

WARWICKSHIRE
SUSTAINABLE
FUTURES STRATEGY
2023

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This document was approved in draft by Warwickshire County Council Cabinet on 13 October 2022.

Foreword

Warwickshire County Council is committed to acting decisively to reduce our carbon emissions to net zero across the Council by 2030 and to support Warwickshire as a county to do the same by 2050 or earlier.

Climate change is one of the most critical issues facing humankind. The continued burning of fossil fuels is affecting weather patterns around the world as well as causing devastating extreme weather events more locally, leading to flooding, heatwaves, drought and wildfires. These events pose a direct risk to the people that live, work and study in Warwickshire and threaten our infrastructure, assets and economy.

However, whilst the heart of our Strategy sets out our actions to reduce carbon emissions, our focus goes beyond climate change alone. We are taking a comprehensive approach to creating a sustainable future that aligns with other Council priorities such as improved life chances for children, a thriving economy, improved transport and infrastructure, and supporting our commitment to safeguarding and enhancing the quality of life for everyone.

We know that we cannot do this alone. Collaboration is therefore the cornerstone of our Strategy, and we will continue to work closely with our partners from the public, private and voluntary sectors to achieve our ambitions.

Our collective efforts will drive meaningful change, shape a zero carbon Warwickshire with reduced energy consumption, preserve our landscapes with flourishing biodiversity and bolster a sustainable, thriving economy, resulting in improvements for communities.

We remain focused on our goal: to make Warwickshire sustainable now and for future generations.



**Cllr. Heather Timms,
Portfolio Holder for Environment, Climate and Culture
Warwickshire County Council**

Executive Summary

The Sustainable Futures Strategy sets out a framework, key actions and enablers for delivering the strategic priority of being a county with a sustainable future. This means adapting to and mitigating against climate change, reducing our carbon emissions to net zero across the Council by 2030 and supporting Warwickshire as a county to do the same by 2050 or earlier. It also means creating a sustainable environment aligned with other council priorities that include education, sustainable economic growth, improved transport and infrastructure, health and wellbeing.

Between 2005 and 2021, carbon emissions in Warwickshire reduced by 23% to 5,499,000 tonnes of CO₂e. Transport and industry are our two largest sources of emissions, now representing 38% and 31% of the total respectively, having remained largely static over this period. Meanwhile, emissions from domestic settings and commercial buildings have been steadily declining.

Council-related activities currently account for 18,245 tonnes of CO₂e, having reduced by 63% between 2014 and 2020. To meet our net zero commitment, our emissions will need to reduce by another 29% by 2026 and 46% by 2030. The largest falls are likely to be in our transport and building use.

In both cases, we expect there to be residual emissions, which we will look to balance through nature-based or other forms of greenhouse gas removals.

Our Strategy and actions have been created to establish a clear pathway towards these goals. It is organised around five delivery themes, each focusing on an area where we are best able to make a difference:

- **Transport:** We want surface transport across the county to have zero-carbon and minimal air quality emissions. We will achieve this by increasing the use of sustainable modes of transport, with residents having access to zero-carbon transport options, as well as encouraging active travel.
- **Built Environment and Energy:** We want to live and work in a county that is powered entirely by clean fuel or renewable sources; in buildings that are energy efficient and resilient to the impacts of climate change and connected to nature.

- **Resources, Waste and Material Recirculation:** We want to be a county where we make the best use of our resources and minimise waste, with a thriving economy that provides commercial opportunities and sustainable jobs.
- **Sustainable Communities and Green Economy:** We want to have a county that is measured by prosperity and health, where people have the skills and access to new jobs , and where all industries contribute to sustainable, equitable and healthy communities.
- **Natural Capital and Biodiversity:** We want a habitat-connected landscape for people to enjoy, wildlife to thrive and to increase our ability to capture and store carbon.

Critical to our success will be how we deliver our ambitions. This will include effective change management, changed behaviours, accountable governance, adequate resource, the right policies, and appropriate engagement.

Substantial financial investment will also be required to reduce carbon from our operations, and we recognise the need to be creative in our ability to invest and fund sustainable solutions.

Finally, partnership working will be vital to the key elements of this Strategy such as realising the net zero vision, contributing to Levelling Up and enhancing prosperity across the county. We will therefore work together with our public, private and voluntary sector partners on projects and external funding applications, providing the benefit of collaboration and shared outcomes across boundaries and organisations.

Introduction and Context

Climate change, cost of living and the impact of inflation for residents and businesses are amongst the most important issues currently facing the UK and Warwickshire. The county's infrastructure, assets and economy are under threat from the impacts of climate change and, if left unmitigated, will cost us more in the longer-term. This Sustainable Futures Strategy sets out how we can begin to tackle these issues across our communities, businesses, and Council services by focusing on reducing carbon emissions to mitigate climate change and meet our net zero commitments.

The ambitions of this Strategy are relevant to every organisation and resident within the county. Net zero can only be achieved by working together and doing so at a pace that is affordable and right for residents and businesses. As we developed this Strategy, we listened to a wide range of views from residents, business, academia, the voluntary sector and other public sector organisations. Our place-based approach to Levelling Up and community power will be an important way in which we work with communities to develop solutions at a time when people are ready and willing to take forward actions.

As well as being aligned with the United Nations [Sustainable Development Goals](#) (UN SDGs), the ambitions of this Strategy are relevant to every part of the Council, and we are clear that we need to integrate sustainable thinking in all that we do. The Strategy will guide our work across the Council, translating the commitment made within our [Council Plan \(2022-2027\)](#) into tangible objectives and action. This includes the actions we need to take to ensure our existing services are resilient to the current and future effects of climate change.

This Strategy is organised around the areas where we are most able to make a difference. These five themes are:

- Transport
- Built environment and energy
- Resources, waste and material recirculation
- Sustainable communities and green economy, and
- Natural capital and biodiversity.



Climate Change Crisis

There is a growing recognition that climate change is one of the most critical issues facing the world. The resulting emissions from the continued burning of fossil fuels causes a global warming effect which has altered weather patterns, melted polar ice, and increased ocean acidification. This has led to changes in sea life, as well as causing devastating weather events such as flooding, heatwaves, drought and wildfires. These events pose a direct risk to Warwickshire's communities and economy.

To protect the county against the known risks from climate change, the Council declared a climate emergency in 2019. Since then, we have committed to becoming carbon net zero as an organisation by 2030, and to support Warwickshire to become carbon net zero no later than 2050.



Biodiversity Crisis

More than two-fifths of UK species, including animals, birds, and butterflies, have seen significant population declines in recent decades. Contributing factors include thousands of acres of habitats being lost to development, the intensification of agriculture and the increasing effect of climate change. Pollution also causes problems for streams and coastal areas. Together these are a significant problem, because decreases in biodiversity are directly related to declining wellbeing and economic prosperity.

The UK Government and others across the globe have declared a biodiversity emergency. The United Nations' (UN) draft biodiversity framework guides actions across the world to preserve and protect nature through to 2030 and the UK supports this through our Nature Positive 2030 reports.

Our Strategy provides a framework of how we can implement and deliver these requirements locally whilst living in harmony with nature.

“

Nature is in decline globally and in the UK. Between 1932 and 1984, we lost 97% of our species-rich grassland, five species of butterfly have disappeared from England in the last 150 years, and indicators showing the state of birds dependent on farmland stand at less than half their value compared to 1970.

”

*Environment Bill:
Nature and conservation covenants
(parts 6 and 7). September 2021.
DEFRA (Department for Environment,
Food and Rural Affairs)*



The Cost of Living

At the time of developing this Strategy, the UK is under pressure from a rising cost of living. With high inflation rates and energy bills, along with the impacts of the conflict in Ukraine on fuel and food prices, huge pressures and burdens are being placed on families and businesses. There are concerns for people's physical and mental health and the ability of smaller firms to stay afloat. This has also contributed to widening inequalities across the UK, emphasising the need for Levelling Up at a local level.

This Strategy allows us to develop an approach that helps our residents with the cost of living in the longer-term; improving energy efficiency to reduce fuel bills and addressing the "take-make-dispose" approach which traps consumers into continually needing to replace products.

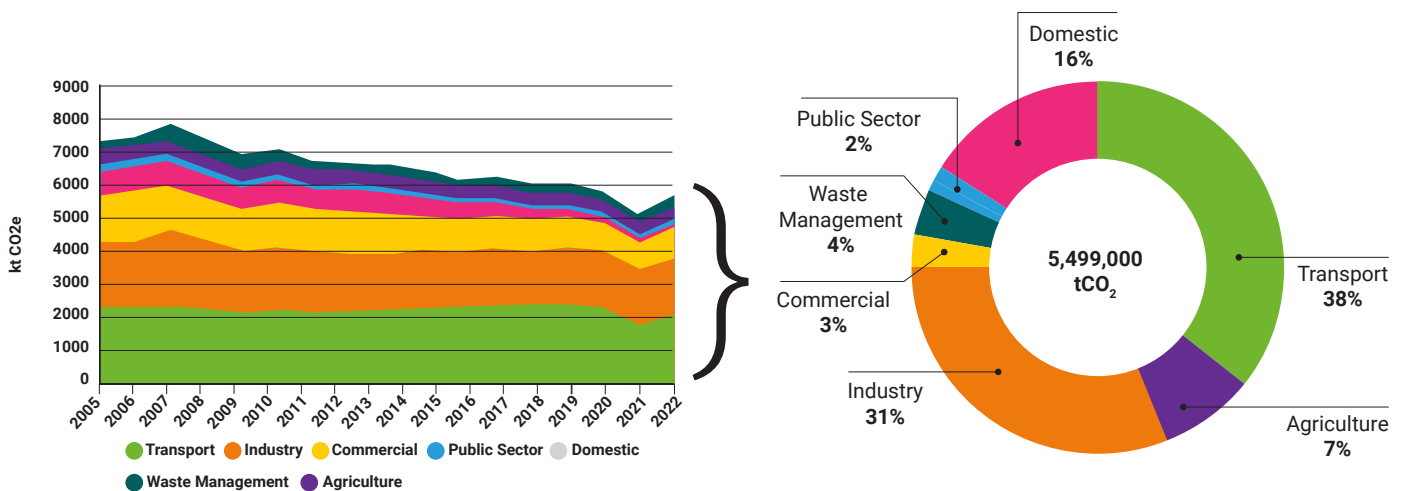
Our Carbon Emissions

Warwickshire County-Wide Emissions

Where we are now

In 2019 (our baseline year) the county's greenhouse gas emissions were 5,701,000 tonnes of CO₂e¹, having reduced by 21% since 2005. The biggest sources of emissions are from transport and industry, followed by the domestic and commercial sectors, with the public sector making up the smallest proportion. Transport and industrial emissions in the county have remained largely static, whilst those from domestic and commercial buildings have steadily decreased.

2020 was an exceptional year due to the Covid-19 outbreak and the associated lockdowns. During this time emissions fell by 12% compared with 2019, with a 20% year on year reduction from the transport sector alone. However, total emissions have risen since then to 5,499,000 tonnes of CO₂e in 2021, although this is still 3% below 2019 levels.



¹ www.gov.uk/government/collections/uk-local-authority-and-regional-greenhouse-gas-emissions-national-statistics

Reaching our net zero 2050 target

Our county-wide target to be net zero by 2050 is aligned with the UK's legal commitment to deliver net zero by 2050. National reduction targets are set at five-yearly intervals, referred to as a carbon budget. To date the UK has met the budgets set but these will become increasingly more ambitious to achieve.

By mapping the following developments in Warwickshire, we can identify the impact on our emissions and therefore how much more we need to do to support these national budgets:

- Grid electricity decarbonisation as projected by the Department for Energy Security and Net Zero (DESNZ)) will reduce emissions.
- Planned increases in new housing and non-domestic properties to meet the Local Plans of the District and Boroughs will see increases in emissions by 2050, although these are less than otherwise due to technological advances in heating. Based on current baselines, National Grid's Future Energy Scenarios (FESs) show demand for natural gas heating in homes decreasing by 18% by 2030 and 99% by 2050, and for commercial and industrial buildings by 11% by 2030 and 95% by 2050.
- Likely decarbonisation of the transport sector due in part to the electrification of registered vehicles and adoption of alternative fuels such as hydrogen will reduce emissions.

Under all scenarios, we expect that there will be residual emissions remaining in 2050 which we will look to balance through nature-based or other forms of greenhouse gas removals. We will explore and identify these as we move towards 2050.

Warwickshire County Council Emissions

Where we are now

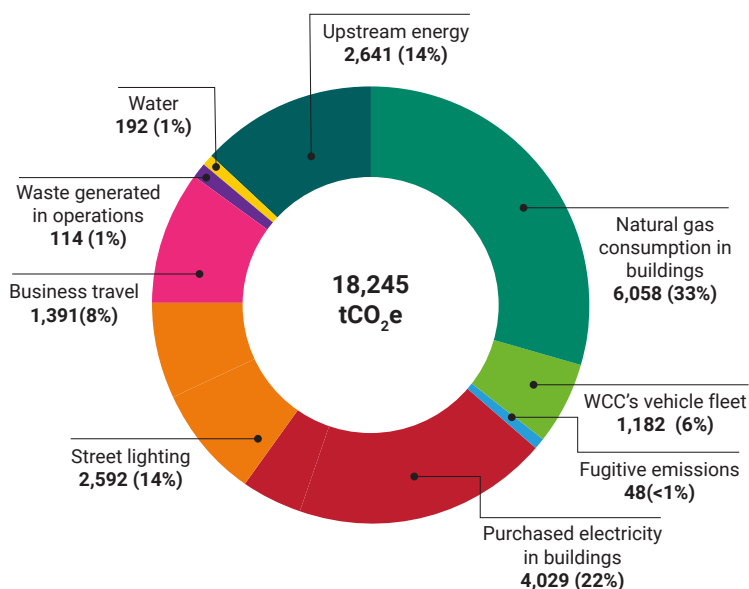
Since 2014, we have reported on our emissions related to natural gas, electricity use in buildings and for streetlighting, and fuel use for our own vehicle fleet. We have seen a 63% reduction in these emissions between 2014 and 2020. This has been due to the decarbonisation of grid electricity and replacing sodium bulbs in streetlights with LEDs.

We have committed to achieve carbon net zero by 2030 for the following emissions sources:

- **Scope 1** – Direct emissions from assets we control: building gas / oil use, fuel use from vehicles we own
- **Scope 2** – Emissions from purchased electricity in our buildings and streetlighting
- **Scope 3** – Indirect emissions from the waste we generate, the water we consume, business travel and upstream energy.

In 2019, these emissions equated to 18,245 tonnes of CO₂e. We have set this as our baseline from which to measure future progress towards our 2030 target. Some of these emissions are currently estimated using industry benchmarks, so we will also continue to improve the quality of the data we collect.

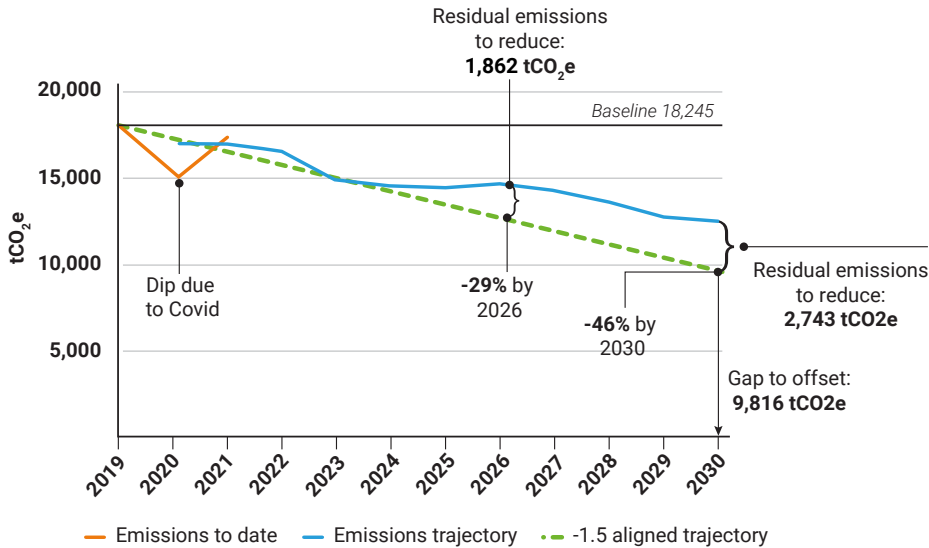
We continue to understand areas to target for Scope 3 reductions. Whilst these emissions are not directly within our control, we will work with our contractors, suppliers and other partners to influence and support reductions in these areas.



To measure progress towards our target of net zero by 2030, we have set interim targets of reducing emissions by 29% by 2026 and 46% by 2030. This is in line with the scientifically informed Sectoral Decarbonisation Approach (SDA)² which sets proportional targets to limit global temperature rises to 1.5°C.

Whilst we expect emission levels to reduce due to external factors, we will need to take the actions outlined in this Strategy to lower residual emissions further. Even so, based on a target of 46% reduction, there will still be 9,816 tonnes of CO₂e required to be inset or offset each year. We will therefore be developing a plan in 2024 to review the options and viability for inseting and offsetting.

Emissions in 2021 were 16,712 CO₂e, on track against our reduction trajectory. We will report progress annually on the [Warwickshire climate emergency website](https://www.warwickshire.gov.uk/climate-emergency-website).



¹www.sciencebasedtargets.org

Note, these targets have not been verified by SBTi.

Strategy Aims

This Strategy sets out a framework and key action areas for delivering the Council's strategic priority of:

Being a county with a sustainable future, which means adapting to and mitigating climate change and meeting net zero commitments.

The scale and pace needed to meet targets for 2030, 2050 and beyond is ambitious; business-as-usual activities within the Council and across the county will not be enough. This Strategy recognises that we need to do more and faster; challenging us to be innovative and to consider what powers and funding we might need to deliver our objectives.

As well as reducing carbon emissions to stop global temperatures rising, we also recognise that the effects of climate change are already being felt. Our 2022 [Climate Change Adaptation Plan](#) considers the work needed to carry out our business as temperatures and emissions rise.

2030
Council carbon
net zero

2050
Warwickshire
carbon net zero

2050+
Carbon
surplus

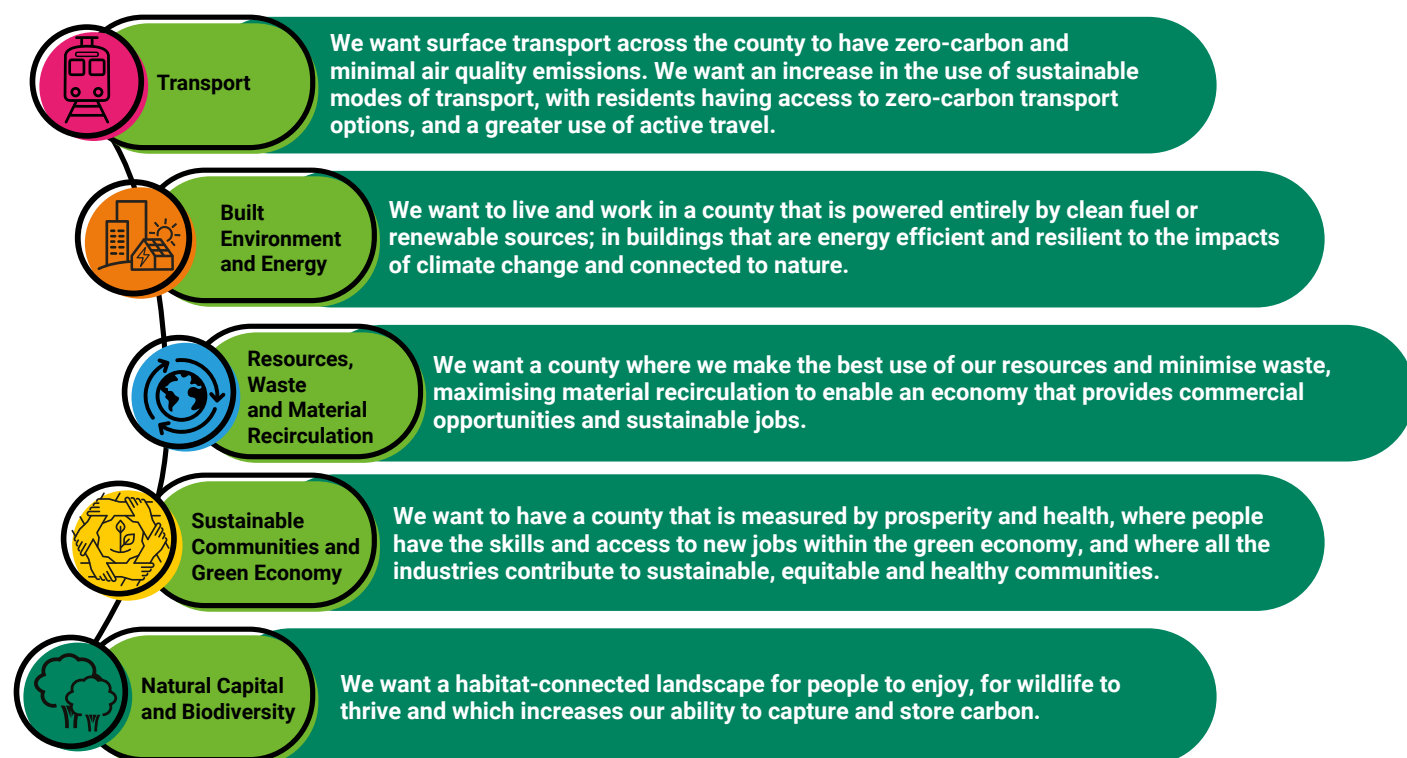
“
We want to make
Warwickshire the best
it can be, sustainable
now and for future
generations.”

Warwickshire County
Council, Council Plan
2022-27

Where do we want to be – the future

We are ambitious about what we want our future to look like. Within the next few decades, we want our county to be reimagined; low in carbon with vastly reduced energy bills, landscapes with plenty of wildlife that people can enjoy, farms which provide us with local food, a thriving sustainable economy and communities that are happier, healthier and more engaged.

This Strategy is organised around five delivery themes, and we have developed a vision for each as part of this strategy:



Delivering Success

We know from our earlier stakeholder engagement and expert panels that many of our businesses, organisations and residents are already on their own journeys to net zero. We are fortunate to have strong expertise and innovation across Warwickshire's institutions and private businesses and have established the foundations for longer-term partnership working with District, Borough, Town and Parish Councils as well as our wider regional partners, local universities, the health and voluntary sectors.

As a County Council we will play our role in leading by example and creating the conditions to support strong partnerships that can work together towards this common purpose. We want to inform and inspire action and will do so by widely sharing ideas, case studies and best practice. We will learn from others on similar journeys to us to help find solutions and adapt to the challenges ahead.

Our community powered approach will help to increase ownership, capacity and capability and create the conditions for communities to identify their own priorities and solutions. Our [Levelling Up Strategy](#) will reduce disparities across the county and provide an opportunity to create a sustainable Warwickshire that values quality of life, inclusivity, and prosperity.

We need to be innovative in how we tackle the challenges ahead, working collaboratively to create momentum for change and exploring new ideas. Our existing organisational behaviours and processes will support our ambitions. This includes being able to deliver change management successfully, using our commissioning processes to maximise our impact as well as reviewing our existing policy framework to ensure alignment with this Strategy.

We have set out objectives and actions to support our net zero targets for each theme and these are described below and within Annex A, our Delivery Plan. This is based on current evidence and as technology, data and national policy evolve, we will adapt these plans. We expect to review this Strategy every three years.

We have established a governance structure to monitor our progress and provide clear and transparent reporting mechanisms. This includes strategic oversight and accountability to a Programme Board led by senior officials. We will also report regularly to our democratic committees, including at least quarterly performance reports to Cabinet and Overview and Scrutiny Committees. Further updates will be shared on our dedicated [Warwickshire Climate Emergency website](#).

Funding the Strategy

Funding is key to our ability to deliver this Strategy and substantial financial investment will be required in the next decades for decarbonisation.

We know that financial pressures on national and local government are significant. As such, we need to be creative in our ability to invest and fund sustainable interventions.

We will:

- Take advantage of planned improvements across our services to advance our climate change ambitions, providing longer-term financial benefits to the authority. This will include embedding net zero and social value requirements into our procurement.
- Build a pipeline of projects that are ready to take advantage of funding opportunities as they arise.
- Bid for dedicated grant funding from central government to achieve net zero ambitions as well as that which delivers on sustainability objectives as part of wider goals, such as social, economic growth or devolution. Examples include the Towns Fund, Levelling Up Fund, and the UK Shared Prosperity Fund (UKSPF).
- Leverage funds from the commercial sector, including developer contributions such as the Community Infrastructure Levy (CIL).
- Look to generate revenue from net zero investment opportunities, such as renewable energy, for reinvestment into activities within the Strategy.
- Work with Voluntary, Community and Social Enterprise organisations to encourage local project delivery that could be potentially funded via voluntary sector sources, including lottery and trust funding.
- Work with partners on external funding applications.
- Consider private sector investment and public sector borrowing to fund long-term capital projects.
- Investigate the potential use of Local Climate Bonds (LCB) as a way for residents and businesses to invest in net zero projects.
- Continue to receive developer contributions through our biodiversity net gain market and look to extend these to other nature markets to help us deliver habitat enhancements and other nature-based benefits.
- Develop opportunities for the private sector to support our ambitions through financial contributions, materials, time or resources as part of their Corporate Social Responsibility objectives.

Key Themes

We have identified five key themes that are fundamental to achieve our strategic aims and aspirations.

The themes are presented separately but there is inherent overlap and synergy between them all.

For each theme we have considered the key objectives that need to be delivered, where our focus will be in the first instance and how we will measure our progress. This is summarised in Annex A as a set of tables outlining the actions that we will deliver.





Transport

Why is this important?

Transport is the largest source of carbon emissions in the county, accounting for 44% of emissions in 2019³ (our baseline year). Whilst the quantity from the transport sector in Warwickshire has remained stable over recent decades, the relative importance of tackling these emissions has steadily increased, due to a fall in emissions from other sectors.

As the transport authority in Warwickshire, we have a key role to reduce transport emissions. Not only will we need to lead the way by reducing the emissions from the Council's vehicle fleet, but we must prioritise more sustainable travel options that can reduce private car use and inspire behaviour change in others. In selecting options, we will also need to reflect the different challenges and barriers for rural areas versus towns.

Ambition

We want surface transport across the county to have zero-carbon and minimal air quality emissions. We will achieve this by increasing the use of sustainable modes of transport, with residents having access to zero-carbon transport options, as well as encouraging active travel.

What we need to do

Our overarching objectives for this theme are to:

1a. Reduce the amount of carbon dioxide equivalent (CO₂e) and air quality pollutants emitted from journeys made by Warwickshire residents and businesses.

This objective will be addressed by the framework set out in [Warwickshire's Local Transport Plan 4 \(LTP4\)](#) which was adopted in July 2023. The LTP4 indicates the need to change the way that we move around the county and beyond, providing the basis for our transport interventions over the next decade or so. It includes six sub-strategies focused on Active Travel, Public Transport, Safer Travel, Motor Vehicles, Managing Space and Freight.

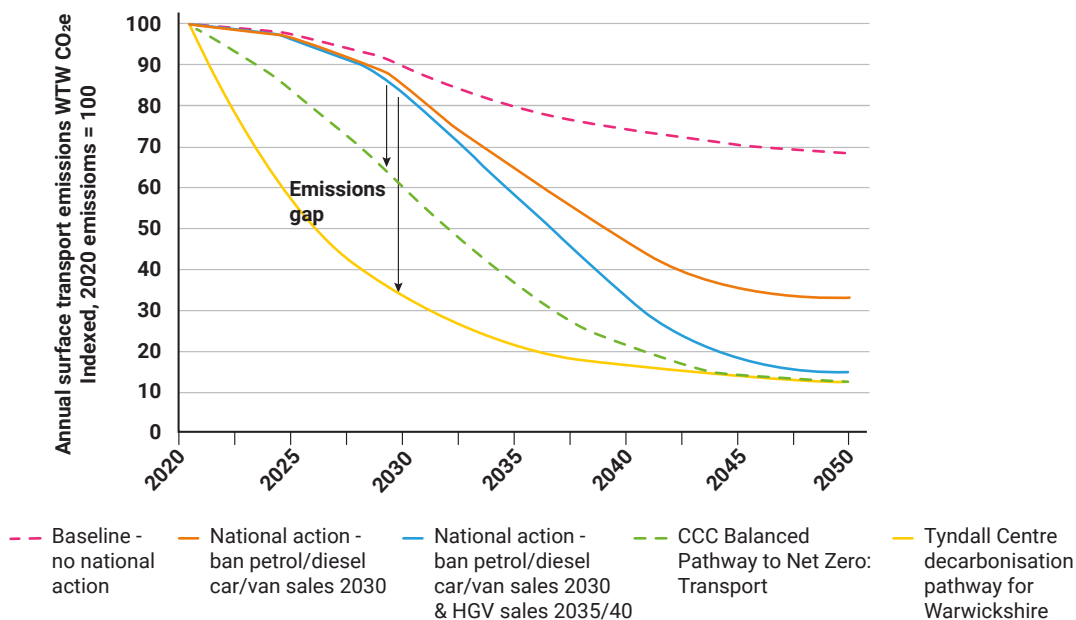
³ www.gov.uk/government/collections/uk-local-authority-and-regional-greenhouse-gas-emissions-national-statistics

To reduce emissions from transport, the LTP4 sets out an "avoid, shift and improve" approach which prioritises:

- 1) Enabling safer walking, cycling and scooting.
- 2) The provision and use of low emission, accessible, safe, and reliable public transport.
- 3) Efficient driving through congestion easing and the use of low emission vehicles through infrastructure to support them.

To achieve net zero in Warwickshire we will need to align behind the reductions outlined below and we will evaluate our success by measuring the greenhouse gas emissions resulting from Warwickshire journeys.

The following graph shows Warwickshire’s transport carbon dioxide emissions challenge under different intervention scenarios.



By regularly measuring the following, we will be able to chart progress of our underpinning activity:

- Publicly available EV charging devices (at all speeds), rate per 100,000 population
- Percentage of schools signed up to our Safe and Active Programme
- Number of journeys on public transport services supported by the Council
- Number of businesses engaged with the Active Travel Programme
- Kilometres of cycle infrastructure.

1b. Reduce the amount of carbon dioxide equivalent (CO₂e) emitted because of Council-related travel.

Using figures from our 2019 baseline, Scope 1 and associated upstream emissions from the Council's fleet and business travel will need to reduce by approximately 1,100 tonnes of CO₂e by 2030. National policies banning the sale of new petrol and diesel cars, vans and HGVs will have a positive effect on these reductions, but where possible we will reduce emissions further and faster.

This will be achieved through a range of activities, including encouraging the shift to active travel journeys where appropriate, campaigns to encourage more fuel-efficient practices, a strategy and plan to decarbonise our fleet and targeted activity focused on services such as home to school transport.

1c. Improve resilience of our transport system through climate change adaptation.

We will work across our transport system to ensure we have infrastructure and services that will cope with future changes in climate. This will mean ensuring our own design guides and specifications are climate resilient and that we work with transport owners and operators throughout the county to support them in making their own preparations.



Built Environment and Energy

Why is this important?

The energy we use and generate, especially across the built environment, has one of the biggest emissions impacts across Warwickshire. By retrofitting new technologies into existing buildings and improving standards within new construction, we can develop a built environment that needs less energy to heat and power to run. Reducing energy consumption and improving efficiency within homes and buildings will also help to tackle fuel poverty.

As a Council, close to 70% of our carbon footprint (Scope 1 and 2) is associated with energy in our buildings and streetlighting. How we construct, use, heat and cool our buildings is particularly important.

Our path to net zero will be supported by decarbonisation of the electricity grid over the next 30 years. Sources such as wind, solar, and potentially nuclear will become the main source of electricity generation and will provide greater energy security within our own borders. Other options such as the use of hydrogen for heating may become a viable solution in the future but widespread use is not expected for many years.

Ambition

We want to live and work in a county that is powered entirely by clean fuel or renewable sources; in buildings that are energy efficient and resilient to the impacts of climate change and connected to nature.

What we need to do

Our overarching objectives for this theme are to:

2a. Increase the amount of energy generated from local renewable sources.

To do this we must first understand our local energy needs. We will therefore develop and deliver local energy plans that map out future energy demands and capacity and consider options for potential schemes including community energy schemes and our own infrastructure investment decisions.

We will continue to engage with regional stakeholders such as West Midlands Combined Authority, Energy Innovation Zones, Midlands Net Zero Hub and Energy Systems Catapult for lessons learnt and partnership opportunities to decarbonise.

By measuring the amount of renewable energy capacity installed in Warwickshire we will be able to determine our progress against this objective.

2b. Reduce the amount of carbon dioxide equivalent (CO₂e) arising from energy and building use across Warwickshire's homes, schools, and businesses.

Across the county our local authorities and many businesses and organisations already have their own net zero carbon ambitions and plans. To achieve this objective requires us all to do our part but also to work together to provide greater influence. For example, by working across authorities to review our planning systems and engaging developers at an earlier stage, we can improve the energy efficiency of new buildings as well as reducing CO₂e emissions from the construction process.

We will support schools to decarbonise by raising awareness and providing advice through schemes such as Eco-Schools. We will work with them to bid for resources to improve energy efficiency, invest in renewables and improve new build standards in schools. We will ensure maintained schools meet high energy performance standards by replacing plant and equipment with less carbon intensive systems.

As councils take forward plans to minimise carbon emissions in existing housing, we will provide support to encourage residents and businesses to take up energy efficiency opportunities such as the installation of heat pumps and other improvements. This will include advice provided to residents and businesses through in-house and commissioned services.

We recognise that some industries across the county will have greater carbon emissions than others and we will look to identify those businesses to target support and advice to encourage them to progress towards net zero. This will include actions to reduce embodied carbon in materials and whole life cycle emissions in buildings and infrastructure.

We will regularly measure and report CO₂e emissions from Warwickshire homes and businesses so that we can track progress.

2c. Reduce the amount of carbon dioxide equivalent (CO₂e) emitted from Council buildings and streetlighting.

Our Energy Strategy provides us with a framework to decarbonise our estate. This will include improving the data we capture, embedding energy considerations within new schemes and developing an approach and planned programme for retrofit across our buildings. We will carry out a survey of our estate to identify potential sites for renewable energy opportunities and establish a priority pipeline of projects. This will include a review of our heating systems, moving towards renewables where possible and maximising the efficiency of residual heating sources that rely on fossil fuels.

Every year we will measure and report our CO₂e emissions from Council buildings so that we can monitor our progress, with a goal of reducing CO₂e by 1,650 tonnes by 2030.

2d. Improve Warwickshire's built environment to provide resilience to changes in climate.

We will work with District and Borough council colleagues to ensure future developments across the county are designed and built to provide resilience to natural hazards such as flooding, rising temperatures and other impacts of climate change.



Resources, Waste and Material Recirculation

Why is this important?

To become more sustainable as a county we need to reduce the demands that we place on our resources. If materials end up as waste, the energy and associated emissions required to dispose of and replace products will continue. As the waste disposal and planning authority for Warwickshire, we use a hierarchy approach to prevent, reduce, reuse, recover and only then, dispose of our waste. But we want to go much further and move away from a “take, make, consume and throw-away society” towards one that minimises waste and pollution, keeps products and materials in use for as long as possible and supports the regeneration and protection of natural resources and our environment.

Such an approach will encourage better designed products that last longer and can be more easily repaired and maintained. It will reuse, remanufacture and recycle products, components, and materials so they can be usefully used for other purposes and their life extended. Lower impact products and services could include more sustainable materials, improved processes such as modular buildings that reduce waste within construction, a shift to sharing resources, and repair and return services driving a strong second-hand market.

Ambition

A county where we make the best use of our resources and minimise waste, with a thriving economy that provides commercial opportunities and sustainable jobs.

What we need to do

Our overarching objectives for this theme are to:

3a. Reduce the amount of waste arising in Warwickshire.

As the waste disposal authority, we are directly responsible for managing the household waste collected by District and Borough councils. We will work to promote and encourage greater reuse and recycling and therefore a reduction in overall waste. We will also work with partners to improve the services offered across the county to make it easier to repair, reuse and recycle. Success will be determined by our existing measures.

3b. Establish a material recirculation approach that provides commercial opportunities and sustainable jobs.

We will establish an approach, identifying business sectors to focus on and actions to take, that will support the adaptation of our local economy to reduce waste and increase cost efficiency. This will include direct support to businesses as well as encouragement through our own procurement activities.

Measuring a thriving, sustainable economy is difficult, but we will look to align with sustainability measures emerging from our [Economic Growth Strategy](#) alongside nationally available data for waste generated from construction and demolition activities and from the commercial and industrial sectors.



Sustainable Communities and Green Economy

Why is this important?

Realising the ambitions of climate change for Warwickshire will not only rely on active engagement from communities and businesses, but also create huge opportunities. Our climate change actions have the potential to make a positive contribution to the social and economic needs of the county, supporting and developing businesses to address green challenges and provide the required future skills.

Working collaboratively will help us to ensure we do so in a way that helps address inequalities and takes account of the risks and impacts to society. Bringing together residents to deliver on climate action will help to create sustainable communities with healthy and happy residents who are inclusive and equitable in their actions.

This theme is based on the following:

- Health and wellbeing are paramount.
- Taking a community powered approach to increase community ownership, capacity and capability; creating conditions for communities to identify their own priorities and solutions and providing help for delivery.
- Encouraging an approach that supports sustainable consumption and production. Providing economic growth without raising resource consumption and provide sustainable, local access to goods and services.
- Working collaboratively with institutions that are accountable and resilient to amplify and maximise impact as well as providing communities with a sense of democratic empowerment.
- The development of jobs, skills and technology to contribute to Warwickshire's decarbonisation and sustainability journey. We will support the greening of all areas of the economy with a focus on our key priority sectors of automotive, manufacturing, engineering, tourism and digital creative.

- Building capacity within the supply chain to ensure investments to support our net zero ambitions can be delivered.
- Nature is safeguarded, restored and supported by an economy which invests in protecting, growing and restoring biodiversity, soil, water, air, climate and other natural systems.
- Our farming community plays a key role in providing local, sustainable enterprise to support healthy lifestyles.

Ambition

We want to have a county that is measured by prosperity and health, where people have the skills and access to new jobs within the green economy, and where all the industries contribute to sustainable, equitable and healthy communities.

What we need to do

Our overarching objectives for this theme are to:

4a. Grow our economy in a sustainable way to support new low carbon businesses and ensure Warwickshire businesses can successfully transition to net zero.

This will include the delivery of a new Warwickshire net zero programme to directly support businesses to make changes to reduce their carbon emissions. This will include financial support of loans or grants to make the necessary adaptations.

Recognising the positive contributions the low-carbon sector can bring to the county, we will commission research to identify future opportunities.

We will lead by example and review our processes and priorities to encourage low-carbon, social equity and increased biodiversity outcomes for the goods, services and investments that we make.

We will work with District and Borough councils to reduce energy demand and carbon emissions in the domestic sector. We have improved our understanding of energy performance across the county and plan to use this to target worse performing properties. We will continue to provide advice to householders on how to reduce energy bills and cut carbon through our energy support helpline and will also encourage the take-up of grants and funding by those who are eligible.

We know that we need more skilled workers to cope with the demands of retrofitting the domestic sector. We have a role to help grow the skills base to support this and we will help to create a strong and reliable market for new technology and home improvements for all who want to invest in their homes.

4b. To improve prosperity, health and wellbeing for Warwickshire's communities through our sustainable actions.

We will continue to work across our communities to harness the collective power of our residents. Many voluntary sector organisations are already helping to deliver outcomes to support net zero carbon across the county and we will continue to encourage them and support others to learn from their successes.

With our place-based approach to Levelling Up, we will collaborate with those seeking to tackle economic, health and education disparities within communities to explore how sustainable outcomes can play a role in the solution. This will help us provide positive outcomes for health and wellbeing as well as ensuring our businesses have the skills available to support sustainability and growth.

Through the Eco-Schools programme we will continue to encourage our young people to have the knowledge and skills to make sustainable choices and to help embed these within their communities.

We will review our progress by engaging with communities to understand their involvement in local activities that support our ambition. We will also measure the number of employers we engage with to encourage healthier working environments. Other measures of success will be developed in line with our [Economic Growth Strategy](#).



Natural Capital and Biodiversity

Why is this important?

Taking a natural capital approach, which considers nature as an asset, is critical to our survival. It includes tangibles like water and food, as well as intangibles such as clean air, a stable climate, and biodiversity. These provide the foundations for life on earth, without which the quality and wellbeing of human life would suffer. As our climate changes we therefore need to adapt to ensure impacts to our ecosystem are minimised and we protect and enhance these assets and the benefits they bring to us.

The UK Government has continued to promote the use of a natural capital approach through their 25-Year Environment Plan. This monitors the environment and the delivery of nature-positive outcomes, including those required by environmental markets such as carbon markets. Building on this, the UK has committed to the COP15 international target to protect 30% of our land and ocean by 2030, known as 30x30.

Changes in climate directly impact ecosystems, including the survival of varied species, their behaviour, distribution and abundance. By improving the quality and availability of our habitats in Warwickshire we can provide greater ecosystem resilience to climate change. We can also provide wider ecosystem benefits through adaptation; for example, strategically located areas for ecological restoration can improve water quality by reducing surface run-off and promoting groundwater recharge.

Our natural assets play a vital role in being able to capture and store carbon to help Warwickshire achieve its net zero ambitions.

Ambition

We want a habitat-connected landscape for people to enjoy, wildlife to thrive and to increase our ability to capture and store carbon.

What we need to do

Our overarching objectives for this theme are to:

5a. Increase the coverage and connectivity of habitats in Warwickshire as a percentage increase of total land.

This will include further development and management of our natural assets and environmental markets to support developers and planning authorities within the county to enhance natural habitats. We will work with our residents to support wider community engagement and action to improve our natural environment.

We will determine progress by measuring the percentage of habitat biodiversity within the Council's rural estate, the area of biodiversity net gain schemes established, and the total area of land managed through schemes designed to manage and enhance biodiversity (including higher level stewardship and other nature markets, Sites of Special Scientific Interest and Woodland Schemes).

5b. Increase the amount of carbon dioxide equivalent (CO₂e) captured and stored through nature-based solutions in Warwickshire.

By 2024, we will develop a plan to deliver our offsetting and inseting targets. We will continue to deliver against our tree planting commitment of a tree for each of our residents by 2030 and will develop other land-based assets to further support carbon capture. The development of our nature markets will be important to capturing carbon throughout the county.

We will measure the number of tonnes of carbon dioxide (CO₂e) captured and stored annually through our nature-based solutions in Warwickshire, as well as annual changes in soil and vegetation carbon storage and the number of trees planted to support our tree planting commitments.

5c. Improve resilience of our natural habitat through climate change adaptation

As Warwickshire's climate changes, we will make adaptations through our natural assets to protect our communities, looking at nature-based solutions to reduce flooding risks and improve water quality. We will ensure adaptation is considered throughout our natural-asset decision making to safeguard our investments.

Appendix A

Terminology

Absolute reduction

Generally, 90% reduction from the baseline across Scope 1, 2 and 3 delivered through long-term science-based targets.

Biodiversity Net Gain

A concept for development and/or land management that aims to increase biodiversity, using quantitative and qualitative approaches.

Carbon dioxide equivalent (CO₂e)

A measure used to compare the emissions from various greenhouse gases on the basis of their global-warming potential. Volumes of other gases are converted to the equivalent amount of carbon dioxide, to give an overall global warming potential.

Carbon inset

An action or process of compensating for carbon dioxide emissions by removing carbon dioxide out of the atmosphere using an organisation's own products / boundaries. An example for WCC would be a biodiversity or tree planting scheme.

Carbon Offset

Involves investing in projects that are not related to an organisation's products or boundary, for example purchasing carbon credits or tree planting outside its own organisation.

Green Economy

Broader than a low carbon economy; it aligns to the wider context of the UN SDGs. An approach to sustainable economic growth with a central focus on reducing societal and environmental risks and ecological scarcities. It embeds climate adaptation into its construct. It transitions from the current 'growth-based' approach to investments, employment, and skills towards growth without degrading the environment, and the wellbeing and prosperity of citizens.

ISO14001

Environmental Management System Sets out the criteria for an environmental management system that can be certified to. This helps us as an organisation to make sure we are setting up and following an effective system for managing environmental factors.

Material Recirculation

A model of production and consumption which minimises waste through sharing, leasing, reusing, repairing, refurbishing and recycling existing materials and products for as long as possible. This aims to reach maximum efficiency in the use of finite resources as part of creating a sustainable, productive economy.

Natural Capital

Stocks of the elements of nature, such as forests, fisheries, rivers, biodiversity, land and minerals. Stocks of natural capital provide flows of ecosystem services over time which produce a wide range of benefits.

Natural Capital approach

Framing nature as an asset, or set of assets, that society benefits from and attempts to assess, in qualitative, quantitative and monetary terms, the ability of natural assets to provide ecosystem services, in order to make them more visible in decision making. It enables a much clearer picture of what we stand to gain or lose when we make decisions about how to manage or consume natural resources.

Net Zero

Balance of carbon emissions and removals, focusing on 'absolute reductions' in operational boundaries prior to investments in external carbon removals.

Sustainable

Meeting the needs of current generations without compromising the needs of future generations.

Prosperity

Growing wealth for wellbeing (not just financial wealth but the full range of human, social, physical and natural capitals).

Zero Carbon

No emissions are produced from a product or service.

Appendix B

Key Trends

We have assessed the key trends within sustainability and climate change (including changes in demographics, technology, behaviours, and factors such as the Covid-19 pandemic) across the short, medium and long term and how they may impact the Council and the wider county. The assessment has provided input into our themes and actions as impacts to the Council and county.

People Changes

- Changes in behaviour
- During the pandemic there was an increase in active travel and sense of 'local' work and shopping
- Green technology jobs
- Influence of climate change on the economy
- Changing population
- Demographics
- Risks of technological unemployment, impact to food supply and others

Technology Changes

- Changes in energy: the Energy White Paper (December 2020) and related Policy provides an indication about how the Government will address energy related climate change challenges
- Transport and a move towards electric vehicles
- Automation
- Risks of technological unemployment, impact to food supply and others

Policy Changes

- Changes in energy
- New policy and strategic intents to influence response to medium-term challenges e.g., Climate Change Committee 6th Carbon Budget, national priorities.
- Waste Management: encourage residents and businesses to minimise waste, and maximise recycling and reuse
- Net zero carbon target
- Influence of climate change on the economy

National progress

The Climate Change Act (2008) commits the UK government to reducing greenhouse gas emissions by at least 100% of 1990 levels (net zero) by 2050. This is the foundation of the UK's approach to reducing emissions and preparing for the impact of climate change and includes legally binding stepping stones or carbon budgets to be achieved every five years.

The following table illustrates the pathway to net zero:

Budget	Reduction below 1990 levels	Met?
1st Carbon Budget (2008 to 2012)	Yes ✓	26%
2nd Carbon Budget (2013 to 2017)	Yes ✓	32%
3rd Carbon Budget (2018 to 2022)	To be assessed in 2024	38%
4th Carbon Budget (2023 to 2027)	To be assessed in 2029	52%
COP26 agreement (2030)	To be assessed in 2032	68%
5th Carbon Budget (2028 to 2032)	To be assessed in 2034	58%
6th Carbon Budget (2033 to 2037)	To be assessed in 2039	77%
7th Carbon Budget (2038 to 2042)	To be set in 2025	To be set in 2025
Net zero target	At least 100% by 2050	At least 100% by 2050