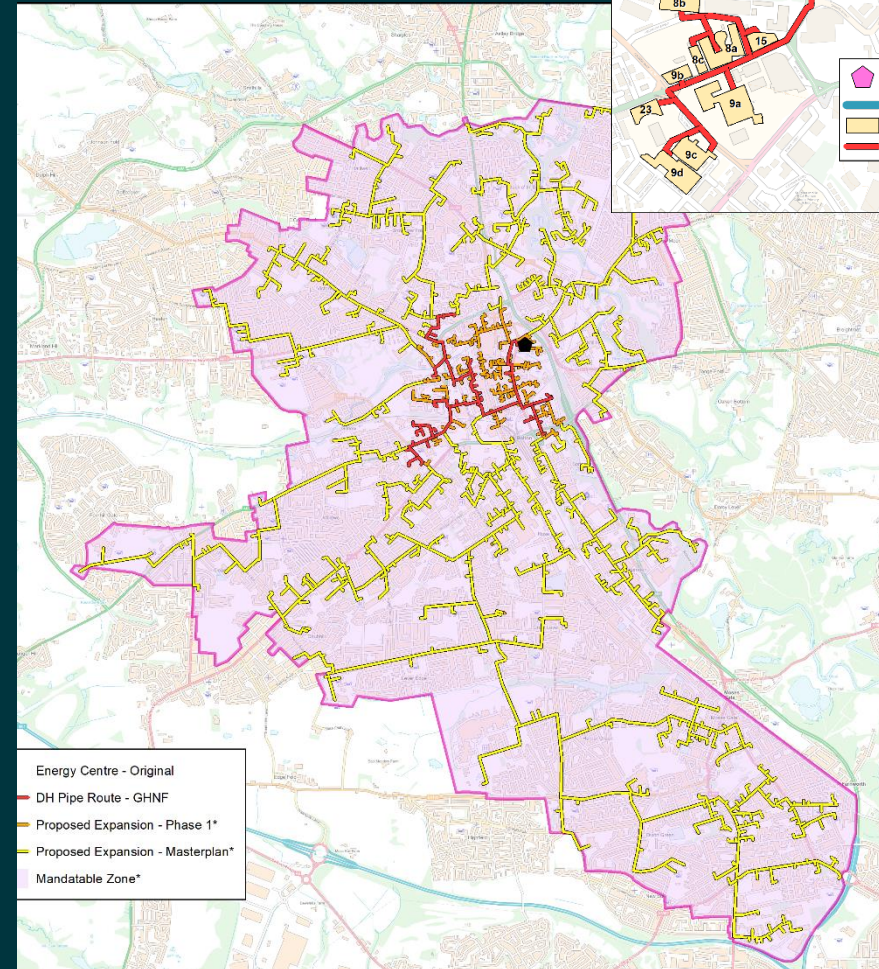
# Example – Bolton Heat Network

- 3 MW sewer source heat pump (SSHP)
- 5.6 km provisional network pipe route across the town centre
- Equivalent heat supplied to 2000 homes
- Delivered by Clear Futures
- Wider Zoning potential

**33 GWh** Annual Heat Demand

**20** Buildings

**1.9M T** Carbon Saving over 40 years

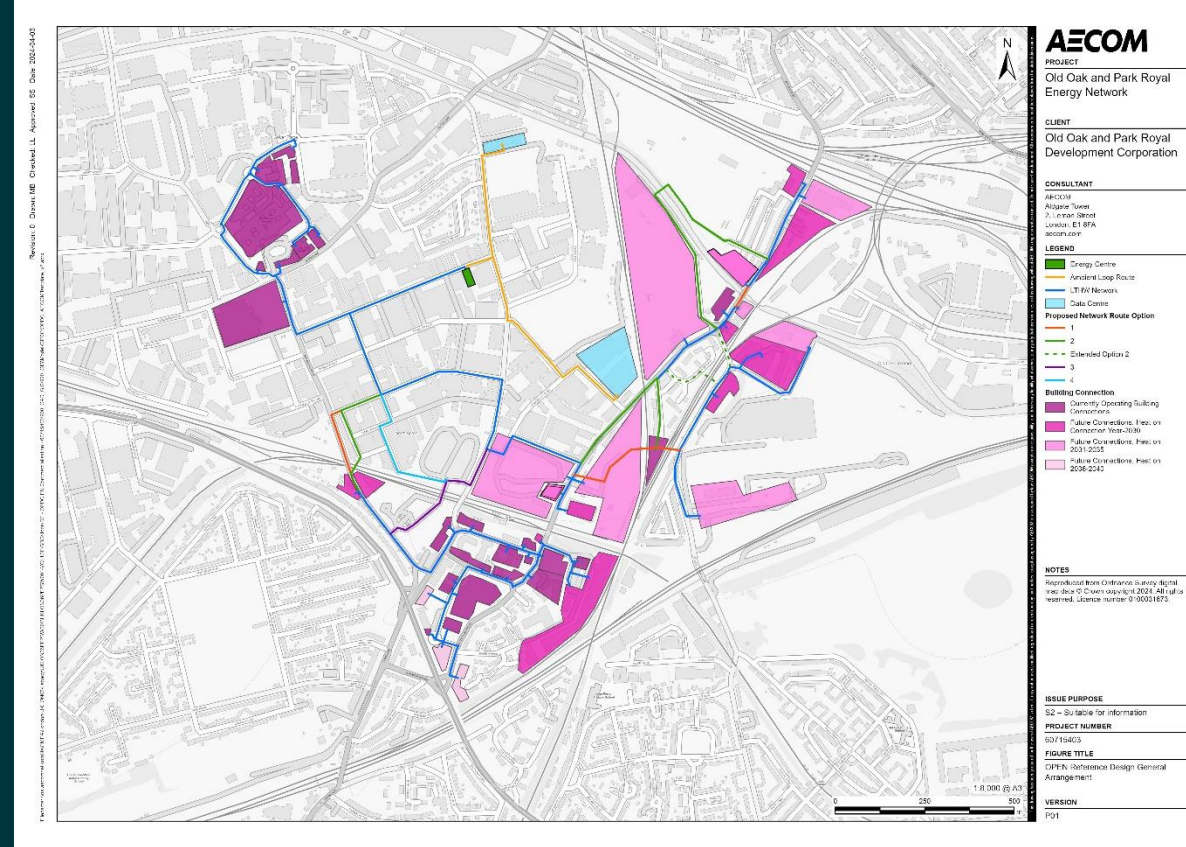


# Example – Old Oak Common (OPEN) Heat Network

- Opportunity for low carbon heat to over 13,000 homes, a hospital and several major existing buildings.
- Network of 11km of Pipework
- Reduces the electrical impact on the grid from redevelopment.

**90 GWh** Annual Heat Demand

**13,000** Homes



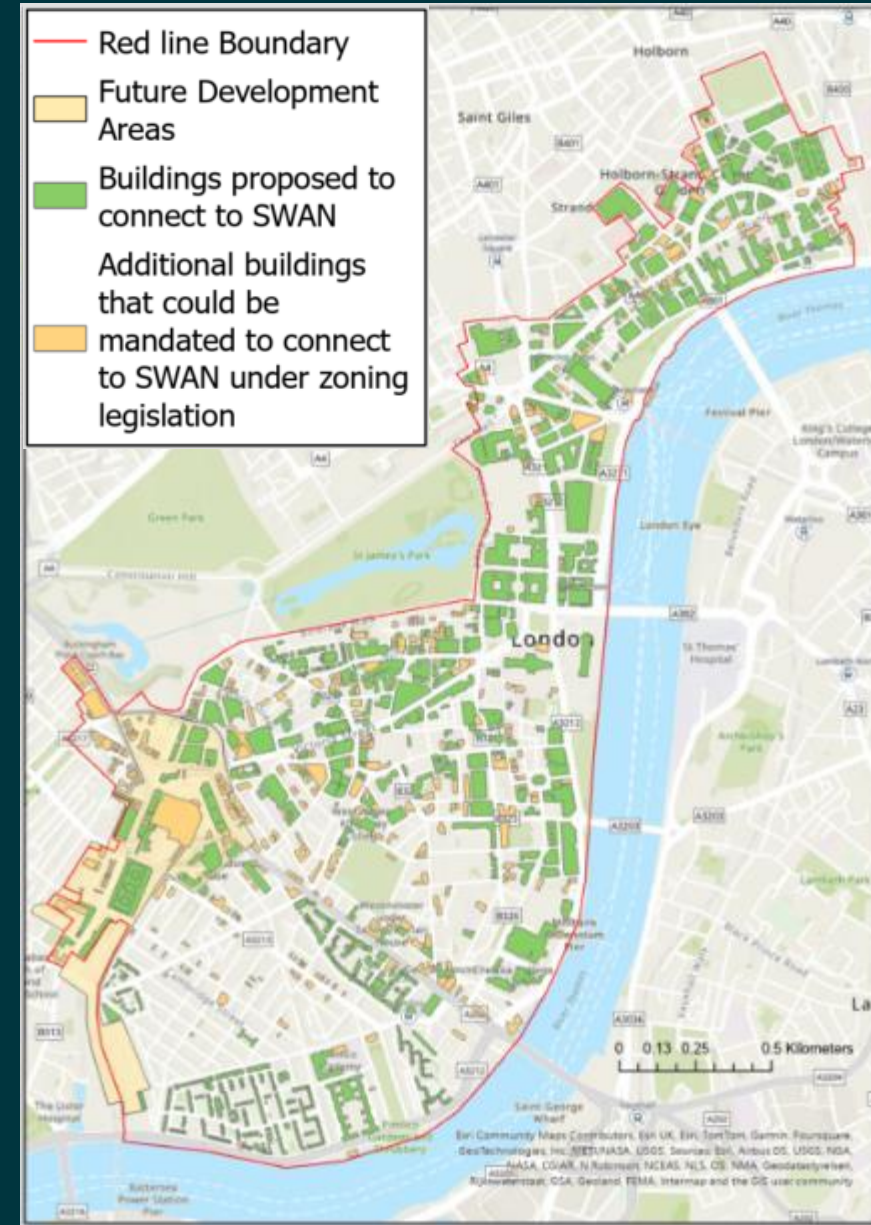
# Example – Westminster Heat Network

- Significantly large demand underpinned by a strong public sector presence
- Four existing heat networks connected together
- Taking heat from the river, sewer and London Underground
- Approximately 23km of pipe at 80/60°C network operating temperatures
- 60% saving in grid capacity compared to each building putting in their own ASHP

**400 GWh** Annual Heat Demand

**1,000** Buildings

**75,000 T** Carbon Saving

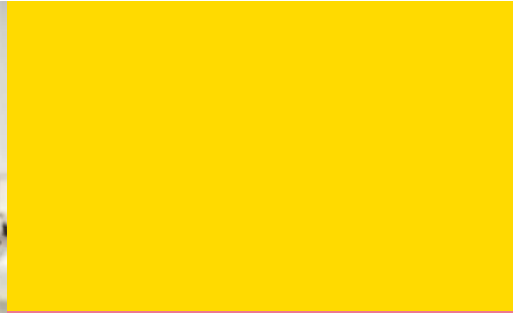


**AECOM** Delivering a  
better world



Q&A:

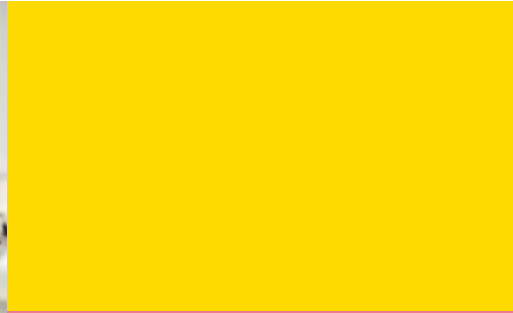
Liz Warren  
Channa Karunaratne



We are in the break - starts again soon

Host: Sam Moore, SWNZH

5i Heat Network Project  
Implementing



# ES Catapult: Heat Networks Guide

Matt Caville  
Senior Advisor - Decarbonisation of  
Complex Sites



# Heat Networks Guide and the Public Sector Decarbonisation Guidance

**CATAPULT**  
Energy Systems

Accelerate Net Zero  
energy innovation

**Matt Caville**  
Senior Advisor



Decarbonisation of Complex Sites

19 November 2024



## Covered today

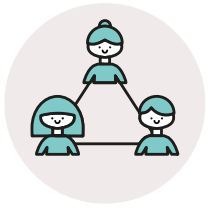
1. Introduction to Energy Systems Catapult
2. Guidance for the public sector
3. Heat networks guide
4. Guidance in the pipeline



# Energy Systems Catapult

## Who we are

We help energy innovators to transform great ideas into valuable products and services

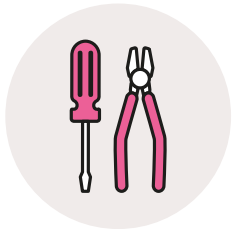


Independent  
Not for Profit

We work with  
Innovate UK

Established by  
Innovate UK

## What we do



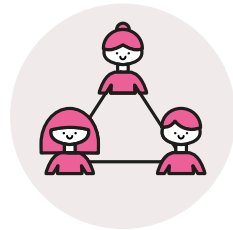
Technical capabilities, equipment, and other resources



Open up opportunities for innovators, in the UK and globally



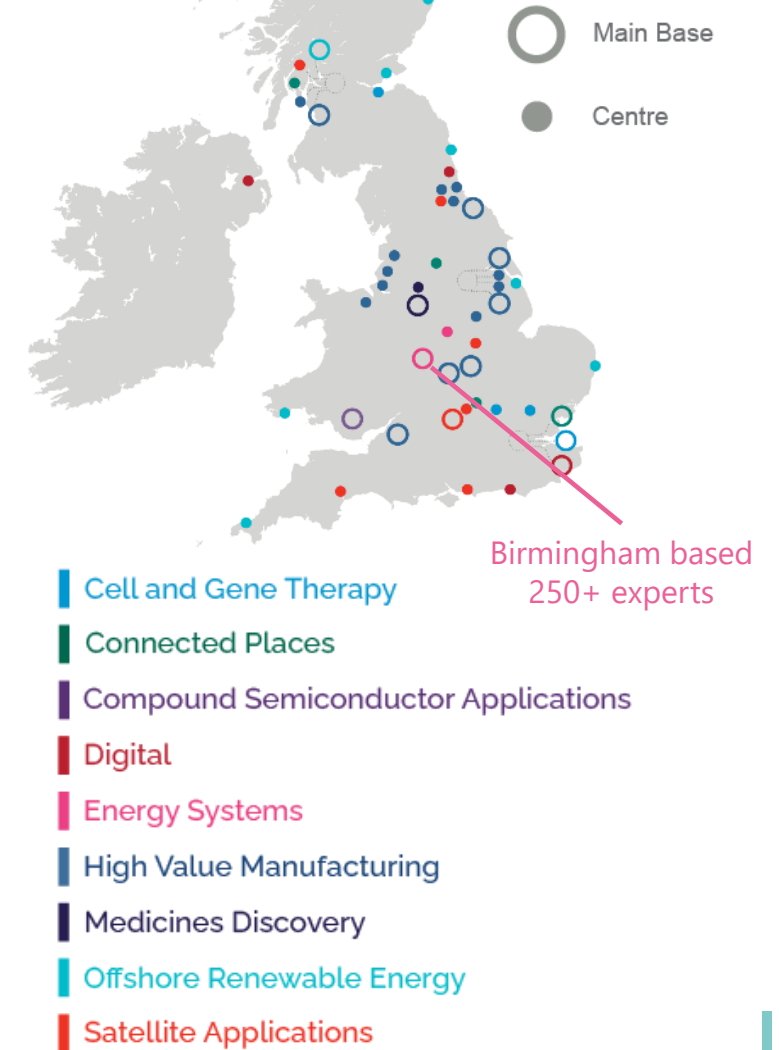
Solve key problems and develop new products and services



Bridge the gap between stakeholders in the sector

**CATAPULT**  
Energy Systems

Part of a national  
Catapult network...



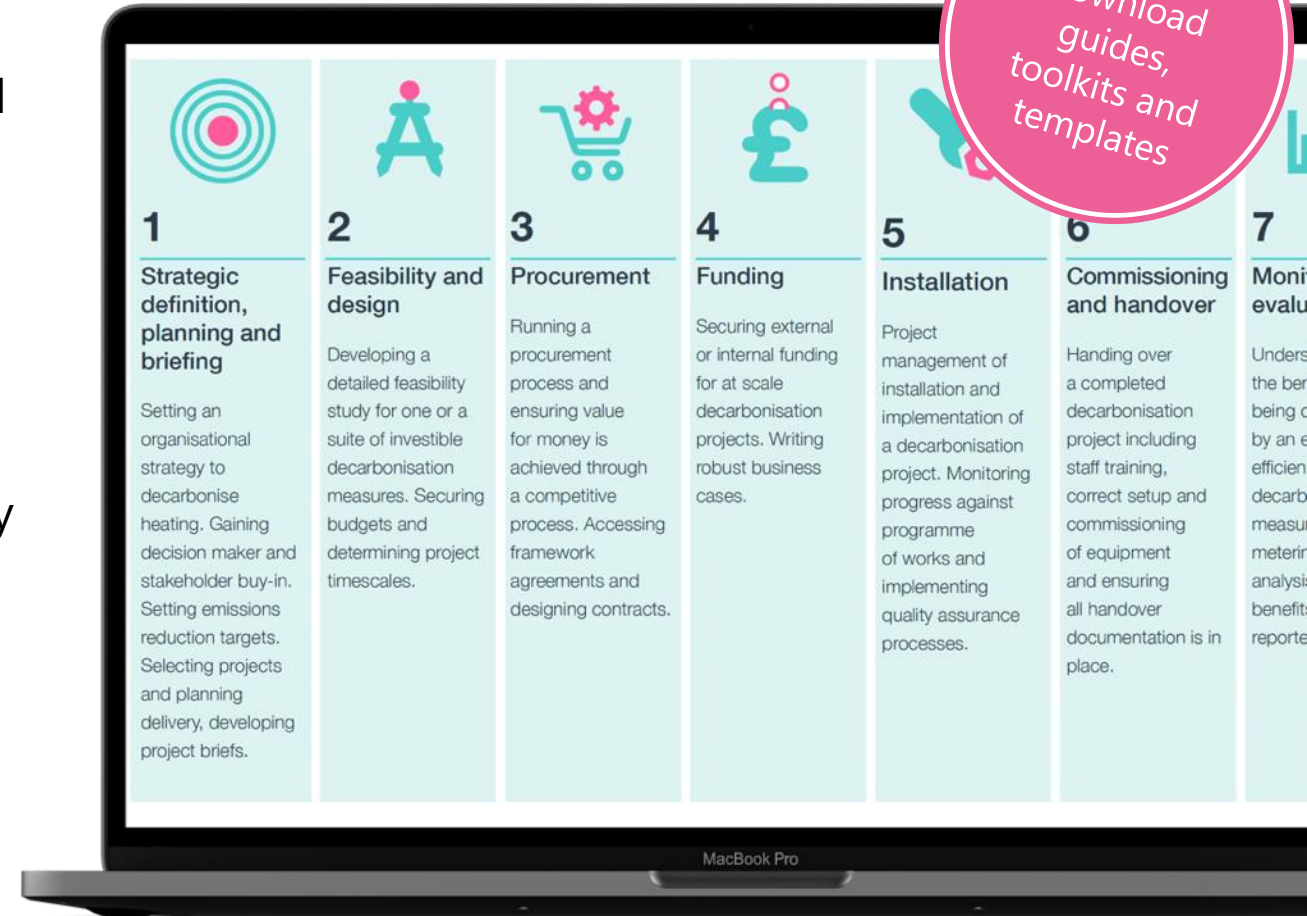
# Public Sector Decarbonisation Guidance

Download the guides for free here:



- **Plan:** Step-by-step framework
- **Government-backed:** funded by DESNZ and supports Public Sector Decarbonisation Scheme and Low Carbon Skills Fund.
- **Deliver:** Practical tools, guides, calculators; free outputs
- **Access:** Open resource – no login needed and free.
- **Scale:** Consistent, cost-effective, proven approaches
- **Tested:** Based on the award-winning Modern Energy Partners programme.
- **Upskill:** Ultimate resource hub for estates decarbonisation. All in one place.
- Developed with UK government and industry.


45+ free to  
download  
guides,  
toolkits and  
templates



# Helpful Public Sector Decarbonisation Guides

Department for Energy Security & Net Zero | Cabinet Office | Government Property Function | **CATAPULT** Energy Systems


### Heat networks guide



Public Sector Decarbonisation Guidance

Department for Energy Security & Net Zero | Cabinet Office | Government Property Function | **CATAPULT** Energy Systems

### Heat Pumps: Which one is right for your site and what else to consider alongside




This guide covers the types of **heat pumps** suitable for **non-domestic applications**, feasibility considerations and complementary technologies to improve system efficiencies. Examples of alternative electric heating solutions are also provided.

Public Sector Decarbonisation Guidance

Department for Energy Security & Net Zero | Cabinet Office | Government Property Function | **CATAPULT** Energy Systems

### Developing and delivering your strategy: What could decarbonisation look like for you ?



This guide supports public sector organisations to **develop their decarbonisation strategy** and programme with the aim of reducing energy demand and eliminating fossil fuels **across your estate**.

Public Sector Decarbonisation Guidance

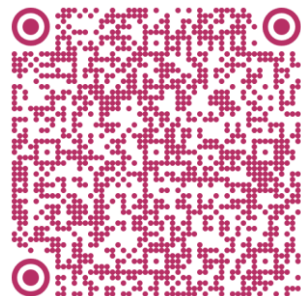
This document is marked as confidential

Department for Energy Security & Net Zero | Cabinet Office | Government Property Function | **CATAPULT** Energy Systems

### Funding: What do the numbers mean?

This guide provides a breakdown of the **typical types of numbers** that are considered best practice to generate as part of your decarbonisation programme and an **easy guide on how to interpret them**. This will help with getting business cases signed off and applying for Salix Public Sector Decarbonisation Scheme (PSDS) funding.

Public Sector Decarbonisation Guidance





# Heat network guide for the public sector

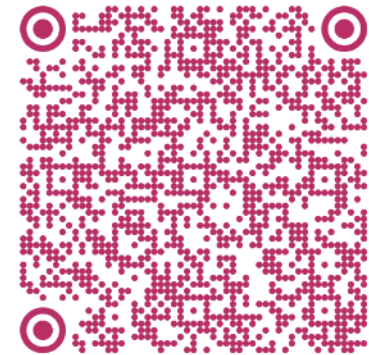
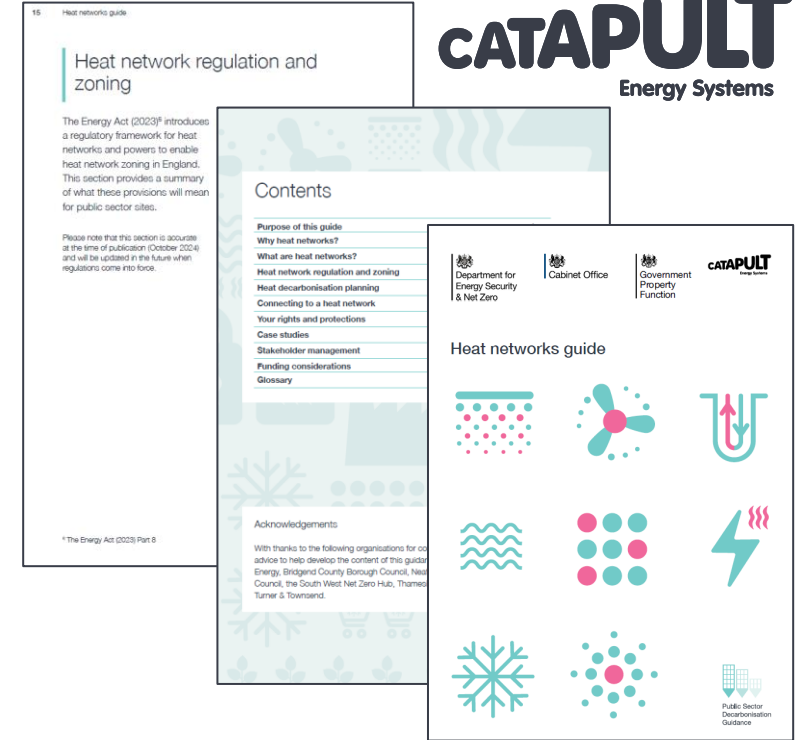
This is a non-technical guide on heat networks for public sector organisations looking to connect their buildings to existing or planned heat networks.

The guide covers:

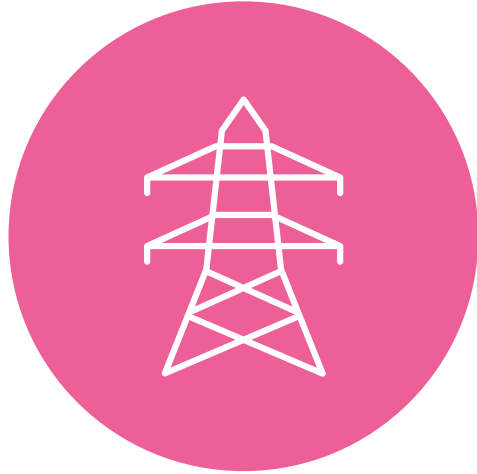
- Benefits of connecting to heat networks.
- How heat networks work.
- Heat network zoning
- Heat decarbonisation planning with heat networks.
- Steps to connect to a heat network.
- Consumer rights and protections.
- Stakeholder management.
- Funding opportunities.

The guide complements and signposts to an extensive array of existing technical guides that provide detailed information on the planning, design, and technical considerations for heat networks.

We're always looking for feedback on existing material and ideas for new content.



Visit our PSDG website and download the guide here.



## Energy flexibility and storage

Covering flexibility products and markets, and the types of storage technologies, how they apply to public sector sites.

**Coming December**



## How to treat technologies

Update of one of our existing guides helping you understand the technologies available and support you in evaluating technology options for site decarbonisation

**Coming December**



## Detailed design

Guidance outlining the expected deliverables from a detailed design, why design is important, how to engage with a contractor, and procure support and services.

**Coming December**

# Questions?

## Matt Caville

Senior Advisor – Decarbonisation of Complex Sites

[matt.caville@es.catapult.org.uk](mailto:matt.caville@es.catapult.org.uk)



**Download the heat  
networks guide today!**

es.catapult.org.uk

Follow us on socials  

# ES Catapult

Jim Lott  
Net Zero Go Content Manager



## Net Zero Go

---

Jim Lott – Knowledge manager

19 Nov 2024





*The “one stop shop”  
saving you time &  
effort in delivering  
local net zero projects.*

Net Zero Go is a digital platform to help local authorities accelerate their net zero projects

It brings together the knowledge, the tools and the people needed to:

- Increase Capacity
- Increase Capability
- Increase Collaboration

.....In order to deliver net zero projects faster

# Accelerating the delivery of net zero projects

Net Zero Go will accelerate the delivery of local net zero projects by



Being the one stop shop for local net zero energy projects

- Working with, and signposting others' work;
- identifying gaps, reducing overlap & simplifying the landscape



Building **capability** of Local Authority officers & their support teams

- Providing targeted knowledge articles, case studies, guides in the Net Zero Library
- Providing support from experts & peers through Net Zero Support
- Building on knowledge from other programmes & alignment with other platforms



Building **capacity** of Local Authority officers & their support teams

- Provision of targeted templates, tools & step by step structure in Net Zero Projects
- Enabling Hubs to do more by sharing and aligning tools & templates



Foster an environment of **collaboration** by

- Supporting & encouraging peer to peer learning & sharing

## Local Electric Vehicle Infrastructure (LEVI) funding amounts



The Department for Transport (DfT) has announced that following the Local EV Infrastructure (LEVI) Pilot, a further £343 million capital and £37.8 million resource funding will be available over the next 2 financial years through the LEVI Fund.

The LEVI Fund is being allocated to Tier 1 local authorities in England. DfT has developed funding allocations. This funding is dependent on suitable plans being agreed by DfT.

Local authorities will be able to apply for funding up to these allocations. The allocations are derived using an allocation model developed by DfT, which evaluates the degree of need and progress within areas.

LEVI recipients had a short opportunity to raise any questions about their allocation amounts. This closed on the 14 April and there was one response. There are no changes to the allocation amounts as a result of this response. However, the described allocation methodology has been updated to show that the chargepoints per 100,000 of population variable is inversely weighted. Areas with a lower chargepoint density received a higher characteristic score.

[Read the full list of capital allocations](#)

[Read the full list of capability allocations](#)

Manage My Projects

Browse Knowledge Library

Browse Case Studies

Visit the Forum

[Action Plan](#) [Upcoming events](#) [Other actions](#)

Based on what you have told us, these are sections of Net Zero Go we recommend you start with.

[Update your action plan](#)

### Funding

- Use our guide to building better Public Sector Decarbonisation Scheme applications

[PSDS Guide](#)

### Groups

- A group for Net Zero Go members that are interested in sharing knowledge, experience and best practice resources about retrofit projects.

[Retrofit Projects Group](#)

Your interests
Final details

Help us give you relevant material, by telling us which projects you're interested in and your current experience level:

1. Foundation **1** | 2. Advanced **0** | 3. Expert **0**

**Building decarbonisation**

Select All

<input checked="" type="checkbox"/> Domestic retrofit measures	Foundation	Expert
<input checked="" type="checkbox"/> Non-Domestic Energy efficiency	<input type="range" value="1"/>	1
<input type="checkbox"/> New residential developments	<input type="range" value="1"/>	1
<input type="checkbox"/> New commercial developments	<input type="range" value="1"/>	1

**Strategy development**

Select All

<input checked="" type="checkbox"/> Climate Emergency Declaration and Action Plan Development	Foundation	Expert
<input checked="" type="checkbox"/> Local Decarbonisation Planning	<input type="range" value="1"/>	1
<input checked="" type="checkbox"/> Strategy Development	<input type="range" value="1"/>	1
<input type="checkbox"/> Policy Development and Implementation	<input type="range" value="1"/>	1
<input type="checkbox"/> Carbon Offsetting	<input type="range" value="1"/>	1

**Transport decarbonisation**

Select All

<input checked="" type="checkbox"/> EV Infrastructure	Foundation	Expert
<input checked="" type="checkbox"/> Fleet decarbonisation	<input type="range" value="1"/>	1
<input type="checkbox"/> Transport policy	<input type="range" value="1"/>	1

**Infrastructure and connecting systems**

Select All

<input type="checkbox"/> Smart Local Energy Systems	Foundation	Expert
<input checked="" type="checkbox"/> Heat networks	<input type="range" value="1"/>	1
<input type="checkbox"/> Network Innovation	<input type="range" value="1"/>	1
<input type="checkbox"/> Hydrogen Networks and infrastructure	<input type="range" value="1"/>	1

**Renewable energy generation and storage**

**Industrial Decarbonisation**





## Real world examples with deep information

### Case Studies & Templates

Browse the examples below, or use the search bar above to view information about real-world projects, in various stages of development.

Use these resources to provide an evidence base for your project's business case. Or, check the templates below as sector-best templates to provide a starting point.

[NZG Case Studies](#) [Case Study Map](#) [Other Case study libraries](#) [Templates](#) [EnergyREV Case study map](#)



**Case Study Energise Barnsley** + Follow

Organisation: Region: Case Study provided by:

**# Topics (4)**

[Municipal Bond](#) [Solar PV](#) [Battery Storage](#) [Peer to Peer Trading](#) [Case Studies](#) [Community Energy](#)

Summary [Project Partners](#) [Benefits](#) [Components](#) [Financial](#) [Risk, Lessons and Impacts](#)

**Financial Sources (4)**

NAME	TYPE	NARRATIVE	VALUE (£)
Retail Bond	Municipal Green Bond	Investors in the five year bond have received three years of interest to date of 5% per annum. The bond, dubbed the 'Barnsley Solar Bond', raised the £800,000 target in under three months over the summer of 2016, allowing local residents to invest in the scheme to benefit from the returns. Local ownership in the community bond is in excess of 60%.	800,000
Charity Bank	Private Sector Loan		1,200,000
Ignite	Risk mitigation/ Guarantee	2000000 underwriting facility	
Northern Powergrid	Grant	The full cost of the storage solutions was funded by local DNO Northern Powergrid through the NIC. Total cost of the project was circa £250,000 to cover the two year lifetime costs of all project participants and hardware.	250,000

**Financial Model (1)**

NARRATIVE	BUDGET	CAPEX	OPEX	REVENUE	PAYBACK	IRR
In terms of revenue streams, the project has shown a continuing growth in overall earnings, and despite a slight fall in generation levels from 2015-16 to 2018-19 of 1.21% for both residential and commercial arrays, revenue from power generation rose by 5.08% overall. PPA offerings are generating 2.68% higher revenue as well according to the 2018 Directors Report.		£2,630,870				



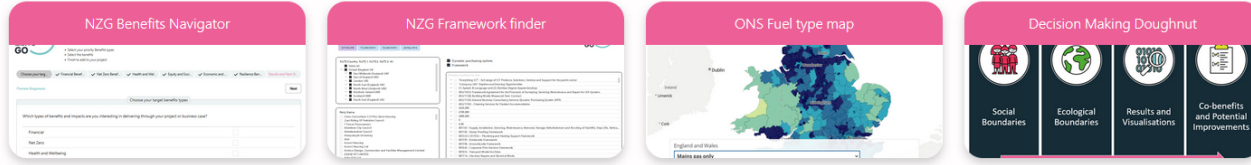
# Net Zero Library – Tools and Templates



## Best Practice Tools and templates from across the sector

### Featured Tools

Net Zero Go has a series of tools that allow you to find information and create data for your project or business case.



Net Zero Go tools [External Tools](#)

### External Tools

There are a wide range of tools and toolkits available from providers across the local energy project sector. We have identified some here. You can navigate to tools for specific subjects via [topics pages](#)

<p><b>Anthesis</b></p> <p><b>SCATTER</b></p> <p>SCATTER is a local authority focussed emissions tool, built to help create low-carbon local authorities.</p>	<p><b>Ashden</b></p> <p><b>Climate Action Co-Benefits Toolkit</b></p> <p>The toolkit supports local authorities and others on their climate change ambitions. It demonstrates how action on climate change can deliver many local benefits, including improved health, increased equity and social cohesion, economic opportunities and increased resilience.</p>	<p><b>Carbon Trust</b></p> <p><b>Energy benchmark tool</b></p> <p>The benchmark tool has been designed to help UK based small and medium sized businesses (SMEs) assess the typical energy use in their sector.</p>	<p><b>Carbon Trust</b></p> <p><b>Biomass decision support tool</b></p> <p>The biomass system decision support tool will help you assess the most cost effective size and integration approach for a biomass heating system at a particular site based on the site's heating requirements and spatial considerations.</p>
<p><b>Carbon Trust</b></p> <p><b>SME Carbon Footprint Calculator</b></p> <p>The Carbon Footprint Calculator has been designed to help UK based SMEs measure their corporate emission footprint following GHG Protocol Guidance, including direct emissions from fuel and processes (Scope 1 emissions) and those emissions from purchased electricity (or Scope 2 emissions) for the assets they operate.</p>	<p><b>Carbon Trust</b></p> <p><b>Lighting business case tool</b></p> <p>The Lighting Business Case Tool has been designed to help UK based SMEs assess the potential for investing in more energy efficient solutions.</p>	<p><b>Carbon Trust</b></p> <p><b>Fleet upgrade tool</b></p> <p>Helps UK based small businesses manage and report their company's energy consumption and carbon emissions, and assess the opportunities available for upgrading their (leased) vehicle fleet.</p>	<p><b>Centre for Sustainable Energy</b></p> <p><b>Affordable warmth &amp; health impact evaluation toolkit</b></p> <p>The aim of this toolkit is to make evaluation of the health and wellbeing impacts of affordable warmth schemes easier and more effective</p>

**This article has files attached. Download from the files box on the right hand side of the page**

**Strategic Outline Case (SOC) Generic Project Template**

The purpose of this document is to provide a template for a council to draft a Strategic Outline Case (SOC). This template is based upon the HM Treasury Green Book Five Case Model and seeks to follow and build upon the Better Business Cases Guidance.

It aims to provide a framework for structured 'thinking' and assurance so that a project:

- provides strategic fit and is supported by a compelling case for change;
- will maximise public value;
- is commercially viable and attractive to the supply side;
- is affordable and fundable over time; and
- can be delivered successfully by the organisation and its partners.

The purpose of the SOC is to establish the case for change and to provide a preferred way forward for senior management's approval prior to going onto the more detailed planning stage. Completing the SOC includes:

- making the case for change;
- agreeing the strategic context;
- determining the objectives, existing arrangements and business needs;
- determining the potential scope of the project;
- determining the project benefits, risks, constraints and dependencies;
- exploring the preferred way forward;
- agreeing the critical success factors (CSFs);
- determining and appraising the long list options;
- recommending a preferred way forward; and

[Develop Business Case \(Strategic Outline Case\)](#) [template](#)

**LOCAL PARTNERSHIPS**  
Provided by Local Partnerships

**Links**  
Based on: [The Green Book \(2022\) - GOV.UK \(www.gov.uk\)](#)  
[SOC Generic Local Energy\\_WITH GUIDANCE v1.0](#)  
[Download docx \(0.3 MB\)](#)

**This article has files attached. Download from the files box on the right hand side of the page**

**Decision Making Doughnut**

This self-assessment framework has been developed following the theory of Doughnut Economics. Doughnut Economics takes into account the social and ecological impact of human activities while developing strategic aims or projects or programmes.

In answering the questions included in each subsection, the user will need to engage with internal stakeholders spread across their organisation, stimulating a discussion on the social and environmental impact of a specific project.

As an outcome, the user will be able to communicate to internal and external stakeholders the social and ecological benefits of the project, as well as its risks.

**NET ZERO GO**  
Provided by Net Zero Go

**Links**  
[NZG Decision-making tool](#)  
[Download docx \(4.3 MB\)](#)

**Was this article helpful?**  Yes  No

**Recommended Articles**

## Build your skills for different local energy & Net Zero projects

### Featured Tools

Net Zero Go has a series of tools that allow you to find information and create data for your project or business case.



Net Zero Go tools [External Tools](#)

### External Tools

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Home > Learn > Programme Introduction to Solar PV

### Introduction to Solar PV

What you need to know to understand the basics of solar generation. (30 mins)

7/8

**Solar Overview**

What is solar energy and how can we use it?

Completed

**Benefits of Solar Projects**

This module explores the benefits of solar PV projects using the Net Zero Go benefits framework.

Completed

**PV Technology**

This module covers the basic terminology and technology for solar PV.

Launch

**Your Role in Developing Projects**

Local authorities can have a number of roles in local energy projects.

Completed

# Net Zero Support – Forums, events and expert sessions

Share your experiences, ask questions and find out who else is on your journey

## Featured Groups



### Net Zero Go User Support

The Net Zero Go User Support group is a place to contact NZG team if you have any questions or queries regarding the Net Zero Go platform, features, functions or resources.



### Heat Projects Group

A group for Net Zero Go members that are interested in sharing knowledge, experience and best practice resources about heat decarbonisation projects.



### Building a Business Case

This is a group to facilitate discussion around building a business case using Net Zero Go and a place to access all of the beginners guides and resources you need, for the fundamentals of Net Zero Go.



### Jim Lott ( Net Zero Go)

Net Zero Go

Name

Jim Lott

Nickname

Jim Lott ( Net Zero Go)

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About Me

I am the content and training manager for Net Zero Go.

Edit

1 (1 point)

PUBLIC

**Building a Business Case**

Member Weekly Digest

Manage Notifications

Post

Poll

Question

Share an update... Share

Sort by: Latest Posts

**Jack McNaugher ( Net Zero Go team) (Employee)**  
29 June 2023 at 15:08

Strategic and Commercial Dimensions for Developing Local Energy Project Business Cases | Net Zero Go

Video from today's webinar: <https://www.youtube.com/watch?v=K-wF4dxZE-4>



Strategic and Commercial Dimensions for Developing Local Energy Proj...

00:00:00 Introduction and Welcome - Guy Newey, Energy Systems Catapult

<https://www.youtube.com/watch?v=K-wF4dxZE-4>

## Net Zero Go: Building the Business Case for EV Infrastructure in Local Authorities

### UK Local Authority Quarterly Webinar

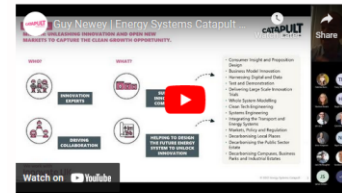
31st January 2023

On the 19th January 2023, we ran our Net Zero Go UK LA Quarterly Webinar. We had 145 people attend from a variety of UK Local Authorities, our partner organisations, academic institutions, professional organisations within the energy sector and Government departments. Please find a summary of the event below in addition to the post-event resources and a link to our new Electric Vehicle Infrastructure Community Forum via the Net Zero Go platform.

#### Event Summary

Guy Newey, CEO at ESC, chaired our latest Net Zero Go event, bringing together fund providers, local authorities and supporting organisations to highlight some of the key opportunities and considerations for local authorities interested in developing EV infrastructure business cases and funding applications.

Our UK Local Authority Quarterly Webinar took place on the 19th January 2023 and was chaired by the Energy Systems Catapult CEO – Guy Newey, brought together UK Local Authorities, delivery partners, and funders, to explore how to develop successful business case to decarbonise transport in local areas.



We asked the audience what their main challenges were that they had faced, with the clear majority stating grid connections as one of the most difficult areas. Tracy Millmore, Senior Electric Vehicle Project Officer from Durham County Council reiterated this in her presentation, highlighting how the difference in connection costs can massively impact the viability of a project, which has led them to develop a new approach as part of the LEVI pilot scheme – [find out more from her talk by viewing presentation slides 41-42 here.](#)



## Your Organisations



Refer a Partner

PRIVATE

[+ Ask to Join](#)

**Ask the Expert | LIVE Q&A Session**

How can we help each other through Net Zero Go?

Case studies

Lessons


Challenges and solutions

Answering questions

Templates and examples

Feasibility studies and business models

- Heat forum - Questions and sharing
- Heat network topic
- Case studies
- Business models guide – Heat networks

 **Sam Moore ( South West Net Zero Hub )**  
25 October 2024 at 14:04

For info: Heat Network Zone pilots launched in Leeds, Plymouth, Bristol, Stockport, Sheffield, and London <https://www.gov.uk/government/news/six-towns-and-cities-to-pilot-clean-heating-innovation>

Topic: Heat Network

Project Types > Infrastructure And Connecting Systems

Following | Ask a Question

**Heat Network**

A heat network – sometimes called district heating – is a distribution system of insulated pipes that takes heat from a central source and delivers it to a number of domestic or non-domestic buildings. The heat source might be a facility that provides a dedicated supply to the heat network, such as a combined heat and power plant; or heat recovered from industry and urban infrastructure, canals and rivers, or energy from waste plants.


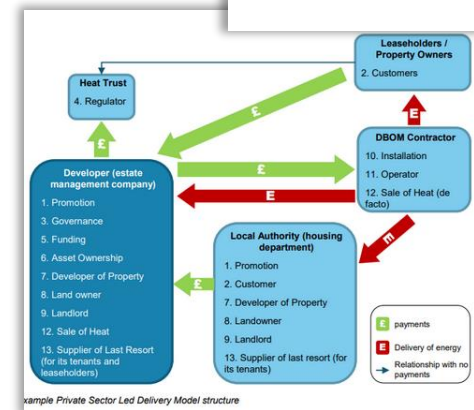
**Related Topics**

- Funding and Financing
- Green Heat Network Fund (GHNF) | Heat
- Building Decarbonisation and Retrofit
- Non-Domestic Energy Efficiency

**Upgrading Pimlico District Heat Network**

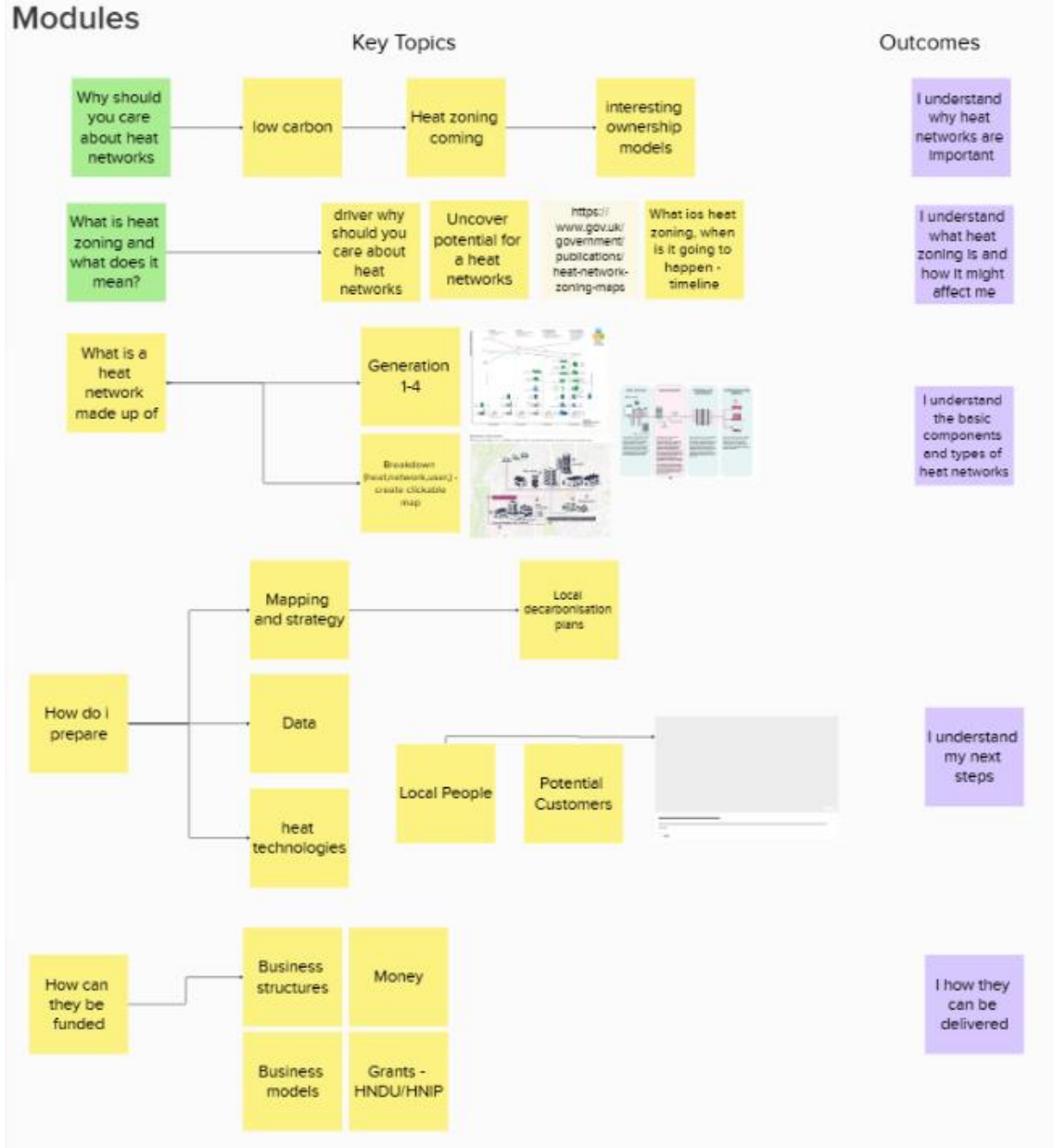
Provided by London Borough of Westminster

The Westminster City Council-owned Pimlico District Heating Undertaking (PDHU) is a heat network providing energy to over 3,200 homes and 50 business, including three schools. The PDHU is currently undertaking a feasibility review for replacement of gas-source CHP with a water source heat pump.



# Net Zero E – Learning – Current development



Get in touch if you want to help shape the e-learning

[jim.lott@netzerogo.org.uk](mailto:jim.lott@netzerogo.org.uk)

# Thanks for listening

**Jim Lott**

Knowledge manager – Net Zero Go



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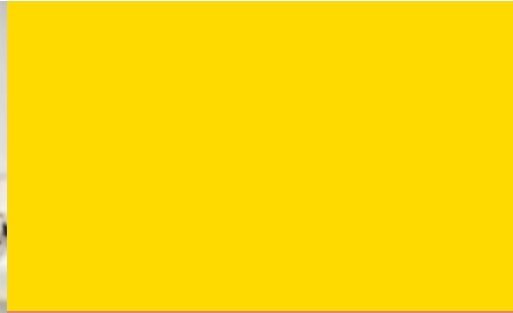
Q&A:

Matt Caville  
Jim Lott



# Panel discussion and wrap up

Liz Warren: SE2 Ltd  
Channa Karunaratne : AECOM  
Matt Caville: ES Catapult  
Jim Lott: ES Catapult  
Sam Moore: SWNZH



# And finally...

1. Thank you for your time today
2. We will be making the recording of today available on our website and on the website of other Hubs to share learning on this topic
3. Please share your feedback. Help us make these events and webinars more useful.
4. Please do consider signing up to our newsletter (every two months): [South West Net Zero Hub Newsletter](#)
5. Email: [sam.moore@WestOfEngland-CA.gov.uk](mailto:sam.moore@WestOfEngland-CA.gov.uk)