

WILSHIE STRATEGY

Wiltshire Council



Foreword

Our world is changing around us, with increasing temperatures, extreme weather and risks to property, health, wildlife habitats, and food production. Climate change affects us all, but we also all have the power to do something about it.

The council has acknowledged the climate emergency and committed to becoming carbon neutral as an organisation by 2030. We are taking immediate action to tackle the climate emergency rather than waiting for this strategy and its delivery plans to be in place.

Being 'carbon neutral' and having 'net zero carbon' emissions are slightly different, so the concepts are explained in 'Our Approach' in relation to our commitments. Essentially, we need to ensure that any carbon dioxide emitted - from vehicles. homes, businesses or the land - is balanced by an equal amount taken out of the atmosphere - for example being absorbed by trees, soil or captured from factories by specialist technology. However, bearing in mind that nature absorbs carbon dioxide relatively slowly from the atmosphere and that technology to capture it is not yet available at scale, the easiest way to take action is to cut our emissions significantly. This also shifts our energy reliance from finite resources to long-term,

sustainable sources of power.

This will mean making changes to the way we all live our lives. New technology will help us to enjoy our lives without emitting carbon but this will need to be accompanied by changes in the way we do things.

Research shows us that a bright future, fuelled by clean energy, is achievable and affordable. However, we need a commitment to achieving this goal and we need to put actions in place now.

We also need to adapt to impacts of climate change that will be inevitable – for example by preparing for more floods and heatwaves. However, the long-term costs of adapting will be far higher if we do not act now to minimise our impact and so the short-term investment is very worthwhile.

Climate change is a global problem, but the UK is well-placed to set an example to the world. And we want Wiltshire to be a role model for the country.

The council's ambition for Wiltshire as a county – beyond just the council's footprint – is to seek to achieve carbon neutrality by 2030 and contribute to global efforts to keep temperature increase to safe levels.

Everyone in Wiltshire is invited on this journey and we want to make sure that no-one is left behind or disadvantaged in this transition. From the older generations

to the very youngest – who will be most affected by climate change – we want to invite you to help shape the future.

As a large county made up mainly of market towns with their rural hinterlands, the challenges and the opportunities to cut greenhouse gases are quite different from those in urban areas.

The purpose of this strategy is to highlight key areas that we in Wiltshire can focus on in the next five years as well as setting out some important context on policy and emissions data. This strategy is structured around seven delivery themes. A discussion of challenges and opportunities in each theme was presented in a discussion document in January 2021 so this strategy does not repeat that discussion.

We were pleased with the level of response we received to our consultation on this strategy in Autumn 2021. This final version is a longer document which

incorporates feedback from the more than 1000 residents and stakeholders who responded.

Cllr Richard Clewer, Leader



Introduction

In February 2019, against a backdrop of increasing concern over climate change, the council acknowledged the **climate emergency** and committed to seek to make the county of Wiltshire carbon neutral by 2030. To this end, in July 2019 Wiltshire Council **pledged** as an organisation to become carbon neutral by 2030. A Climate Emergency Task Group was set up, gathering the views of a wide range of stakeholders to provide recommendations on ways to reduce carbon emissions.

Wiltshire Council has been working to reduce its carbon emissions for over a decade with some of the following results:

- We cut our carbon footprint by more than 80% between 2015 and 2021
- Thanks to sustained investment in renewables over time, in 2020/21 council-owned solar PV generated 727,097 kWh. Renewable electricity generation on our own estate increased by 39% compared with 2019/20.
- In October 2019, Wiltshire was named by Friends of the Earth as the most climate-friendly local authority area in England and Wales

 Energy consumption from streetlighting is being reduced by two thirds thanks to a £12 million LED programme

Significant progress has already been achieved since 2019, as reported to Cabinet and Council through six-monthly reports. We recognise however that cutting carbon emissions deeply and rapidly over the coming years is a huge challenge and that there is much more to do. We will learn from best practice elsewhere and share our skills and experience with local partners who look to us for leadership on this agenda.

The council has engaged with residents and stakeholders in Wiltshire to develop the strategy through a comprehensive consultation process. This demonstrated overwhelming support for all our climate objectives and a strong desire for the council to show leadership and do more, faster. A summary of the consultation feedback is available in the council's Cabinet papers for 1 February 2022. The Wiltshire Climate Alliance was formed in 2020 as an umbrella organisation for environmental groups across the county. These groups have been holding the council to account on its climate commitments. They have also helped to shape this draft strategy through workshops in 2020 and 2021, including two organised by the Wiltshire Climate Alliance Youth group of under 25s.

As national policy and legislation are crucial enablers of action at a local level, we are involved in influential national networks to shape and inform central government thinking. The council's leader chairs the **Countryside Climate Network**, made up of ambitious council leaders from 28 rural councils who represent over 45% of England's land area, making the case that rural communities can be at the forefront of climate action.

This strategy sets a framework for reducing emissions in Wiltshire over the next five years and for making the county resilient to climate impacts. This strategy is not a statutory document but it will influence other key council strategies and plans such as our emerging Local Plan and our Local Transport Plan. Our new Business Plan firmly reflects the objectives of this strategy: our mission states that 'we take responsibility for the environment' and 'we are on the path to carbon neutral'.

About this document

This document has deliberately been kept simple and succinct to encourage a wide readership. The council's **climate webpages** complement the strategy, including the discussion of the issues and evidence published in a Discussion Document in January 2021. Frequently Asked Questions (FAQs) are published to help explain issues such as net zero development and planning, and there is information on what residents and organisations can do to tackle climate change. The website will also provide progress updates on this strategy.

The **UK Climate Change Committee** estimates that local authorities can influence one third of emissions in their area. This makes public engagement and buy-in from organisations and businesses critical to tackling the other two thirds – as well as advocating for strong government action. This high-level strategy sets out our objectives and areas of focus while remaining flexible. As the world around us evolves in terms of knowledge, legislation and policy, technology and the market, we will adapt to take advantage of these opportunities. Detailed delivery plans will be developed, and in recognition that we are facing an emergency, we are already taking action on a number of fronts.

This strategy is not perfect. It is built on the currently available evidence base, but there are gaps in understanding and more work will need to be undertaken over time. Technical studies will be commissioned as required to address these gaps, including to help us set meaningful interim targets.





Transport

Achieving zero emissions surface transport in Wiltshire is a challenge which will require action across all areas, with a significant role played by zero emissions vehicles, in conjunction with reducing trips and shifting modes. Zero emissions transport is a necessary priority, since transport produces the largest proportion of emissions in the county.



Homes and the Built Environment

New buildings need to be net zero carbon as soon as possible, using less energy and running on low carbon sources of electricity and heat. Existing buildings need to be retrofitted along the same principles. All buildings also need to be able to cope with the impacts of climate change.



Natural Environment, food and farming

A healthy natural environment is crucial to achieving net zero, and providing ways for people and wildlife to adapt to the stresses of climate change. Central to our challenge is the efficient and sensitive use of land for all our needs – local food production, preserving habitats, generating energy, absorbing carbon dioxide and providing homes.



Energy

We need to reduce the energy we use, as well as using low carbon forms of energy, including from microgeneration. There are also opportunities to explore in terms of 'smart' and digital solutions that help to smooth demand, and ensure fair distribution of energy and new technologies.

Strategy overview



Wiltshire Climate Strategy 2022 - 2027



Green economy

We want to grow a net zero, climate resilient economy in Wiltshire. This includes opportunities for training and more jobs in green sectors, as well as building up supply chains to enable objectives in our other delivery themes.



Resources and waste

Using the waste hierarchy 'reduce, reuse, recycle, recover energy' helps reduce the energy and emissions associated with extracting, manufacturing, transporting and storing all the products we use.



Carbon Neutral Council

This section sets out the areas of work that will help Wiltshire Council become a carbon neutral organisation. The council's role also extends to providing leadership and opportunities to share knowledge and learn from one another.



Strategies and Targets Timeline

An overview of key government and council milestones to 2050.



Achieving net zero is a colossal challenge and significantly more challenging than government's previous target to reduce emissions by 80% by 2050. Achieving net zero means all parts of the economy, including those that are harder to decarbonise, need to reduce emissions substantially. In some sectors, there are well-understood pathways to net zero but there is uncertainty in other sectors over how to reduce emissions. This is because it is not yet known how quickly some technologies will develop or how much individuals will be willing to change their behaviours.

National Audit Office report, December 2020



Our approach

This strategy will help Wiltshire Council – and Wiltshire's people – to lead action on climate change. We hope that residents, communities, organisations and business will join us in working towards these shared goals and principles.

We will focus on reducing carbon emissions in order to keep global temperature to below 1.5°C. However, given that the effects of climate change are already being felt, we need to plan to be able to cope with the impacts of climate change associated with a 2°C rise in global temperature. Our existing Climate Change Adaptation plan supports this and will be reviewed to reflect the most recent research into climate impacts and mitigation in Wiltshire.

During the period of this strategy we will focus on our commitment to being carbon neutral by 2030 (meaning focussing on substantially reducing emissions, before residual emissions being offset or compensated). Beyond 2030 we will aspire to be fully net zero, meaning that stricter criteria will apply to offsetting, which should be via carbon removal methods such as tree planting and 'carbon capture and storage' technologies, and for these to be sufficient we will have reduced emissions almost completely.

We will scale up existing technologies and solutions, while supporting innovation for the future.

2030

Be a carbon neutral council

2030

Wiltshire to be carbon neutral

2°C

Be resilient to the impacts of climate change

We will focus on Wiltshire-based ('territorial') emissions in the first instance as these are better understood. Although we recognise that embodied carbon in materials and in the imported goods that we buy and eat also need to be brought to net zero, this is something the council has extremely limited influence over.

The council only has direct control over 0.5% of carbon emissions in Wiltshire but can use its democratic mandate and other levers of influence to have an impact on wider emissions (see diagram), including influencing strategic partners on infrastructure projects.

Most activities to mitigate climate change involve new and smarter ways of doing things. It will be essential to involve all sectors and generations, and especially children and young people as they will be the most affected.

Principles

Our strategy and delivery plans will:

- Be inclusive ensuring the transition to a low carbon, climate resilient future is accessible to all sectors of society, including our rural communities and businesses.
- Be evidence led using the best available science and analysis, while working to increase knowledge in areas where there are gaps. Our evidence base has been informed by feedback from a wide range of stakeholders.
- Follow the Greenhouse Gas Hierarchy, making sure that low carbon technologies and offsetting do not take the focus away from reducing energy use in the first place.
- Deliver co-benefits where action to tackle carbon emissions also yields health or financial benefits, such as air quality and physical exercise benefits from walking and cycling.
- Further embedding climate considerations in decision-making.

Local Authority spheres of influence

Direct control: e.g.
Council's operation,
buildings, fleet,
streetlights

Indirect control: e.g. Buying, goods and services, investments, business travel

Regulatory role: e.g. Planning, licensing

Leadership and demonstration: Leading by example. Showcasing and rewarding good practice

Partnerships: Joint delivery, convening, co-ordinating, supporting

Enabling and engaging: e.g. Inspiring action, providing information



Context

This strategy identifies areas of focus for climate action for the period 2022-2027. Given that we are tackling an emergency, we are taking immediate action rather than waiting for this strategy and its delivery plans to be in place. Immediate opportunities are highlighted , while we also include the wider challenge and objectives for the longer-term.

International and national bodies, such as the UK Committee on Climate Change (CCC) and the International Energy Agency have given clear messages that governments are not yet doing enough but that there is a viable way to achieve net zero and avoid the worst impacts of climate change. We are currently on course for 3-4°C of warming but with a concerted international effort and investment, limiting warming to 1.5°C is possible, as per the UN Paris Agreement. The Glasgow Climate Pact resulting from the COP26 conference in November 2021 is likely to lead to 2.4°C warming if all countries follow through on their commitments. However there are plans for swift follow up and tightening of targets to achieve the Paris goal.



National

2050

UK to become carbon neutral

2030

68% reduction in carbon emissions

1.5°C

Keep UK temperature rise below 2°C while aiming for 1.5°C



International

1.5°C

Keep global temperature rise below 2°C while aiming for 1.5°C

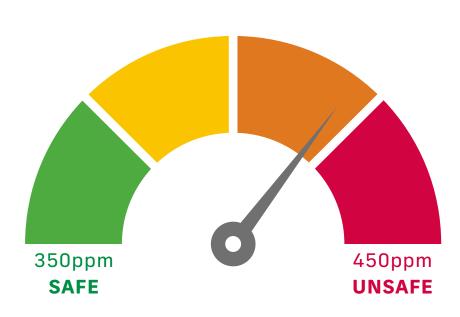


The 2020s must be the decisive decade of progress and action.

Climate Change Committee sixth carbon budget



Britain's emissions have fallen for the last eight years in a row and are now 48.8% below 1990 levels. UK emissions dropped by 9% in 2020, mainly due to the large reductions in road transport during nationwide lockdowns and the reductions in business activity.



The currents level of carbon dioxide in the atmosphere peaked at 420pp, in May 2021



Financing our ambitions

This is a very challenging time for local government finances across the country. Nonetheless, since the council acknowledged a climate emergency, it has already allocated £88m capital and £3.9m revenue to deliver on its climate programme - but we know much more will be needed. The council will use invest to save principles for its own assets while recognising that research by Surrey County Council indicates that the cost of reaching net zero in that county will be in the region of £3-4 billion. While Surrey is a more densely populated county with more than twice the number of inhabitants, this gives an indication of the order of magnitude of investment required in Wiltshire. The majority of these costs will be funded by individuals and businesses improving their building energy performance and switching to electric vehicles; however, some council funding will be required to unlock investment and act as match funding to draw in large grants from government and other investors. The main risk recognised by the Surrey County Council study is that external funding is not available at the scale required to meet their targets. Wiltshire Council will access

government funding wherever possible and welcomes the commitment in the government's **Net Zero Strategy** to simplifying and consolidating funds for net zero initiatives and the recognition of the need for longerterm funding streams. National legislation will enforce change through replacement of vehicles and boilers, however the immediate reduction in emissions that we need will require additional action and funding. New ways of raising finance, such as green community bonds and an Environment Fund, will also need to be explored.



Where we are currently

To reduce emissions and work towards making Wiltshire carbon neutral, we first need to understand our emissions. The pie chart below shows the key sources of emissions in Wiltshire (chart 1). These are the territorial emissions from Wiltshire and do not take into account imported goods.

Wiltshire's renewable electricity generation accounted for approximately 6% of the county's total energy demand.

Wiltshire has made rapid progress in reducing carbon emissions: while Gross Domestic Product (GDP) and number of dwellings grew in recent years, energy usage and CO₂ emissions fell (chart 2). There remains a significant way to go to decarbonise transport, reduce reliance on fossil fuels for heating, and protect and enhance carbon stored in the natural environment.

Chart 3 shows Wiltshire's territorial emissions per person per year for 2005-2019 from **government statistics**. These initially reduced in line with the regional/national averages but the rate of reduction in Wiltshire has slowed in recent years. Territorial emissions exclude the footprint of goods and services from other

parts of the world which are consumed here. Wiltshire's total territorial emissions in 2019 were 2,587 ktCO₂.

Consumption based emissions are not available at a local authority level, however they have been **calculated** for England as a whole. England's consumption based carbon footprint (carbon dioxide, methane and nitrous oxides) was estimated to be equivalent to 652.3 million tonnes of carbon dioxide (MtCO₂e) in 2017, a 15.3% reduction on levels in 2001. As a proportion of total emissions in 2017, greenhouse gases emitted overseas in the production of goods and services consumed in England made up roughly half (46.3%) of the total footprint.

The **Tyndall centre** for climate change

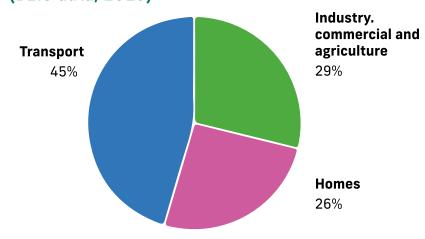
research has calculated carbon budgets to 2050 for every local authority area. These budgets set out the maximum amount of carbon dioxide that can be emitted and still limit global warming to 1.5 degrees compared to pre-industrial levels. With no change to current emissions, Wiltshire would use up all its budget within seven years.

As part of developing a delivery plan for Wiltshire,

research will be carried out to find the most efficient measures to achieve carbon reduction and establish the cost of trajectories to carbon neutrality. The council has commissioned a roadmap which will model a number of emissions reduction pathways, setting out what needs to happen to get to carbon neutrality. These illustrative pathways will set out the amount of each technology required and an estimation of how much carbon would be saved by each measure where these are quantifiable.

We will use our monitoring and reporting framework to help understand the impacts of the strategy – in terms of carbon, costs and additional benefits in areas such as air quality, jobs and skills.

Chart 1: Wiltshire emissions by source, ktCO₂ (BEIS data, 2019)



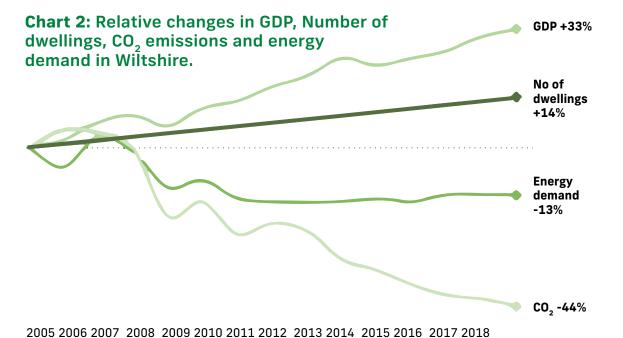
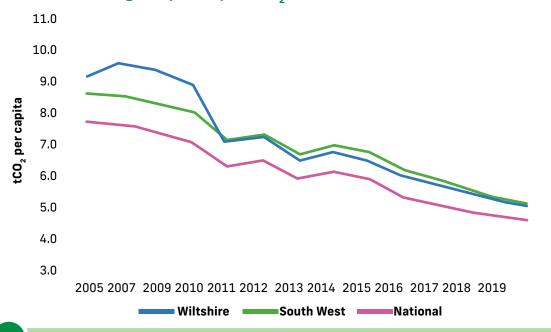


Chart 3: Change in per capita CO₂ emissions over time





Emissions explained

Throughout this document we use the term 'carbon' and 'carbon dioxide'. Carbon is not harmful in itself, but is used as shorthand for carbon dioxide - the gas responsible for 80% of global warming.

Other greenhouse gases also contribute to climate change, such as methane and nitrous oxides. While the charts in this section only track carbon dioxide (CO₂), we need to stop all greenhouse gases from accumulating in the atmosphere. The actions that we put in place will also decrease the other main greenhouse gases. In 2021 the UK signed up to a Global Methane Pledge to reduce methane emissions – an effective and fast-acting way to address climate change.

An average person

will emit 5.2 tonnes of CO₂ per year



Return flight to Orlando

will emit 2.1 tonnes of CO₂e



Return trip to Rome

by plane will emit 0.44 tonnes of CO₂e



by car will emit 0.16 tonnes of CO_ae (with four people travelling)

county's annual emissions.



An area the size of Wiltshire completely covered with trees could absorb only 1/3 of our



Figures calculated using BEIS data, 2019 and carbonfootprint.com



How National Policy Supports our Strategy

The UK government has set a target of achieving net zero emissions across the entire country by 2050. This is in line with international goals set by the United Nations. In Wiltshire we can, and will, go further and faster.

The UK government puts supporting green jobs and the net zero carbon goal at the centre of its plans for a green recovery. It is committing significant investment towards achieving this goal, such as £1 billion for retrofitting buildings, £1.3 billion for developing electric vehicle infrastructure and £5.2 billion for new flood and coastal defences.

During the pandemic the government has made a range of climate-related announcements although some expected national strategies were delayed. National policy changed rapidly in the run up to the United Nations Climate Summit, known as COP26, held in

Glasgow in 2021, which coincided with the development of this strategy. At COP26 the commitments from all countries who signed up to the Paris Agreement were reviewed and the Glasgow Climate Pact was drafted. As the host nation, the UK sought to provide ambitious leadership and set interim targets to net zero by 2050: a 68% reduction on 1990 emissions by 2030 and a 78% reduction by 2035.

The message from national government and independent studies is that many of the solutions we need are already understood and available. They include solar and wind power, heat pumps for buildings, electric cars – and more walking, cycling and public transport. We therefore need to base our immediate action on existing technology and behaviour change, while innovating for the longer-term.

The UK Committee on Climate Change (CCC) Sixth Carbon Budget Report, (December 2020) provided specific scenarios and recommendations for transition to net zero for each sector. The report is clear that we still have the

opportunity to turn the situation around and it is achievable, and affordable.

Many of these measures will deliver co-benefits, for example the woodlands and green corridors created to absorb carbon will also boost wildlife and provide accessible green spaces which is of proven benefit to physical and mental health and wellbeing.

There is a recognition in the **Environment Act** of the negative impact that climate change is having on biodiversity and the benefits that the natural environment can provide in mitigating over-heating and winter flooding. The Environment Act also contains legal provision to overhaul how waste is managed in the UK, with a focus on treating waste as a resource; increasing levels of recycling; and making producers responsible for meeting the costs of collecting and processing of packaging waste.

The 10 Point Plan, Net Zero Strategy, Heat and Buildings Strategy and the Sixth Carbon Budget report set out very clear intentions on our national direction of travel as shown in the illustration.

This context allows us to be ambitious but also means that we need to stay flexible. This will enable us to adapt to changes in national policy and technologies.

As national policy and legislation are a crucial enablers of action at a local level, we are involved in influential national networks to shape and inform central government thinking in this area. The council's Leader chairs the Countryside Climate Network, made up of ambitious council leaders from 28 predominantly rural councils who represent over 45% of England's land area, making the case that rural communities can be at the forefront of climate action.

National wall

More journeys by public transport, walking and cycling



Thousands of jobs created in green sectors



More renewable energy, including offshore wind, hydrogen and nuclear

More electric vehicles



Grid evolution, smart energy generation and storage technologies

Delivery themes

= starting immediately

Wiltshire has a beautiful natural environment with rural villages as well as more urban settlements. Using the government's **definition of rurality** and government designated Output Areas from the 2011 Census, our population is split roughly equally between urban and rural areas.

The strategy for tackling climate change in Wiltshire is structured around seven delivery themes. These are presented separately, but there is a large amount of overlap between the themes. For example decisions on where we locate homes and employment (built environment) will affect travel patterns (transport). Reducing energy consumption (energy) underpins other delivery themes such as avoiding trips (transport) and building net zero carbon homes (built environment). How we use land will impact all the themes - for renewable energy, tree planting, food or the built environment.

As would perhaps be expected in a rural county, the largest carbon emitter and our first delivery theme is transport. The natural environment, which featured as a key topic in engagement, is also a wide-ranging theme with many objectives.

The diagram on the next page illustrates the connections between the themes.

This strategy does not set out specific actions and targets; these will follow via delivery plans which will provide more detail on how the objectives will be delivered.







How we build new homes and retrofit existing ones is an important part of the delivery themes of **Home and the Built Environment**, but how we do this also impacts, and is related to, the other delivery themes as well.



By aiming to be a **Carbon Neutral Council** we can look to lead by example with our ten year council home retrofit scheme and pilot of zero carbon builds



Adaption and Nature based solutions

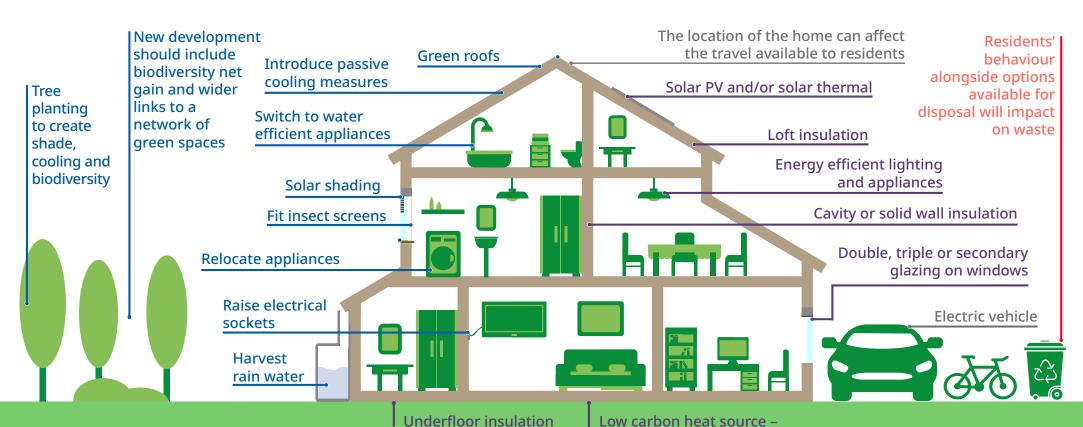


Energy efficiency and micro-generation

air or ground source heat pump, hydrogen boiler or district heating







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Transport

The UK Government's recent Net Zero Strategy builds on the **Transport Decarbonisation Plan** which sets the scene for our approach to reaching net zero for transport. Key national objectives are to end the sale of new petrol and diesel cars and vans from 2030 and requiring Local Transport Plans to set out carbon reductions in line with net zero. It is clear that in Wiltshire, a county where the car is currently the main travel mode for rural communities. an important part of the picture will be electric or other zero emissions vehicles. We also want residents to be able to choose modes of travel such as cycling, walking, shared and public transport because they are convenient, affordable, green and inclusive, 15% of Wiltshire households do not have access to a car or a van, rising to 54% of households in the lowest income quintile.

The range of public transport solutions available to us in Wiltshire means that buses will play a central role to our journeys, both in rural areas and more urban places, while railway stations can become hubs for onward travel and integration between travel modes. Evidence shows that increased cycling and walking presents us with a pleasant

way to get around to shop, work, socialise, and enjoy improvements to our health, local environment and economy. The national Net Zero Strategy provides the objective that half of all journeys in towns and cities will

be walked or cycled by 2030. This will be considered through implementation of the objectives and areas of focus below.

Quick progress is essential, so we will need to act across all areas of focus simultaneously. - reducing trips, shifting to active travel, using public transport and zero carbon vehicles. The Climate Strategy objectives will help guide us as we develop our Local Transport Plan, Local Plan, Bus Service Improvement Plans, and Local Cycling and Walking Infrastructure Plans. Our Local Transport Plan in particular will work out the best mix of transport and travel solutions to help us achieve zero emissions.

Objectives

 To achieve a transport system in Wiltshire that has zero carbon emissions, acknowledging the different solutions for our towns and city versus rural villages

- Creating the infrastructure for increased walking, cycling, shared and public transport and use of alternative fuels, including electric vehicle charging points
- Achieving high-quality public transport and transport hubs that offer a pleasant and convenient way to get around, and seamless combined journeys
- Locating and designing new developments to reduce the need to travel

A zero carbon mobility and transport system will:

Avoid unnecessary travel – reducing the need to travel through digital options, rationalising and combining journeys and locating services, homes and jobs within reach

Shift to more sustainable modes of transport – achieving mobility and accessibility though public transport, and walking and cycling in our towns and city

Improve vehicles and infrastructure – while hydrogen and other alternative fuels are being tested and developed, we know that electric vehicles need to be part of the immediate solution

Our areas of focus

Wiltshire Council will:

- Better understand our carbon baseline and forecast, and the impact of different transport actions
- Develop and implement a new Wiltshire Local Transport Plan, Local Plan and Green and Blue Infrastructure Strategy in line with our climate objectives that will set out plans and policies to help achieve the vision for sustainable mobility and transport in Wiltshire
- Explore how the council can best support infrastructure to encourage the uptake of all types of zero carbon vehicles by Wiltshire residents and businesses, through Wiltshire Council's Electric Vehicle Charging Infrastructure Plan and other future plans
- Produce Local Cycling and Walking Infrastructure Plans for Wiltshire and the major settlements to unlock further Government funding for measures
- Use planning powers and regeneration programmes to increase accessibility to local services and facilities, creating places that enable local living, and explore the potential for '20 minute' neighbourhoods or similar concepts for Wiltshire

- Through Wiltshire's ambitious Bus
 Service Improvement Plan we will
 unlock grant funding for public
 transport in the government's National
 Bus Strategy and deliver a high quality,
 lower fare, higher frequency, and
 greener public transport network.
 We will build upon the existing rural
 transport network, including through
 more Demand Responsive (DRT) type
 operations
- Building on lessons learned in the pandemic and new working patterns, revise and implement the Wiltshire Council travel plan for the council's 4,500 staff

Using our influence and partnerships we will:

- As part of the Local Transport Plan, develop a vision for sustainable mobility and transport in Wiltshire as a basis for the changes needed to achieve zero carbon travel
- Encourage town and parish councils to help develop and deliver infrastructure that links with the wider sustainable transport network, such as Town Cycle Networks as they become updated into Local Cycling and Walking Infrastructure Plans

- Work with the rail industry to help enhance train services, deliver required infrastructure, including new stations, and improve rail's inter-connectivity with the wider transport system
- Encourage schools to develop and update nationally accredited green travel plans through the Modeshift STARS scheme. Continue to work with schools to explore and deliver initiatives to support safe walking and cycling
- Develop an active travel network that is inclusive, safe and enjoyable to use, meets the latest design guidance where feasible and embraces new modes such as e-bikes, non-standard cycles, e-scooters and cargo bikes. Routes can coincide with the Rights of Way network, canals, green open spaces and wildlife corridors where appropriate
- Ensure that infrastructure is resilient to the impacts of climate change, such as flooding, extreme heat, storms and power outages
- Make use of available tools, such as government funded initiatives, behaviour change campaigns and community organisations and networks to deliver zero carbon transport in Wiltshire
- Reduce transport emissions through

planning policy, guidance for good design and the next Local Transport Plan

- Work to further increase access to high-speed broadband, to enable digital options including home working, and encourage businesses to embrace these options building on the success of the Wiltshire Online broadband project
- Encourage recovery and ongoing support of the local economy, building on trends to shop local during the pandemic
- Promote local tourism as well as having a 'green travel offer' available for our visitors
- Work with parish and town councils and community groups to support car clubs, car sharing and community and public transport, making use of zero or low emissions vehicles where viable
- Explore the potential for local delivery hubs, and coordinated, low-carbon forms of transport such as cargo bikes for the last mile of deliveries in towns. Support the provision of intermodal and other rail freight terminals in suitable areas
- Work with partners to move to ultralow emissions vehicles for public transport, and to carbon neutral fuels for heavy fleet vehicles



Homes and the built environment

Ensuring new development is built to net zero carbon standards as soon as possible is a key theme from all engagement to date, so during the course of the climate strategy consultation we published a set of **frequently asked questions** on our website to answer many of the issues raised in relation to this and other tonics. The current

other topics. The current review of the Wiltshire Local Plan is one of our main ways as a council to influence the new built environment of Wiltshire, and our new Local Plan is aiming to set out policies for building to net zero carbon standards within the constraints of the national planning system and housing market.

However, it is not just new buildings that need to be net zero because they make up a very small proportion of all buildings in Wiltshire. We also need to retrofit existing buildings so that they are

energy efficient, use low carbon sources of energy and are resilient to climate change. The Committee for Climate Change highlights 'there is broad scope for variation in the overall heat mix, and in the precise mix of technologies deployed'. Research for the strategy (including by the Climate Emergency Task Group) shows that there are different types of retrofit technologies: well-established such as insulation; technologies that are becoming more widely used such as air source heat pumps and emerging but tested newer technologies such as Energiesprong.

Whilst hydrogen is seen as having a role complementing the energy system, in particular in relation to harder to decarbonise industries, the decision on any role it may play in building heating will not be taken until 2026. The Net Zero Strategy and the Heat and Buildings Strategy do however both show heat pumps having an

important role, in particular for the period of this climate strategy, with the government's stated aim to significantly increase the uptake and market for these. The key therefore is that we don't wait for new technologies but move forward with what we can now, learning from others including the council's own work programmes.

Objectives

- New buildings, including homes, to be net zero carbon and adaptable to climate change as soon as possible (including measures such as water efficiency)
- Existing buildings in all sectors to be retrofitted to improve energy efficiency and decrease energy demand through low carbon technology
- New and existing buildings to be adapted to climate change for both heating and cooling, and to include measures of benefit to the wider environment where possible (see diagram on page 19 for some of the potential measures)

In relation to the existing Wiltshire housing stock, 480 homes would need to be retrofitted every week for the next eight years to get to net zero by 2030. This shows the importance of applying for retrofit funding and engaging with residents as an immediate area of focus; and partnership working in all sectors to allow us to build the supply chains and resident confidence to enable high levels of retrofit in later years.

The non-residential sector can raise specific challenges, e.g. liability and ownership issues at schools, or the many typologies of buildings with different

challenges in the industrial and commercial sectors. Access to funding, whether this is in the form of grants or the ability to borrow, will also be key.

Our areas of focus

Wiltshire Council will:

- Continue to implement the ten-year programme to retrofit all council homes to Energy Performance Certificate (EPC) B standard. This looks at whole house retrofit and includes both energy saving measures such as insulation and technologies like air source heat pumps
- Aspire for net zero carbon development by the council where viable and possible. Starting with the council's own new build development programme; a pilot project to manufacture 19 zero carbon homes (in use) off-site. Using a fabric-first approach, the homes will be all-electric with PV panels
- Use the Local Plan review as an opportunity for zero carbon standards in new builds; stronger policy on adaptation and mitigation; and improved policies on other aspects such as water use and well-considered site layouts
- Look at the council estate to find an opportunity for a case study on retrofitting a historic building

Using our influence and partnerships we will:

- Help residents to understand and engage in retrofitting their homes by information provision and active promotion
- Continue to help fuel-poor households improve the efficiency of their homes by targeted support
- Work in partnership to bid for retrofit funding
- Disseminate learning from our own programmes to partners locally and nationally. This includes via case studies
- Work in partnership to raise standards in both housing and the wider built environment, such as business and schools, utilising existing and new communication channels. This includes with social housing providers through existing partnerships

Warm and Safe Wiltshire

A fair and just transition is a key principle of the strategy. Warm and Safe Wiltshire provides home energy efficiency advice and grants to fuel-poor households.

Historic Environment

Recent research by Historic England (2019) and others shows how historic buildings can be retrofitted to help meet climate aims.



Natural Environment, Food and Farming

A healthy natural environment provides ecosystem services for people, wildlife and the economy, including absorbing carbon dioxide (see diagram on page 27).

Climate change is making it more important than ever to protect and enhance biodiversity, habitats and soil health. We need to reduce pollution and stress on the environment and enable ecosystems and biodiversity to thrive, be more able to adapt to climate change and support human life.

National strategies, the Environment Act and the Glasgow Climate Pact recognise that nature-based solutions and protection of the natural environment must be pursued in tandem with carbonreduction measures. Wiltshire Council is responding through its Wiltshire Green and Blue Infrastructure Strategy, which establishes shared goals and aspirations for climate, biodiversity and health and wellbeing.

The food production system in the UK accounts for around 20% of national greenhouse gas emissions. The National Food Strategy looks at solving the problem of producing enough food while simultaneously restoring nature and absorbing carbon.

To respond to the climate and ecological emergency we will develop Wiltshire-specific targets as well as supporting government policy and legislation such as the **Net Zero Strategy**, Environment Act and 25 Year Environment Plan. Together, the Climate Strategy and the Green and Blue Infrastructure Strategy will shape delivery.

Objectives

 Efficient and environmentally sensitive use of land, providing for the needs of an increasing population and nature: food production, renewable energy generation, housing and transport,

- alongside woodland creation and nature recovery
- Absorbing carbon, by plants and well-managed soils
- Sustainable, low-carbon food and farming systems
- Protect and extend our network of green spaces and land and water habitats. Make best use of this network of green and blue spaces for biodiversity, active travel, recreation, cooling, shade and absorbing carbon
- Natural water management improving climate resilience by reducing flood risk and summer droughts, and reducing water use

It will be important to value the historic, cultural and working environment that makes Wiltshire special and gives us a sense of place and identity, while making

room for new solutions which may create change in our landscape and settlements.



Our areas of focus

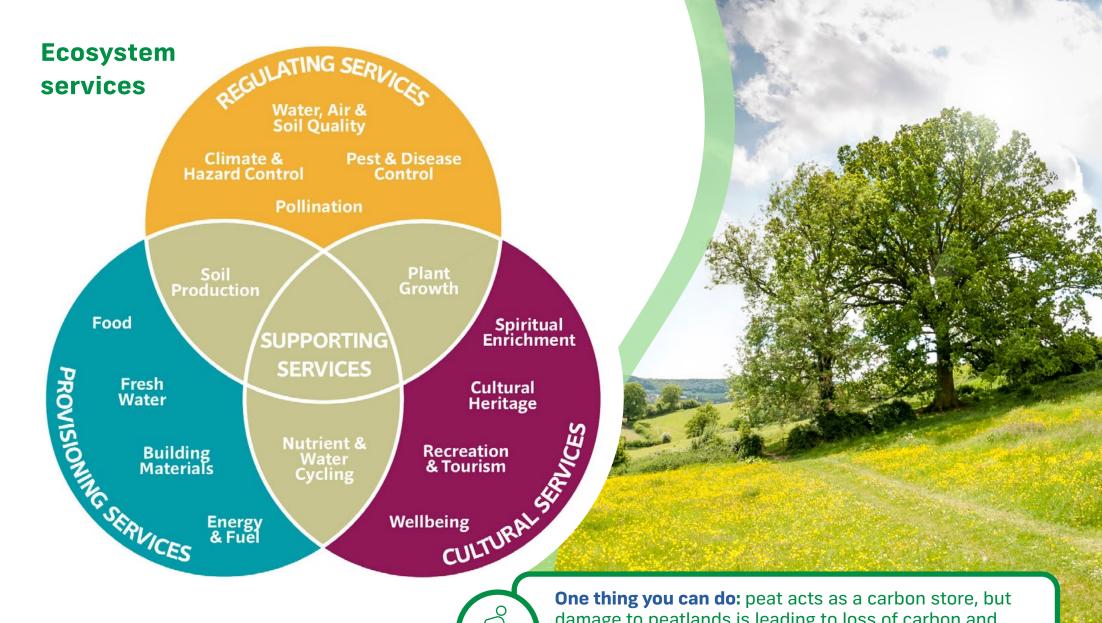
Wiltshire Council will:

- I Use the Green and Blue Infrastructure Strategy for Wiltshire as our framework for partnership working to extend and improve Wiltshire's green and blue infrastructure network, with its key goals of 'adaptation, mitigation and resilience to climate change', 'halting loss of and improving biodiversity', and 'contributing to health and wellbeing'
- Support the roll out of the Community Environmental Toolkit
- Plant trees and create other suitable habitats on council land where appropriate
- Develop a Wiltshire Council Tree and Woodland Planting Strategy to establish targets and advice on planting the right tree in the right place
- Continue to implement, review and update the Wiltshire Council Climate Change Adaptation Plan
- Improve information on the effects of climate change in Wiltshire and show what residents, business, landowners, farmers and decision-makers can do to be prepared for and resilient to climate change

Using our influence and partnerships we will:

- Work with Wiltshire stakeholders, communities and farmers on ways to reduce emissions from food and farming. Encourage and support landowners and farmers in improving soil health, water quality, woodland and other habitat creation, renewable energy and regenerative practices, including through Local Nature Recovery Strategies and the council's work with farmers on phosphate reduction
- Support landowners and community groups to enhance their green infrastructure, for example by bidding for funding
- Use our communications and networks and work with town and parish councils to support sustainable, local food growing and buying
 - Be informed by Swindon and Wiltshire Local Enterprise Partnership's research to measure natural capital and use it to inform decision-making
- Recognise the role canal and river trusts play in natural flood management of our river catchments and biodiversity, and explore the potential of the canals for active travel and renewable energy generation







One thing you can do: peat acts as a carbon store, but damage to peatlands is leading to loss of carbon and habitat so use peat free compost in your garden, or why not try making your own, using a food waste composter?

Energy

At present the grid supplies energy on demand. Once transport and heating are electrified, there will be a much greater demand. In order to manage this a flexible and 'smart' grid will be needed. The UK Net Zero Strategy sets a high level of ambition, stating that all electricity will come from low carbon sources by 2035, subject to security of supply, whilst meeting a 40-60% increase in demand. In order for the grid and renewable energy supply to cope with additional demands from heat and transport, we will also need to reduce our use of energy generally, in line with the 'greenhouse gas hierarchy' (and our principles on page 8): we will need to 'save energy', use 'energy efficiency', as well as 'installing renewables', 'replacing with low emission technology', and then deal with the unavoidable emissions by 'compensating (through offsetting)' and 'neutralising (through carbon removals)'.

While progress has been made on decarbonising electricity by using renewable energy to power the grid, the decarbonisation of heat remains a significant challenge and potential opportunity. As we change the fuels that we use for heating, skills and supply chains will also need to adapt to provide non-fossil fuel alternatives.

Objectives:

- Existing energy use within Wiltshire to be reduced to allow for decarbonisation
- Heat and electricity to be decarbonised (moving from fossil fuels to alternatives)

Our areas of focus

Wiltshire Council will:

- Continue its multi-million pound programme to install renewable electricity and heat on council operational property and council homes where feasible (see Built Environment section)
- Carry out a Wiltshire-wide assessment of the potential for renewable energy production, using a range of technologies, to inform renewable energy targets and policies

Using our influence and partnerships we will:

- Promote the benefits of green energy tariffs to residents and partners while also encouraging energy reduction
- Raise awareness of the need to

- start with energy reduction, and the role of flexibility and the smart-grid, to guide changes in behaviour
- Increase renewable electricity generation including microgeneration (and associated technologies such as storage) in Wiltshire by working in partnership with others. The need for energy generation must be balanced against other land uses and this will be reviewed
- Continue to work with partners including grid operators to address grid constraints and enable alternative, new and emerging technologies
- Explore supporting community energy groups to increase local engagement in the development of renewable energy and retain economic benefits in the area
- Encourage the installation of solar energy on existing buildings for example through planning policy, partnership working and

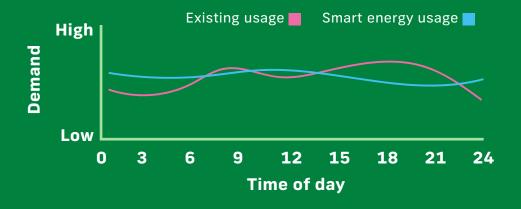
bulk buy schemes

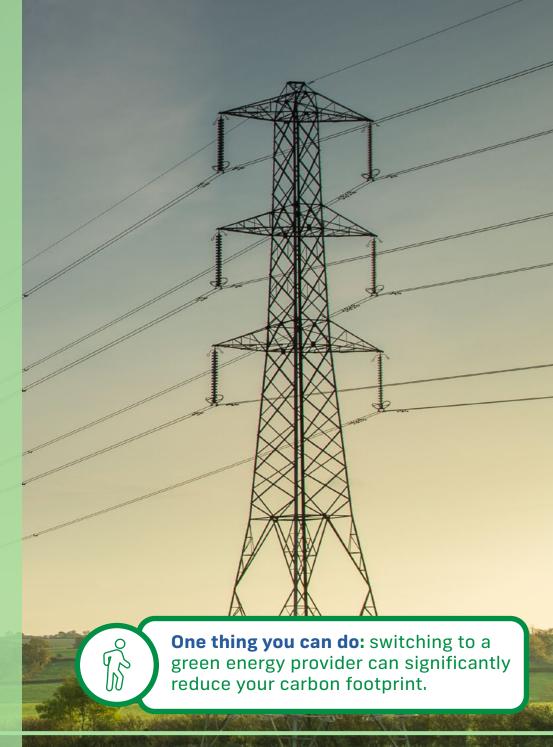
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Future technology mix

Future energy scenarios by the National Grid and the 10 Point Plan by central government both show technologies currently only at trial stage playing a large role in the move to net zero. Research by the International Energy Agency (IEA) shows existing technologies being key until 2030 with the emerging technologies starting at pace after 2030.

Using smart technology to balance demand will reduce peak energy requirement





Green economy

To be 'green' our economic activity must avoid environmental degradation and be efficient, resilient and fair. It encompasses the circular economy (see Resources and Waste) which preserves and recycles resources. It includes investing in sectors that can support a transition to net zero alongside economic recovery as well as reducing the environmental impact of businesses and services.

This future economy will include more jobs in sectors such as renewable energy, electric vehicles and installing low carbon heating in buildings. This is a huge opportunity for Wiltshire not only in supporting our economic resilience, but also encouraging industry and businesses that enable other sectors to decarbonise. In order to ensure a fair transition, care must be taken to ensure those affected by changes in employment have opportunities to upskill and reskill for the green economy.

Objectives:

- To grow the green economy in Wiltshire, increasing capacity and skills in key sectors to meet demand and delivery targets
- Wiltshire businesses take action to be net zero and climate resilient

Our areas of focus

Wiltshire Council will:

- Stimulate the green and circular economy and local supply chains by delivering programmes in key sectors such as housing retrofit and investment in renewables
- Develop a requirement for suppliers to measure and reduce their environmental impact
- Support the growth of businesses focused on sustainability and zero carbon innovation and attract new ones to invest in the county
- Showcase what leading businesses are doing on this agenda in Wiltshire
- Promote green skills opportunities to young people through the Wiltshire and Swindon Careers Hub and encourage engagement with green jobs and apprenticeships through

Wiltshire Council Employment and Skills programmes

Using our influence and partnerships we will:

- Continue to support the social and economic vibrancy of our towns and city, and continue to promote "shop local"
- Work with the Education, Employment and Skills Action Group to identify specific needs for upskilling and reskilling of our workforce
- Work with training providers and employers to increase training for green skills. This depends on generating sufficient demand which our own council programmes will help with
- Work with local networks to support small organisations, from SMEs to local charities, to become climate resilient and sustainable
- Input to government policy and funding programmes, to make sure they are appropriate for Wiltshire residents and businesses



Resources and waste

The council's current household waste management strategy follows the waste hierarchy, aiming to reduce and recycle waste as much as possible, while dealing with residual waste in the most sustainable way currently available. National policy supports generating energy from non recyclable waste, and in future is likely to require carbon capture and storage on all energy from waste plants to reduce carbon impact. Ideally we would have a lot less waste because we will be consuming less and using our resources such as metals, water, timber and plastics efficiently and this would all be managed within a circular economy.

A circular economy is one where resources are used as efficiently as possible, changing what was traditionally a linear process – using things and then throwing them away - to a circular process where value is retained and recovered within the system.

Objectives:

- Work towards a circular economy
- Work towards zero avoidable waste in Wiltshire and decarbonising the waste management process
- Manage waste in accordance with the waste hierarchy: reduce overall waste, increase the amount and quality of waste recycled and reduce the amount of waste sent to landfill

Our areas of focus

Wiltshire Council will:

- Continue to provide efficient recycling services and review the potential for expanding the range of items collected and maximising the efficiency of collections wherever possible
- Keep our household waste management strategy under review, reflecting carbon assessment of collection and disposal options, including the impact of processing waste locally or abroad, and recognising the requirements of the new Environment Act to potentially extend the scope of recycling collections, to include separated food waste

Using our influence and partnerships we will:

- Prevent waste provide advice and information to help reduce the amount of waste generated by householders as well as commercial waste
- Repair and re-use work with local organisations and contractors to maximise opportunity for items to be repaired and reused
- Work with businesses and partners to reduce commercial waste and to conserve resources such as energy, water and timber
- Lobby government in support of the most sustainable options for future national waste management strategy





By recycling and composting household waste rather than sending to landfill, in 2020/21 we saved 38,781 tonnes CO₂e



98% of the waste collected by Wiltshire Council, for recycling, composting or reuse, was managed within the UK and not exported abroad



As well as reducing the amount of waste going to landfill, recycling helps conserve raw materials and protect natural habitats



Landfill waste produces 20 times more emissions than recycling



One thing you can do: Waste food accounts for 8-10% of global greenhouse gas emissions, from rotting food, and through the (wasted) energy used to produce, store, transport and package it. Reduce the amount of food waste that you throw away by utilising your leftovers and meal planning.

Carbon neutral council

Objective:

 To become carbon neutral as an organisation by 2030



 Provide leadership locally and nationally, sharing learning

Our 2030 pledge relates to the council's carbon emissions (or 'carbon footprint') that are within our direct control, i.e. those from our operations and buildings (scopes 1 & 2). In order to fulfil this commitment, the council's carbon footprint will be drastically reduced compared with its current footprint and any residual emissions will be offset.

The council's Business Plan has four main priorities – 'Sustainable Environment', 'Empowered People', 'Resilient Society' and 'Thriving Economy'. All need to be delivered as priorities at the same time.

Our areas of focus

Wiltshire Council will:

- Integrate carbon reduction and climate resilience into decision-making and strategic planning based on implementation of the council's Business Plan mission that 'we take responsibility for the environment' and 'we are on the path to carbon neutral'
- Embed carbon reduction and climate resilience into council working culture, through staff training, values and reward frameworks
- Develop a new Carbon Neutral Council Plan, published in 2022, to include:
- Property / Assets: continue to decarbonise heating, improve energy efficiency and expand renewable electricity generation.
- Fleet: strategy review, move to electric vehicles and identify alternative solutions for larger vehicles.
 Emissions from council vehicles will be reduced by 25% by December 2022, and fully carbon neutral by 2030
- Set further interim targets, informed by a study setting out the council's roadmap to carbon neutral

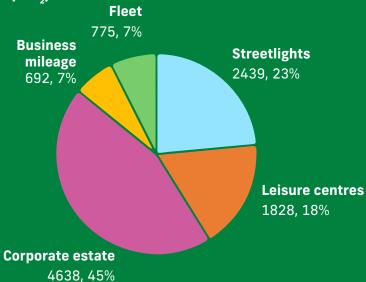
- Continue to monitor and reduce direct emissions, while working to understand and reduce scope 3 emissions (supply chain and outsourced operations) for wider impact
- Work with the council's supply community, to help achieve economic, environmental and social benefits for the public good and the people of Wiltshire (including reduced carbon emissions) when the council buys goods or services
- Ensure council property and infrastructure is resilient to the impacts of climate change
- Ensure all investment considers our climate objectives
- Support the Wiltshire Pension Fund Committee's responsible investment policy, Climate Strategy and action plan



Using our influence and partnerships we will:

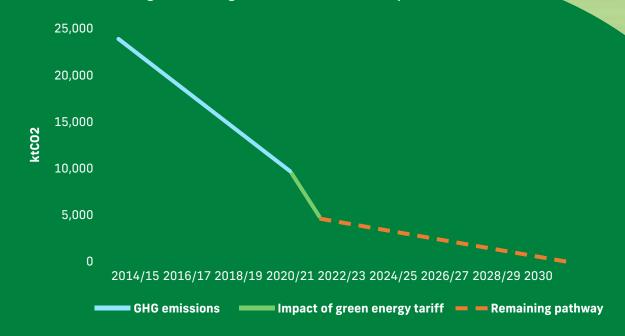
- Lobby government for increased funding and powers through groups such as UK100/Countryside Climate Network, ADEPT and the County Councils Network
- Work with public sector partners, voluntary and community sector and over 20,000 businesses across Wiltshire to share knowledge and delivery







Wiltshire Council greenhouse gas emissions since 2014/15



Working together

The climate emergency is a complex problem and there are no easy solutions. Everything is linked, so benefits in one area such as energy efficiency in homes can also mean 'co-benefits' in others such as warmth, health and financial savings.

Delivery within each theme will naturally cross over into other themes and will require working in partnership with organisations, residents, businesses and the entire community of Wiltshire.

Engagement with stakeholders has shown that Wiltshire organisations and businesses are already working on their own pathway to carbon neutral and are keen to work with the council and each other towards this goal.

It is clear that information and awareness will play a central part, and change by individuals as well as organisations, businesses and the council, is critical.

The council has been progressing on carbon reduction for over 10 years. It is now time to increase the scale and pace of action, working with others to achieve this.

'Central government is working on its strategies as is Wiltshire Council. If we wait for each tier to complete its work before we start, it will be too late... we all need

(Quote from climate action day for town and parish councils, November 2021)

to start now.'



Governance

The council has set up a robust internal governance framework to oversee the climate programme, as set out in our January 2021 discussion document. As part of this, six-monthly progress reports are provided to Cabinet and Council and published online. The Climate Emergency Task Group provides scrutiny for this programme of work.

A new Climate and Environment Forum will be set up to enable a regular two way dialogue and share ideas with local community representatives

We will continue to deliver through existing partnerships, such as the BANES, Swindon and Wiltshire Integrated Care System, the Wiltshire Public Service Board and the Education Employment and Skills Action Group. Wiltshire Council routinely works with partners such as registered housing providers to look at zero carbon homes. The Public Sector Partners Climate Working Group brings together partners such as the NHS, police, fire service, MOD and colleges with the council, to share their approaches and progress towards net zero. We will

support local councils in their efforts to address climate change, building on the workshop held in 2021 with Centre for Sustainable Energy to help town and parish councils develop climate action plans. The council will continue to convene and contribute to working groups as a springboard for collaboration, showcasing, providing leadership and a catalyst for action on climate change.



Next steps

This strategy was reviewed during autumn 2021 in light of consultation feedback and relevant changes in national policy.

As our understanding improves we will be able to define net zero pathways for the council and for the county as a whole. Meanwhile we will take immediate action on the 'no regrets' measures. These are highlighted by an exclamation mark throughout the delivery themes section. Research shows that we need these measures, they are not likely to be a mistake, and they are possible using existing technologies. Delivery plans will be produced, informed by technical studies, which will involve a more indepth analysis of impacts, costs and cobenefits.

Our areas of focus

- The council will continue to deliver carbon reduction work, while working to understand the pathway to carbon neutral and net zero
- By Summer 2022 the council will have the results of studies showing the pathway to carbon neutrality for council operations and for key areas of Wiltshire county emissions

- The council will produce evidenceled delivery plans, identifying targets to deliver this strategy. Priorities will be based on carbon savings, cost, feasibility and co-benefits, in line with the principles of this strategy (see page 8)
- The council is incorporating Climate Strategy objectives into its annual service delivery planning
- An information campaign will help to increase awareness of climate change and provide practical steps to residents

We will continue to monitor progress on our direct emissions and increase measurement and understanding of indirect emissions. We will track progress on our strategic objectives and emissions data and report these to Council and on our website. Ultimately our success will be measured through a reduction in emissions for the council and for the county as a whole. However the two year time lag in reporting on government statistics and the wide range of other factors influencing emissions means that other measures will also be reported. These measures will be set out in our delivery plans.

Our approaches will need to develop over time. This overarching strategy is designed to be flexible and will be reviewed as the national context and technology evolve.



Strategies and targets

Government

Wiltshire Council

2019



This diagram shows a range of key National Government and Wiltshire Council strategies and targets including those in the pipeline. As it is important to start as soon as possible, we are also seizing the immediate opportunities.



February - Wiltshire Council declares a Climate Emergency



June - Climate Emergency Task Group first meeting



<u> 2020</u>

Wiltshire Council climate team in place



October - Wiltshire Council programme to change streetlights to LEDs begins (set to achieve an 83% reduction in carbon emissions by 2023 compared to 2013/14 baseline)



Government publishes Energy White Paper



Part 1 of the independent National Food Strategy published



Wiltshire Council programme to retrofit council homes to Energy Performance Certificate B is agreed



Wiltshire Council zero carbon modular new build council homes pilot starts production



Wiltshire Council upgrades to fully traceable green energy tariff



Government publishes Bus Back Better the National Bus strategy

2021



Wiltshire Council begins work (using Public Sector Decarbonisation funding) to upgrade heating systems and add solar PV to a range of buildings in its own estate (estimated to save 1200 tonnes of CO₂ per year)



Wiltshire Council starts work on Local Cycling and Walking infrastructure plans and receives Bus Back Better funding



Summer/Autumn - National Transport Decarbonisation Plan, Hydrogen Strategy, Heat and Buildings Strategy, Net Zero Strategy and National Food Strategy published



UK Environment Act became law



Wiltshire Council Community Environmental Toolkit produced



November UN Climate Change Conference (COP) 26 held in the UK



February 2022 - Wiltshire Climate Strategy and Wiltshire Green and Blue Infrastructure Strategy adopted

2022+



2023 - Wiltshire Local Transport Plan



2022/2023 -Delivery Plans for Climate Strategy



2022 - Government set to publish national EV infrastructure strategy, Aviation Strategy and England Tree Strategy.



2023 - Wiltshire Local Plan



2025 - Government target for fossil fuel boilers to be banned in new builds



2025 - Government's Future Homes Standard and Future Buildings standard to be introduced



2030 - Government target for four operational Carbon Capture and Storage clusters (two in 2020 and to by 2030)



2028 - Government target date to have 600,000 air source heat pump installations per year



2030 - Government set to end the of sale of new petrol and diesel cars



2032 - Government target for public sector to have reduced its direct emissions by 50% compared to a 2017 baseline



2050 - Government UK target for net zero carbon emissions **Carbon foot-printing tools** For individuals: footprint.wwf.org.uk Parish and town councils: impact-tool.org.uk Neighbourhood-level statistics: www.carbon.place

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Wiltshire Council Climate Strategy 2022 - 2027

www.wiltshire.gov.uk/climate #WiltsCanDoThis

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