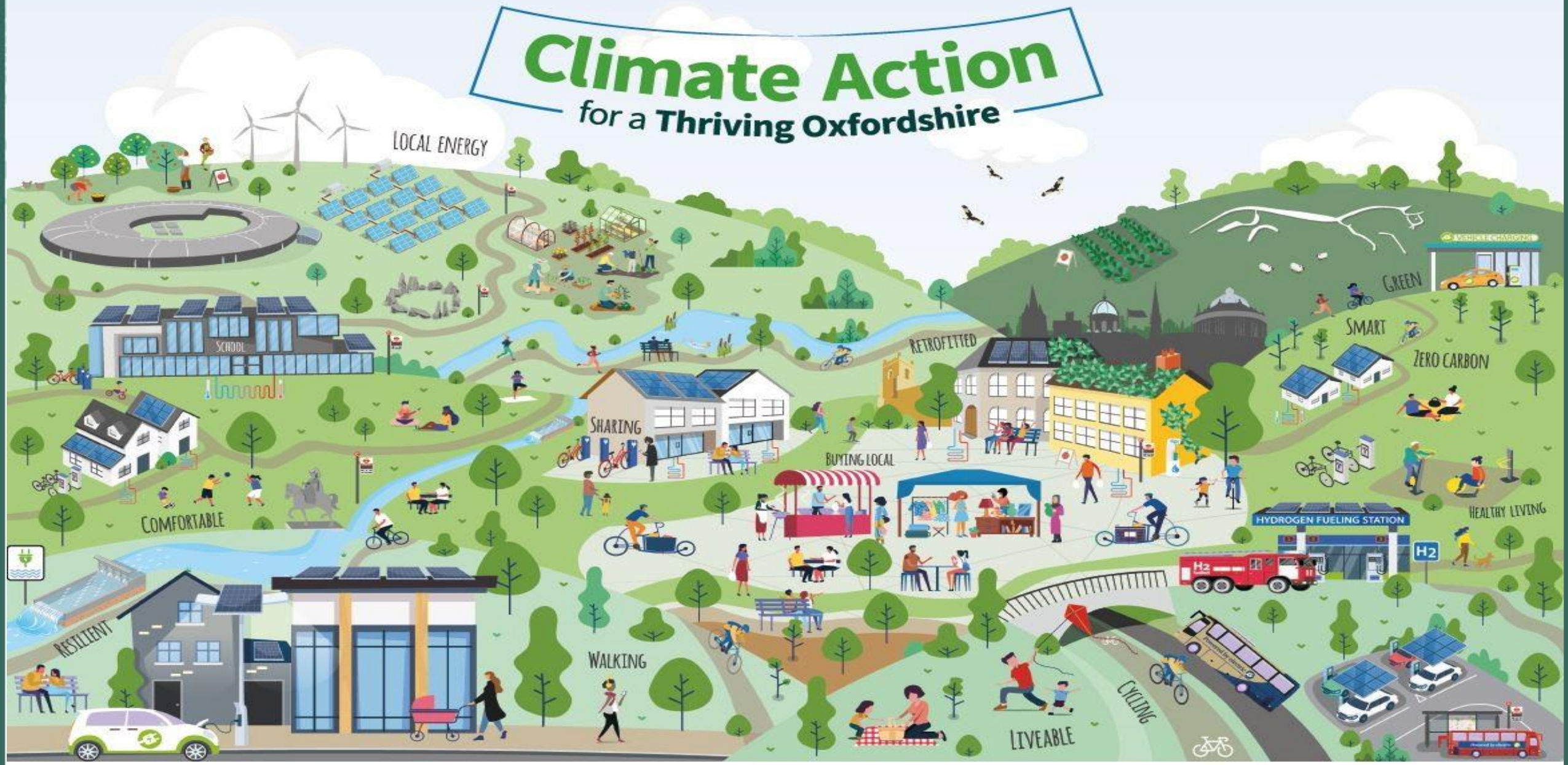
Climate Action
for a Thriving Oxfordshire



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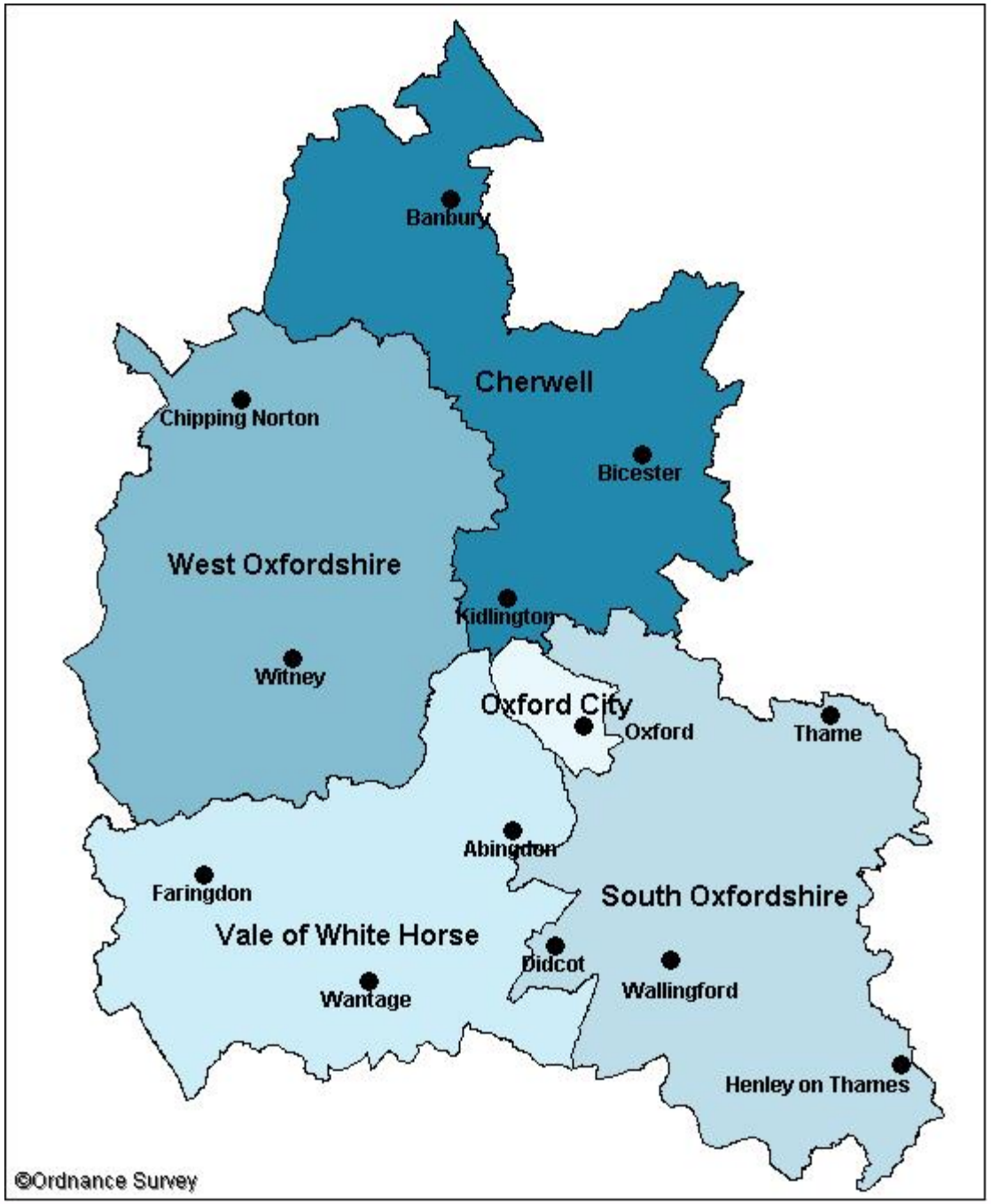
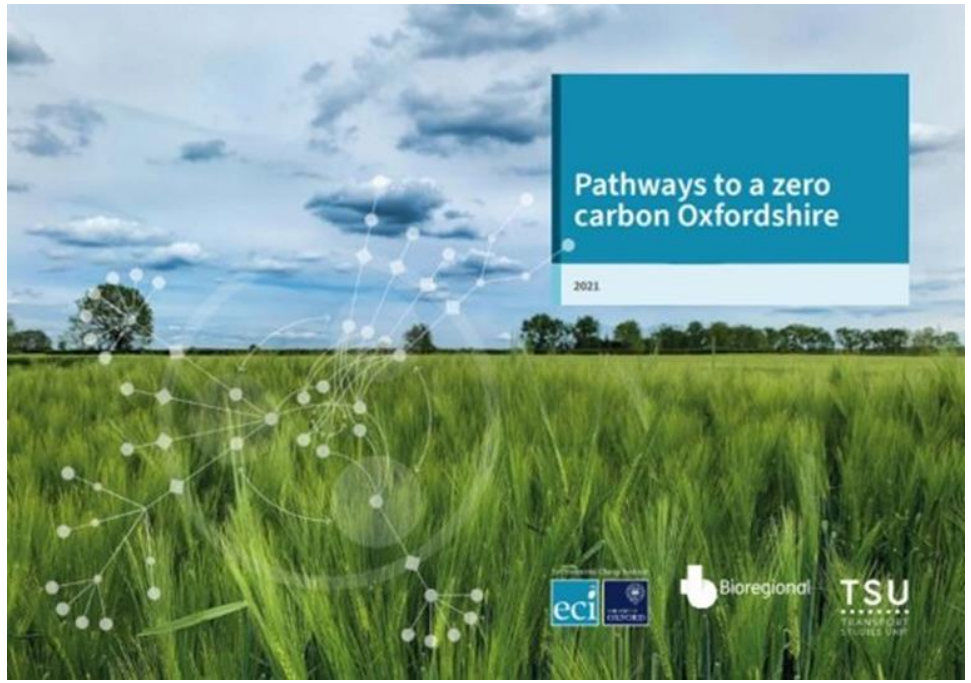
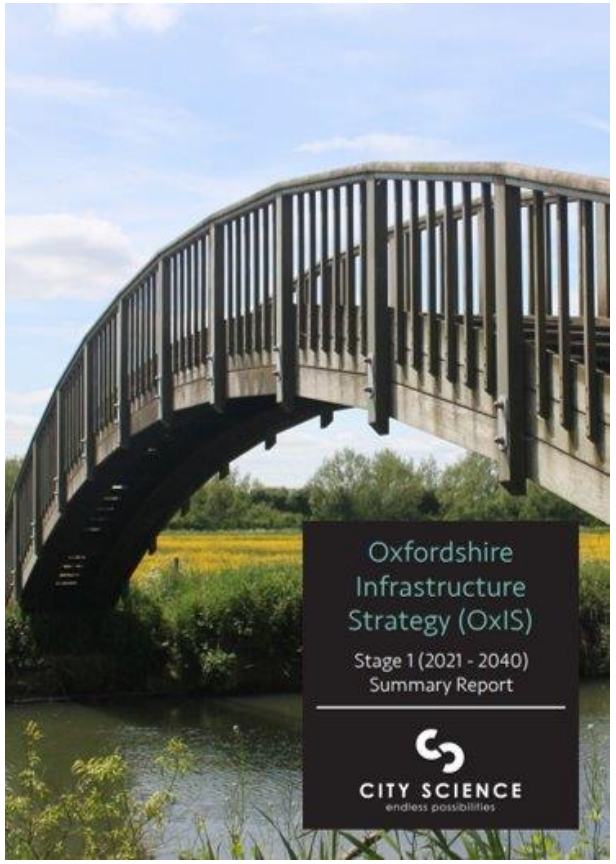
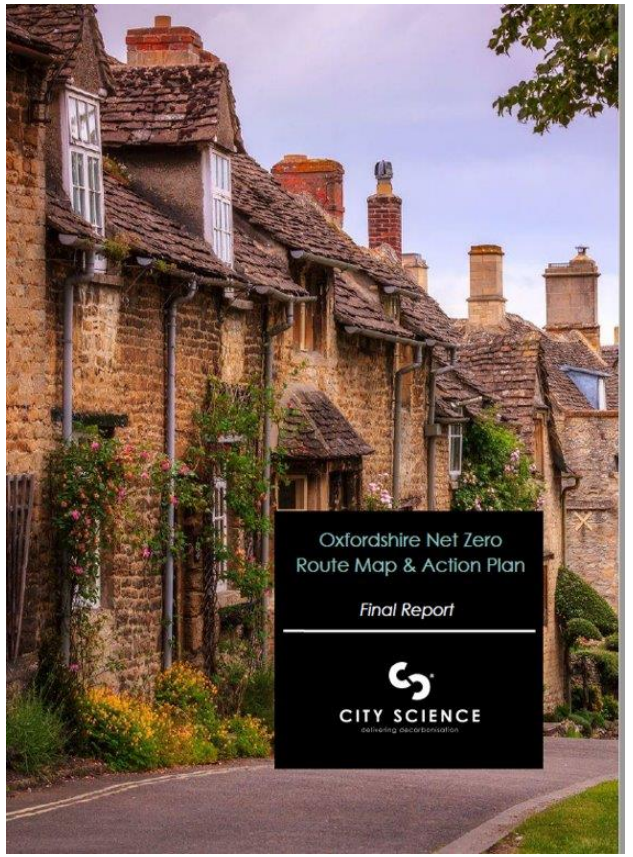
- 2 Tier county structure
- 300,000 dwellings %53 D<
- 750,000 population + 4% by 2034
- Significant areas of protected landscape
- 3 DNOs
- £27bn economy and net contributor to exchequer
- Growth ambitions – knowledge and innovation









Ambition → **Intention** → **Action**

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Routemap and Action Plan

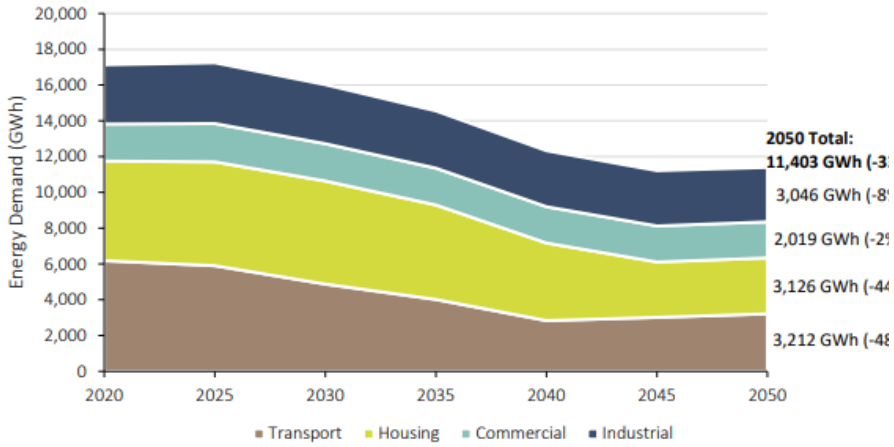


Figure 2-5: Pathway Energy Demands by Sector Projection

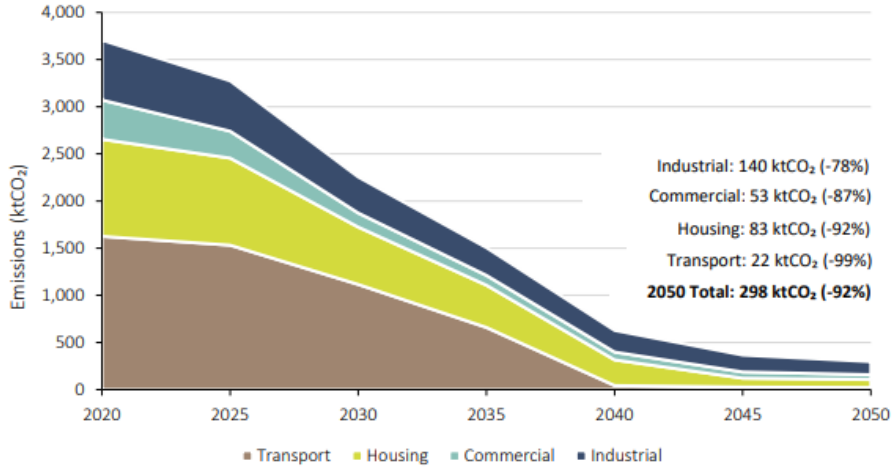
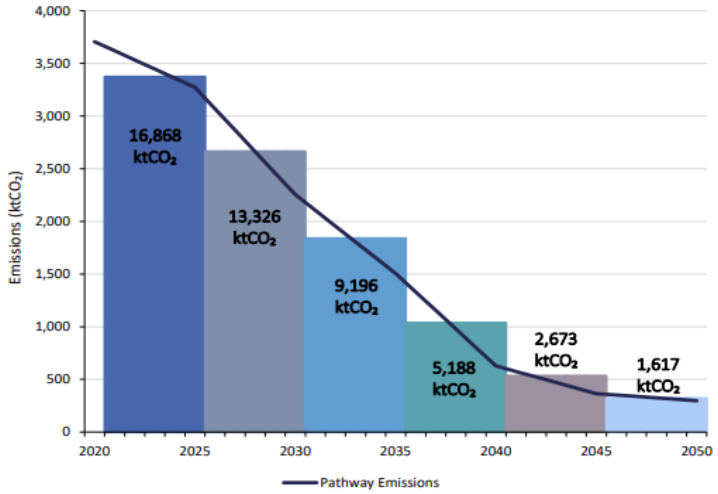


Figure 2-6: Projection of Pathway Carbon Emissions by Sector



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Oxfordshire Net Zero Route Map: Energy Supply Sector

FUTURE OXFORDSHIRE PARTNERSHIP

OXFORDSHIRE COUNTY COUNCIL

Cherwell DISTRICT COUNCIL NORTH OXFORDSHIRE

OXFORD CITY COUNCIL

South Oxfordshire District Council

Vale of White Horse District Council

WEST OXFORDSHIRE DISTRICT COUNCIL

Context:

- 2023: Publish details of Future Homes Standard
- 2023: Completion of Project LEO
- 2023: Allow for hydrogen blending (20% gas grid)
- 2024: South / VoWH Joint Local Plan adoption
- TBC Cherwell Local Plan adoption
- 2025: Gas boilers banned in new dwellings
- 2025: District Heat Zoning introduced
- 2028: 600,000 Heat Pump Sales pa

Publish Oxfordshire Net Zero Route Map & Action Plan

Establish Leads and Sprint Groups

17% Carbon Reduction By 2025

Gas Grid Mix:
Natural Gas: 99%
Biomethane: 1%

Solar PV Targets:
Oxfordshire generates 3.6% of the UK's solar energy.
50% of Oxfordshire's solar energy consumption is self-supplied.

2025 Review Progress

- 2030: Vale of White Horse 75% reduction
- 2030: 59% reduction in Greenhouse Gas Emissions
- 2030: Cherwell target date for Net Zero
- 2030: South Oxfordshire target date for Net Zero
- 2028: Commence fifth carbon budget period

47% Carbon Reduction By 2030

Gas Grid Mix:
Natural Gas: 78%
Biomethane: 2%
Hydrogen: 20%

Solar PV Targets:
Oxfordshire generates 4.1% of the UK's solar energy.
50% of Oxfordshire's solar energy consumption is self-supplied.

2030 Review Progress

- 2033: Commence sixth carbon budget period
- 2035: Ban on sale of new gas boilers
- 2035: Target for 78% reduction in emissions
- 2040: Oxford City target date for Net Zero
- 2045 Vale of White Horse target date for Net Zero
- 2050 West Oxfordshire target date for Net Zero

69% Reduction By 2040

Solar PV Targets:
Oxfordshire generates 5% of the UK's solar energy.
50% of Oxfordshire's solar energy consumption is self-supplied.

2040 Review Progress

84% Carbon Reduction By 2050

Gas Grid Mix:
Natural Gas: 78%
Biomethane: 2%
Hydrogen: 20%

Solar PV Targets:
Oxfordshire generates 6% of the UK's solar energy.
50% of Oxfordshire's solar energy consumption is self-supplied.

2050

Net Zero Oxfordshire

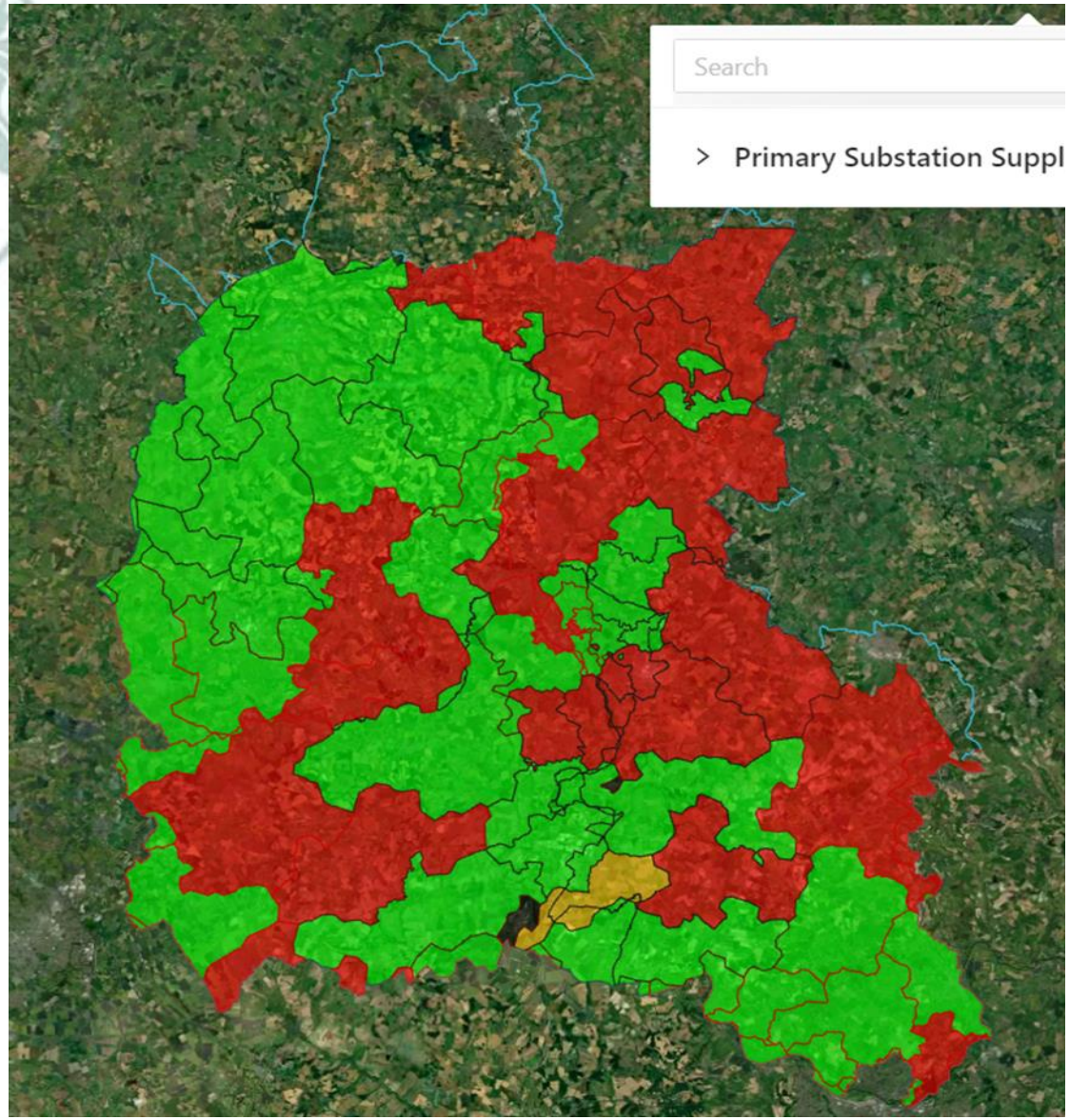
% changes are the total (cumulative change) at that date

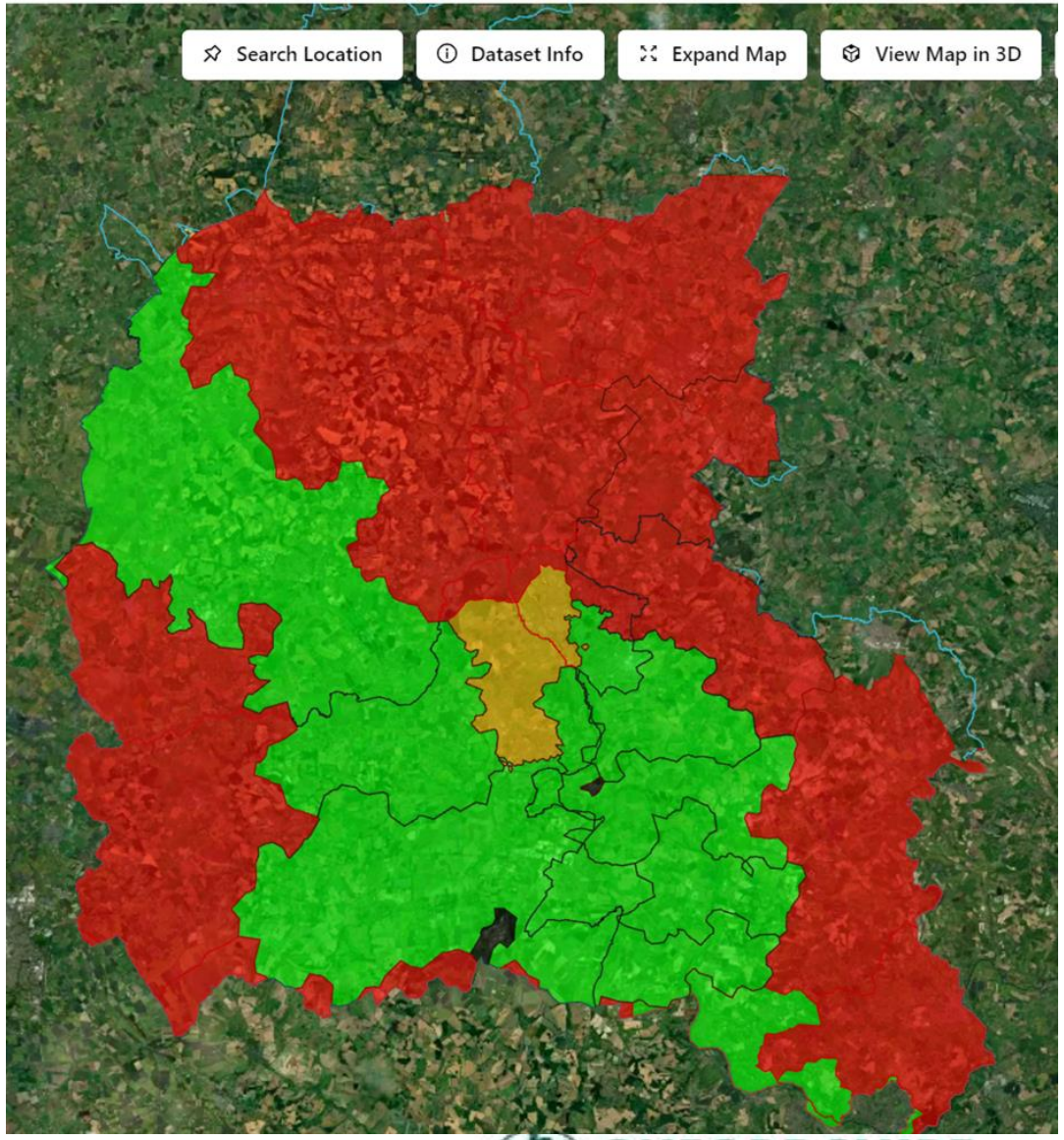
Roadmap covers scopes 1 and 2. Scope 3 (embodied carbon, consumption emissions) will need to be included in considerations over coming years to limit Oxfordshire's wider impacts.

Key

- UK Government Context
- Oxfordshire County Council Context
- District Council Context
- Net-Zero Pathway Requirements

Hydrogen sources (scope 3) are out of scope of the work, however estimates have been made for the aggregate impact of hydrogen on the UK system emissions





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Oxfordshire LAEP (OxLAEP) governance

- The OxLAEP was initiated in 2023 by the **Future Oxfordshire Partnership (FOP),** as one of the actions agreed under Pathways to a Zero Carbon Oxfordshire (PAZCO).
- FOP members are the six local authorities: Oxfordshire County Council and Cherwell, Oxford City, West Oxon, South Oxon, Vale of the White Horse District Council and

- OxLAEP has its own governance structure. members are the six Councils and:

Oxfordshire's three Distribution Network Operators (SSEN, NGED, UKPN)
National Energy Systems Operator (NESO)
Southern Gas Network
Oxfordshire Local Enterprise Partnership (OxLEP)
Greater South-East Net Zero Hub
Low Carbon Hub (Community Energy)

The OxLAEP programme

In 2023, the Future Oxfordshire Partnership (FOP) instructed Oxfordshire County Council to convene local authorities and local network operators to scope a Local Area Energy Plan.

In July 2024 FOP approved the recommended options for the OxLAEP.

WS1 – LAE Plans

- LAEP baseline, scenarios and datasets for essential emissions sectors, suitable to be incorporated into GIS systems
- 5 District level LAEPs
- Integration of community energy projects into wider energy planning
- County-wide summary report

WS2 – LAEP Function

- Support the development of LAEP capabilities in Oxfordshire's authorities, able to navigate the impacts of grid constraints, and coordinate the Net Zero project delivery pipeline
- Embed LAE Planning into Oxfordshire authorities in the long-term
- Develop Investment programme

The Oxfordshire LAEP is informed by Project LEO-N alpha: Local Energy Oxfordshire - Neighbourhoods

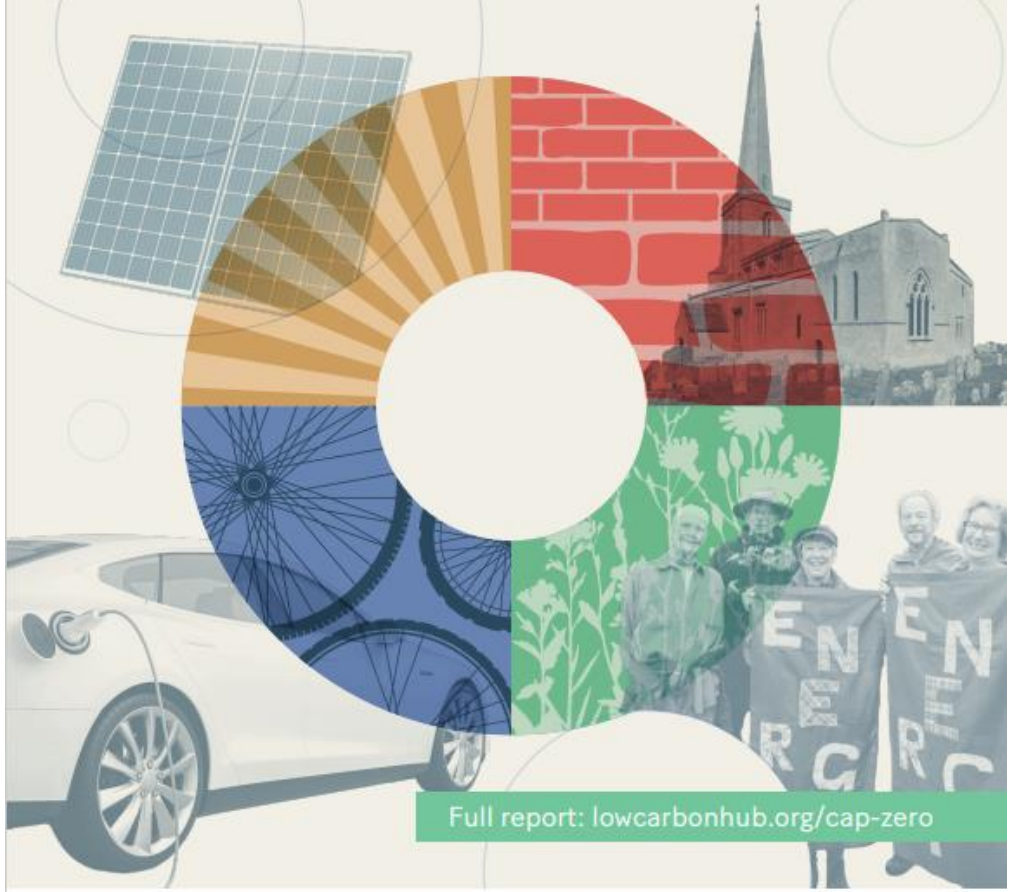
- **LAEP function development**: New institutional arrangements are proposed to facilitate and drive local delivery, develop new delivery mechanisms including innovative financing options, mobilise the supply chain and improve community level energy planning to integrate with wider City or County wide plans.

- **Digital, dynamic LAEPs**: Local Area Energy Planning tools such as AITL's LAEP+/LENZA/Your Net Zero Hub, capable to "nest" datasets, action plans and project pipelines at different geographic levels, feed forecast demand and supply data directly back to DNOs to support infrastructure upgrade planning and enhance local authority capacity through automation. Data is shared with strategic partners.

- **Grid Edge coordinators**: specialist organisations that bring together the skills and expertise required to support communities with neighbourhood-level, hyper-local LAEPs and deployment of Net Zero solutions to reduce and delay need for grid infrastructure upgrades and enable the sharing and trading of energy to maximise community benefits.

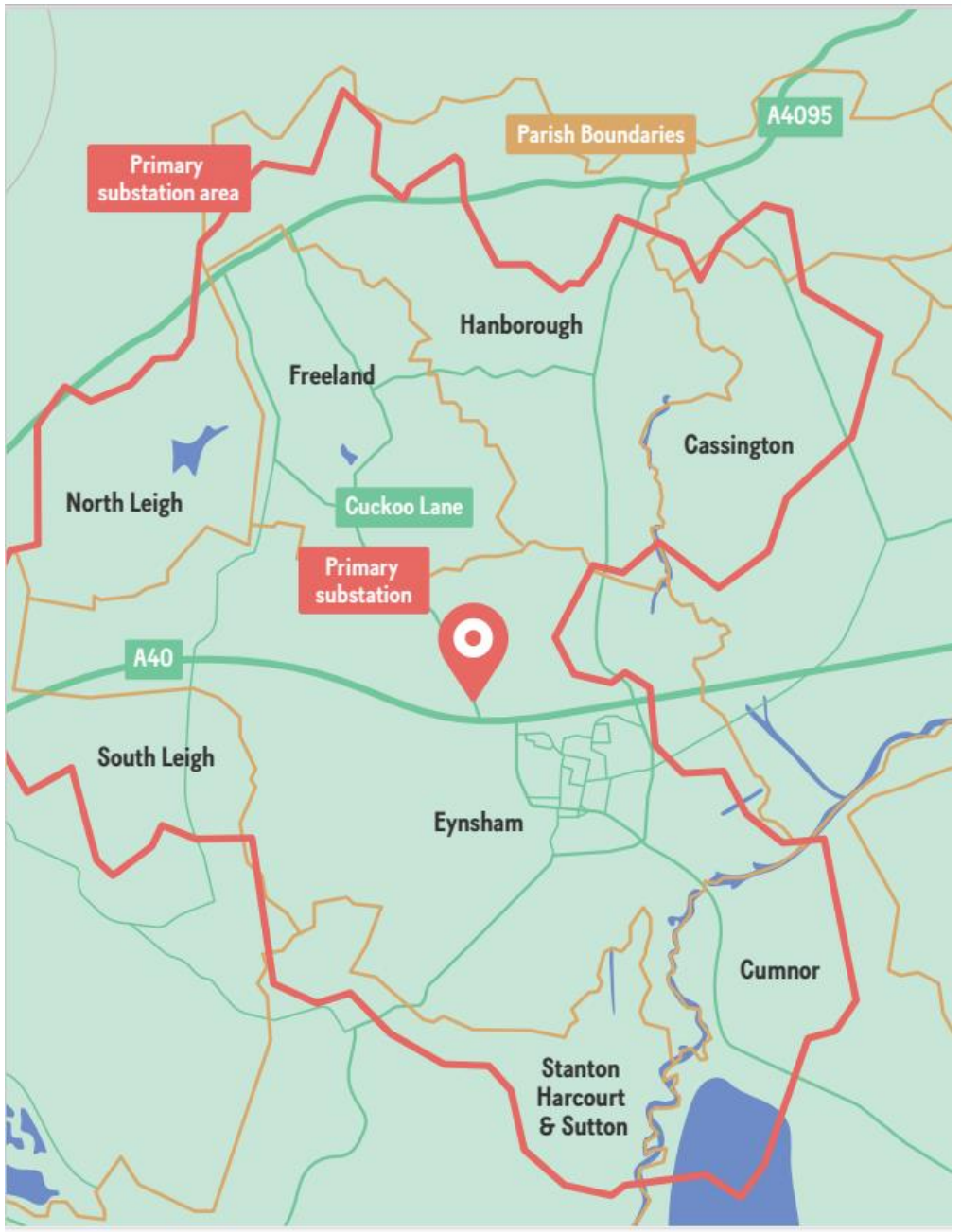
Community Action Plan for Zero-Carbon Energy

CAPZero | Leading the Way — Summary Report



Cassington
Eynsham
Farmoor in Cumnor
Freeland

Hanborough
North Leigh
South Leigh
Stanton Harcourt & Sutton



LAEC : Local Area Energy Coordination

Courtesy of Project LEO-N & Low Carbon Hub

Regional and Local Energy Planning

STRATEGIC LEVEL

- Open information flows and decision- making at local, network and regional levels
- Strategic engagement with local, regional and national stakeholders
- **Prioritisation aligned with local democratic mandates**

Closing the delivery gap

TACTICAL LEVEL

- Create Neighbourhood-level LAEPs (e.g one per primary)
- Net Zero Delivery Engine
- **Fast, iterative learning on-the-ground**
- Provide expertise to communities
- **Access community knowledge & drive & investment**
- Mediate learning to network operators & councils

Local-regional collaboration and governance - LAEP

Data Flow via Digital LAEP Platform

Grid Edge Coordination (GEC)

Net Zero Neighbourhoods Delivered

low carbon hub

Scottish & Southern Electricity Networks

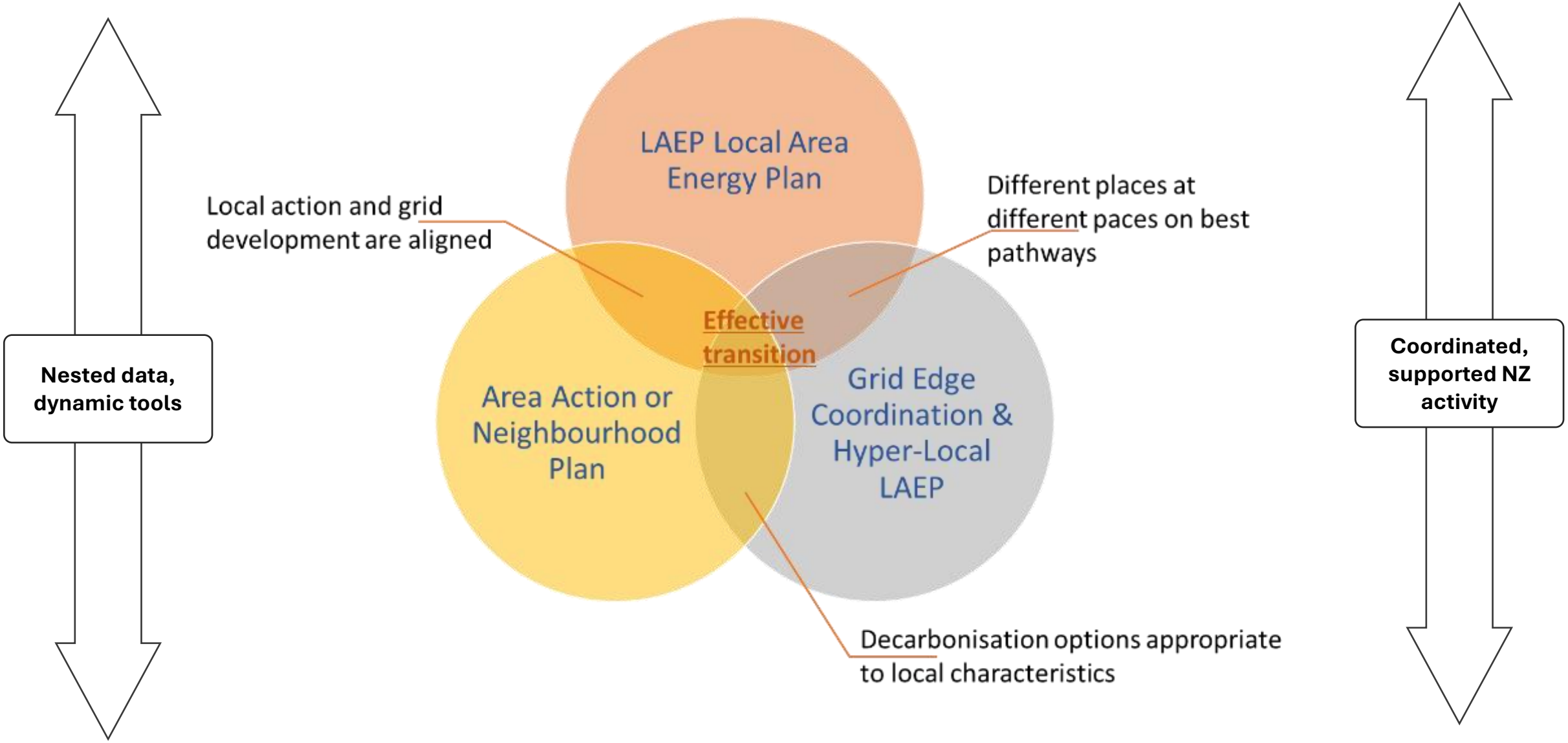
UNIVERSITY OF OXFORD

OXFORDSHIRE COUNTY COUNCIL

Baringa

OXFORD CITY COUNCIL

Integrated Planning: Local Area Energy Coordination



Oxfordshire Energy System partnership projects

- **Local Energy Oxfordshire (LEO)** – whole system transition, flex, community energy, smart and fair
- **Energy Superhub Oxford (ESO)** – BESS with private wire
- **ZCOP Industrial Decarbonisation**
- **Heat Network** feasibility: Oxford, Banbury.
- **County Retrofit Programme and Cosy Homes**
- **Oxfordshire Energy Saver App** – smart data flex and retrofit support
- **Clean Heat Streets** – Trial of mass domestic heat pump roll out
- **LEO-N alpha**: Grid edge coordination, Local Area Energy coordination, smart community energy schemes (SCES)
- **100 Together** – flagship Net Zero investment programme
- **OxLAEP**

Energy Saver App

ENERGY SAVER APP

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Take control of your home energy

Get personalised insights based on your energy use and unleash the power of your smart meter to...

- Use less gas and electricity at home
- Save £200 a year on your energy bills
- Reduce your household emissions

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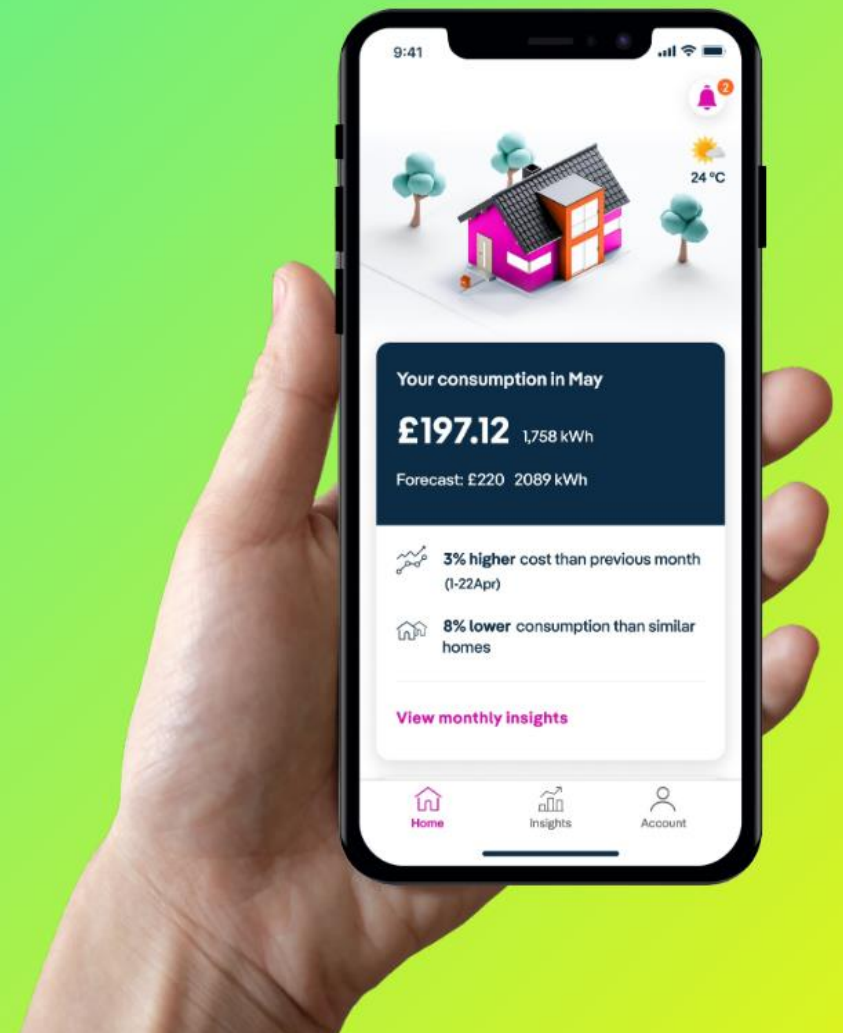

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Thank you

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