Net Zero Leicestershire
Strategy 2023-2045

Tackling climate change through a transition to Net Zero –
a cleaner, greener Leicestershire for people, prosperity and planet

Leicestershire
County Council

NET ZERO
LEICESTERSHIRE

Lead, enable, inspire

Foreword

Councillor Nick Rushton (Leader)

Councillor Blake Pain (Cabinet Lead Member for the Environment and Green Agenda)

Here in Leicestershire, we declared a climate emergency back in 2019, but we're proud of having a commitment to environmental action that dates back much further.

Since 2009, we've reduced our carbon emissions by 75%, and we're on track to reach our target of being a net zero council by 2030 - cutting carbon, reducing waste and boosting biodiversity is built into our services.

Despite all this, we cannot be complacent, there is a huge challenge ahead.

We can't do this alone, we need a team effort - and in this Strategy you'll find out how we are facing the challenge by encouraging our residents, partners and businesses to help shape a greener future for the county, and for generations to come.

The Strategy takes a long-term view - looking ahead to 2045, and our ambitions to be a net zero county by that date. We've developed an action plan for the next five years which we'll review annually and report back on our progress each year.

The Covid pandemic has shown us the importance of working together, and how science and technology can provide us with the information and tools we need to do this. To realise our net zero ambitions will require further investment and commitment, but can deliver savings, and avoid the costs of not acting now.

A clean, green Leicestershire has much wider benefits for our health and our economy and everyone can make changes to help make it a reality. Collectively, we can make a big difference.

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An introduction to climate change and net zero

Climate change refers to a large-scale, long-term shift in the planet's weather patterns and average temperature, caused by the release of carbon dioxide and other greenhouse gases. Evidence has shown that high levels of greenhouse gases in the atmosphere are the leading cause of global warming, with global average temperatures rising by at least 1 degree to date.

Climate change will cause more extreme heatwaves, droughts, intense rainfall and other extreme weather across the world. These impacts will increase the likelihood and severity of a variety of risks including flooding, migration of people, damage to infrastructure, food insecurity and loss of biodiversity.

Although there are negative impacts of climate change, taking action to tackle climate change can provide a range of opportunities and benefits. A clean, green Leicestershire has benefits for health, business and jobs, and can help us reduce costs and provide a secure supply of energy.

The term net zero means achieving a balance between the carbon emitted into the atmosphere, and the carbon removed from it. To reach net zero, greenhouse gas emissions from homes, public buildings, industry, transport, agriculture and from the products we buy will need to be cut. We must ensure that action taken to cut greenhouse gas emissions is just – tackling inequality and injustice.

How the Strategy was developed

The County Council commissioned research to provide information on the baseline emissions from Leicestershire and pathways to net zero by 2045. Even with the most ambitious tailwinds pathway, we must do more to cut emissions at pace and scale to stay within 1.5-2 degrees of warming.

Our public consultation received 1400 responses identifying 12 key themes for us to consider in our Net Zero Strategy and Action Plan.

Our Net Zero Strategy

This Strategy outlines the County Council's approach to working with others to achieve the net zero target for Leicestershire and takes a long-term view to 2045.

We have developed an action plan to demonstrate how we will work with others to deliver action to reduce Leicestershire's emissions over the next 5 years. Tackling climate change across the whole of Leicestershire is too big a job for any one organisation. We need a team effort and we're driving this forward by encouraging our residents and businesses to help shape a cleaner, greener future for the county, and for future generations.

Vision

In 2045, Leicestershire has ended its contribution to global warming and has adapted to the impacts of climate change. The transition to net zero has created a cleaner, greener Leicestershire for people, prosperity and planet; supporting healthy, resilient communities, enabling sustainable growth, and enhancing biodiversity.

Goals

As a place leader, the County Council will:

- Achieve net zero carbon emissions for the council's operations by 2030
- Enable carbon reduction across the county by delivering and facilitating the required infrastructure
- Inspire the county's residents, organisations and partners to take action and develop a joined-up approach that delivers a net zero Leicestershire.

Leicestershire County Council will work with others to achieve
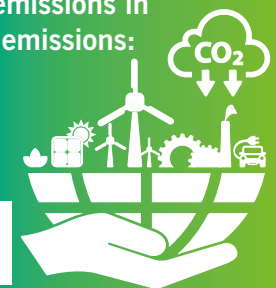
NET ZERO CARBON

FROM LEICESTERSHIRE BY 2045 OR BEFORE

NET ZERO EMISSION CO₂

Leicestershire will reduce its greenhouse gas emissions in line with the UK target to cut greenhouse gas emissions:

↓**78%** **By 2035** compared to 1990 levels

This means a further reduction of 65% between the baseline year 2019 and 2035

1. An introduction to climate change and net zero

1.1 What is climate change?

Climate change refers to a large-scale, long-term shift in the planet's weather patterns and average temperature, caused by the release of carbon dioxide and other greenhouse gases.

Before the Industrial Revolution in the mid-1800s, global temperatures had been stable for 11,000 years. Since then, we have burned increasing levels of fossil fuels such as oil, coal and gas, which release carbon dioxide, methane and other greenhouse gases.

The level of carbon dioxide in the atmosphere rose by 40% during the 20th and 21st century. In 2019, the level of carbon dioxide in the atmosphere was higher than at any time in at least two million years.

Evidence has shown that the high levels of greenhouse gases in the atmosphere are the leading cause of global warming by trapping heat from the sun, with global average temperatures rising by at least 1 degree to date.

Exceeding temperature rises of 1.5 degrees is seen as a tipping point where the impacts of climate change will accelerate beyond manageable levels, including sea level rise, species loss, food security, water supply and other impacts.

1.2 Why must we act?

The Intergovernmental Panel on Climate Change states that it is unequivocal that human influence has warmed the atmosphere, ocean and land.[1] The UK Climate Change Committee reports that climate change is here, already dangerous and will get worse.[2]

Impacts of climate change

Climate change will cause more extreme heatwaves, droughts, intense rainfall and other extreme weather across the world. These impacts will get worse as temperatures increase, with current estimates of between 1.5 to 5 degrees by 2100, as shown in Figure 1. These impacts will increase the likelihood and severity of a variety of risks including flooding, migration of people, damage to infrastructure, food insecurity and loss of biodiversity.
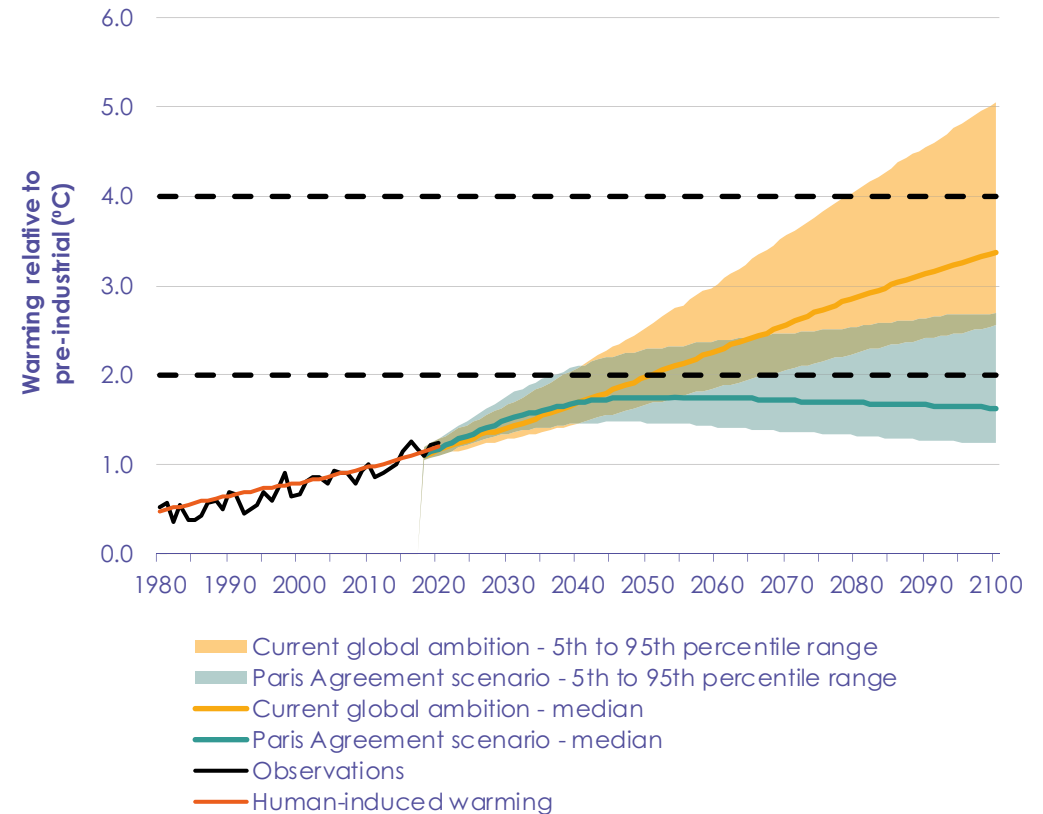

Figure 1: Projected global temperatures compared to a Paris Agreement aligned increase of 1.5-2 degrees

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[1] www.ipcc.ch/report/ar6/wg1/

[2] www.theccc.org.uk/publication/independent-assessment-of uk-climate-risk/

Climate justice

Climate justice relates to concerns about the inequitable outcomes for different people and places associated with climate impacts and ability of policy responses to tackle inequality and injustice.

Climate change has been described as the biggest threat to public health this century. Some people will be more vulnerable to climate risks, as they will be more sensitive to negative effects on their health or wellbeing or may have less capacity to respond. This means it will be important to ensure representative and diverse voices have a say in what climate action is taken.

Co-benefits

Although there are negative impacts of climate change, taking action to tackle climate change can provide a range of opportunities and benefits. A clean, green Leicestershire has benefits for health, business and jobs - by tackling climate change we will help to build strong, healthy and green communities, creating jobs and boosting skills. Taking action can also help us to tackle the cost of living and energy security crisis for example by insulating homes and switching to clean, local energy.

National and international commitments

In 2021, the United Kingdom hosted 'COP26', which brought together nearly 200 countries across the world to discuss and agree on taking action to tackle climate change. COP26 concluded with countries agreeing to the Glasgow Climate Pact, highlighting that urgent and accelerated climate action is needed to keep the ambition of limiting global temperature rise to 1.5 degrees in sight, originally agreed in the Paris Agreement in 2015.

The UK introduced the world's most ambitious climate change commitment at the time, to achieve a 78% reduction in emissions by 2035, compared to 1990 levels, and achieve net zero by 2050. National policies and legislation have been adopted to drive action and investment, including the ban on the sale of new petrol and diesel cars by 2030, Environment Act 2021, UK Net Zero Strategy, Heat and Buildings Strategy, and the Transport Decarbonisation Plan.

Alongside national commitments, strategies and plans, local authorities across the UK are leading the drive for climate action at a local level. Over 300 UK local authorities, including Leicestershire, have declared a climate emergency, with many setting their own net zero commitments too.

1.3 How is Leicestershire affected?

As a rural county, Leicestershire's emissions and vulnerability to climate change are heightened, for example by greater need for travel and high levels of agricultural land use.

It is expected that Leicestershire will experience hotter, drier summers and warmer, wetter winters. The impacts of climate change will be felt locally in a number of ways, but there will also be a range of co-benefits from taking action to reduce greenhouse gas emissions as shown in Figure 2.

Leicestershire County Council, alongside many of the county's district and borough councils and neighbouring authorities, declared a climate emergency in 2019 and set a commitment to achieve net zero emissions for its own operations by 2030. The council's Environment Strategy[3] was revised in 2020 to reflect this and also includes a target to achieve net zero carbon emissions for Leicestershire.

The Council's Strategic Plan 2022-26[4] reflects its environmental commitment and includes Clean and Green as one of its five strategic outcomes. Although it is included as a separate outcome, environmental enhancement and protection will be integrated across all outcomes and decisions will balance the economic, environmental and social pillars of sustainable development. Reducing carbon emissions can provide a cleaner, greener, healthier and fairer future with economic benefits across the area.

Climate Risks

Transport Networks

Disruption to transport networks from extreme weather events, (flood and heat) impacting on local economy, health and wellbeing

Flood risk to transport infrastructure

Heavy rain/high winds leading to more accidents, treefalls, road closures and delays

Risk of slope / embankment failures

Overheating/failure of signalling and comms

Risk of rails buckling, cables sagging and roads softening in heat

Discomfort on public transport

The Built Environment

Overheating risks in housing, offices, schools, hospitals and social care settings

Damage to buildings and infrastructure from extreme weather events

Need to retrofit buildings to build resilience

New design standards needed for drainage, insulation and building fabric etc Increased flood risk

Increased water stress

Disruption to power and communication networks

Figure 2: Risks and benefits associated with climate change and climate action

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[3] www.leicestershire.gov.uk/sites/default/files/field/pdf/2020/7/13/Environment-Strategy-2018-2030-delivering-a-better-future.pdf

[4] www.leicestershire.gov.uk/sites/default/files/field/pdf/2021/2/1/LCC-Strategic-Plan-2018-22.pdf

Climate Risks

The Natural Environment And Agriculture

Risk to vulnerable species and habitats

Impacts on 'eco-system services' enjoyed by people

Impacts of increased drought

Damage to natural habitats from water stress

Pests and disease risk of invasive/non-native species colonising

Changes to growing seasons

Heat stress on livestock

Damage to crops and landscapes from flooding

Business And Industry

Costs to reduce emissions and adapt infrastructure to Climate Change

Disruption to transport, energy and communications

Risks to supply chains both local, national and global

Increased prices for raw materials, goods, and other imported commodities

Reduced comfort in buildings impacting on productivity

Changes to markets and demand

Water (Flood Risk And Drought)

Increase risk of coastal, pluvial and fluvial flooding

Increased flash flood risk from extreme weather events

Further stress on already under pressure water resources

Increased competition for water between agriculture, industry, households and the needs of the natural environment

Drought impacts on water quality and supply

Health And Wellbeing

Increase in heat-related illness and death

Risk to the elderly and very young with heart and respiratory disease

Disrupted access to services and facilities from extreme weather events

Flooding impacts on health, wellbeing and livelihoods

Air quality impacts exacerbated

Co-Benefits

Economic

- Save on energy costs
- Reduce maintenance and running costs
- Increase asset values
- Job creation and upskilling
- Attract forward-thinking businesses
- New economic sectors

Social

- Improved health and wellbeing outcomes
- Reducing health inequalities
- Support social cohesion
- Community resilience
- Alleviating fuel poverty

Environmental

- Reduced air and noise pollution
- Improved soil quality
- Biodiversity benefits
- Reduced water demand
- Climate change resilience

1.4 What is the solution?

Net zero

The term net zero means achieving a balance between the carbon emitted into the atmosphere and the carbon removed from it. This balance - or net zero - will happen when the amount of carbon we add to the atmosphere is no more than the amount removed. This is the point at which there is no additional carbon being added to the atmosphere and the contribution to further global warming is halted.

To reach net zero, greenhouse gas emissions from homes, public buildings, industry, transport, agriculture and from the products we buy will need to be cut. All sectors will have to reduce the amount of carbon they put into the atmosphere.

There will be some greenhouse gas emissions which can't be reduced to zero, so these "residual" emissions will need to be removed from the atmosphere. This could be through changing the way we use land so that it can absorb more carbon, or by being directly extracted through technologies known as carbon capture and storage.

A just transition

We must ensure that action taken to cut greenhouse gas emissions is just - tackling inequality and injustice. We will ensure that climate interventions are designed and assessed to ensure that all residents are able to participate in climate action and those that have less capacity to respond or are disproportionately affected by climate change are supported.

Residents, communities, businesses and other organisations must be informed and engaged, to enable a diverse range of representative voices to shape and contribute to plans.

We must also ensure that action taken is sustainable and supports environmental protection and enhancement. The balance between social, economic and environmental factors is described in Kate Raworth's Doughnut Economics model[5] shown in Figure 3. The green doughnut represents the limits we must stay within to ensure that society's needs are met without exploitation or overuse of the planet's resources. If we move into the red areas, either a shortfall in our residents' needs or an overshoot of what our natural environment can cope with, we risk an unsustainable future for people, prosperity and planet.
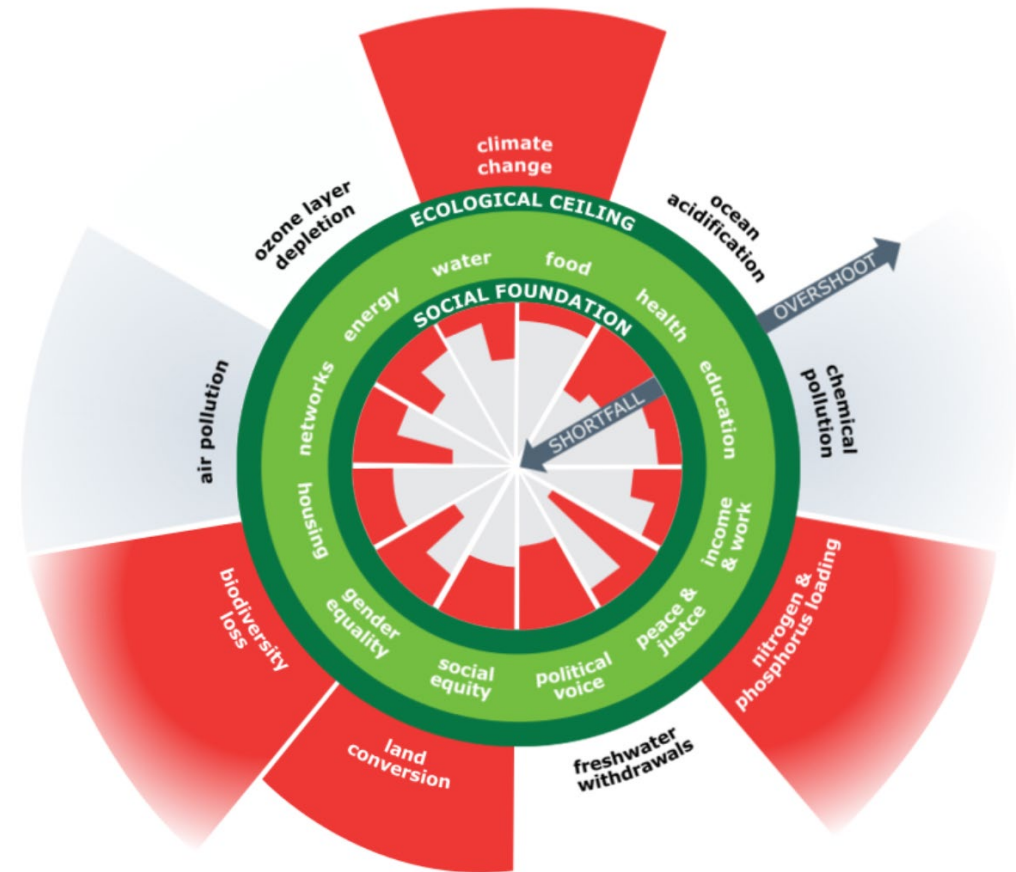

Figure 3: Kate Raworth's Doughnut of planetary and social boundaries

2. How the Strategy was developed

2.1 Timeline

2018
Leicestershire County Council publishes an ambitious Environment Strategy, describing how we will tackle carbon emissions, reduce resource use, improve biodiversity, support communities, wellbeing and the local economy.

2019
Leicestershire County Council declares a climate emergency and commits to achieving net zero for its operations by 2030 and working with others to achieve a net zero county.

2020
Leicestershire County Council signs up to UK100 pledge to achieve a net zero county by 2045 and updates its Environment Strategy.

2021
Leicestershire Net Zero Roadmap research is published, including baseline emissions, pathways to net zero and supporting information.

2022
A public consultation on Leicestershire's draft Net Zero Strategy and Action Plan is held to enable residents and organisations to share their views and shape the final version.

2.2 The Net Zero Roadmap Research

The County Council commissioned research to provide information on the baseline emissions from Leicestershire and pathways to net zero by 2045, which could be used by all local organisations. The Net Zero Carbon Leicestershire 2045 Roadmap[6] also investigated the costs and co-benefits of the net zero transition.

Baseline emissions were split between territorial - greenhouse gas emissions from energy consumption and activities inside the county - and consumption - greenhouse gas emissions that occur outside of the county, associated with creating and handling goods and services consumed within Leicestershire. In 2019, these emissions amounted to 8.5 $MtCO_2e$, with 50% coming from territorial emissions, as shown in figure 4.

A number of pathways to net zero were modelled based on varying levels of action, and compared to a Paris Agreement aligned pathway, which ensures that emissions limit global warming to a rise of 1.5-2 degrees.
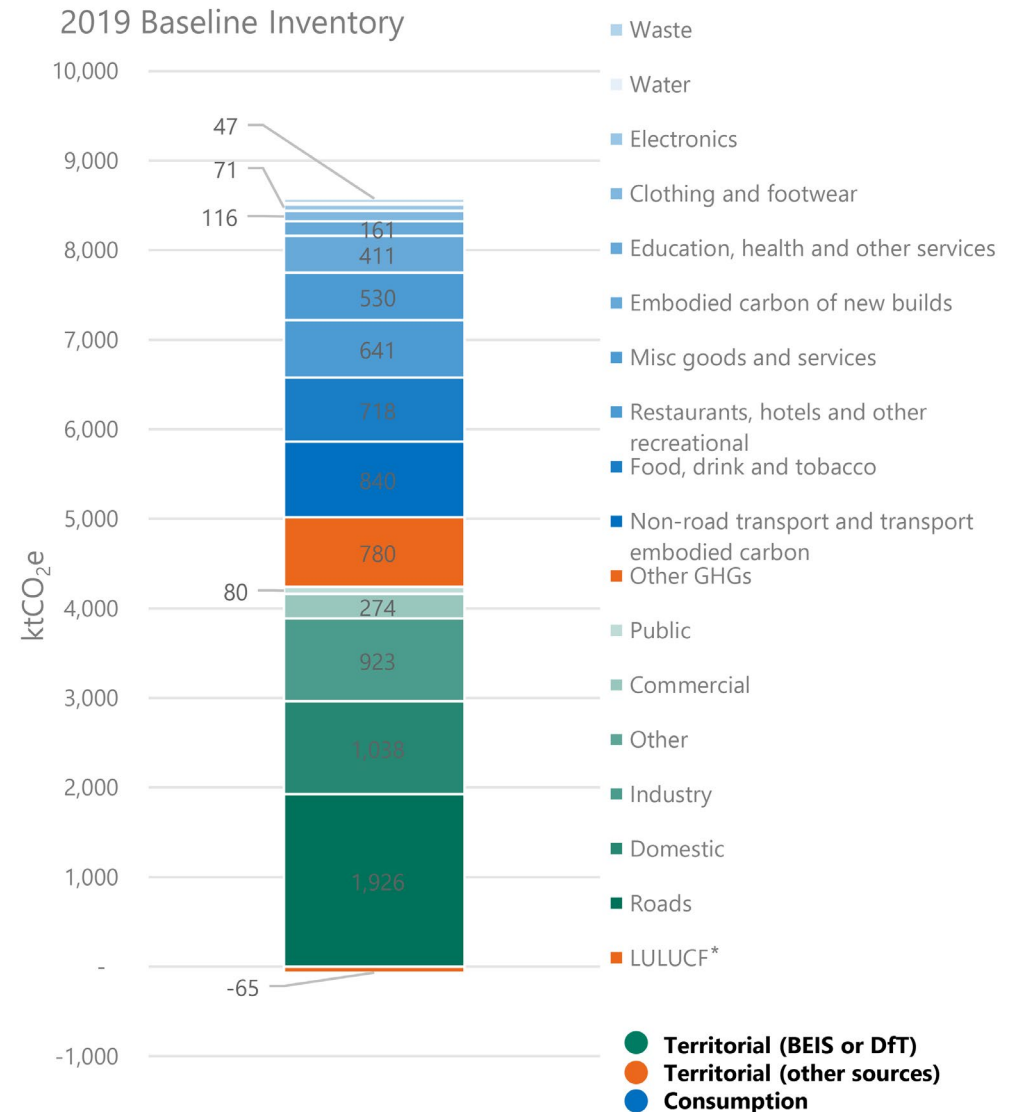

Figure 4: Leicestershire's 2019 Baseline Emissions

*Land Use, Land Use Change and Forestry

6 www.leicestershire.gov.uk/sites/default/files/field/pdf/2022/4/19/Leicestershire-Net-Zero-Carbon-Roadmap.pdf

Figure 5 shows that even with the most ambitious tailwinds pathway, we must do more to cut emissions at pace and scale to support a Paris Agreement aligned trajectory.
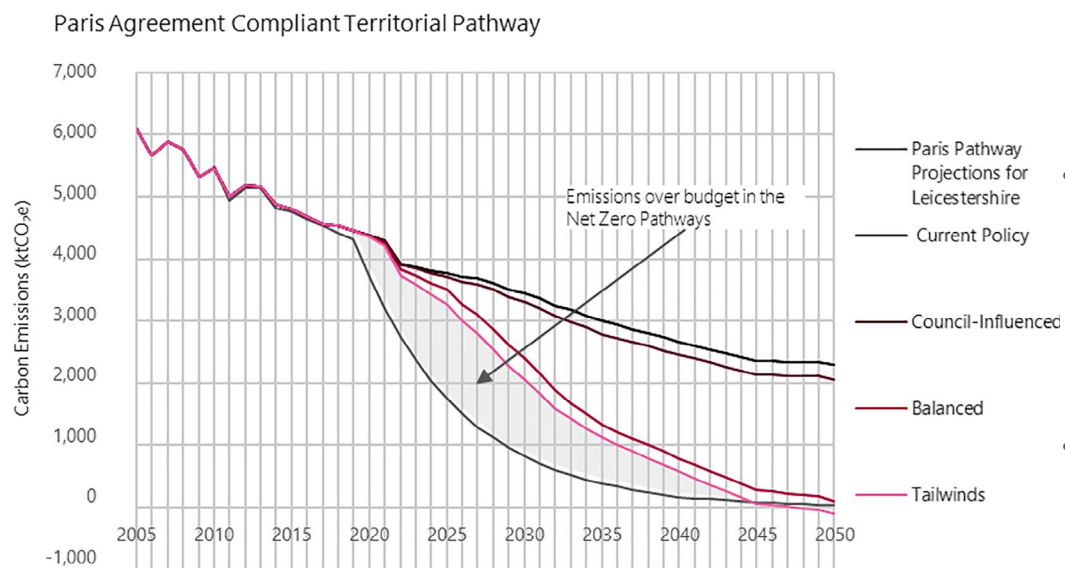

Figure 5: Pathways to Net Zero

The conclusions to be drawn from the research were:

- **The net zero carbon 2045 target for Leicestershire cannot be delivered by the council working alone.** Public and stakeholder engagement and action will be essential and integral to any future action plan. There is a role for the County Council to show leadership, convene partners and inspire commitment and action for net zero, beginning with the development of this Net Zero Strategy and Action Plan.

- **The pathway to net zero is challenging but feasible** if all available policy levers are employed at pace and scale. This would require near total retrofit of buildings, full roll out of electric vehicles and decrease in vehicle mileage, very high numbers of solar panel, industrial heat sources switched to electricity or hydrogen and total reduction in embodied carbon in new buildings.

- **Investment will be required from all sectors** but there are benefits to be accrued for the economy, society and the environment if the transition is just and fair.

- **Net zero should be progressed within the context of other environmental objectives to** enhance biodiversity and provide resilience.

- **Carbon capture and storage should be built into plans but not relied upon,** with offsetting carbon used as a last resort.

The findings and recommendations from the Roadmap research have informed the development of this Strategy.
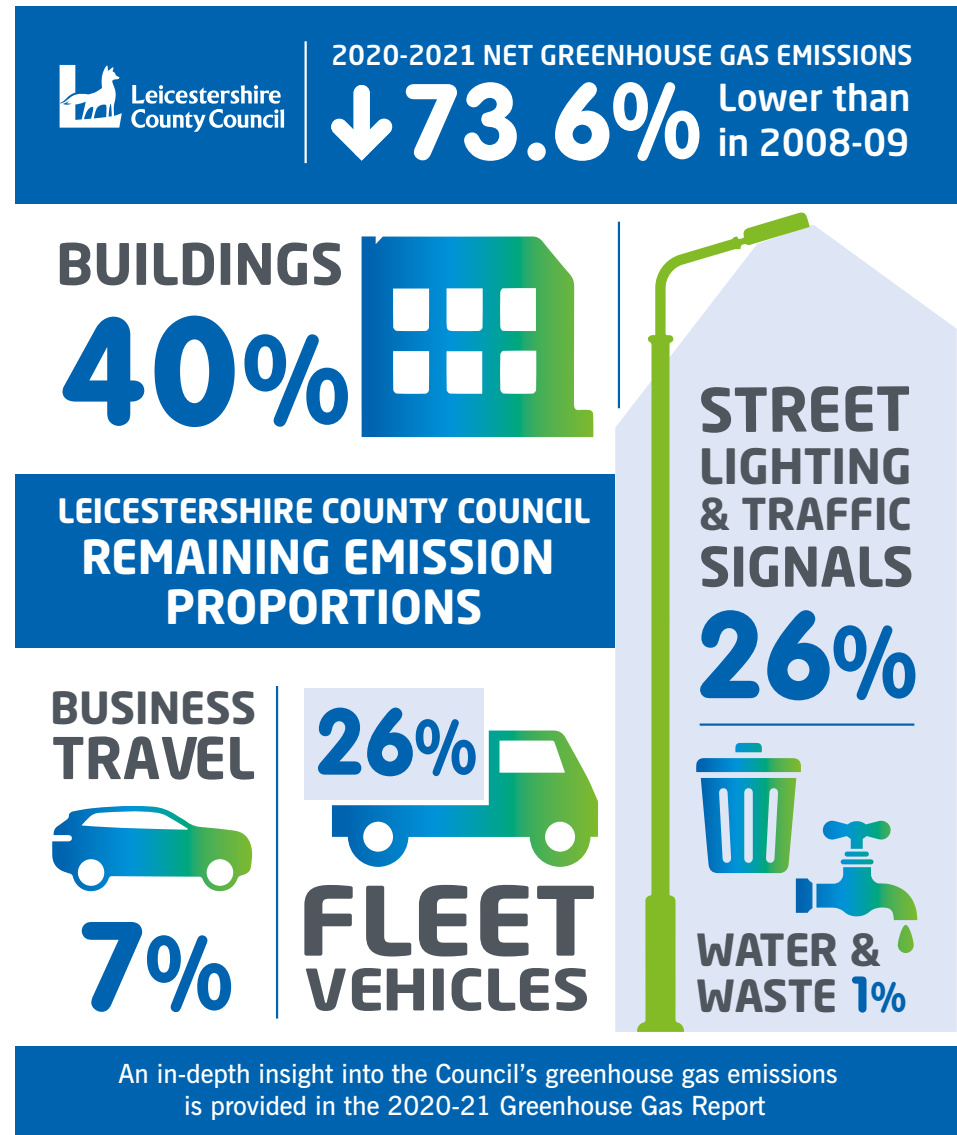
2.3 Progress to date

Council emissions

The council has already made considerable progress in reducing the emissions from its own operations since its 2008-09 baseline, with an annual update provided online.[7]

We're a green council and cutting carbon, reducing waste and boosting biodiversity is built into our services and continuously improving.

The council is investing in a net zero future alongside its policy commitments to deliver a combined 'plan and do' approach. Budget allocations have been made to review the council's operations and to develop plans for carbon reduction. Further investments in renewable energy, reducing energy demand in homes and providing electric vehicle charging infrastructure have also contributed to the countywide carbon reduction target.

More detail about our achievements and plans can be found in our Net Zero Council Action Plan.[8]

Leicestershire County Council

2020-2021 NET GREENHOUSE GAS EMISSIONS
↓ **73.6%** Lower than in 2008-09

BUILDINGS 40%

LEICESTERSHIRE COUNTY COUNCIL REMAINING EMISSION PROPORTIONS

STREET LIGHTING & TRAFFIC SIGNALS 26%

BUSINESS TRAVEL 7%

26% FLEET VEHICLES

WATER & WASTE 1%

An in-depth insight into the Council's greenhouse gas emissions is provided in the 2020-21 Greenhouse Gas Report

[7] www.leicestershire.gov.uk/environment-and-planning/conservation-and-sustainability/environmental-policies-and-reports
[8] www.leicestershire.gov.uk/netzero

Countywide emissions

Since 2005, greenhouse gas emissions across Leicestershire have reduced by 34% as shown in Figure 6. Local authority data breaks down Leicestershire's emissions into seven key sources: industry, commercial, public sector, domestic, transport, agriculture and waste management. As shown in Figure 7, the majority of these sources have reduced emissions considerably since 2005, except for transport, which has seen a lower 22% reduction. The slower pace of transport decarbonisation is a trend seen nationally across the UK. Agriculture and waste management sources have also seen lower reductions; however, they have only been measured since 2018.

It should be noted that the Covid pandemic has had a significant impact on greenhouse gas emissions, with significant reduction in transport emissions in particular. We expect emissions to stabilise over the coming years and will explain any variances in future reports.
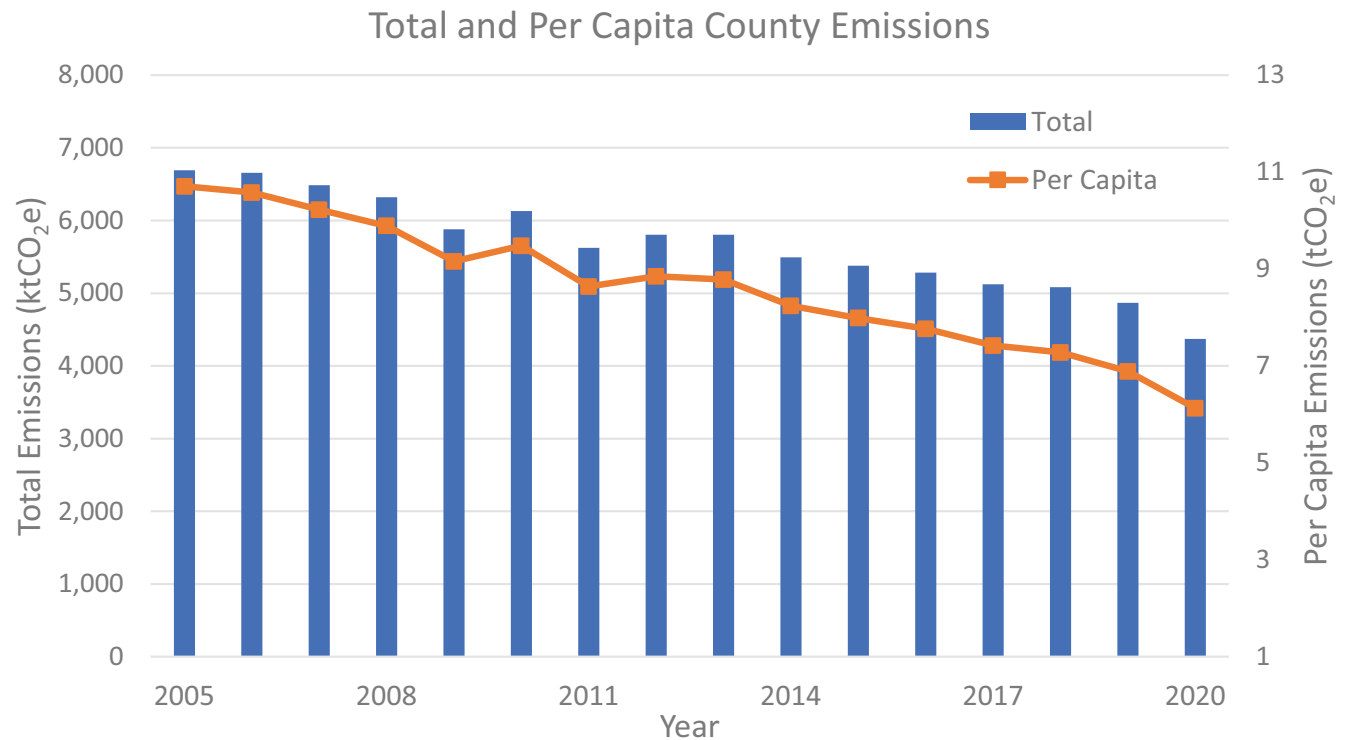
Total and Per Capita County Emissions

Figure 6: Leicestershire's emissions since 2005
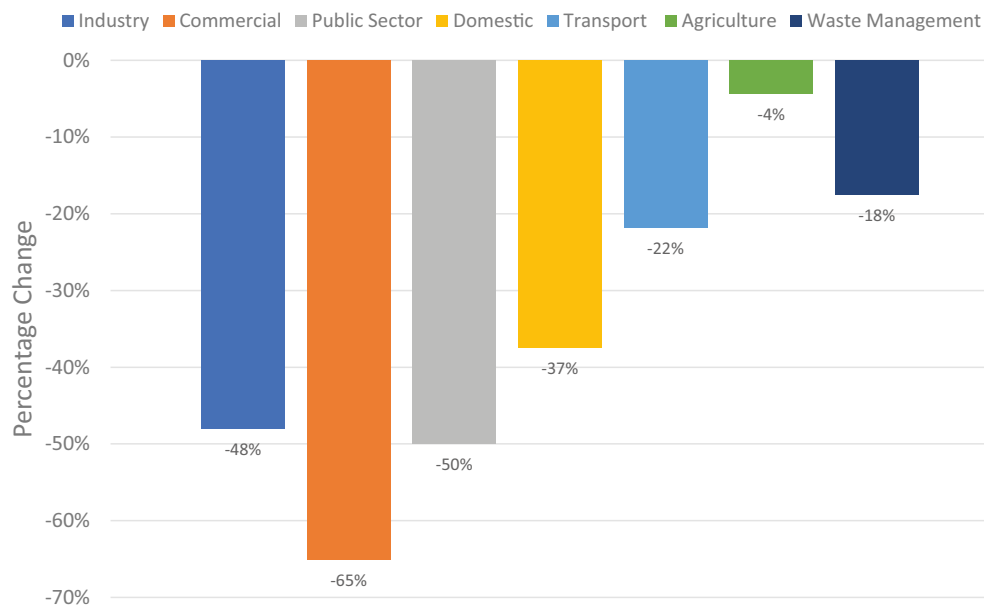
Change per Emissions Sector (2005-2020)

Figure 7: Leicestershire's emissions reductions per sector

2.4 Consulting the public

As well us using research and experience of delivering emissions reductions, Leicestershire County Council sought the public's views on a draft of its Net Zero Strategy and Action Plan to invite feedback and diverse views to shape the final version.

1400 responses were received across a Have Your Say survey, programme of activity (e.g. roadshows and engagement events) and dedicated youth engagement, which identified 12 key themes to consider in the delivery of Net Zero Leicestershire:

• Collaborate and work with others to deliver net zero

• Leadership, buy in and ambition

• Ensure the Strategy is understandable and accessible

• Interim targets, monitoring, and achievement reporting

• Cost benefit implications

• Raise awareness, engagement, education and behaviour change

• Improve and promote transport solutions (public, active and freight)

• Importance of local planning policy and growth

• Importance of renewable energy

• Prioritise energy efficiency and low carbon heat

• Importance of nature and access

• Waste management service, education, and provision

Further information can be found in our consultation summary.[9]

We have sought to incorporate as much feedback as possible in the final version of the Strategy and accompanying action plan, with responses summarised in a You Said, We Did report.[10]

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9   www.leicestershire.gov.uk/have-your-say/you-said-we-did/engagement-2022
10 www.leicestershire.gov.uk/have-your-say/you-said-we-did/engagement-2022

3. Our Net Zero Strategy

This Strategy outlines the County Council's approach to working with others to achieve the net zero target for Leicestershire and takes a long-term view to 2045. A separate climate change adaptation and resilience Strategy will be developed by the council to focus on how we adapt to the impacts of climate change from current and projected levels of global warming.

There is a need to take urgent action to avoid the worst consequences of climate change so we must act at scale and pace without delay.

3.1 Our Vision

In 2045, Leicestershire has ended its contribution to global warming and has adapted to the impacts of climate change. The transition to net zero has created a cleaner, greener Leicestershire for people, prosperity and planet; supporting healthy, resilient communities, enabling sustainable growth, and enhancing biodiversity.

3.2 Goals

As a place leader, the County Council will:

• Achieve net zero carbon emissions for the council's operations by 2030

• Enable carbon reduction across the county by delivering and facilitating the required infrastructure

• Inspire the county's residents, organisations and partners to take action and develop a joined-up approach that delivers a net zero Leicestershire

3.3 Targets

Although we aim to achieve a net zero county by 2045, the research shows that the pathway we take to get there that is a critical factor in successfully tackling climate change.

For Leicestershire's greenhouse gas emissions, we will align with the UK wide targets of a 78% reduction in emissions by 2035 compared to 1990 levels. This equates to a further reduction of 65% between the baseline year of 2019 and 2035 for Leicestershire.

We will also seek to set ambitious 5 year carbon budgets for our actions plans to ensure that delivery remains on track.

3.4 Scope

To measure success, it is important for us to define a scope of emissions for reporting. This will include greenhouse gas emissions from:

• Domestic, commercial, industrial and public buildings

• Road and rail transport

• Waste management

• Agriculture

• Land use, land use changes and forestry

Although included in the Roadmap baseline emissions, wider consumption emissions categories will be excluded from reporting for the following reasons:

• Availability of data to establish a robust baseline and provide annual progress updates.

• To avoid double counting of emissions, for example, transport emissions associated with consumption that are already included in road transport emissions from the county.

• To take as comprehensive an approach as possible to tackling greenhouse gas emissions from Leicestershire and to reflect the rural character of the county.

Although some emissions categories are excluded from reporting, we have still included actions in the action plan to influence and reduce these wherever possible.

3.5 Scoped 2019 emissions baseline

Using the latest available BEIS datasets and our baseline year of 2019, scoped emissions equate to 4.87 $MtCO_2e$.

Figure 8 provides a breakdown of these scoped emissions by source.

It is also possible to breakdown the baseline emissions by Leicestershire's districts. These can be found in Figure 9 and show that North West Leicestershire and Charnwood have the greatest emissions in the County, primarily driven by greater emissions in transport (both), domestic (Charnwood) and industry (NW Leicestershire) sectors, compared to other local authorities.
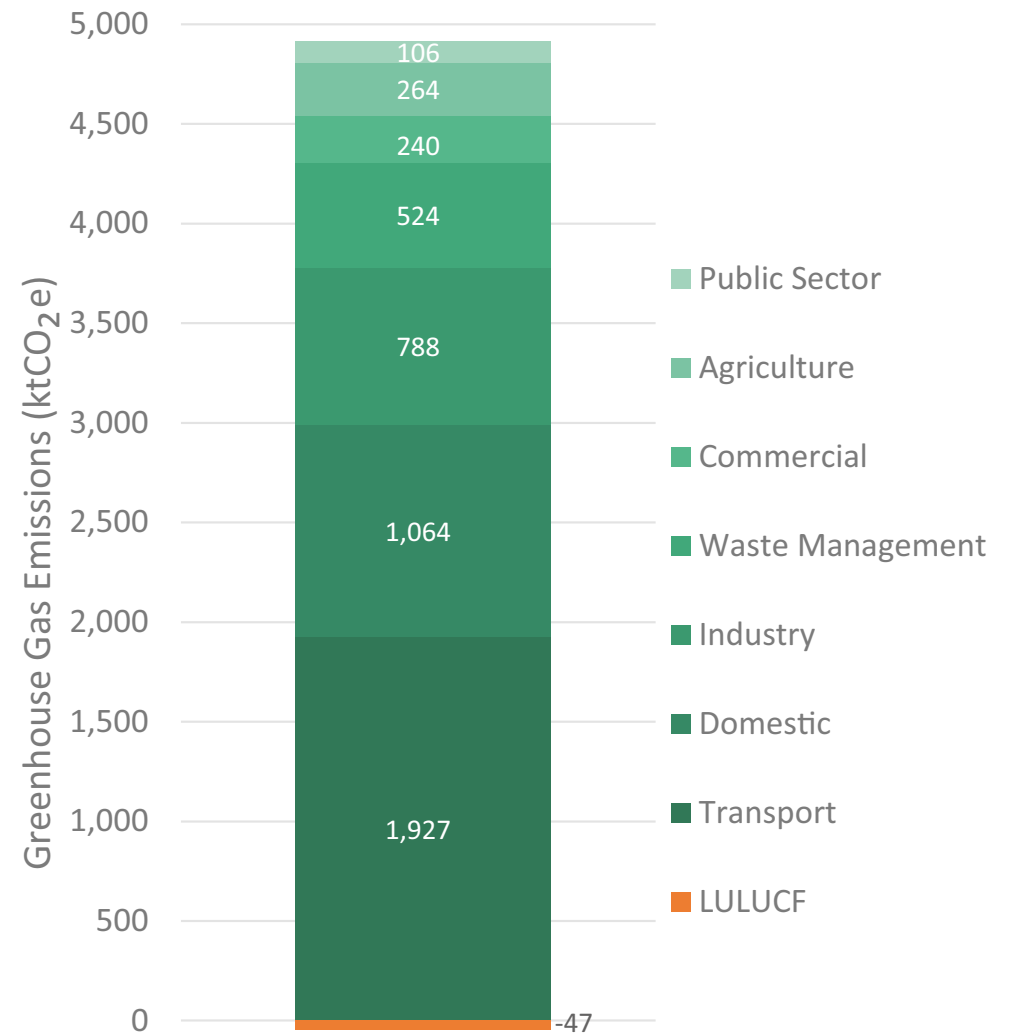

Figure 8: Leicestershire's scoped 2019 baseline emissions breakdown

Local Authority	Transport	Domestic	Industry	Waste Management	Commercial	Agriculture	Public Sector	LULUCF	Total Emissions
Blaby	335	150	45	41	42	36	9	-2	656
Charnwood	342	261	156	65	49	62	36	-8	963
Harborough	333	153	39	34	34	177	10	-7	772
Hinckley & Bosworth	281	172	111	32	32	76	6	-11	709
Melton	117	83	61	18	18	121	5	-8	418
North West Leicestershire	468	159	345	53	53	48	30	-10	1,133
Oadby & Wigston	51	86	31	12	12	4	10	0	214
Leicestershire Total (ktCO$_2$e)	1,927	1,064	788	264	240	524	106	-47	4,866

Local Authority	Per Capita Emissions (tCO$_2$e)	Emissions per km^2 (ktCO$_2$e)
Blaby	6.5	5.0
Charnwood	5.2	3.5
Harborough	8.2	1.3
Hinckley & Bosworth	6.3	2.4
Melton	8.2	0.9
North West Leicestershire	10.9	4.1
Oadby & Wigston	3.8	9.1
Leicestershire Total	6.9	2.3

Figure 9: Leicestershire's 2019 emissions by district

3.6 Approach to delivery

We have developed an action plan to demonstrate how we will work with others to deliver action to reduce Leicestershire's emissions over the next 5 years as shown in figure 10. This will be reviewed and updated annually.

It also identifies cross cutting actions to enable successful delivery:

• Leadership

• Collaboration

• Research and Innovation

• Funding

The plan further defines our approach to prioritisation of actions, following the Emissions Mitigation Hierarchy (Eliminate, Reduce, Substitute, Compensate and Neutralise), as well as scoring the deliverability of actions by assessing their timescale, cost and carbon saving. This has enabled us to identify lead actions that will be central to progressing carbon reduction.

The framework also includes the governance of the plan and describes how we will monitor and report against our targets and goals.

Introduction

• Why do we need a plan?
• Who needs to be involved?
• How can you hep?

Framework

• The Net Zero Actions
• Cross Cutting Actions
• Prioritisation
• Governance
• Monitoring and Reporting

The Plan

• Transport
• Buildings and Energy
• Resources and Waste
• Business and Economy
• Communities
• Nature and Land Use

Next Steps

Figure 10: The Net Zero Action Plan Framework

3.7 Ensuring success

It is vital that the plan secures buy in from all residents, organisations and partners in the county, as well as support from national government.

In the UK Climate Change Committee's report on Local Authorities and the Sixth Carbon Budget they found that more than half of the emissions cuts needed rely on people and businesses taking up low-carbon solutions. The report highlights that many of these decisions depend on having supporting infrastructure and systems in place, concluding that local authorities have powers or influence over roughly a third of emissions in their local areas as described in figure 11.

Additionally, the UK Climate Change Committee suggest that without some level of coordination from Government, the UK risks pursuing a fragmented strategy towards net zero.
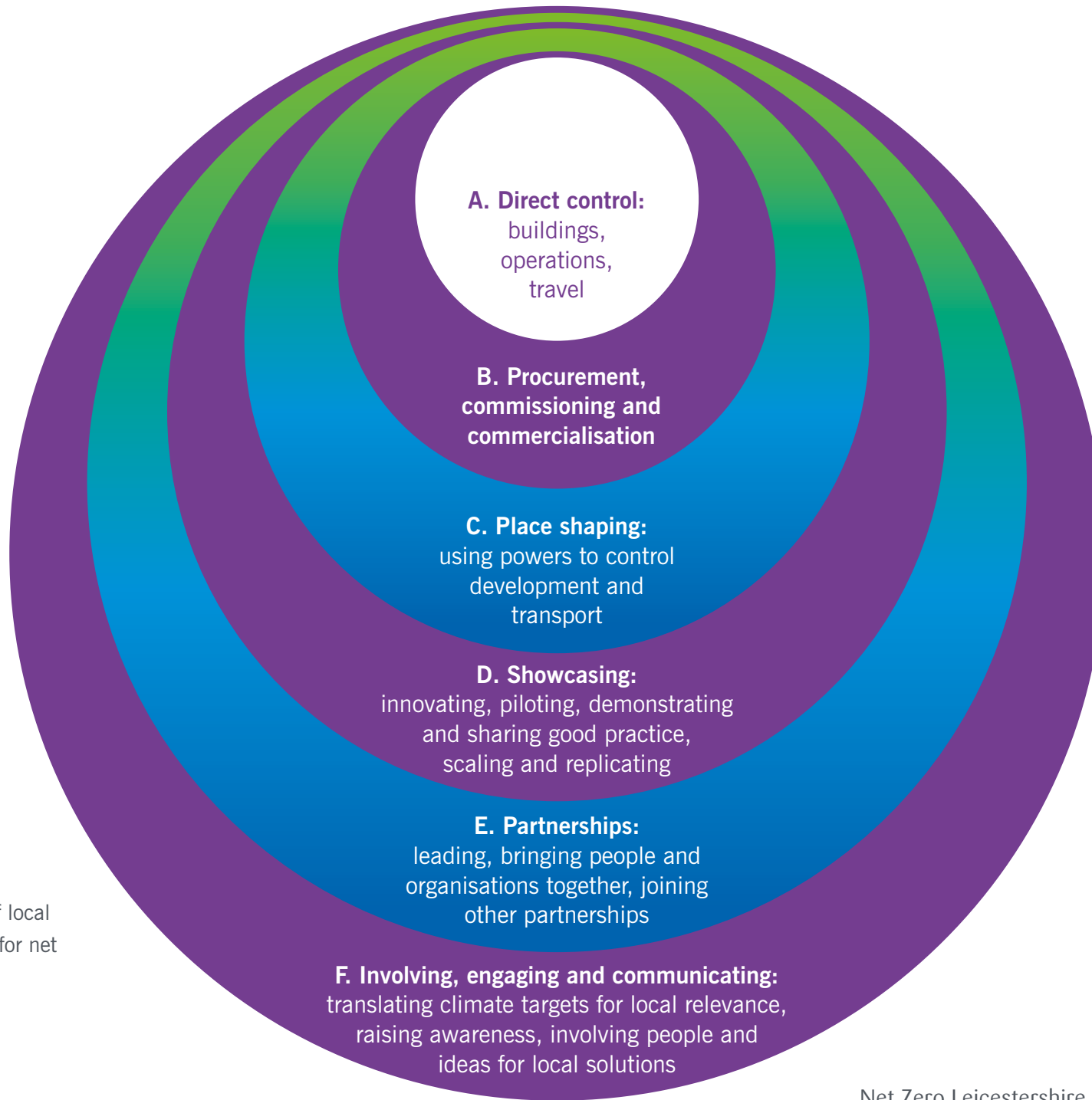
A. Direct control: buildings, operations, travel

B. Procurement, commissioning and commercialisation

C. Place shaping: using powers to control development and transport

D. Showcasing: innovating, piloting, demonstrating and sharing good practice, scaling and replicating

E. Partnerships: leading, bringing people and organisations together, joining other partnerships

F. Involving, engaging and communicating: translating climate targets for local relevance, raising awareness, involving people and ideas for local solutions

Figure 11: Areas of local authority influence for net zero delivery

The council has ambitions to demonstrate both strong place leadership and to retain oversight of the 2045 target on behalf of the county.

However, tackling climate change across the whole of Leicestershire is too big a job for any one organisation. We need a team effort and we're driving this by encouraging our residents and businesses to help shape a cleaner, greener future for the county, and for future generations.

Together we can ensure that our vision is achieved:

In 2045, Leicestershire has ended its contribution to global warming and has adapted to the impacts of climate change. The transition to net zero has created a cleaner, greener Leicestershire for people, prosperity and planet; supporting healthy, resilient communities, enabling sustainable growth, and enhancing biodiversity.

Glossary

Baseline emissions
The amount of carbon emissions measured in 2019, which can be referenced to or measured against

Carbon emissions
Greenhouse gases (carbon dioxide, methane, nitrous oxides etc) emitted by both natural and human sources

Carbon budget
The maximum amount of carbon emissions which can be emitted to be in line with the Paris Agreement and limiting temperatures to below 2°C

Carbon insetting
Actions and technologies to compensate and neutralise carbon emissions within a company or locality value chain

Carbon offsetting
Actions and technologies to compensate and neutralise carbon emissions that are unable to be eliminated, reduced or substituted.

Carbon sequestration
A process that removes carbon dioxide from the atmosphere and stores it in a solid or liquid form

Climate adaptation
Actions which reduce the effects of and vulnerability to climate change on society, the economy and natural environments

Climate change
The long term (decades or longer) change in climate patterns

Climate emergency
The situation where urgent action is needed to reduce or stop climate change, to prevent irreversible impacts to the economy, society and natural environments

Climate justice
A concept that looks to address the division, fair sharing and equitable distribution of the benefits and impacts of climate change, alongside the responsibilities to deal with climate change

Co-benefits
Positive impacts associated with taking net zero action, including those to the economy, society and the natural environment

Consumption emissions
The carbon emissions resulting from the creating and handling of goods and services that are consumed inside a geographical area but take place outside of the geographical area

Decarbonisation
The reduction of carbon emissions by interventions aimed at eliminating, reducing, substituting, and neutralising emissions

Doughnut Economics
A framework for sustainable development, combining social boundaries with planetary boundaries.

Emissions mitigation hierarchy
Decarbonisation which looks to address emissions directly at their source, above taking action to take action and invest in mitigation outside of a company or geographical area's value chains.

Global warming
The gradual increase in global temperatures, attributed to increased levels of greenhouse gases

Greenhouse gases
Atmospheric gas emitted from all activities that involve burning of fossil fuels. These accumulate in the atmosphere and trap heat from the Earth's surface, increasing warming (known as the greenhouse effect)

Just transition
Maximising the social and economic opportunities of taking net zero action, while minimising and managing any challenges

$MtCO_2e$
Unit representing the amount of greenhouse gasses emitted during a given period, measured in million tonnes of carbon dioxide equivalent.

Net zero

The point when carbon emissions being emitted into the atmosphere are balanced with their removal, meaning there is no overall addition to atmospheric levels

Pathways

A model of projected greenhouse gas emissions in future years, including interventions to reduce them to zero

Residual emissions

The remaining greenhouse gas emissions at the end of a decarbonisation pathway.

Sustainable development

Meeting human development goals, whilst also sustaining the ability of natural systems to provide ecosystem services and natural resources, on which the economy and society depend

Territorial emissions

Greenhouse gas emissions from energy consumption and activities inside a geographical area

To find out more about Leicestershire's Net Zero plans visit:
www.leicestershire.gov.uk/netzero

Leicestershire
County Council

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