ZERO
CARBON
OXFORDSHIRE

ANNUAL REPORT 24/25

Executive Summary

Since 2021, Zero Carbon Oxford Partnership (ZCOP) and the supporting Secretariat have been working together to enable the city to meet its net zero targets and prepare for climate change impacts.

Building on the success of the partnership, we are expanding to become a countywide body to drive collaborative climate action across the Oxfordshire.

The Zero Carbon Oxfordshire Partnership will build on this record of enabling partners to collaborate to accelerate climate action, harnessing our collective skills and powers expertise and – increasingly – new sources of funding, to accelerate local net zero projects.

Its current membership includes both universities, both hospital trusts, the City and County Councils, further education bodies and large businesses.

Partnership Members commit to:

- Working together to create a zero carbon and resilient Oxfordshire.
- Working on shared projects that deliver greater carbon emission reductions than we could achieve individually.
- Emphasize local, community and non-carbon benefits of climate action.

This report

This report highlights the key activities and impacts delivered by the Partnership over the last year and sets the vision for the county wider partnership.

Foreword

Nick Eyre, Interim ZCOP chair

'It's been a transformative year for the Partnership, and one which shows how working in collaboration can accelerate local climate action.

ZCOP has convened a large number of local stakeholders and we have catalysed a range of initiatives that support the city's ambition to become zero carbon. We have also made a promising start to expanding the partnership to become the Zero Carbon Oxfordshire Partnership, with new members and plans for action across our wider geography. We are hugely grateful to our existing partners for their contributions of funding, expertise, creativity and time, and to more than 80 organisations beyond the formal partnership who joined our activities this year.

This report sets out the Partnership's work to date in Oxford and starts to set the vision for an expanded Oxfordshire-wide partnership.

Despite the progress we have made in the city in reducing emissions, we are not progressing sufficiently fast. So we also make an urgent call to support the action needed across the county, if Oxfordshire is to achieve its climate change targets.

With the expanding geography, come the challenges of climate action in rural communities. We need to include new perspectives – from agriculture, forestry, land-based renewable energy and nature recovery. Our goal will be to coordinate, champion and, where needed, lead on climate action in the county, building on the great work already being delivered, and enable more organisations and individuals to act on climate change.

As Interim Chair of the partnership, I call on all the key stakeholders in Oxfordshire to join with ZCOP in building on the excellent work showcased in this report.'

The Partnership brings together organisations from across the county's public, private, and voluntary sectors that share the common goal of achieving the ambitious climate objectives and targets set by the partnership

24 partners

150 organisations represented

56,000 employees

14 sectors

26 events and workshops

2 networking events

100+ organisations involved in ZCOP initiatives

ZERO CARBON OXFORDSHIRE

Understand more about joining ZCOP by emailing ZCOP@oxford.gov.uk

Zero Carbon strategy, targets and roadmap

Since 2021, the Partnership has set the Oxford city's climate change vision, target and collaborative action plan.

We deliver transparent, robust reports that show progress towards our targets and are used to inform future strategies and action.

In developing a shared place-based strategy, in deep consultation with the largest organisations locally, ZCOP is driving buy-in, deliverability and ensures local leaders understand the action required.

ZCOP Roadmap and Action Plan and PAZCO

City progress

In 2021, ZCOP set a science-based pathway to take the city to net zero by 2040 and 5-yearly carbon budgets, with an accompanying partner led action plan setting out key collaborative actions for the partnership to drive forwards in Sprint Groups and galvanise partners in the Roadmap and Action Plan.

The roadmaps provide an important step in breaking down the overall net-zero vision into more tangible pieces, by looking at 5-yearly periods by sector, and form the basis from which the actions set out in the action plan have been developed.

Buildings are the city's biggest contributor, with transport close behind. Later slides present more detail.

This action plan has been developed specifically for ZCOP to own and implement; this report spotlights key activities from 2024/25.

County perspective

The Oxfordshire Net Zero Routemap and Action Plan (ONZRMAP) is the guiding document for decarbonisation efforts at a county level. This report, published by the Future Oxfordshire Partnership in 2023, sets a pathway for the county to achieve net zero by 2050, with intermediate emissions reduction milestones at 2025, 2030, and 2040. ONZRMAP is based on the 'Oxfordshire Leading the Way' scenario set out in the Pathways to a Zero Carbon Oxfordshire (PaZCO) report published by the University of Oxford in 2021.

The majority of the county's emissions are produced by the transport sector, although the exact proportion varies by district. Domestic sources are also a big contributor to county emissions. Significant action is still required in order to deliver on the county's 2050 net zero target.

More detail on sectoral emissions and the county's carbon budget is provided on page 9.

Progress against ZCOP Roadmap and Action Plan

Emissions pathways

The latest greenhouse gas emissions data published by the Department for Energy Security and Net Zero (DESNZ) shows a 14% reduction in emissions in 2022 compared to a baseline 2018. The ZCOP Roadmap set the 2025 target at a 44.3% reduction from 2018 emissions.

Oxford's emissions per capita are at their lowest since the pandemic in 2020, at 3.7 t CO_2e per person, below both the average for the South-East (4.4 t CO_2e) and England (5.1 t CO_2e). This is driven by higher-than-average public transport and cycling, a high population density and its lower level of large industrial facilities. For comparison, Cambridge also has a 3.7 t CO_2e per person.

Carbon Budgets

To account for fluctuations between years, the roadmap tracked five-yearly carbon budgets up to 2040, based on combined projected emissions of carbon dioxide across the sectors. A total of 1,263 kt CO_2 (56%) of the 2021-2025 budget has already been emitted. This is above a linear extrapolation of the budget, however historic CO_2 emissions data suggests that the city may recover its position, particularly if the grid decarbonises at an increased rate as part of Clean Power 2030 Action Plan.

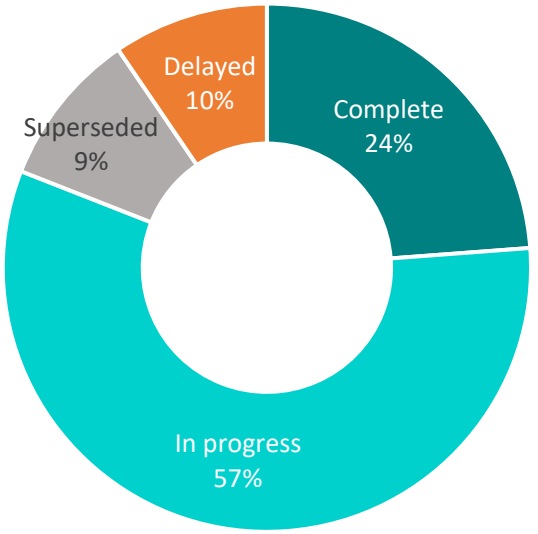
Action Plan progress

The Action Plan provided a clear initial direction for the ZCOP Secretariat and Partnership to follow, including both near-term (2025) and mid-term (2030) priority actions. Just over 80% of the near-term actions have been delivered or are in progress (read more on pages 11-18).

Actions marked as superseded often relate to specific technologies, whose development have either surpassed or not met expectations predicted in 2021 and will no longer be explored as a priority. Delayed actions will be considered if remain relevant for ZCOP when working across the county.

Key actions remaining include:

- Local Area Energy Planning, being led by Oxfordshire County Council across the county.
- Collaboration within the education sector on low carbon skills
- Strengthening domestic grid connections



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A new action plan will be created in 2025 for the county partnership in collaboration with partners.

City emissions by Sector

Buildings

The 2021 Roadmap and subsequent research shows around 60% of Oxford's emissions arise from buildings, including residential, commercial, industrial, and institutional including universities, colleges, councils, and NHS buildings. Domestic emissions have reduced by 14%, commercial by 19% and institutional by 9%.

To reach zero, the carbon roadmap required reductions of 45%. 42%, 57% respectively, driven by updates in electrical heating, roof top solar and grid decarbonisation. 2022 City building reductions mirror those across the South-East. Mild weather & price increase likely contributed to decreases in 2022.

Transport

The second largest contributor to Oxford's emissions is transport, accounting for 23% in 2018, with private cars being the main source of emissions. This reduced to 15% in 2022, exceeding the ZCOP roadmap pathway, which required a 6% reduction. Local transport trends emissions match reductions across the South-East.

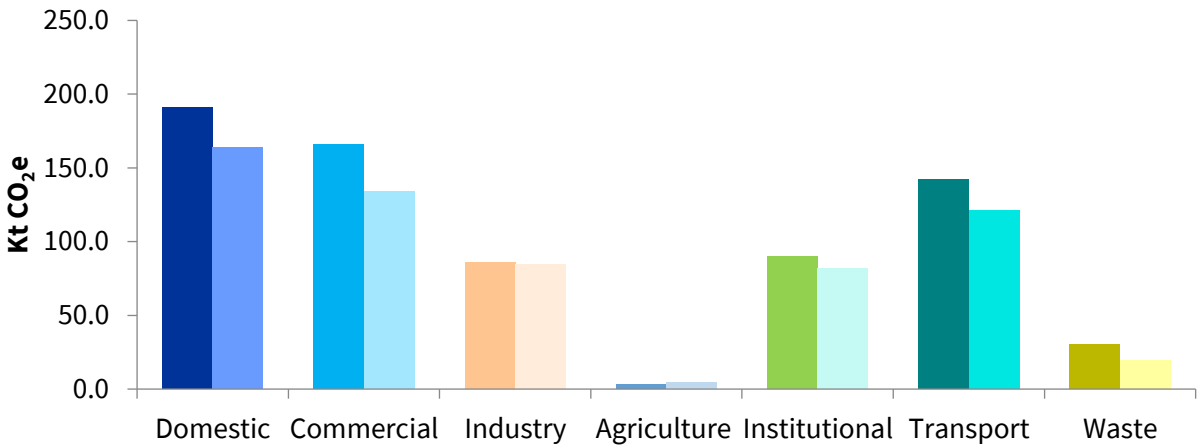
Industry

Industrial emissions accounted around a fifth of total emissions. From 2018 to 2022 there has been a 2% reduction in emissions, whereas the roadmap pathway required a 35% reduction. The national trend is a 7% decline. This deviation and a revised pathway and action plan to meet net zero by 2040 has been developed by the ZCOP ID project (page 12).

Waste & Agriculture

In 2022, agriculture continues to contribute less than 1% of emissions. While it has not been the focus of ZCOP to date, it becomes a significant sector for climate action as ZCOP expands to the county. National agriculture trends have seen reductions mainly from agricultural machinery emissions and lessening nitrous oxide emissions from agricultural soils.

Waste emissions reduced by 36% in 2022, exceeding the ZCOP pathway which required 22%. Waste actions in Oxfordshire are led by the Oxfordshire Waste Partnership (OWP). The South-East has reduced by 23%. DESNZ notes waste is calculated by arising in each local authority.



2018 vs 2022 Note all emissions data 2-years in arrears

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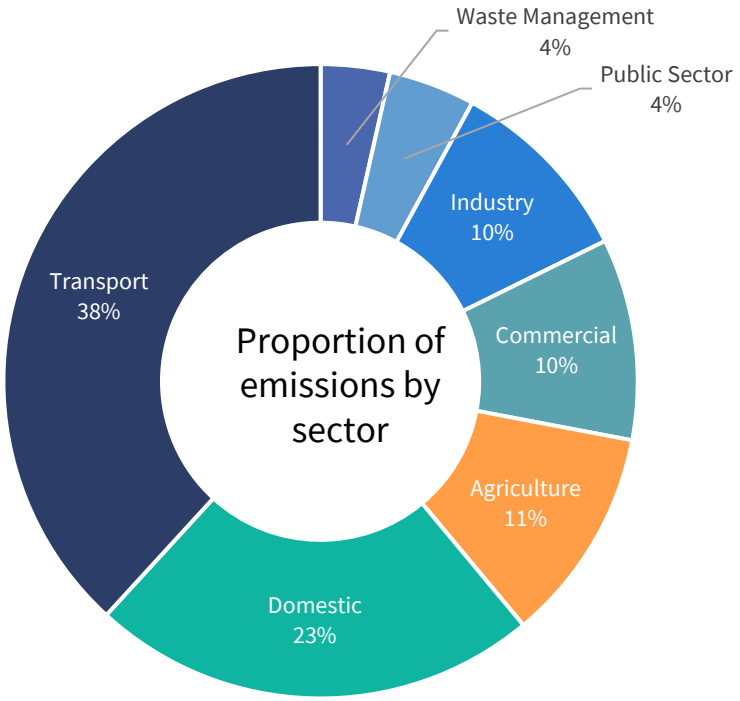
Oxfordshire countywide emissions

Sectoral Emissions

The same dataset from DESNZ shows that 4,064 kt CO_2e was emitted from sources in Oxfordshire during 2022. This is equivalent to 5.5 t CO_2e per person, which is above the average for the South-East (4.4 t CO_2e) and England (5.1 t CO_2e).

Transport was the highest emitting sector in the county, responsible for 38% of all emissions. The domestic sector accounted for just under a quarter of total emissions (23%).



Between 2019 and 2022, transport showed the greatest reduction in emissions (14%). Domestic emissions also decreased by 10% over the same period.

The share of emissions by sector varies significantly by district across the county and demonstrates that priorities for decarbonisation will change as ZCOP expands to a countywide partnership.

Carbon Budgets

To inform progress against the county's net zero target, ONZRMAP provides five-yearly carbon budgets between 2021 and 2050, based on combined projected emissions of carbon dioxide across the industrial, commercial, domestic and transport sectors. A total of 3,413 kt CO_2 was emitted from these sectors in 2022 (according to the latest available DESNZ data), which accounts for 20.2% of the 2021-2025 budget.

Since the COVID-19 pandemic, emissions have rebounded and have not decreased at the rate necessary to stay within the carbon budgets outlined in the ONZRMAP. However, Oxfordshire is still within the carbon budget set by the Climate Change Committee, and extrapolation of historic CO_2 emissions data suggests that the county may recover its position in relation to the ONZRMAP carbon budgets later in this budget period.

Taking Action to Decarbonise

Decarbonisation across the county is informed by the actions set out in the ONZRMAP, including vehicle electrification, retrofit, development of a Local Area Energy Plan and nature-based carbon sequestration.

Rural affairs and the challenges of decarbonisation within rural communities will also need to be included within the refreshed action plan for the countywide partnership.

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ZCOP will continue to report emissions updates annually to the SG and in future annual reports.

New strategies and action plans

ZCOP Industrial Decarbonisation (ZCOP ID)

Oxford's industrial sector has a global impact and reach but is made up of many relatively small, diverse sites spread across the city, alongside a few larger ones. In 2023, ZCOP successfully secured funding through the Local Industrial Decarbonisation Plans (LIDP) competition, enabling the development of a strategic roadmap to support local industries on their journey to net zero. The resulting ZCOP ID Roadmap and Action Plan is the culmination of 14 months of collaboration among industrial sites, local authorities, decarbonisation experts, network operators and academia to assess the current state of industrial decarbonisation and research into a range of scenarios to the Cluster achieve net zero.

The final strategy marks a major milestone in Oxford's net zero journey, building on ZCOP's 2021 report while advancing the city's industrial decarbonisation strategy. It outlines the optimal way for organisations to work together in a newly formed Oxford Industrial Cluster to decarbonise industry in Oxford. Focusing on:

i) Energy supply infrastructure,
ii) Collaborative financing,
iii) Building the cluster and its capacity.

Adaptation

Oxfordshire County Council has led work on a new Oxfordshire route map, developed in collaboration with ZCOP and other local stakeholders to enable collective action and build long term resilience to a changing climate.

The 15 priority actions for 2025-26 include:

- establishing working groups within ZCOP,
- identifying funding sources,
- analysing habitats and crops which are most at risk from climate change,
- and producing adaptation guidance for developers.

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ZCOP action

Our Partners are committed to working together to create a zero carbon and resilient Oxfordshire and working on shared projects that deliver greater carbon emission reductions than we could achieve individually.

The following section spotlights some of the collaborative work of the partnership from the last year.

ZCOP Working Groups and Sprints

Buildings

Local plan in Oxford and ZCOP – 12 organisations met to develop recommendations for reducing the operational and embodied carbon in new buildings to be considered for inclusion within the city's next Local Plan

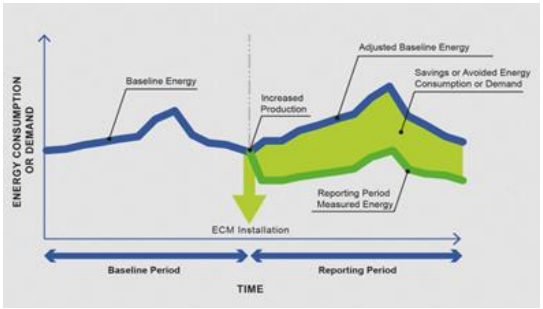
ZCOP partnered with ESOx to provide 8 energy audits to SMEs, these include customised energy efficiency recommendations tailored to business needs, along with practical advice for implementation.

Priming the low carbon retrofit supply chain is a press release and campaign aimed at local suppliers and contractors to raise awareness of the significant and growing market for net zero technology installers locally and encourage upskilling.

Quarterly ZCOP energy managers meetings bring together those responsible for efficiency and net zero technologies at partners' sites for knowledge exchange to overcome barriers and share best practice.

Establishing ZCOP energy management apprenticeship to help address skills gaps and attract incumbents into this challenging and growing discipline.

ZCOP also provided free training worth £1,500 per person To interested partners on measurement and verification of energy efficiency for 7 organisations over 2 days to improve accuracy of savings calculations.



ZCOP+ 2025-26

Residential

- Oxfordshire County Council, supported by ZCOP and the buildings working group, is developing a baseline assessment and gap analysis of current retrofit delivery in the county. Once recommendations have been tested with wider stakeholders, they will be completed in summer 2025.
- ZCOP will build on this baseline work to create an action plan, to be led by the working group (WG) with some expected external partners.
- Next WG meeting in May 2025.

Commercial & Institutional

- Landlord Tennant forum in May 2025 will gather these two groups to address barriers in implementing net zero actions in leased properties.
- Expand and continue energy managers forum.

Champion Lucy Properties

Lead Oxford City Council

+ 8 supporting partners

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100% of city partnership members who own their site(s) are working to improving its energy efficiency.

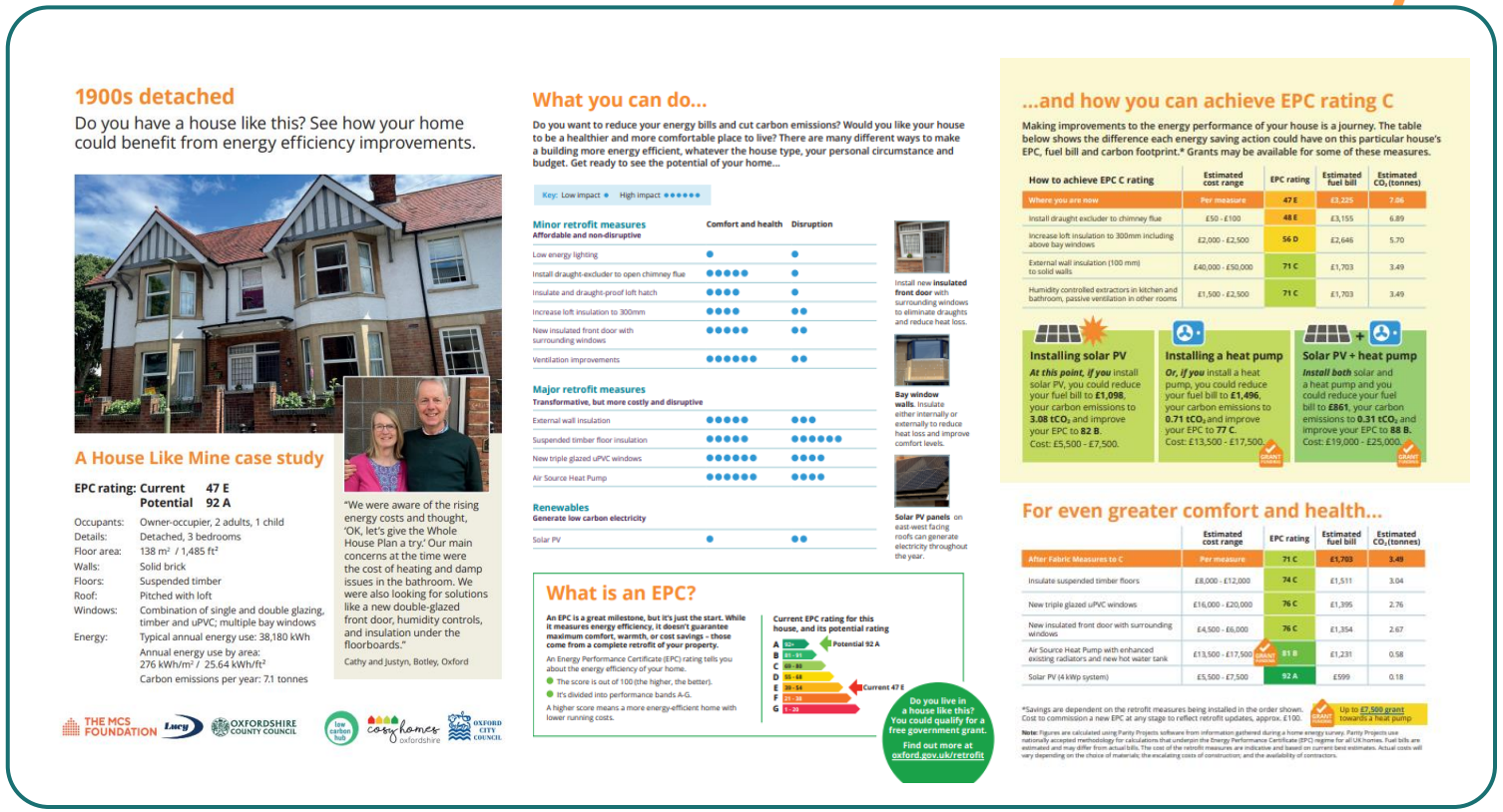
ZCOP Working Groups and Sprints

Buildings

The ZCOP Sprint Group on residential retrofit developed and refined the project, *A House Like Mine,* which spotlights 12 common, real-life homes from across Oxford, to help demonstrate to residents how their homes can be more energy efficient.

The homes feature the experiences of eight homeowners and four landlords, who explain how bespoke plans help pinpoint the most effective upgrades, prioritise improvements, and how to avoid mistakes. Available: www.houselikemine.org

Partners with their own residential properties are using these to engage with tenants as they endeavour to meet EPC C. Others, including the both councils involved, are sharing widely to support public understanding of retrofit.



Champion Lucy Properties

Lead Oxford City Council

+ 8 supporting partners

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ZCOP Working Groups and Sprints

Champion OXFORD BROOKES UNIVERSITY

Lead ZERO CARBON OXFORDSHIRE

+ 11 supporting partners

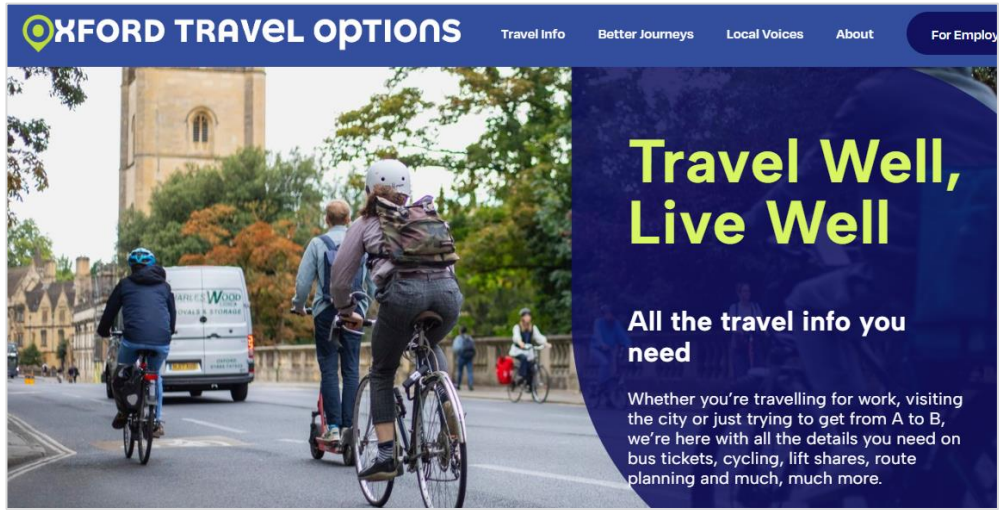
Transport

The ZCOP Sustainable Travel workstream has engaged many of the partnership's largest employers, identifying common challenges in promoting sustainable commuting. Partners are already making great strides, with initiatives such as offering low-carbon commuting incentives, transitioning vehicle fleets to electric, and supporting staff through innovative company car schemes & on-site charging infrastructure. However, a key issue remains the difficulty in gathering consistent staff travel data, translating it into actionable insights, and effectively engaging employees.

To address these barriers, ZCOP is unlocking funding for new research initiatives, such as the development of a website for commuters, delivering 'activation' trials (e.g. try-before-you-buy an e-bike), and researching staff sentiment on commuting. Beyond this, ZCOP is facilitating the sharing of best practices across the partnership and ensuring that solutions are accessible to all members. By bringing employers together, ZCOP has negotiated lower costs for some transport tools helping members achieve their sustainability goals for less.

Existing incentives of ZCOP partners

- 90% offer cycle-to-work schemes
- 80% provide additional bike support
- 70% offer bus discounts for staff



The **Oxford Travel Options** website is a ZCOP-led initiative designed to be a one-stop shop for all active travel options and information in Oxford. This site provides up-to-date and accurate resources, case studies, and practical guidance for those commuting into Oxford, aiming to inspire others to try new commutes and travel options. It is designed to be helpful and practical for everyone, with a section specifically dedicated to busy employers, offering valuable insights to support their sustainability goals and improve employee commuting experiences.

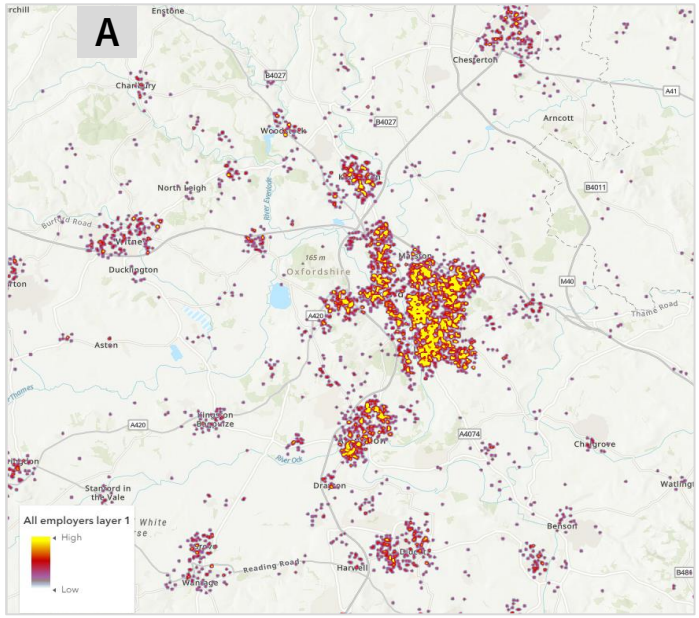
Over 90% of partnership members interviewed incentivise sustainable commuting

ZCOP Working Groups and Sprints

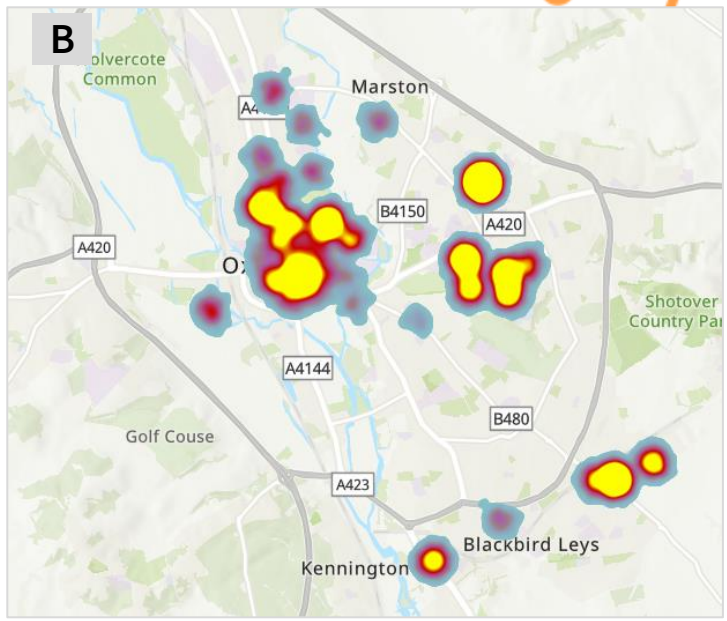
Transport

Post code mapping analysis – a snapshot

- 29,000 employee home locations processed
- 7 major ZCOP employers' post code data provided
- GDPR-compliant analysis
- Best practice guide on post code mapping and conducting staff travel surveys has been created for ZCOP employers to align data sets and enable better insights
- Findings shared with bus companies and other travel operators improve services and guide investment plans



A: Employee Home Locations Heatmap



B: Employee Destinations

Champion

OXFORD BROOKES UNIVERSITY

Lead

ZERO CARBON OXFORDSHIRE

+ 11 supporting partners

ZCOP 2025-26

- Work with the County Council on baselining and developing ZCOP offer for travel in more rural areas.
- Repeat data collection and analysis of Oxford commuter patterns.
- Partner with University of Oxford to assess the cost of congestion.
- Host 1-hour webinars sharing best practices for postcode mapping and staff travel surveys.

Findings

47.3% of the workforce* has a **sustainable commuting option** available** that takes no more than 15 minutes longer than driving

Only **18.3%** of the workforce* has **public transit as a viable commuting option** that takes no more than 15 minutes longer than driving

**analysis of 6 organisations (~22,000 commuters)*
***walking, bus, cycling, lift share*

ZCOP Working Groups and Sprints

Energy infrastructure

ZCOP worked with partners and SSEN, the District Network Operator (DNO), to simplify interactions infrastructure processes and to ensure future grid upgrade plans reflect local needs.

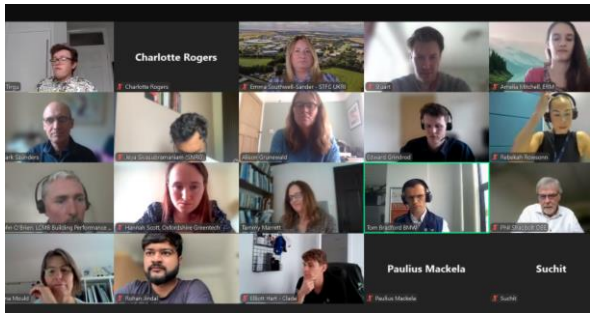
SSEN produce Distribution Future Energy Scenarios (DFES). This annual process produces forecasts of future electricity needs. ZCOPs engagement with partners ensures organisation's planned development, upgrades and decarbonisation plans are considered in grid upgrade planning.

Our recent collaboration led to the collection of local data and evidence from over 10 businesses and business parks, directly supporting forecasting, network analysis, and investment planning for future electricity systems. In total, we engaged over 30 organisations—raising awareness of DFES and encouraging broader data sharing to strengthen local energy planning.

ZCOP represented its partners in Ofgem's Working Groups on regional strategic planning function delivered by the National Energy System Operator in the creation of regional Energy Strategic Plan (RESPs). As well as in submitting a detailed response on behalf of the partnership to the Cowley grid supply point: Strategic Development Plan. Our inputs requested the future processes considered local data and needs and resulting solution increased visibility of regional approach and priorities.

ZCOP 2025-26

- ZCOP will continue to collaborate annually with SSEN to support data collection and expand the offer to new county partners.
- Work with the OxLEAP program and WG, specifically, ZCOP is developing plans with Oxford Brookes to support stakeholder engagement for the project.



Champion

Scottish & Southern Electricity Networks

Lead

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+ 32 participating organisations

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ZCOP Working Groups and Sprints

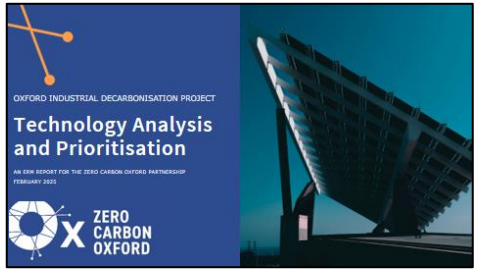
Industry

As well as the Industrial Decarbonisation Roadmap and Action Plan (see slide 12), ZCOP produced series of detailed studies exploring the industrial cluster, its technological options for decarbonisation, the level of ambition required, and the barriers to be overcome. These are detailed below.

Lead ZERO CARBON OXFORDSHIRE + 6 supporting partners

Industrial Landscape & Baseline

- Defined the Oxford industrial cluster.
- Evaluated current energy consumption and emissions.
- Identified future growth of the Oxford Industrial Cluster.



Technology Prioritisation

- Reviewed possible decarbonisation technologies against criteria of technology readiness, cost, applicability, and a range of barriers.
- Identified most appropriate technologies for Oxford industrials.

Scenario Modelling

- Identified business-as-usual uptake for technologies and initiatives to accelerate uptake.
- Developed Oxford industrial decarbonisation scenarios and technology uptake targets.
- Evaluated impact energy, emissions, costs, jobs & GVA.

Funding and Financing

- Identified barriers to funding and financing industrial decarbonisation in Oxford.
- Explored options for enabling uptake of abatement technologies from a funding and financing perspective.

Skills and Supply Chain

- Identified barriers to abatement technology uptake associated with skills and supply chains in Oxford.
- Explored options for enabling uptake of abatement technologies from a skills and supply chain perspective.

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139 attendees from 96 organisations, representing 64% of industry in Oxford were engaged by ZCOP ID

ZCOP Working Groups and Sprints

Industrial Cluster

Now complete, the 14-month project established the Oxford Industrial Cluster within ZCOP, who will work to deliver Local Industrial Decarbonisation Action Plan and Roadmap, with 16 targeted actions identified to be pursued by across – Energy Supply Infrastructure, Collaborative Financing, and Capacity Building. Collectively, these actions will support the delivery of key milestones along a shared journey to net zero industrial emissions by 2040. By fostering collaboration, knowledge sharing, and investment planning, the project aims to reduce emissions, lower costs, and accelerate the adoption of innovative clean technologies—ensuring Oxford's industries remain competitive and sustainable in the green transition.

By being part of ZCOP, members of the Cluster will be able to access the existing network of expertise and activities in domestic, commercial, institutional and transport decarbonisation.

Lead ZERO CARBON OXFORDSHIRE

+ 6
supporting partners

ZCOP 2025-26

- Develop cluster deliver plan.
- Apply for DESNZ funding opportunities.
- Online showcase of ZCOP ID for county-based industrial and potential industrial clusters.

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ZCOP network building

ZCOP supports organisations and individuals to connect through our projects, Working Groups, training, and networking events. For partners opportunities create collaboration, association, and identify new suppliers & customers.

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Networking and peer to peer learning 2025

ZCOP hosted nearly 30 events, meetings and workshops for over 140 attendees in 2024-25. The next two pages summarise those planned for 2025-26.

Energy managers forum

Quarterly ZCOP energy managers meetings bring together those responsible for efficiency and net zero technologies of partners for knowledge exchange to overcome barriers and share best practice. Agendas include partner updates, topical focus, guest presenters, and arranging additional interaction as needed.

AGM

2024's event, hosted by BMW MINI, brought together 40 organisation leaders from across the Partnership and wider stakeholders to connect, share learning and challenge the progress being made locally. We also run a handful of social networking events each year.

2025's AGM will be in the Autumn, and all partners will be invited to join and set the priorities of the expanded partnership, as well as connect and learn about the leading climate work ongoing across the county.

Landlord tenant forum

This event is planned for May 2025 and will bring together property owners and occupiers to collaborate on removing barriers to making rented premises more sustainable net zero carbon buildings.

Peer-to Peer

ZCOP accelerates organisational change via a series of peer-to-peer focus sessions on a range of topics including Scope 3 assessments, heat decarbonisation and sustainable procurement, helping partners to increase impact by working and learning together. Partners can request topics of focus by contacting the ZCOP Secretariat.

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Connections

Partnership influence

ZCOP compiles recommendations from partners and relays these to national government, consultations, and other bodies on behalf of partners:

- Representation on the GSENZH RAB
- Regular engagement with Oxford City Council and Oxfordshire County Council.
- Participating in initiatives including the 3ci Initiative and C40
- Working with groups such as Oxfordshire Champions
- Regular meetings with Directors and delivery leads of Department for Energy Security and Net Zero.

Socials

Informal networking events offer individuals and organisations the opportunity to meet to make new connections, share ideas, and hear about local climate initiatives.

The first meet up in 2025, the Spring Social, will take place at Oxford's Covered Market on 3rd April 2025.

Free & discounted training

In partnership with local further and higher education providers, ZCOP provides partners with free training. In 2024, ZCOP partners benefitted from free training in energy management as well as heat pump and PV installation and maintenance.

In 2025, we will be partnering with Abingdon and Witney College to offer new certifications.

Quarterly Steering Group meetings

The Steering Group is made up of local business, political and knowledge leaders, who strategically guide our partnership's work.

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Partners are invited to suggest new sessions, forums, training sessions by contacting the Secretariat.

Thank you

Finally, as ZCOP moves to a new chapter, we would like to extend thanks to all members of the ZCOP and Secretariat for their work over the years in contributing to making Oxford a zero carbon city. Special thanks go to Lucy Group, Landsec, Oxford Health NHS Trust as they come to the end of their terms on the Partnership's Steering Group.

ZCOP's successful work relies on the generous backing of our partner. Particularly thanks goes to the individuals and organisations who support us financially and who give their time to support the work of our sprints, working groups and projects .

As the partnership now embarks on an ambitious expansion, we will continue to prioritise action on the ground and recognise the need to increase pace and scale.