

LANCASTER
CITY COUNCIL

Promoting City, Coast & Countryside

LOCAL
AREA
ENERGY
PLAN

CATAPULT
Energy Systems

Putting your LAEP in Place

Susanna Dart
Principal Climate Policy Officer
Lancaster City Council

Lancaster District
Local Area Energy Plan

October 2024



Funded by
UK Government

Outline

Lancaster's LAEP

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Creating a Living LAEP

Summary

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Lancaster's LAEP





Lancaster's Journey to Net Zero by 2040

The Local Area Energy Plan is more than a strategy document; it is a call to action. It embodies our District's commitment to a sustainable future and sets a clear pathway toward Net Zero. By working together across sectors and with communities, we can build a resilient, sustainable, and vibrant energy future for generations to come.



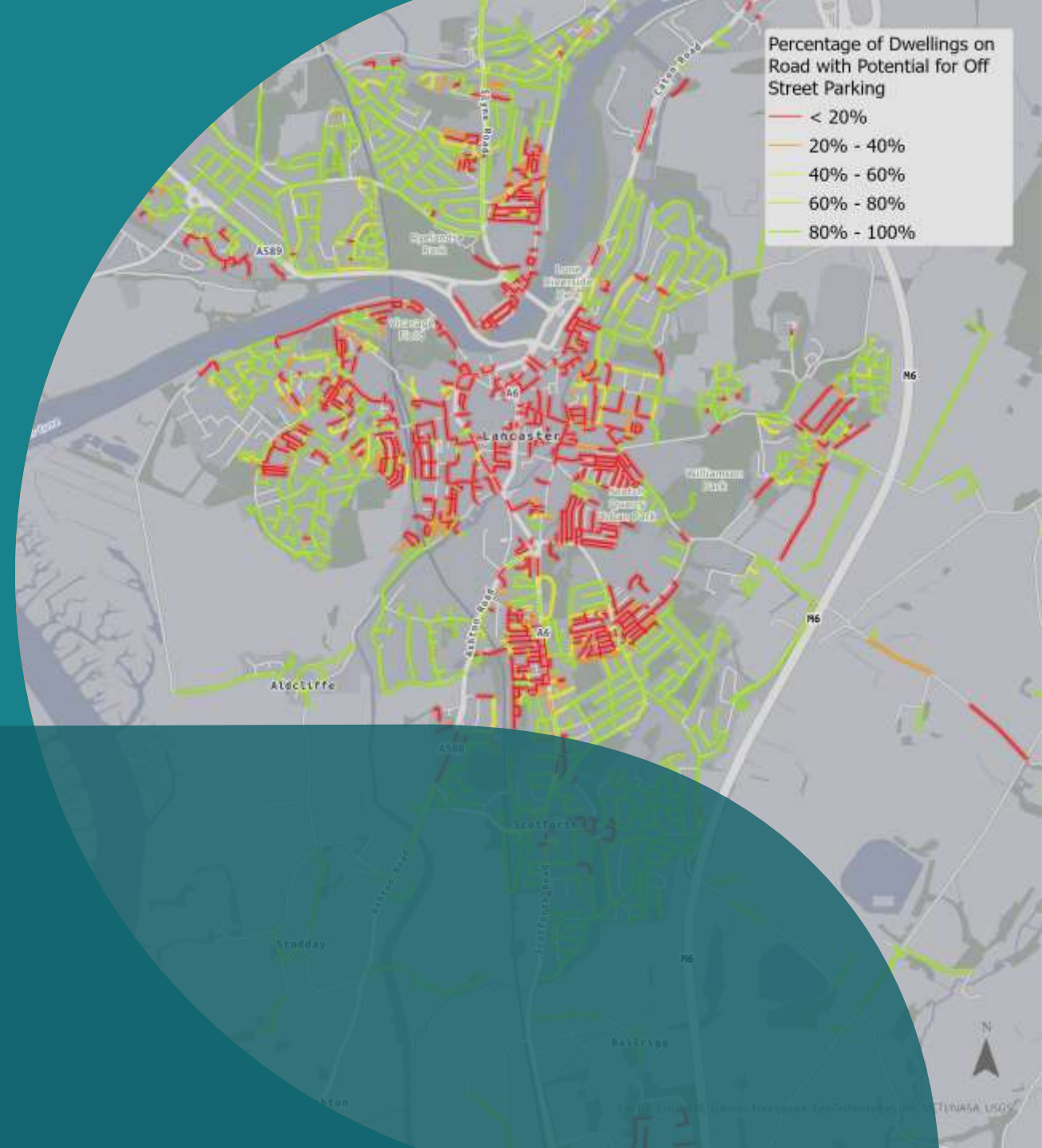
Councillor Gina Dowding

Portfolio Holder for Climate Action

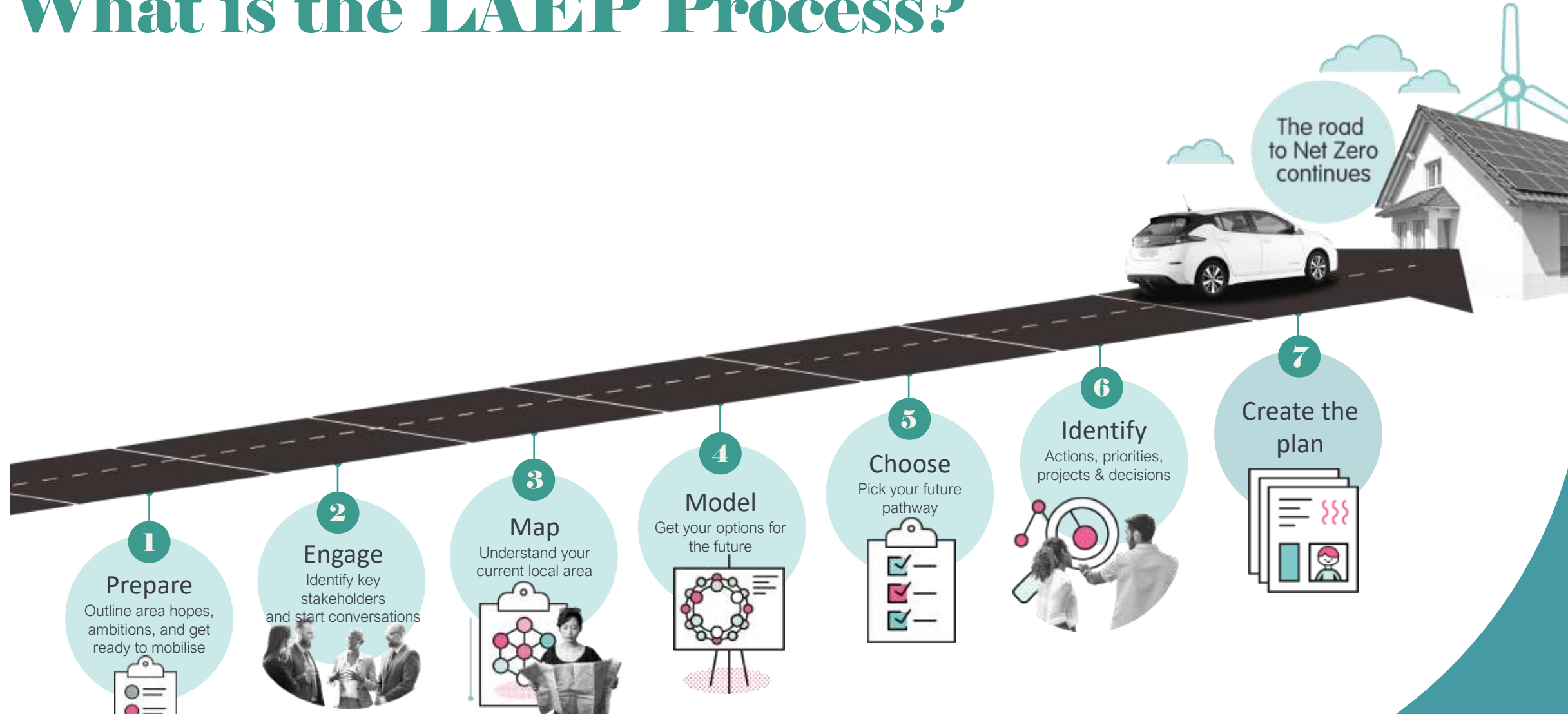
Lancaster City Council



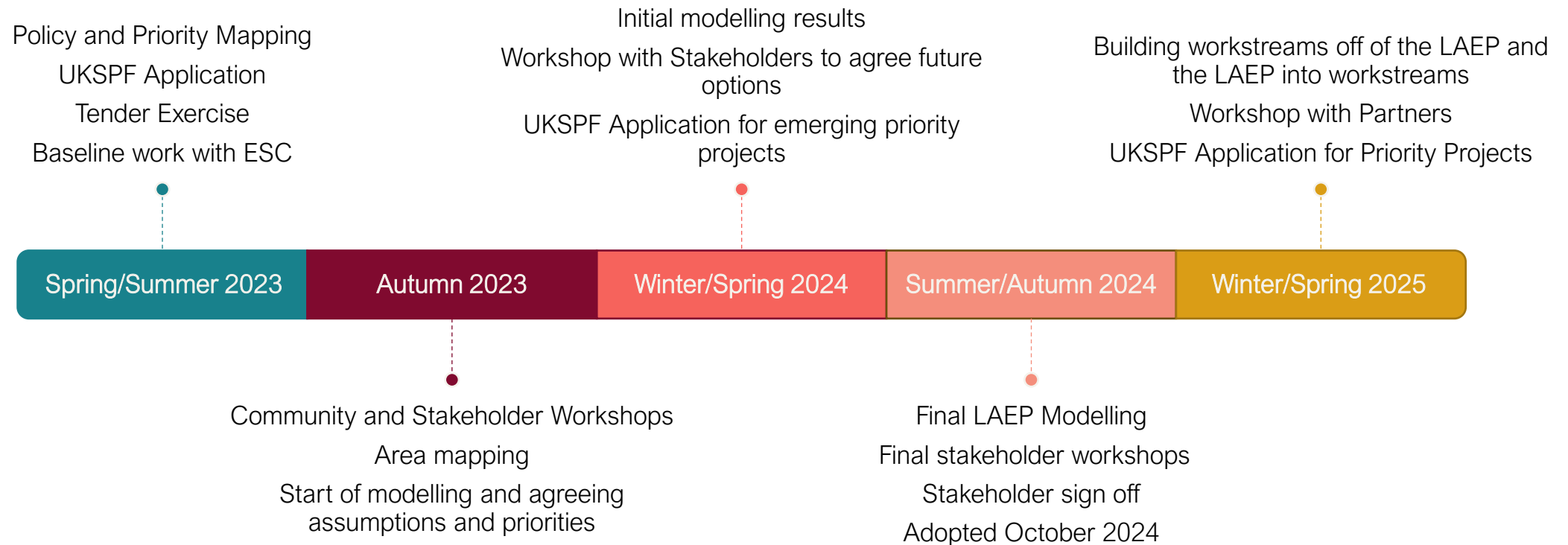
LAEP Process



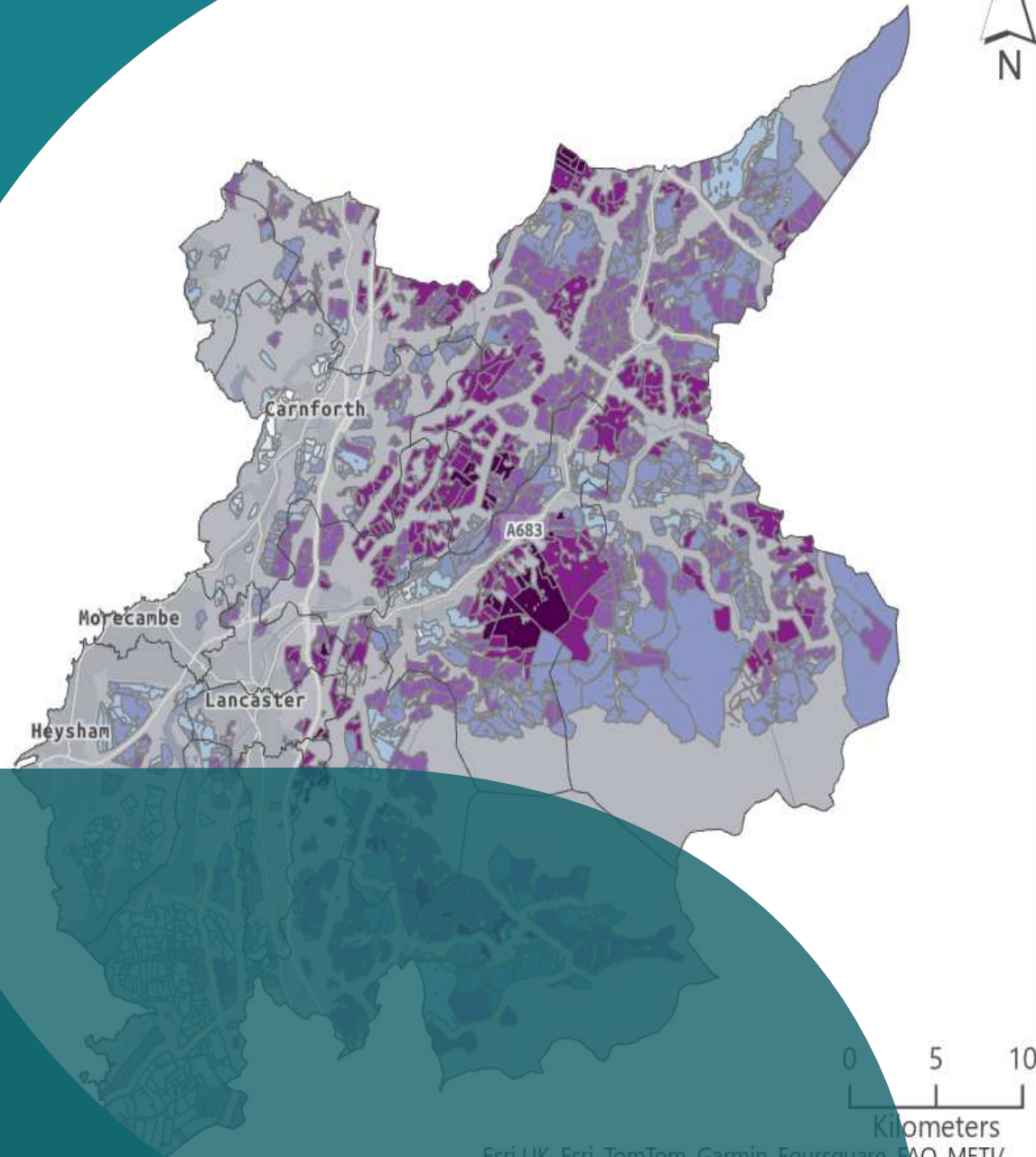
What is the LAEP Process?



Timeline



People and Priorities



Esri UK, Esri, TomTom, Garmin, Foursquare, FAO, METI/
NASA, USGS



Meet the Lancaster Team



Mark Cassidy
Chief Officer
Planning & Climate Change
Service



Elliott Grimshaw
Service Lead
Energy & Sustainability



Susanna Dart
Principal Climate Policy Officer
Planning & Housing Strategy



Robert Boschi
Senior Project Manager
Energy & Sustainability



Gillian Dobson
Consultation Officer
Planning & Housing Strategy

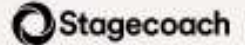
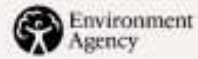


Izzy Maher
Project Manager
Energy & Sustainability



Kelly Dodd
GIS Officer
Planning & Housing Strategy

Stakeholders



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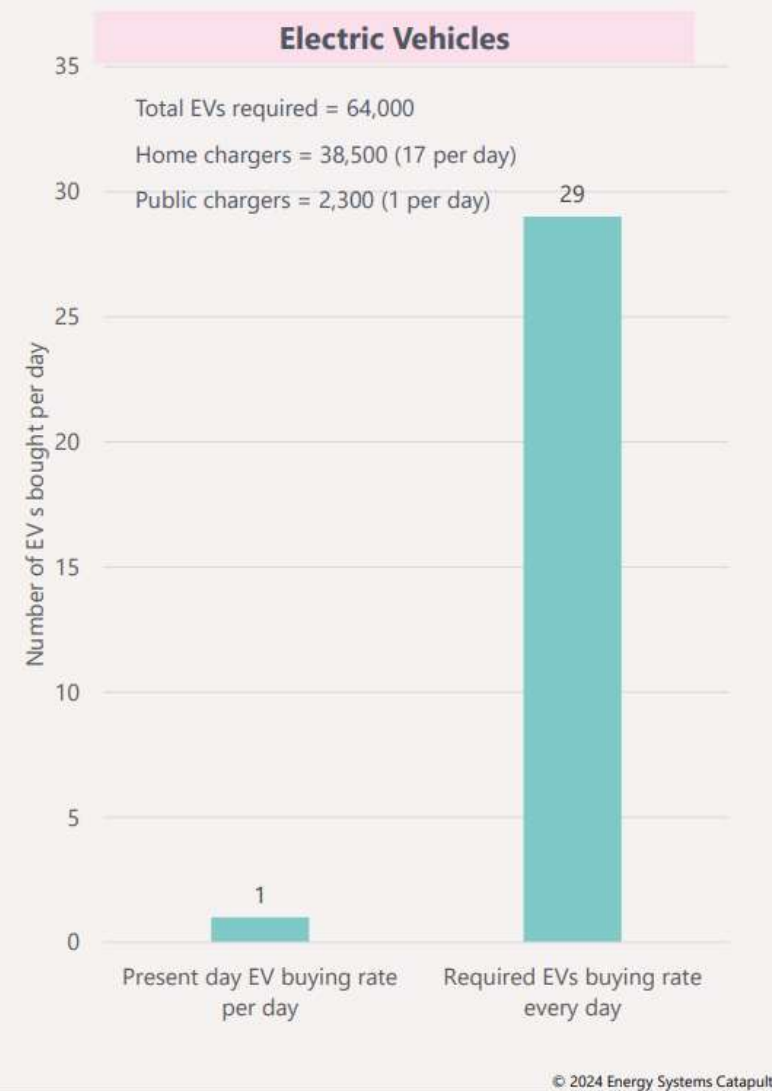
Priorities

- 1) Provide the base for a **just** transition
- 2) Deliver an ambitious, data driven net zero target for districtwide energy associated emissions
- 3) Build on existing workstreams and suggest new ones
- 4) Supports funding, projects, and policy
- 5) Provide data in a usable and interrogatable format
- 6) Deliver a LAEP which anyone could use



2030?

2030 Challenges



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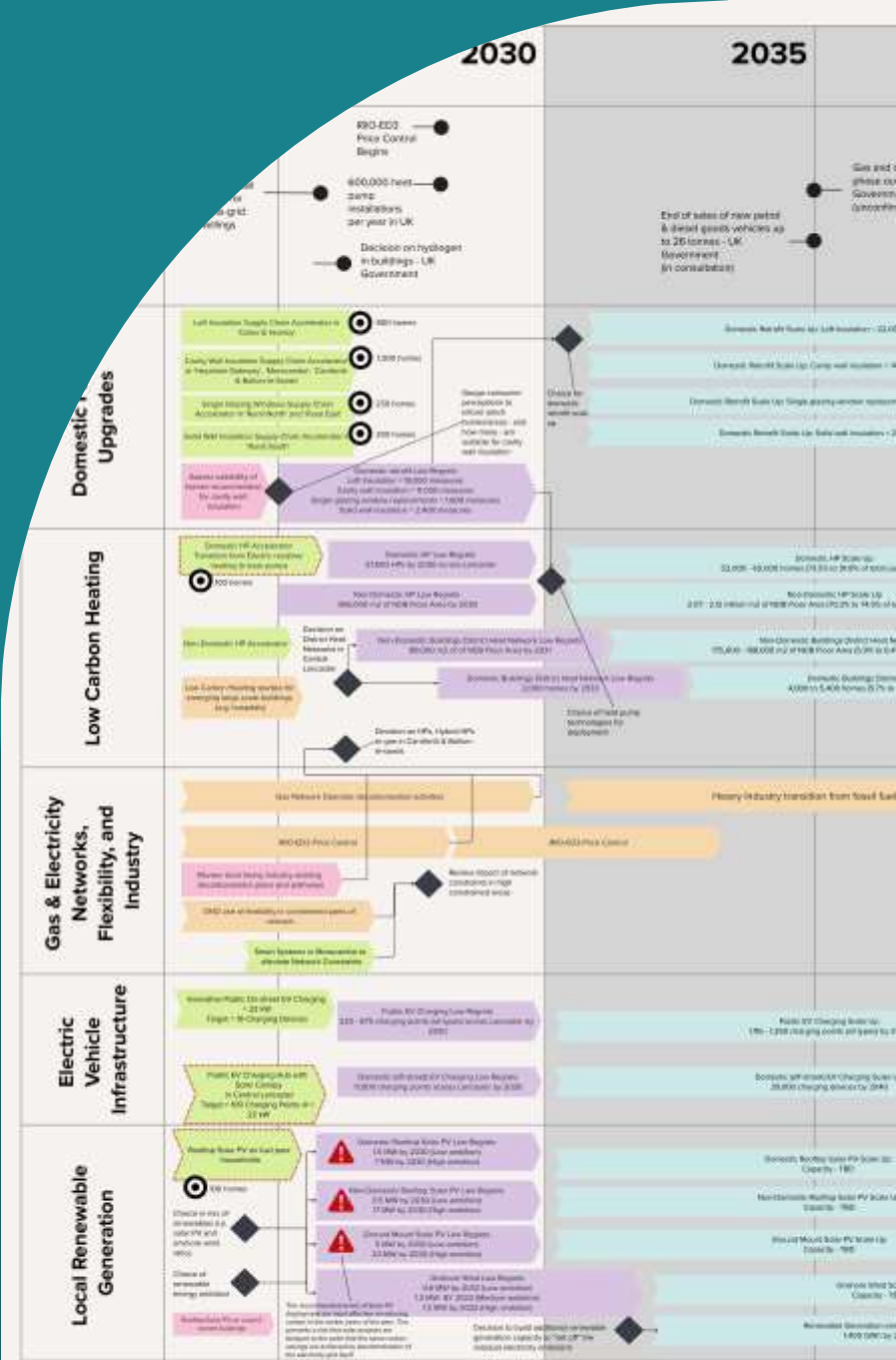
Scenario Summary

Figure 29.a: Analysis summary of scenarios modelled in this LAEP (see next section, [The Energy Transition](#), for full detail)

2040

		Do Nothing	Net Zero 2050	Local Innovation 2040	Accelerated 2035
Abundance of...	Domestic fabric upgrades	Existing only ●	Medium ●	Medium ●	High ●
	Domestic heat pumps	Existing only ●	High ●	High ●	Medium
	NDB heat pumps	Existing only ●	Medium ●	Medium ●	High ●
	Heat networks	Existing only ●	Low ●	Medium ●	High ●
	Rooftop solar PV	Existing only ●	Medium ●	High ●	Medium ●
	Ground solar PV	Existing only ●	Medium ●	High ●	Medium ●
	Wind	Existing only ●	Medium ●	Medium ●	Medium ●
Pace of...	Domestic EV charging roll out	Existing only ●	Maximised ●	Maximised ●	Maximised ●
	Public EV charging roll out	Existing only ●	Slow ●	Moderate ●	Fast ●
	Additional cost relative to 'Do Nothing' scenario	N/A ●	Low ●	Moderate ●	High ●
	Emissions Reduction [2040 snapshot]	Very Slow with High residual emissions in 2040 ●	Medium with Moderate residual emissions in 2040 ●	Fast with low residual emissions in 2040 ●	Fast with low residual emissions in 2040 ●
	Energy demand change	Neutral - Baseline ●	Moderate increase - immediate	Small increase - immediate	Small increase - delayed
	Carbon savings valuation	●	●	● ●	●
	Changes to consumer electricity costs	●	●	●	●
	Local jobs	●	●	●	● ●
	Air quality (health)	●	●	●	●

Creating a Living LAEP



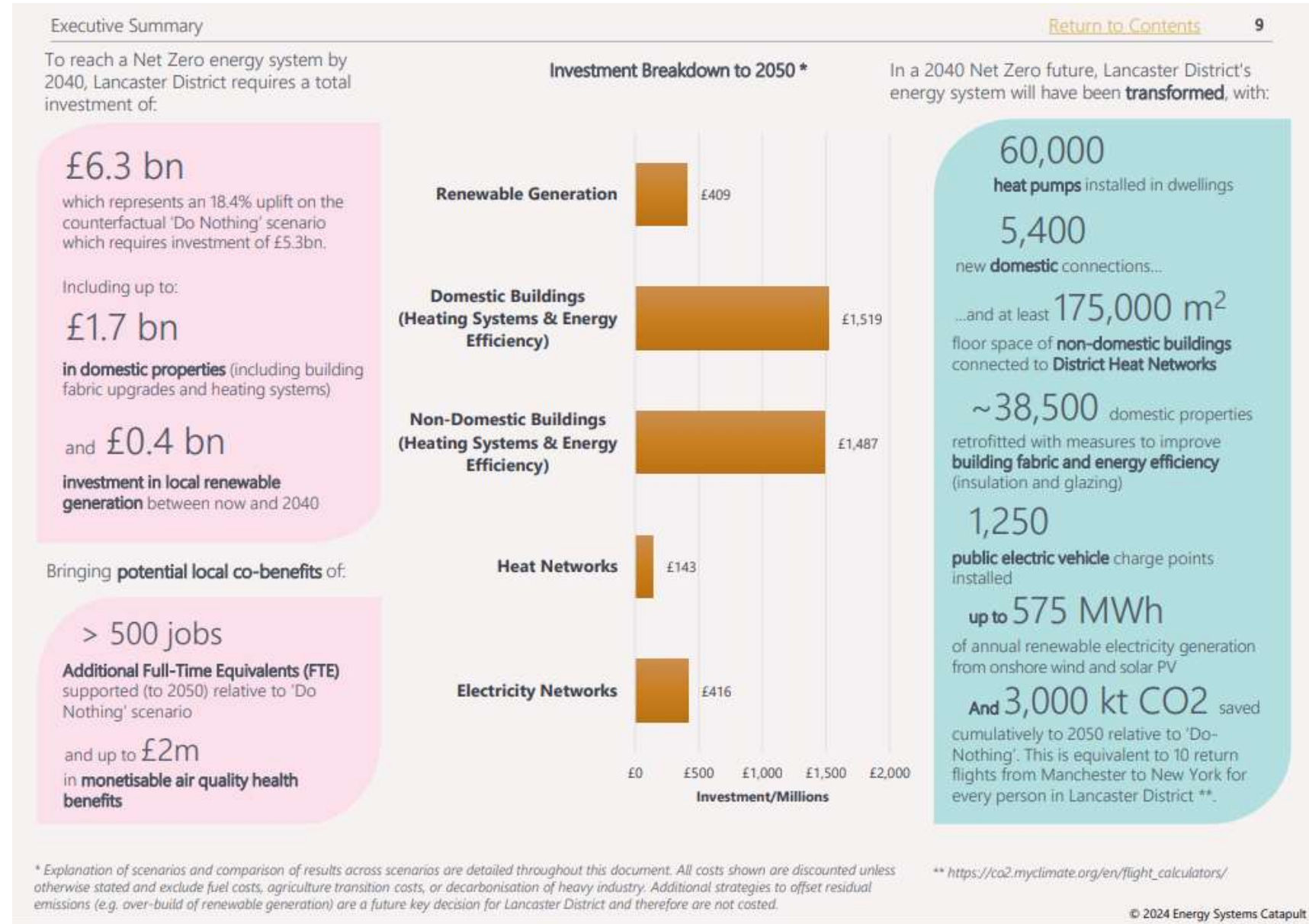
Local Area Energy Planning: Headlines

The Local Area Energy Plan identified the most **cost effective plan** for the District to contribute to timebound national and local Net Zero targets whilst maximising co-benefits to society.

The LAEP has identified ~60,000 dwellings which need interventions for net zero.

Approx. £400 million in network upgrades in order to meet net zero and support housing growth.

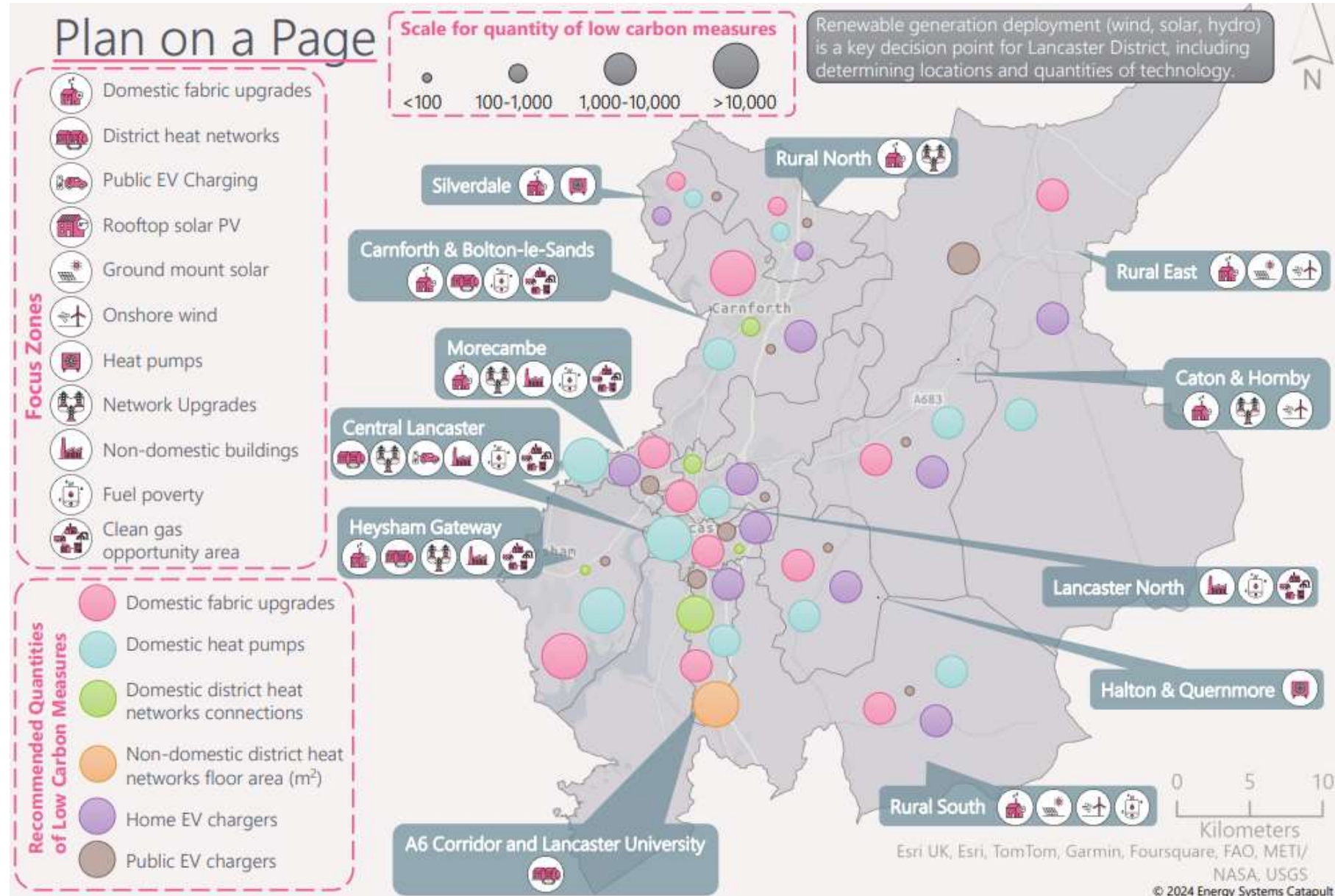
Visit: lancaster.gov.uk/laep



Local Area Energy Planning: Focus Zones

Focus Zones highlight areas where a concentration of a certain solution is recommended

Focus Zones also account for factors such as the socio-economic conditions in an area, network capacity, or characteristics of the building stock, which could bring specific advantages, learning opportunities or challenges to delivery in that location.

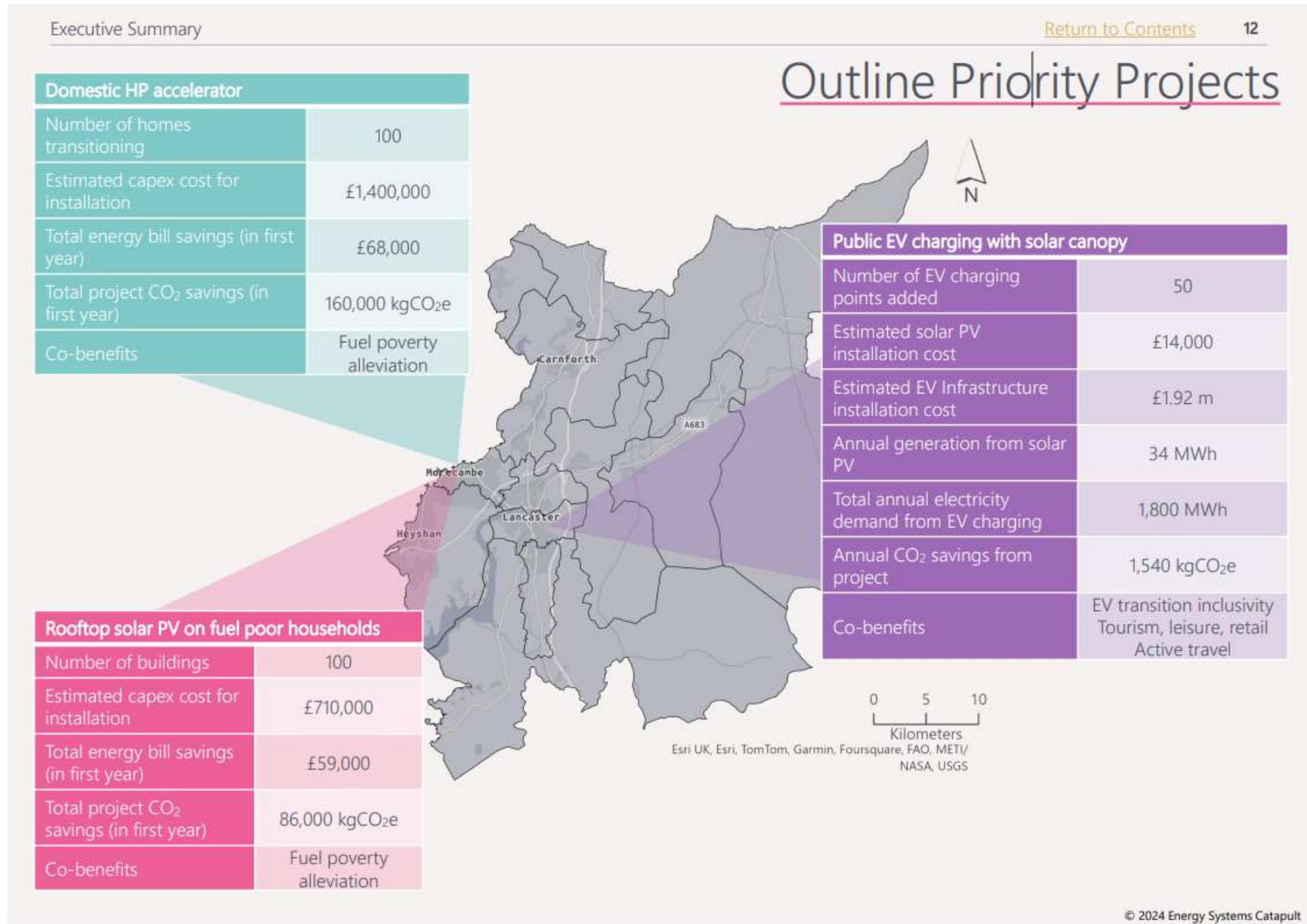


Local Area Energy Planning: Priority Projects

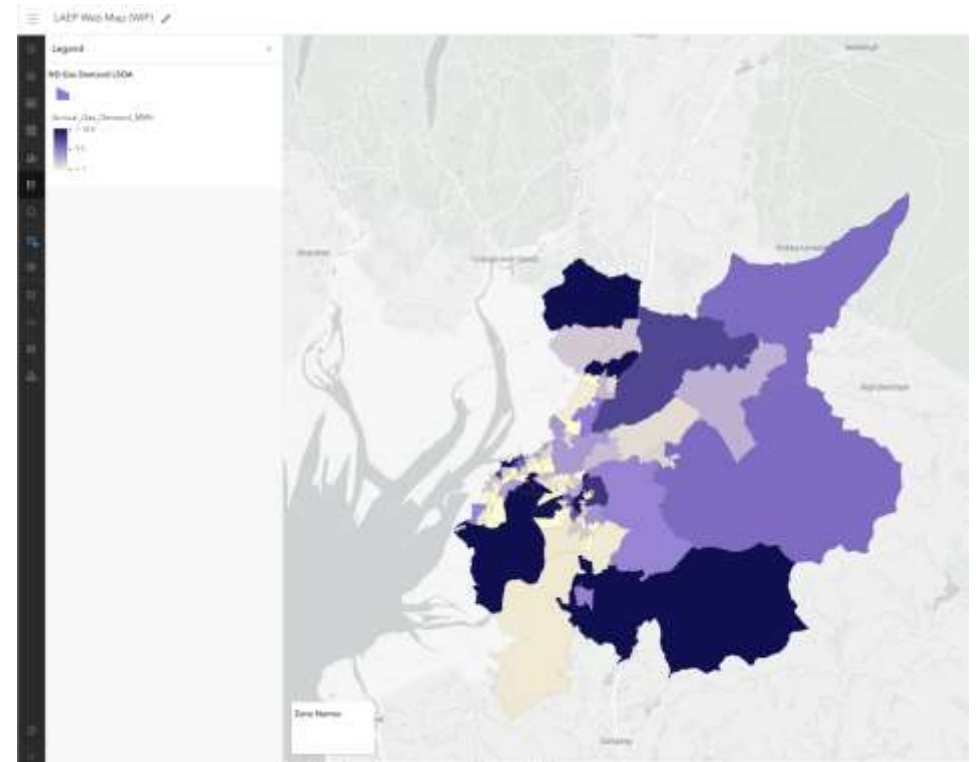
The LEAP outlines a range of priority projects.

LCC have started strategies, feasibility work and a domestic energy/fuel poverty pilot off of the LAEP.

Looking to develop an action plan for delivery.



Transparent Data



Improved Stakeholder Engagement



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Just Transition

Fuel Poverty Focus Zones

Figure 87.a: Present day estimated percentage of homes in fuel poverty

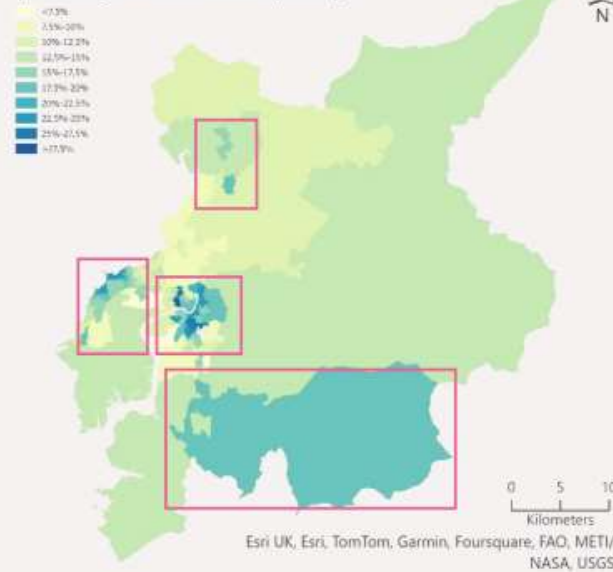


Figure 87.b Present day density of buildings with an electric resistive heating system

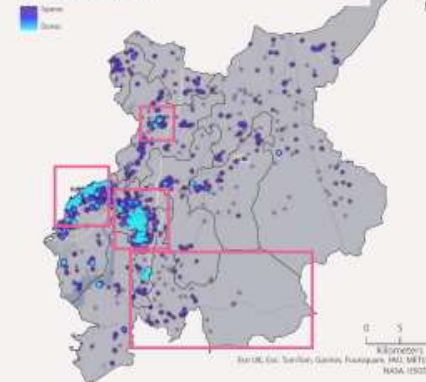
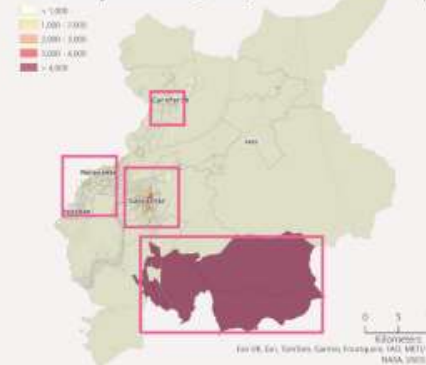


Figure 87.c: Present day annual electricity demand (MWh)



Fuel poverty Focus Zones seek to prioritise the transition away from electric resistive heating to other forms of low carbon heating with the goal of reducing electricity demand. Domestic rooftop solar PV and fabric retrofit measures are also a consideration for alleviation of fuel poverty. Lancaster District will consider these aspects when determining priorities for decarbonisation projects.

Figures 87.a – c highlight Focus Zones for alleviation of fuel poverty as it exists today.

Just Transition

COSY HOMES
IN LANCASHIRE



Free Energy Grants for a Cosier Home in 2025

Welcome to Cosy Homes in Lancashire, where we make Lancashire homes warm, cosy and energy efficient. Get started today with free funding from your local council.

[APPLY FOR FUNDING >](#)



Electric Vehicles

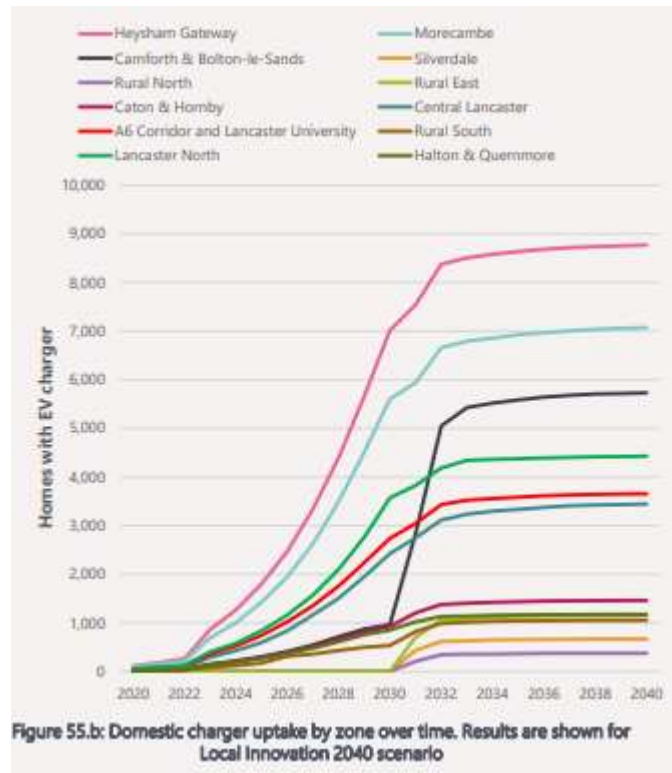
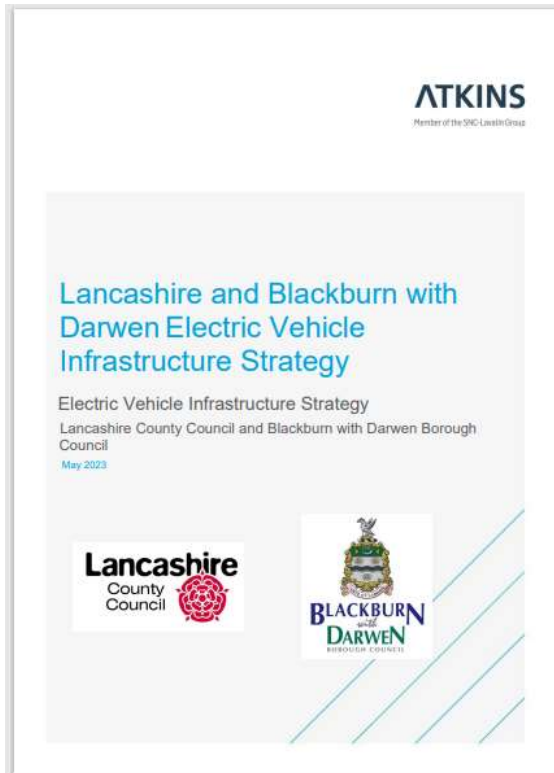
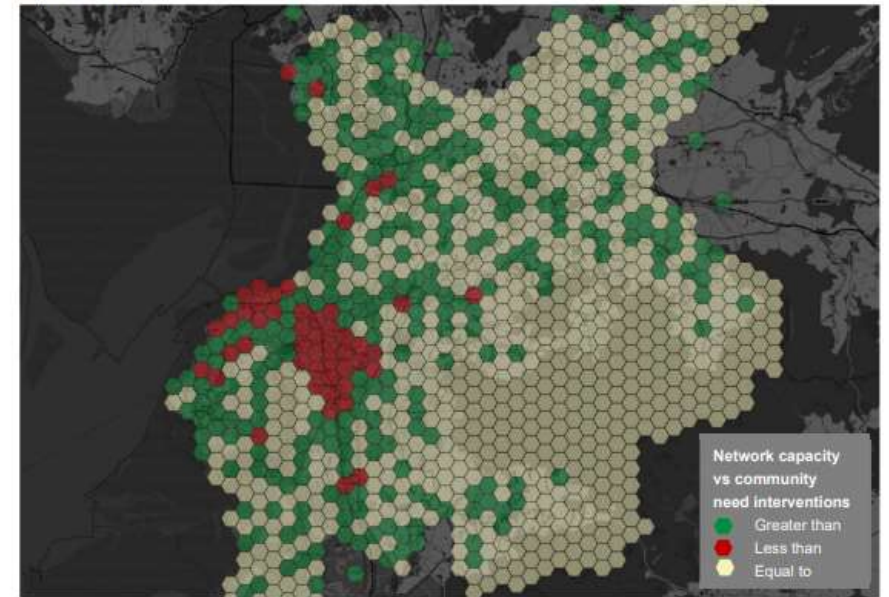


Figure 31: Assessment of existing electrical network capacity vs community need intervention requirements (AC)



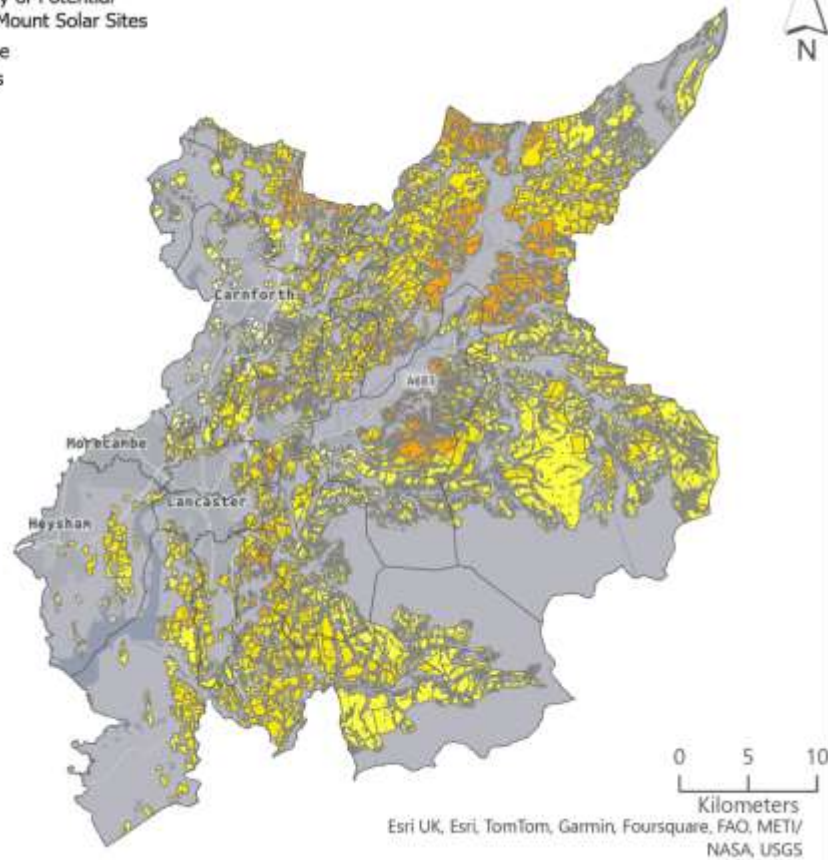
Lancaster District Local Plan Review | Lancaster City Council | Outline Sustainable Transport Strategy | 4138/001



Renewable Energy

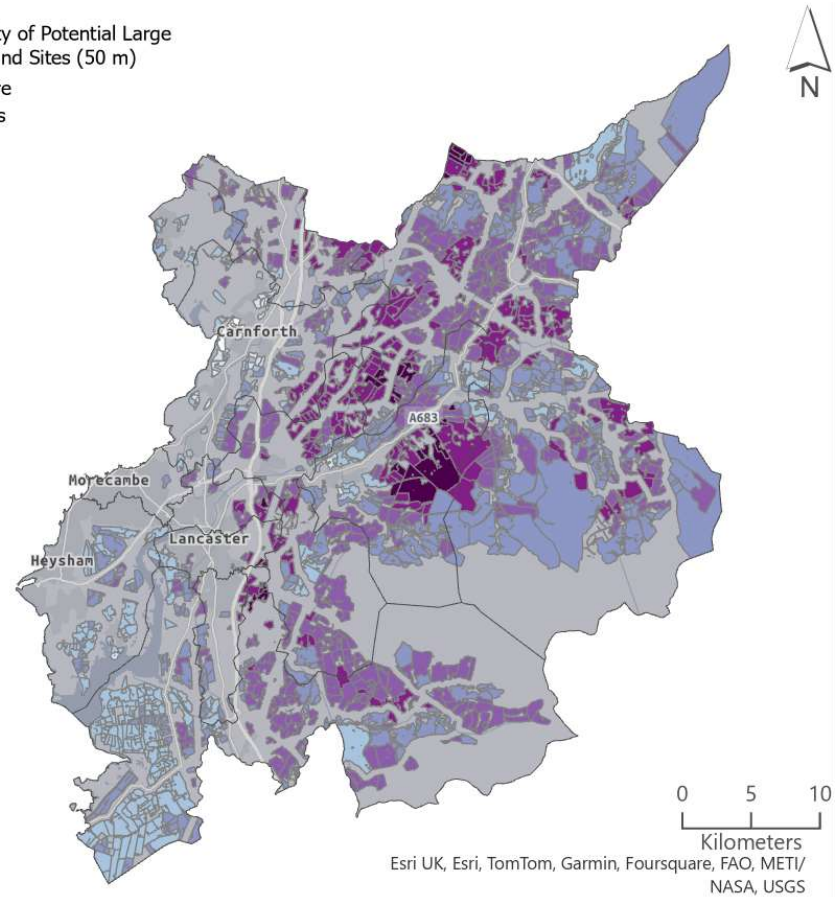
Suitability of Potential Ground Mount Solar Sites

More
Less



Suitability of Potential Large Scale Wind Sites (50 m)

More
Less



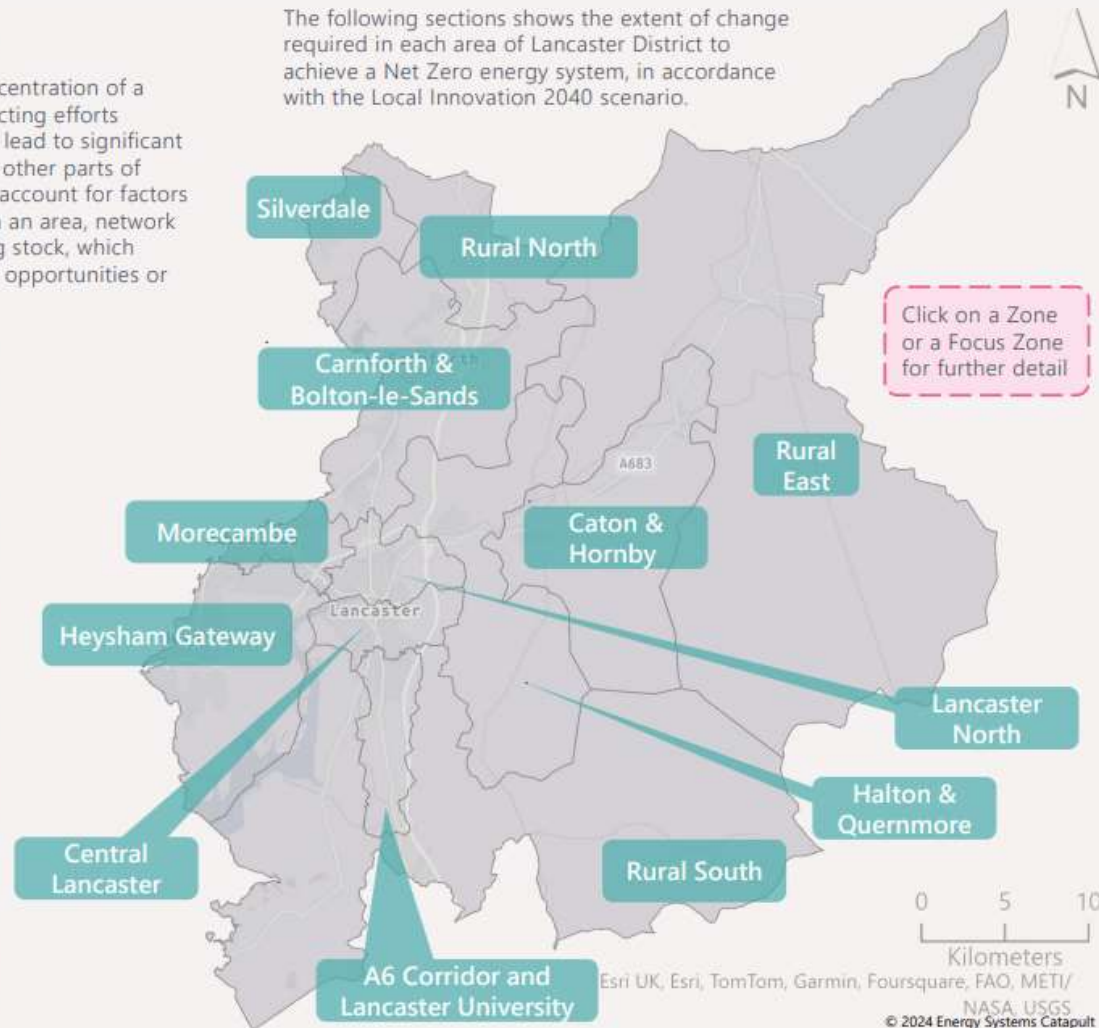
Communities in Action

Plan on a Page

Focus Zones highlight areas where a concentration of a certain solution is recommended, so directing efforts towards delivery at scale in that area can lead to significant progress and serve as a demonstrator to other parts of Lancaster District. Focus Zones may also account for factors such as the socio-economic conditions in an area, network capacity, or characteristics of the building stock, which could bring specific advantages, learning opportunities or challenges to delivery in that location.



- Focus Zones**
-  Domestic fabric upgrades
 -  District heat networks
 -  Public EV Charging
 -  Rooftop solar PV
 -  Ground mount solar
 -  Onshore wind
 -  Heat pumps
 -  Network Upgrades
 -  Non-domestic buildings
 -  Fuel poverty
 -  Clean gas opportunity area

The following sections shows the extent of change required in each area of Lancaster District to achieve a Net Zero energy system, in accordance with the Local Innovation 2040 scenario.



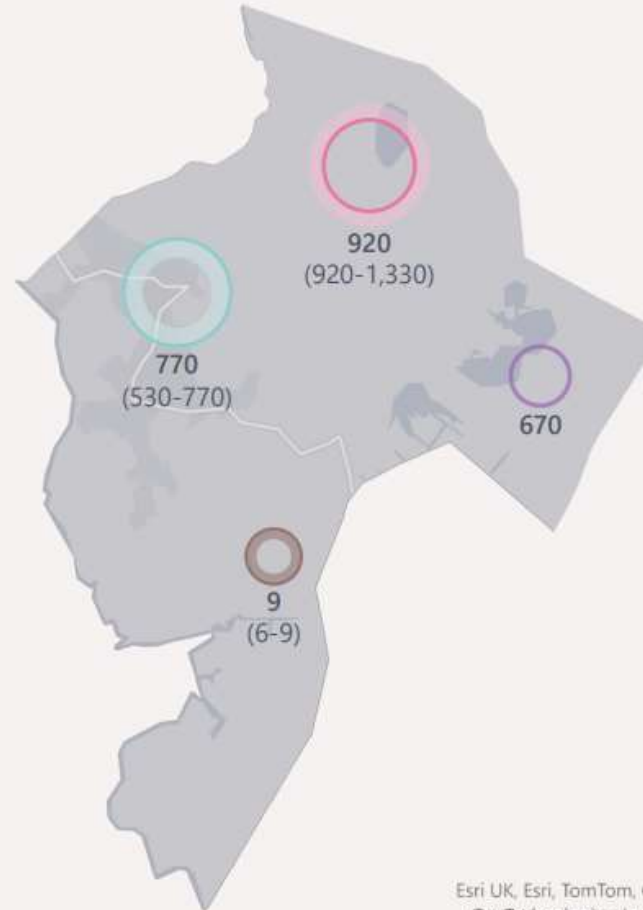
Communities in Action

Focus Zones for Silverdale

-  Domestic fabric upgrades
-  Heat pumps

Recommended Quantities of Low Carbon Measures

-  Domestic fabric upgrade measures
-  Domestic heat pumps
-  Domestic district heat network connections
-  Non-domestic district heat network floor area (m²)
-  Home EV chargers
-  Public EV chargers



-  Local Innovation 2040 scenario
-  Uncertainty - showing range between scenarios

Figures are provided for the Local Innovation 2040 scenario (solid rings). Figures in brackets represent the uncertainty relating to other scenarios modelled in this LAEP (semi-transparent rings).

No heat networks in any modelled scenario.

Renewable generation deployment (wind, solar, hydro) is a key decision point for Lancaster District. This includes the determination of locations and quantities of technology.

Locations of low carbon measures are spread across the Zone of Silverdale.

Esri UK, Esri, TomTom, Garmin, Foursquare, GeoTechnologies, Inc, METI/NASA, USGS

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Summary

- Involve as many people as possible
- Take the time to do project, policy and priority mapping prior to the tender exercise and then update throughout the LAEP process
- Ensure that you are clear on what outputs you need
- Enjoy the process!





Thank You

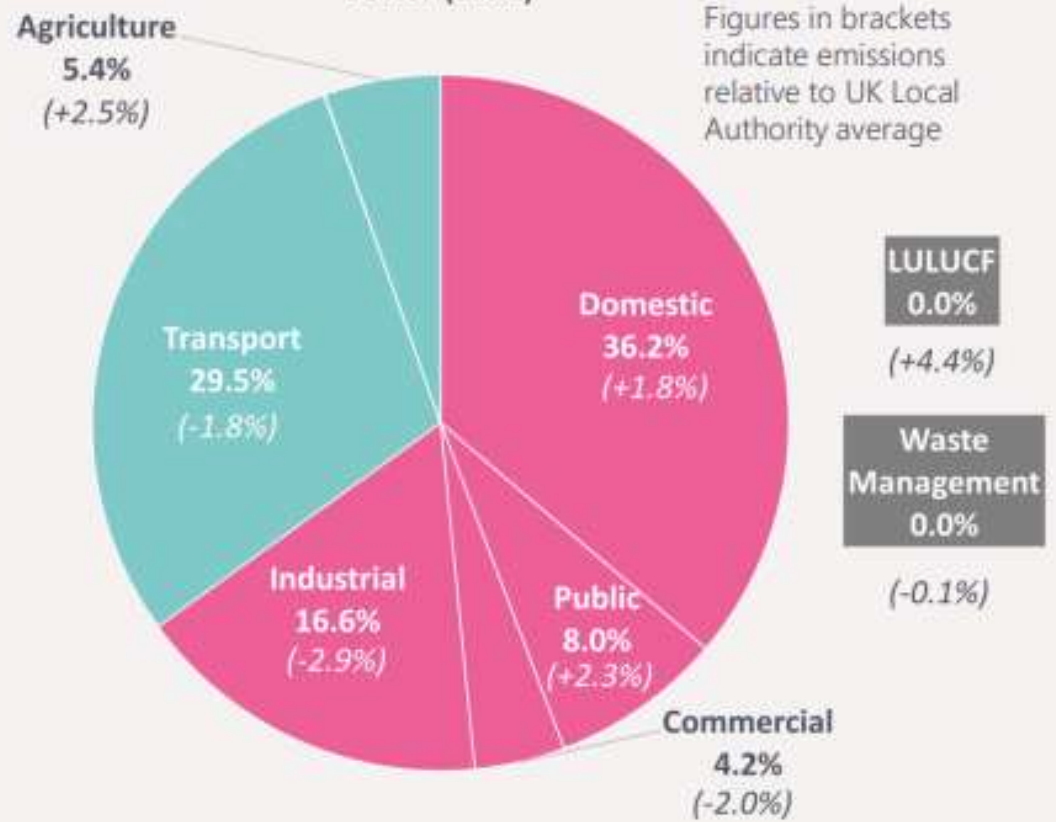
Susanna Dart

sdart@lancaster.gov.uk

<https://www.lancaster.gov.uk/laep>

Emissions Covered by the LAEP

Figure 16.a
Lancaster District CO₂ 'emissions within LA influence' estimates by sector (2021)



- Emissions covered by this LAEP
- Emissions partially covered by this LAEP
- Emissions not covered by this LAEP

Cost Uplift of Net Zero

