Edinburgh LHEES
From Publishing to Present

Hilary Blackman

APSE Energy Summit 2024

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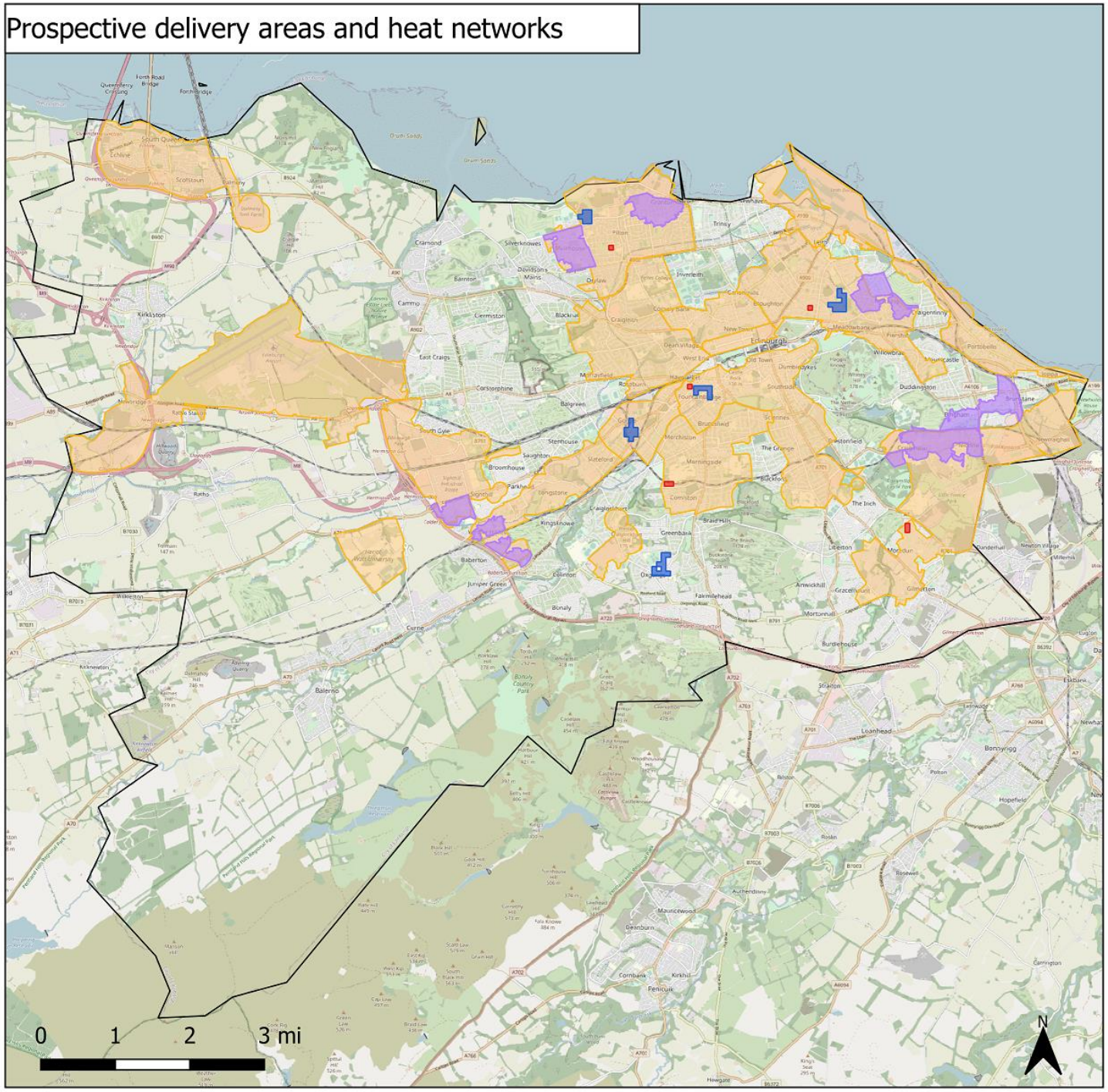
THE CITY OF EDINBURGH COUNCIL

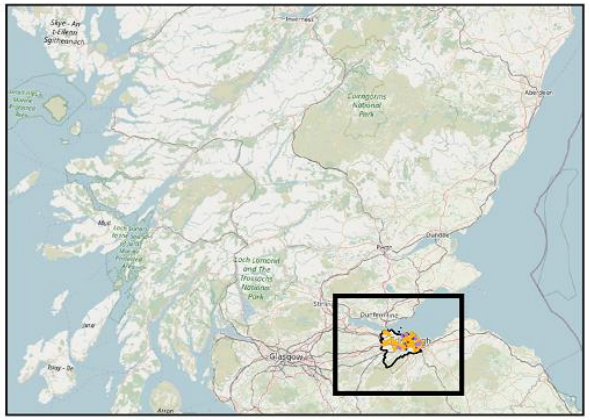
Outputs – baseline analysis

- 69% of homes in Edinburgh are flats – a far greater proportion than Scotland overall.
- Private landlords account for 21% of homes in Edinburgh – again far greater than Scotland overall.
- Around half of all homes in Edinburgh are located in mixed-tenure buildings.
- Homes in Edinburgh are significantly older than the Scottish average, with a tenth being listed and a quarter lying within conservation areas.
- 120,938 homes in Edinburgh have an EPC rating worse than 'C' and will require upgrading to achieve the target of all homes attaining this by 2033.
- To achieve recommended levels of energy efficiency, 129,706 homes in Edinburgh will require wall insulation (including 80,708 homes with hard-to-treat solid walls); 66,903 homes in Edinburgh will require (improved) loft insulation; and 52,279 homes will require improved glazing: a total of 248,888 interventions.
- To achieve decarbonisation of heat, at least 229,798 homes in Edinburgh will need their existing fossil fuel-based heating systems replaced, the vast majority of them (227,550) homes currently heated using gas boilers.



- **8 energy efficiency Delivery Areas**
- **10 heat pump Delivery Areas**
- **17 prospective Heat Network zones**

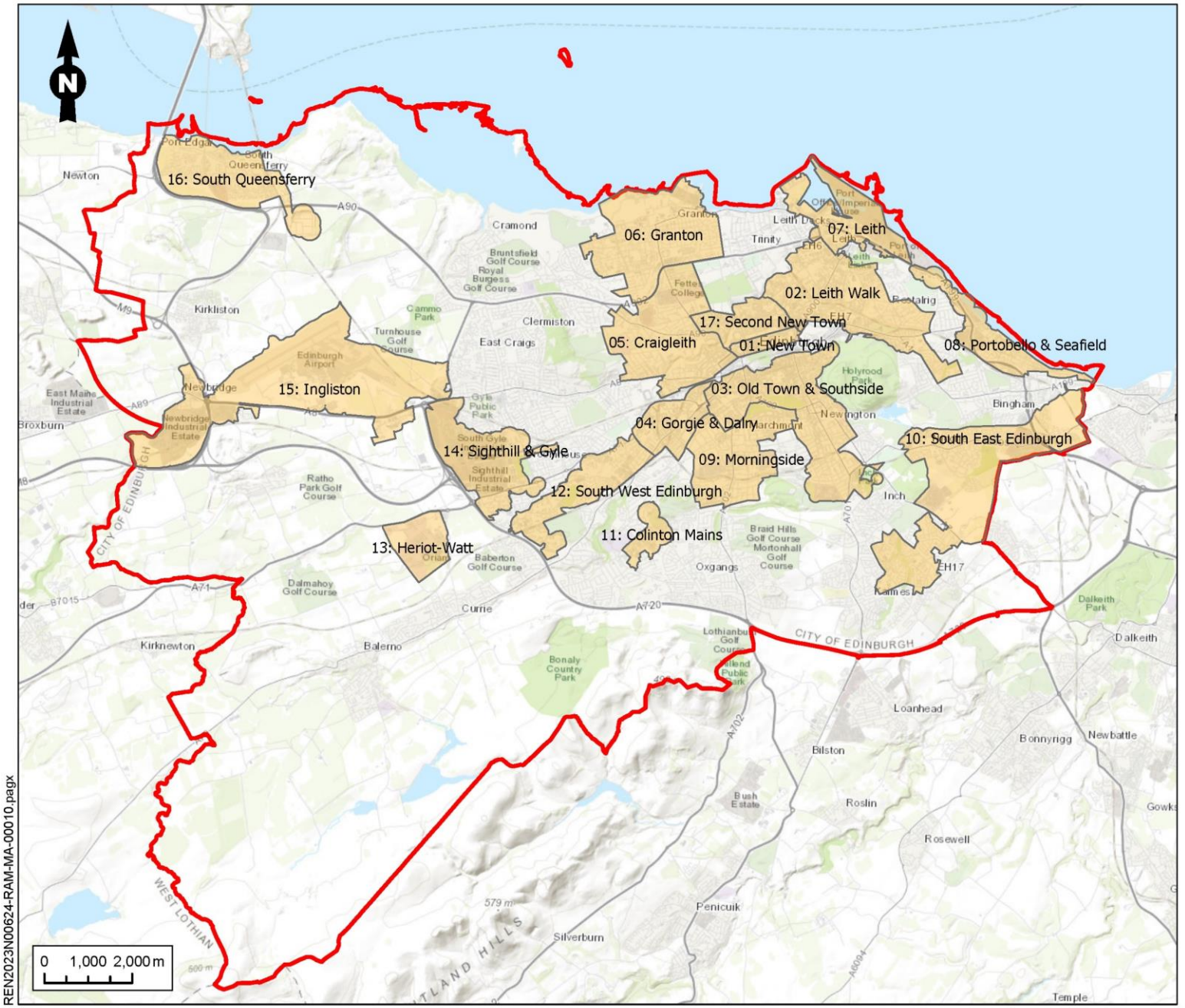
On Gas Category 1 Areas
Off Gas Category 1 Areas
Prospective High Priority Delivery Area
Prospective Heat Network Zones
Local Authority Boundary



Heat Network Zones

- 17 Zones that are identified as having the greatest potential for heat networks.
- Selected on the basis of demand analysis, with refinements to reflect practical considerations such as railway lines.

- New Town
- Leith Walk
- Old Town & Southside
- Gorgie & Dalry
- Craigleith
- Granton
- Leith
- Portobello & Seafield
- Morningside
- South East Edinburgh
- Colinton Mains
- South West Edinburgh
- Heriot-Watt
- Sighthill & Gyle
- Ingliston
- South Queensferry
- Second New Town



Legend

- Prospective Heat Network Zones
- LA Boundaries

Figure Title		
LHEES CEC - Zones Refinement		
Project Name		
LHEES CEC - Heat Networks		
Project No./Filery ID		
1620015872 / REH2023N00624		
Date	Figure No.	Revision
October 2023	2	1
Prepared By	Scale	
PDAGS	1:120,000 @A4	
Client		
LHEES CEC		

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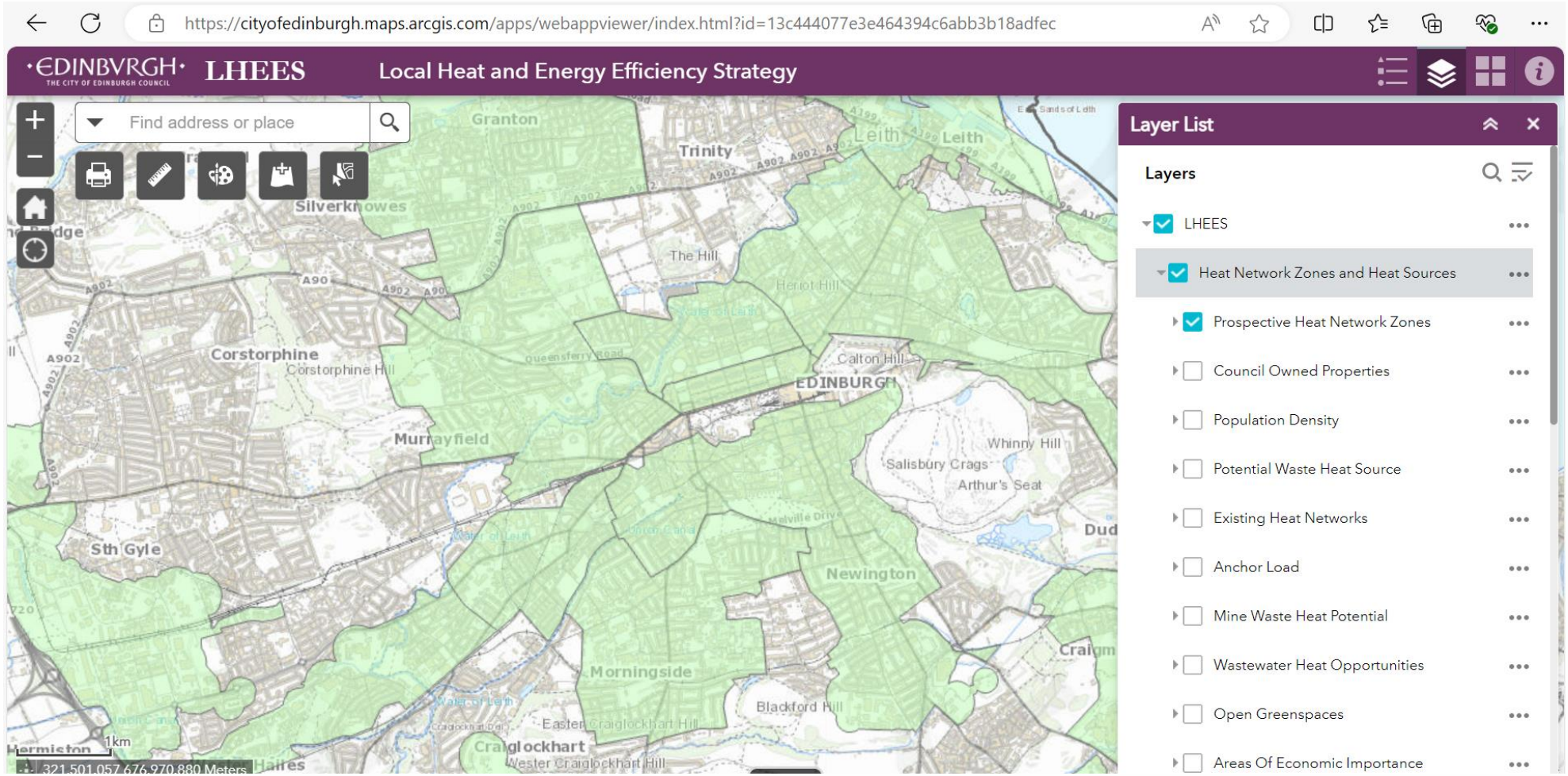
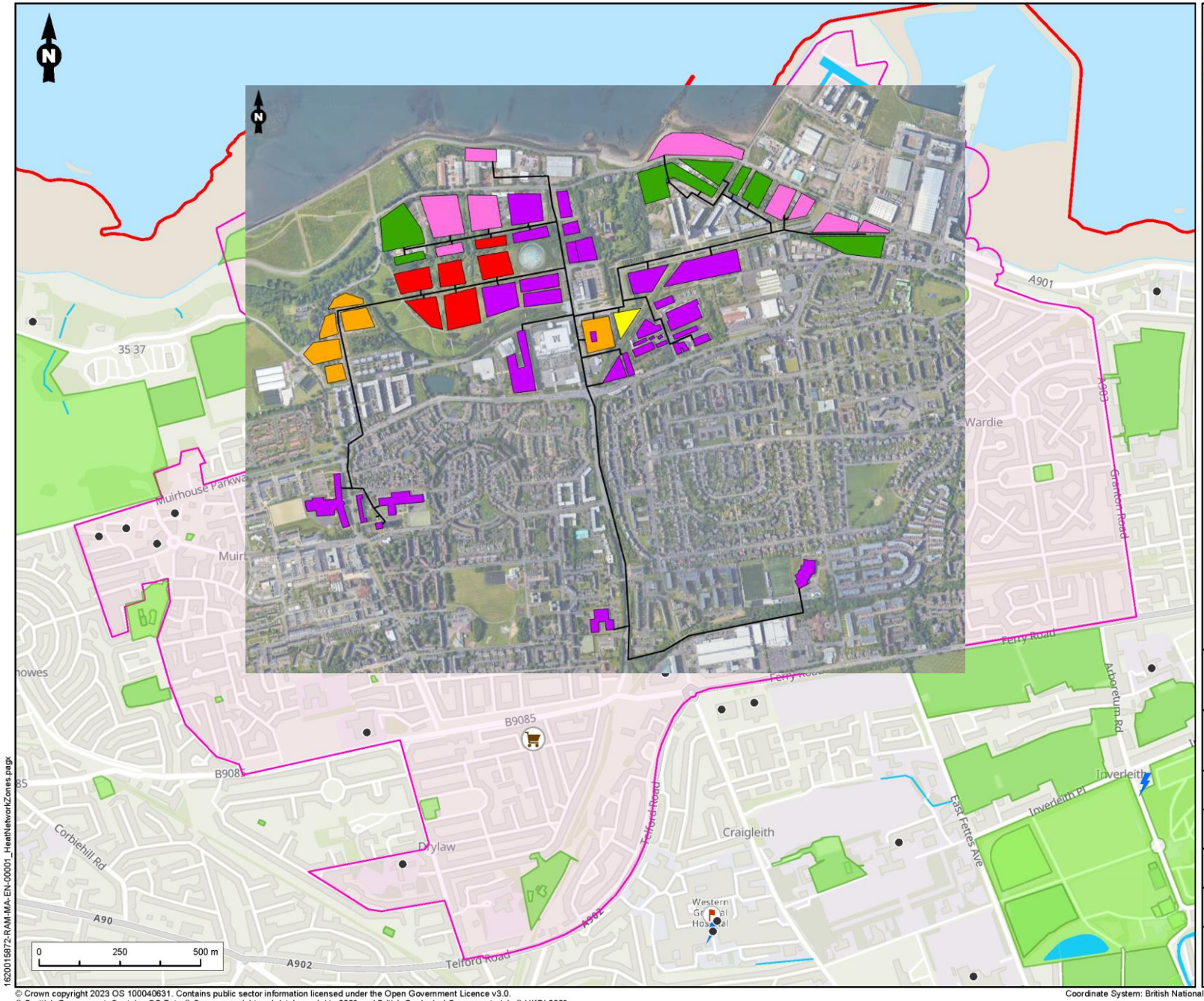
Coordinate System: British National Grid. Projection: Transverse Mercator. Datum: OSGB 1936.

LHEES Interactive Map





Coordinate System: British National Grid. Projection: Transverse Mercator. Datum: OSGB 1936.

Granton heat network

OBC technical solution:

- 4MWh sewer source heat pump
- electric boilers for back-up/top-up
- 1MW solar array

Anchor loads:

- 12 existing and new public sector buildings
- 3,383 homes
- 9,000m2 commercial space

Capex:

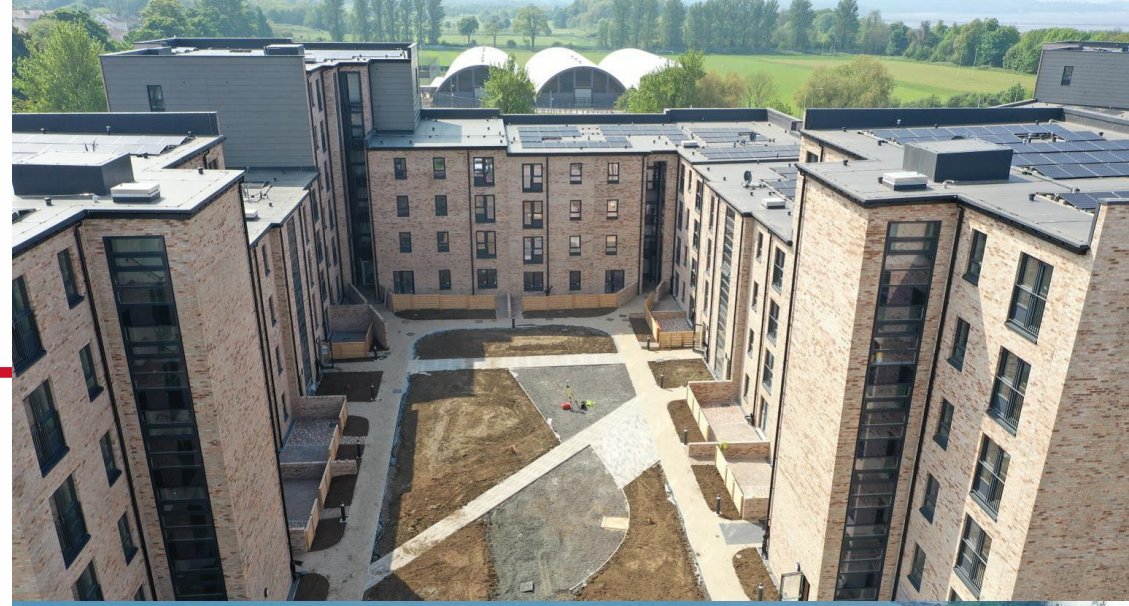
- £81m

Western Villages

Communal heat network

- 2 Stage heat pump solution provides hot water to flats at temps suitable for heating and hot water.

PV panels feed into individual properties, reducing use of electricity from the grid and also electric car charging points.



Heat network development

Legal

- Agree a preferred model for supporting the wider roll-out of heat networks in Edinburgh.
- Develop a Heat Network Customer Charter.

Technical

- Feasibility review of the prospective Heat Network Zones.
- Audit and analysis of low/zero carbon heat sources in and around Edinburgh.
- Identification of an optimal spinal pipe serving a city-wide network, or linking multiple networks.

Additional

- Feasibility study for a heat network in the Old Town.
- Statutorily designate Heat Network Zones as per pending guidance.

Assessing the Council's estate

Non-disruptive surveys

- Develop a scope for high-level heat network suitability surveys for use across the Council's varied estate.
  - Current flow/return, nightly set-backs, cost and duration of works.

Financial modelling

- Using a sample of survey results, develop a financial model that accounts for capital investment, ongoing O&M, and proposed tariffs.

Outline business case

- Using the above, develop an OBC for the connection of Council assets to heat networks.

"Low temperature readiness"

- Trialling a reduction in operating temperatures across a range of Council operational buildings.

LHEES – key actions

- Bring forward heat pump pilots, supported by energy efficiency measures, solar and battery installations to reduce the risk of increased running costs compared to gas.
- Continue work with colleagues and stakeholders to deliver a heat network at Granton and explore options for clean heat at the BioQuarter.
- Support the uptake of funding for energy efficiency measures in eligible households.
- Engage with financial providers with a presence in Edinburgh to better understand their products with respect to retrofit and energy efficiency, for example green mortgages.
- Write and distribute quarterly LHEES newsletter for interested stakeholders and residents.
- Bring forward an updated LHEES in 2024 following stakeholder and public consultation, and incorporating changes to legislation, funding and policy landscape.
- Updating the LHEES every 5 years; every 3 years for the Delivery Plan.

Thank you

LHEES@edinburgh.gov.uk

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