Edinburgh Update: Heat Networks and LHEES

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LHEES Office

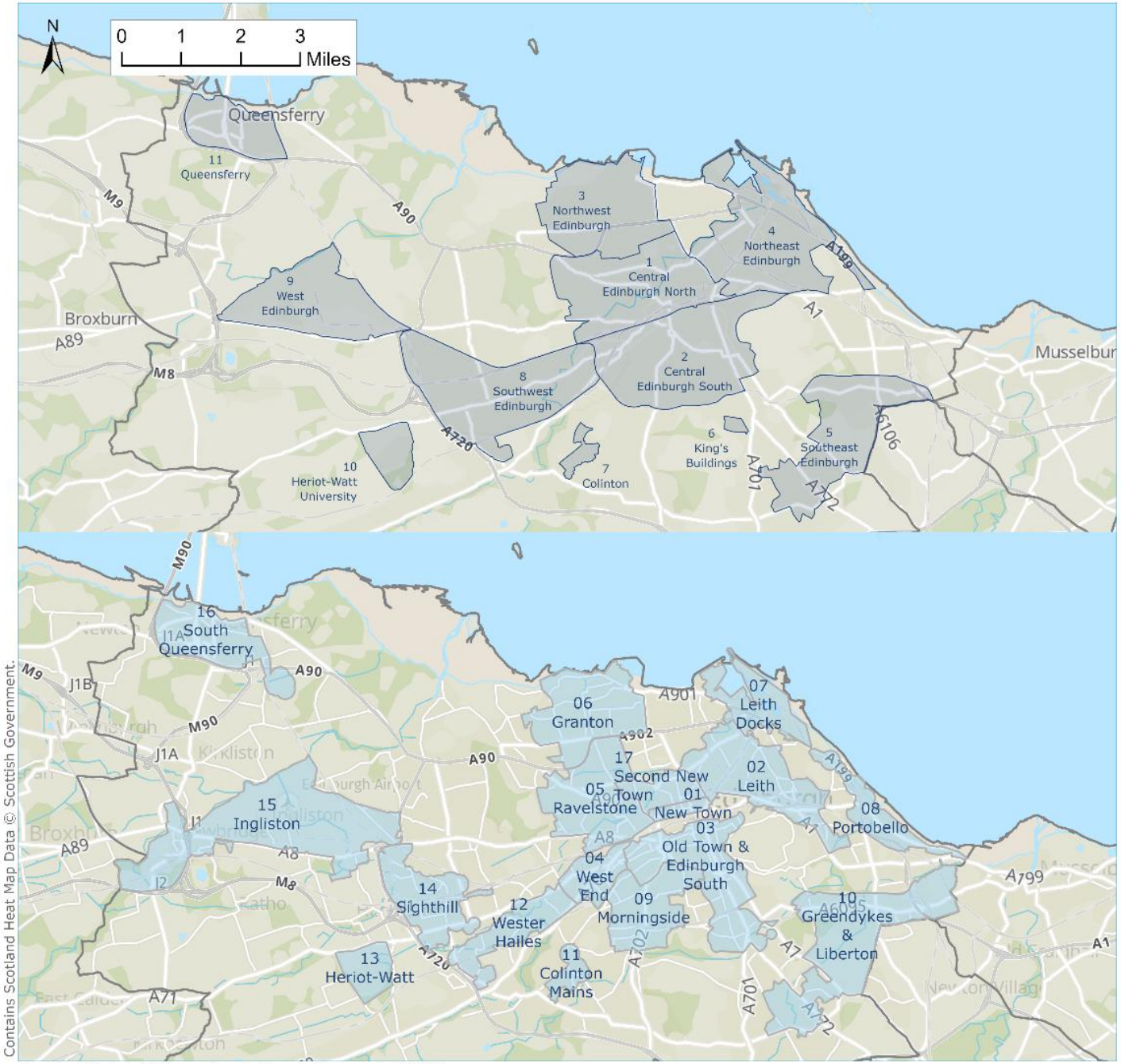
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What is an LHEES?

- A **long-term** (20-25 years) **spatial strategy** for decarbonising heat in buildings and improving energy efficiency across Edinburgh that:
  - Sets out how each segment of Edinburgh's building stock needs to change.
  - Identifies "**strategic zones**" for heat decarbonisation within Edinburgh and sets out "pathways" for reducing the emissions of buildings in each zone.
  - Prioritises areas for delivery.
- Published December 2023, followed by public consultation, with **updates after five years**.

Heat network zones

- Original zones based on **LHEES methodology**
- Result of refinement to anchor load heat demands and the shape of zones
  - Avoid major/minor constraints
  - Avoid splitting estates and properties
- 17 zones reduced to **11 zones**
- Refined zonal heat demand of **3.5 TWh**
- Refined zonal anchor load count of 515



Prospective heat network zones

Edinburgh and Lothians boundaries

LHEES prospective heat network zones

This map presents a snapshot using the most recent data available. It should be read with the limitations and assumptions provided in the report.

Figure Title:
Prospective heat network zones and LHEES prospective heat network zones

Client:
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Project:
Strategic Heat Network Analysis

Project Number: PGB0900002386

Status: Final

Version: 3

Date: 26/02/2025

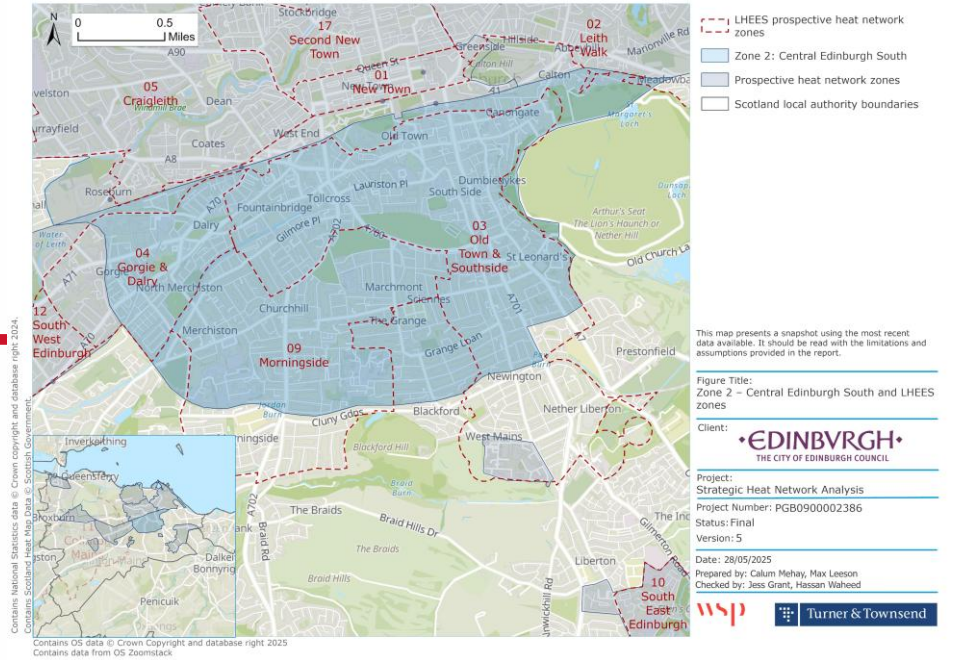
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Checked by: Jess Grant, Hassan Waheed

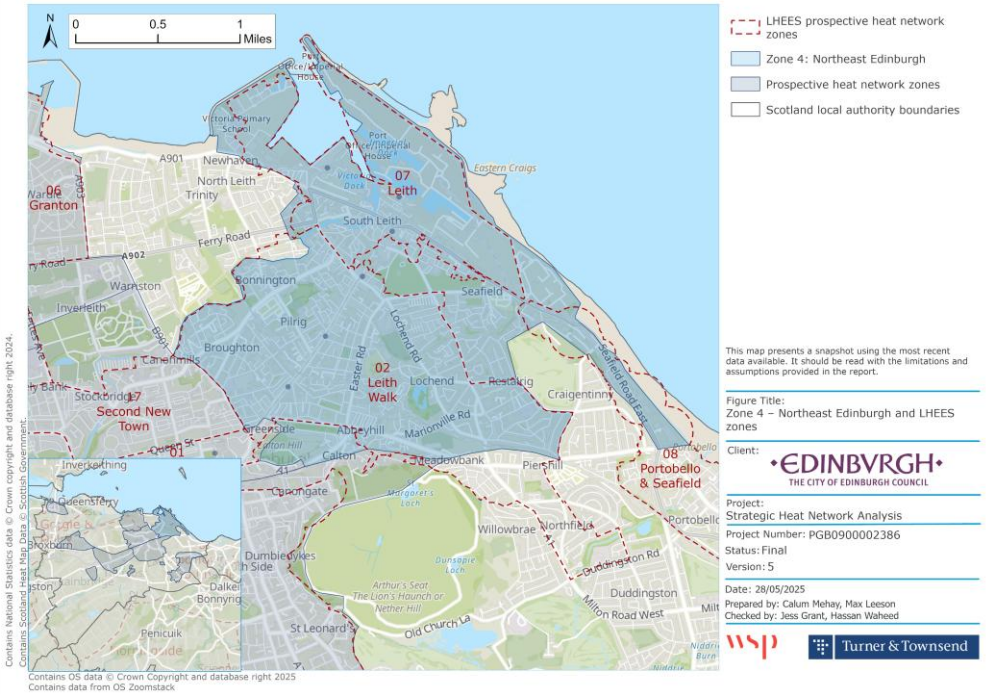
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Heat networks

- Formally **designate Heat Network Zones** in line with statutory process (pending government guidance).
- Determine optimal corporate heat network **delivery model** for the Council.
- Register Council's communal heating systems with Ofgem and **ensure regulatory compliance**.
- **Feasibility studies** – range of scale and technologies.


Inch View Care Home
Liberton Primary School
Glenallan Dr


0 0.5 Miles
LHEES prospective heat network zones
Zone 2: Central Edinburgh South
Prospective heat network zones
Scotland local authority boundaries
02 Leith Walk
17 Second New Town
01 New Town
05 Craigleith
03 Old Town & Southside
04 Gorgie & Dalry
12 South West Edinburgh
09 Morningside
10 South East Edinburgh
This map presents a snapshot using the most recent data available. It should be read with the limitations and assumptions provided in the report.
Figure Title:
Zone 2 – Central Edinburgh South and LHEES zones
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Project:
Strategic Heat Network Analysis
Project Number: PGB0900002386
Status: Final
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0 0.5 1 Miles
LHEES prospective heat network zones
Zone 4: Northeast Edinburgh
Prospective heat network zones
Scotland local authority boundaries
06 Granton
07 Leith
02 Leith Walk
17 Second New Town
01
08 Portobello & Seafield
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Figure Title:
Zone 4 – Northeast Edinburgh and LHEES zones
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Hacking Heat Networks

- Exploring options for **PPAs** with green electricity providers.
- **Partnership** – stakeholder development, relationship building.
- Investigating opportunities to participate in the **flexibility market**.
  - Modelling large thermal store
- **Co-location** conversations with small scale data centres.
- Heat source – **location, scale, assurance**.
- Understanding the options for fossil fuel use for **peaking and back-up**.

The dials

Heat demand Density Scale Certainty	**Heat source** Reliability Scale Carbon	**Proximity** Distance Geography
Trust Reputation Policy Performance	**Land** Availability Costs Risks	**Routes** Constraints Space Optimisation
Temperature Compatibility Seasonal Legal	**Electricity** Connection Costs Exposure	**Supply chain** Design Construction Operation

v2

The traps

Most heat network opportunities are not ‘dialled in’, which is often discovered too late.

No one answer, location-specific settings

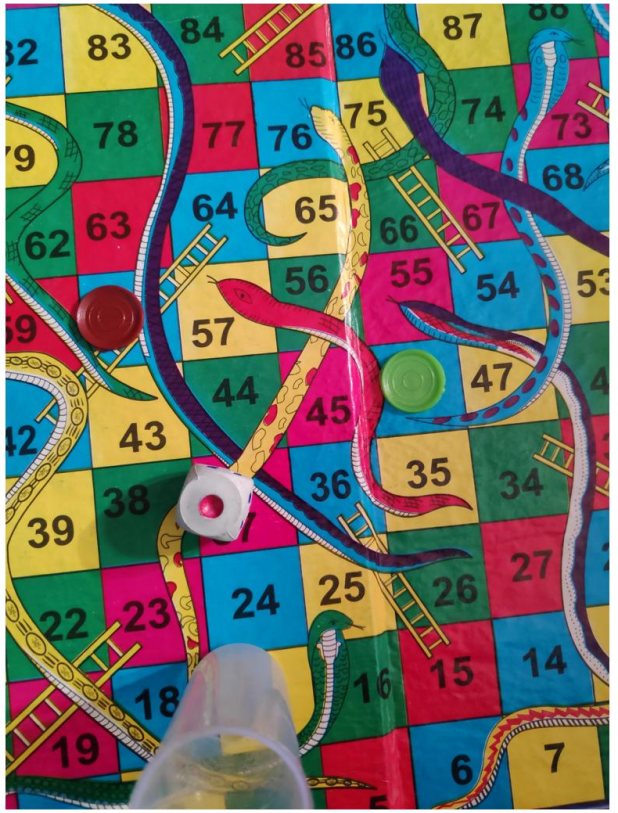


All dials impact the others

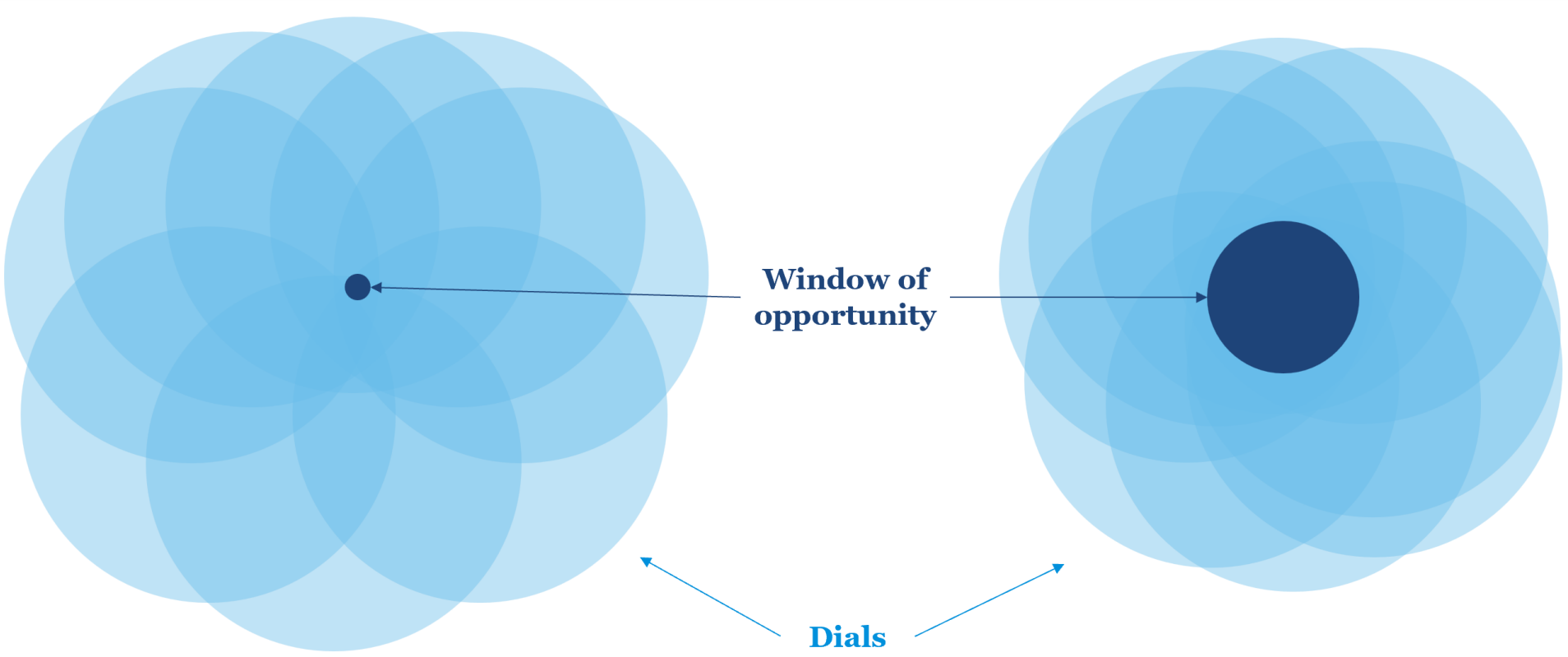


Tweak dials to open a narrow window, if any





Expanding the window



Heat network route

