

Climate Change

Annual Report 2023 - 2024





Staffordshire County Council
Cabinet Member for Environment
Infrastructure and Climate Change

Foreword

There can be no denying that our local climate is changing.

This year has been a demonstration of this with the MET office reporting we experienced over 100% higher than average rainfall in the UK last autumn and winter. For example, these wet conditions impacted our road networks, putting increased pressure on resources to manage these conditions. Whether it's dealing with the heat wave of 2022 or the wet conditions this year, it's clear that we need to build resilience into our services to cope with the changing climate.

Climate change continues to be a priority for the council and I am proud of the achievements made this year and achieving a 52% reduction in emissions since 2019. Of increasing priority has also been our work on building resilience across our services, resulting in the release of the combined Staffordshire Adaptation Strategy with Staffordshire's district and borough councils. This document shows our commitment to working together to achieve the best outcomes for residents and businesses of Staffordshire.

Climate change affects everyone, no matter where they live. Over the next year, we'll focus on working together with our partners to get the best results. By joining forces, we can make Staffordshire more sustainable.

Introduction

Staffordshire County Council has made a commitment to achieve net zero emissions by 2050. This pledge has been made across all services, with climate change identified as a key priority in the county council's Strategic Plan.

This report reviews our achievements through 2023-2024 and highlights the challenges ahead.

We have continued to make good progress towards our net zero target, achieving a 5.5% reduction in emissions over the year.

We recognise in addition to reducing emissions, building resilience into our services from the challenges of a changing climate is also essential. This year, we refreshed the Climate Change Strategic Development Framework to incorporate more considerations around climate change adaptation alongside carbon reduction. The council also took the lead to produce the joint **Staffordshire Adaptation Strategy**, providing a strategic approach for Staffordshire councils to work together on shared objectives.

The Climate Change Action Plan is being reviewed and work is ongoing to produce a more extensive, revised plan which considers both mitigation and adaptation. Any ongoing actions or projects from the current plan where timeframes have slipped will also be carried over to the revised plan for 2024/25.



Staffordshire County Council's greenhouse gas emissions

The council's carbon footprint contains information on our energy, fuel and transport emissions for our buildings, assets and services. The methodology for calculating the council's carbon footprint is outlined in Appendix 2.

Emissions have continued to decline, achieving a reduction of 5.5% from the previous year from 25,541 tonnes to 24,109 tonnes and a 52% reduction since 2018/19.

Figure 1 shows that emissions reduction has slowed down over the last 3 years reflecting the increasing challenge to continually reduce emissions.

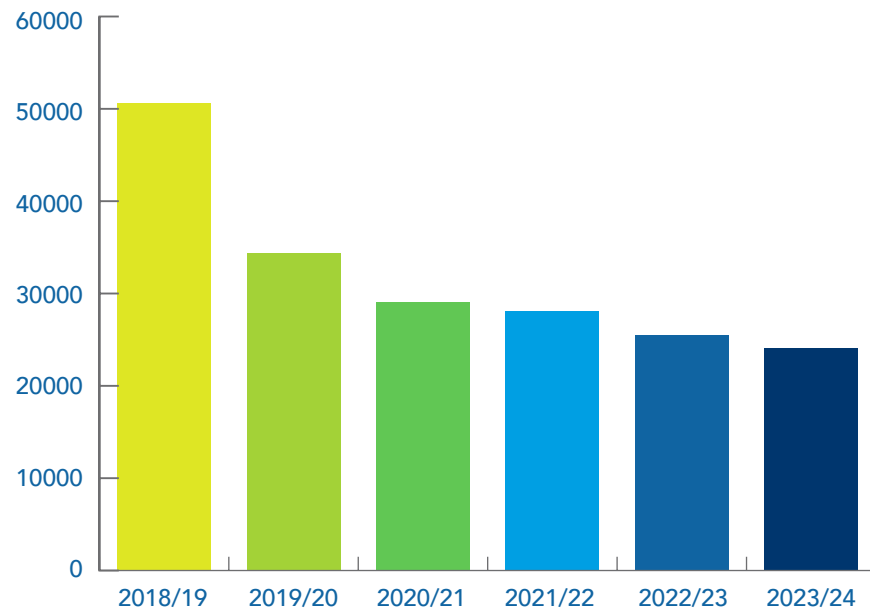


Figure 1 Total greenhouse gas emissions 2018-2023



Figure 2 tracks the emissions by generation type. Travel and transport make up the biggest part of the council's emissions at 42%, with most of this coming from home to school transport (87%). Waste management is the next largest at 28% of the emissions followed by the energy use in corporate properties and maintained schools at 23%.

Our greatest emission reduction this year has been achieved from gas, LPG and oil use in schools and corporate buildings, reducing carbon emissions by 950 tonnes. There was a decrease in gas use by 10% for corporate property and 14% for schools. For electricity use a 4% reduction in electricity use for corporate property and 10% for schools was achieved. Part of the reduction has been due to the gradual increase in schools converting to academies (and therefore no longer under the control of the council) and an overall reduction in the corporate property portfolio. Energy efficiency works carried out on council properties has also made a good contribution to the decline.

The ongoing programme of upgrading streetlights to LED reduced electricity consumption by 15%, saving nearly 4 million kwh over the year - that's the same amount of energy if every household in Staffordshire had the oven on for 5½ hours!

General waste tonnage being processed through the two energy recovery plants has remained relatively constant over recent years and the amount of material recycled through the recycling centres has slightly decreased. For waste emissions to substantially fall, the amount of waste generated from households must reduce. Through the Extended Producer Responsibility Regulations introduced in 2023, producers need to cover the cost of dealing with the waste and therefore are incentivised to minimise waste or design packaging that can be easily recycled. This should help to reduce the amount of waste produced, although all residents of Staffordshire also have a role to play. Through our communications campaigns and introducing new opportunities for residents to reuse and recycle, we aim to encourage everyone to do their bit where possible.

Travel and transport includes fleet, staff travel and home to school transport. Staff travel has slightly increased from the previous year, although remains at a much lower level compared to pre-pandemic which reflects the changes to the way we work requiring less travel. The emissions from fleet and home to school transport have stayed about the same.

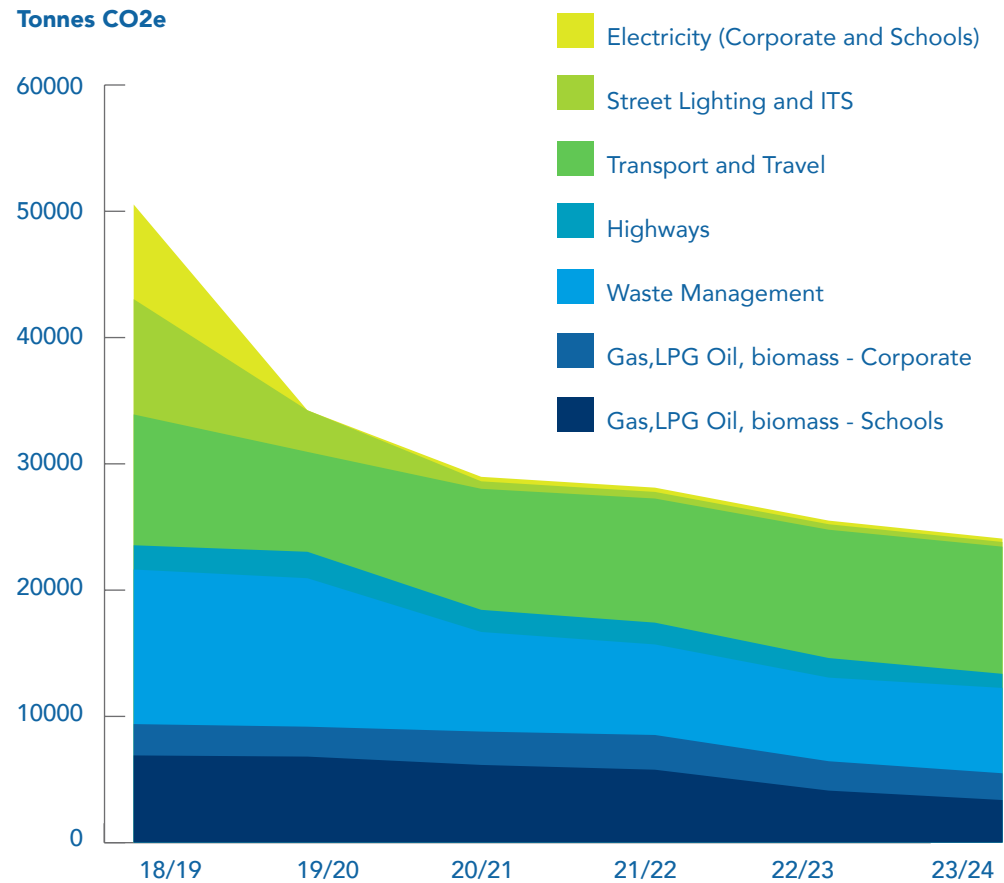


Figure 2 Carbon emissions comparison by generation type

Staffordshire Sustainability Board

The Staffordshire Sustainability Board had a strong focus on engagement and collaboration throughout the year. This included reaching out to the local community and improving partnership working relationships with the voluntary and private sector.

The Board joined the Staffordshire and Stoke on Trent Climate Commission to support collaborative cross-sector working. The Climate Commission reported on its activities and achievements during the Staffordshire Sustainability Board public meeting.

The Board supported a communications campaign to raise awareness on climate change. A giant orange bubble, 10 metre in diameter, representing 1 tonne of carbon went on tour across the county. Everyone attending the roadshow was encouraged to calculate their household footprint and tips on how to reduce household carbon emissions was provided. Over 10,000 residents worked out their carbon footprint during the tour.

As part of the roadshow, completion of a consultation was encouraged to provide a better understanding of community climate change related needs. Over 3,400 responses were received and revealed almost half of people would prefer to receive information around climate change from the local councils, ahead of media outlets and central government. The information from the questionnaire is being used to help inform future communications campaigns.

The Board agreed on the preparation of a joint **Climate Change Adaptation Strategy**. Published in September, this strategy represents a commitment across the county council and district and boroughs providing a clear framework and direction for the councils.

Following Board recommendation work has started on:

- An approach to decarbonising Staffordshire's licensed taxi services.
- Working together with the NHS for a more sustainable future



Summary of achievements 2023/2024

Carbon reduction

Staffordshire warmer homes

The Warmer homes scheme is an ongoing programme helping residents in fuel poverty better insulate their homes and install more efficient heating systems so they can heat their homes for less.

In 2023/24, £874,300 was invested between April and September in 81 Staffordshire properties, making their homes more energy efficient and using low carbon technologies. Key measures included loft insulation, cavity wall insulation, air source heat pumps and solar panels.

The council also had access to a further £985,000 to support applications through other funding schemes managed by a third party (ECO4 and GBIS scheme). £4.2 million has been secured for rollout through 2024/25.



Highways and the library service reduce diesel use

Hydrotreated vegetable oil (HVO) biofuel is a more sustainable, renewable and low-carbon fuel alternative to conventional diesel. Following a successful trial of using HVO biofuel in the council's gritting fleet and forklifts, the use of this sustainable fuel to replace diesel continued through 2023/24. HVO was also introduced into one of the mobile library vehicles and three other library vehicles. The shift from diesel to HVO has saved 146 tonnes of carbon over the year. The transition to HVO is considered an interim fuel until even more sustainable electric options are available for HGV and heavy plant.

Green solution business scheme

Environmental business support continues to be delivered through the Staffordshire Business Environment Network and the Green Solutions scheme in affiliation with the Business Energy Advice Service programme. Engagement with businesses is growing with membership increasing by 27% to 604 organisations. This has included 71 businesses receiving a free Energy Assessment providing recommendations for saving money and reducing carbon emissions. Many of these businesses are now looking at our Green Solutions grant funding to implement their recommendations. Free Energy Assessments are still available for eligible businesses for more information please visit the **Staffordshire County Council Green solution webpage**. 78 businesses have received accredited Carbon Literacy Training looking at the science, psychology and impacts of Climate Change and action planning solutions for their organisation. "It is an eye opener and well worth doing to help to secure our future" Michael Unwin, New Vic, Maintenance Technician.

Continued investment for the upgrade of street lighting to LED

Further investment has been made to transition streetlights and traffic signalling from high energy halogens to low energy LED. 236 traffic signal heads, 90 push button units and 6 pedestrian signal heads have been upgraded across 43 sites / locations. This is estimated to reduce energy consumption by 57% and save the council over £27,000 a year in reduced energy bills.

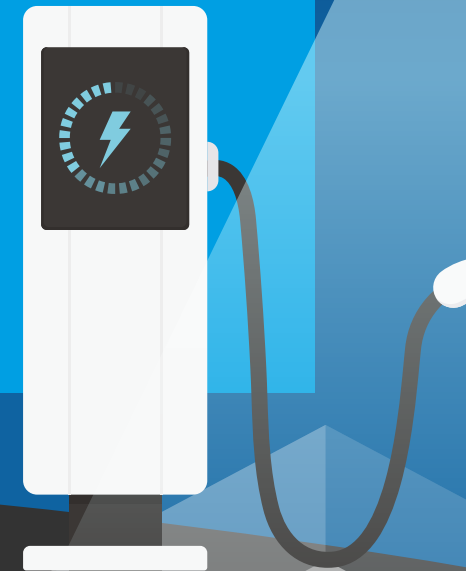
Responsible investment for Staffordshire pension fund

The **Staffordshire Pensions Fund** has produced a Climate Change Strategy with the overarching aim of achieving a portfolio of assets with net zero carbon emissions by 2050. With 2050 being several years away; to guide and monitor the Fund's decarbonisation journey, a series of 2030 targets had been set using the position at 31 March 2020 as a baseline. The positions against these are monitored and reported annually. The latest update, as at 30 September 2023, showed a 55% reduction in its Weighted Average Carbon Intensity, compared to the 2020 level.

Electric vehicle infrastructure

Through the Midlands Connect Consortium, working in partnership with Derby City Council, Nottingham City Council and Nottinghamshire County Council, over £5 million has been awarded through the Local EV Infrastructure (LEVI) funding programme for the region.

A detailed business plan has allowed 90% of this funding to be secured with the final 10% awaiting agreement in 2025. The funding will help councils install more local charge points, allowing more residents, especially those without off street parking, to switch to electric vehicles. Charge points will be installed between 2024 and 2028.



Natural environment

Building resilience to flood risk at Norton Canes community library

Following the council's successful bid to the Flood and Coastal Resilience Innovation Programme (FCRIP), the FAIR (Flood: Aware, Informed, Resilient) approach was awarded £6 million in 2022 for projects for completion by 2027. Through this funding, flood mitigation measures were installed at Norton Canes library costing £58,000. This community hub has suffered from regular surface water flooding.

The project incorporates an innovative design use of natural aquifer solutions - the first of its kind to be installed in Staffordshire. Being underground provides opportunity to support planting above ground, and a rain garden has been created, improving the local biodiversity and ground water quality for the local area.

With the wet winter last year and spring this year, the rain garden has already been tested several times and has successfully reduced the impact of local flooding.

To find out more about the FAIR Approach to Community Flood Risk project, and information about flood risk and flood resilience, please visit the project website:

www.fairflood.org



Zero waste and circular economy

HVO replacing diesel on the household recycling centres

The use of HVO fuel was trialled with the vehicles transporting the general waste from the Cannock household recycling centre to the energy recovery facility at Four Ashes. The trial achieved a saving of 50 tonnes of carbon. Further rollout should happen during 2024/25 to include the heavy plant on the household recycling centres.

Boosting reuse and recycling opportunities

We've introduced new reuse and recycling opportunities across the Staffordshire recycling centres which help to keep items or valuable components in circulation for longer. So far, we have reached 100 community groups to raise awareness of the schemes:

MediCycle

Used medical care equipment dropped off at the recycling centres is collected by a local charity, Grace Cares. The charity cleans and repairs the equipment and then gets the equipment back into the community. Over 200 items have been collected so far.

TechCycle

This scheme has been rolled out to save all IT equipment including laptops, desktops together with keyboards, mice and any other related items. We work with two local charities, Free IT Stafford and EEE4, so far, over 8,400 items have been saved.

- Free IT Stafford try and repair/update the laptops and computers and gift them back into the local community.
- EEE4 repair all equipment where possible which they gift into the community. If an item is beyond repair, they strip all equipment and save all components. The monies they receive from the components funds their training programme for people struggling with mental health illness or learning difficulties.



Air quality

Staffordshire's new Local Transport Plan

Work started on the fourth Local Transport Plan (LTP) which will set out the council's vision for the transport network. Transport decarbonisation will be a key theme in the new plan and will cover to 2050, aligning with the councils and governments net zero emissions target. We've been working with partners and stakeholders throughout the year to find the best approach for the Staffordshire plan.

The updated plan will be published in March 2025.

Staffordshire Bus Service Improvement Plan

The Staffordshire Enhanced Partnership includes the county council and bus operators. They work together to improve bus services in the county and support the goals of the National Bus Strategy. In October 2021, the county council, along with the Enhanced Partnership, published Staffordshire's first Bus Service Improvement Plan (BSIP).

A revised plan has been published with updated baselines to 2023/24 levels and a programme for 2024/25 bus service improvements together with short and long-term actions for improving bus services. The **BSIP** is a live document and will continually be reviewed with new funding streams and advances in technology.



Air Aware campaign

The Air Aware project was delivered for another year with great results. The project focuses on behaviour change to increase active travel, decrease car use, and raise awareness of air quality issues.

Air Aware was promoted to all schools in Staffordshire through a series of ongoing campaigns run at key dates throughout the year including Clean Air Day, World Car Free Day, Walk to School Week and Walk to School Month. The promotional materials for these campaigns carried messages about climate change and air pollution.

Through the countywide anti-idling campaign, information packs were distributed to businesses, schools and community settings throughout 2023/24. There are now over 200 packs in use throughout the county. These packs can be requested from the Staffordshire County Council **Air Aware** web pages. Ten schools ran the anti-idling campaign and pupil parking campaigns throughout the academic year.

We worked with a local media company to produce 6 videos explaining the benefit of active travel and demonstrating lesson plans and activities to schools and residents. These are available on the Staffordshire County Council's **YouTube** page and will be promoted in the school annual travel guides that get sent out to every school in Staffordshire in September. This will increase knowledge of air quality sustainable travel in the next academic year.

We had stalls at events in key areas of the county that suffer with air pollution. We took EVIE, the electric van to raise awareness about air quality and climate change. We engaged with over 4,000 individuals at these events which were held in districts with Air Quality Management Areas (areas designated by local authorities to assess and manage air quality).



Community Engagement

Community learning programmes

Staffordshire's Community Learning provides formal and informal learning programmes for adults aged over 19, attracting around 3,000 learners each year. All the learning programmes include elements of sustainability, with many having a strong environmental focus. Over 1,300 learners participated in 73 courses with sustainability as a key value. A further 11 courses were run with around 250 learners where the outcomes directly related to either a career in the green economy, pursuing volunteering and further learning in the environmental sector or taking actions to reduce household carbon footprints.

Climate change action fund

Round four of the Climate change action fund was successfully delivered from July 2023-January 2024 providing £65,970 for climate change related projects across Staffordshire. The councillor led fund invited applications for funding between £500 - £3,000 for not-for-profit organisations, parish councils and schools. This was another successful year of the fund with many county councillors receiving requests exceeding their budget allocation. There were 74 successful applications with energy efficiency projects and upgrading lighting to LED making up around 50% of the successful applications. Tree planting, biodiversity projects, waste reduction were other common themes. Since the introduction of the scheme in 2020, £267,660 has been awarded to 290 projects across the county. Round 5 of the scheme opened in July 2024.



Green libraries month

Following the success of last year's Green Libraries Month it was repeated in May 2024 with even more activities. The libraries hosted 114 events including green themed crafts, seed swaps and recycling. Perton library organised a Science Fair, attended by over 1,100 people. Visitors had the opportunity to learn about climate change and their carbon footprint, and positive feedback was received from those who attended. Biodegradable library cards were introduced in Rugeley and Shenstone libraries and 1,000 seeded bookmarks were offered to visitors. Staffordshire Libraries & Arts teamed up with Keele University to highlight a selection of entries to their Earth Stories Film Festival aimed at young filmmakers based on environmental themes which resulted in good engagement on Facebook.

Risks and issues

Local delivery can be significantly influenced by national policies and priorities. With a change in government, there is a degree of uncertainty over emerging policies and direction. We'll keep working towards our current goals but stay flexible in case we need to adjust our plans based on changes in national policy.

We need to invest a lot in our infrastructure and services to reach net zero by 2050. External funding is crucial for this goal. Over the past year, we've successfully secured significant external funding. However, changes in government priorities could affect future funding levels. We'll stay informed and try to take advantage of funding opportunities as they come up.

We know that by 2050, the council won't be able to eliminate all its carbon emissions. To reach net zero, some emissions will need to be offset. Carbon capture and storage technologies is a new and developing area although does not offer a viable option for the council yet.

To achieve our net zero goal, we're exploring nature-based solutions like tree planting that we can start now to continue our progress to reach net zero by 2050.



Next steps

Funding secured for Staffordshire net zero skills for growth

Staffordshire County Council as lead and in partnership with Keele University have been successful in securing a 17-month project from Innovate UK through the Pathfinder, phase 2 places scheme. The project will develop a roadmap to net zero, based around the net zero economy and green skills.

This project builds on the learning from phase 1, which identified there was confusion around the potential for growth into the “green economy” and the short-term requirement to upskill the workforce with the necessary “green skills”. This phase aims to clearly explain the short-term opportunities and the skills needed to achieve growth and reduce carbon emissions quickly.

We will identify the skills needed to support this growth in the short, medium, and long term. Then, we will assess the current skills available and identify any gaps.

By bringing this all together (future economy/supply chain and skills requirements/training) we will be able to design what the future skills offer should look like to enable the growth. With a key output potentially being a Green Skills Academy, this will allow Staffordshire businesses to diversify, ahead of our peers, into a sustainable economic model.



Planning to reduce flooding events

Great Wyrley /Cheslyn Hay Wyrley Brook Mitigation Scheme

During the period 2022 - 2024 - Staffordshire Flood Risk Management team have been working with Severn Trent to jointly design flood reduction measures for the community. This scheme is in its early stages, and so far, £50,000 has been secured to assist Severn Trent in this investigation and scoping of options to bring forward for discussion with the wider community.

This project will not only reduce the impact of flooding, with the agreement of stakeholders it will incorporate a range of other benefits. These benefits include creating wetlands, wet pond habitats, new public open spaces and using innovative highway solutions for Staffordshire.

This is a long project and will not be fully delivered till 2029 with delivery of certain phases starting in 2026/7. It is anticipated the project will secure £2.5 million in Flood grant in aid and £6.5 million in Severn Trent funding.

It is proposed early 2025 a design will be shared with stakeholders, the community and other partners.

Perton Community Flood Mitigation Project

Since 2017, a selection of early feasibility modelling of the Penk running through Perton has been on-going with Severn Trent, City of Wolverhampton Council and Staffordshire County Council.

In June 2024, Staffordshire Flood Risk Management team were successful in securing £249,964. This will take this project to the next stage to review options for mitigation, model these options and present the options to Risk Management Authority Stakeholders and the community.

It is proposed these options will be presented Summer 2025 for the full business case to be presented to the Environment Agency for funding of delivery in 2026 through to 2028. Early feasibility study indicates this scheme will likely attract over £2,000,000 of grant in aid.



Appendices

Appendix 1

Staffordshire County Council approach to carbon reduction

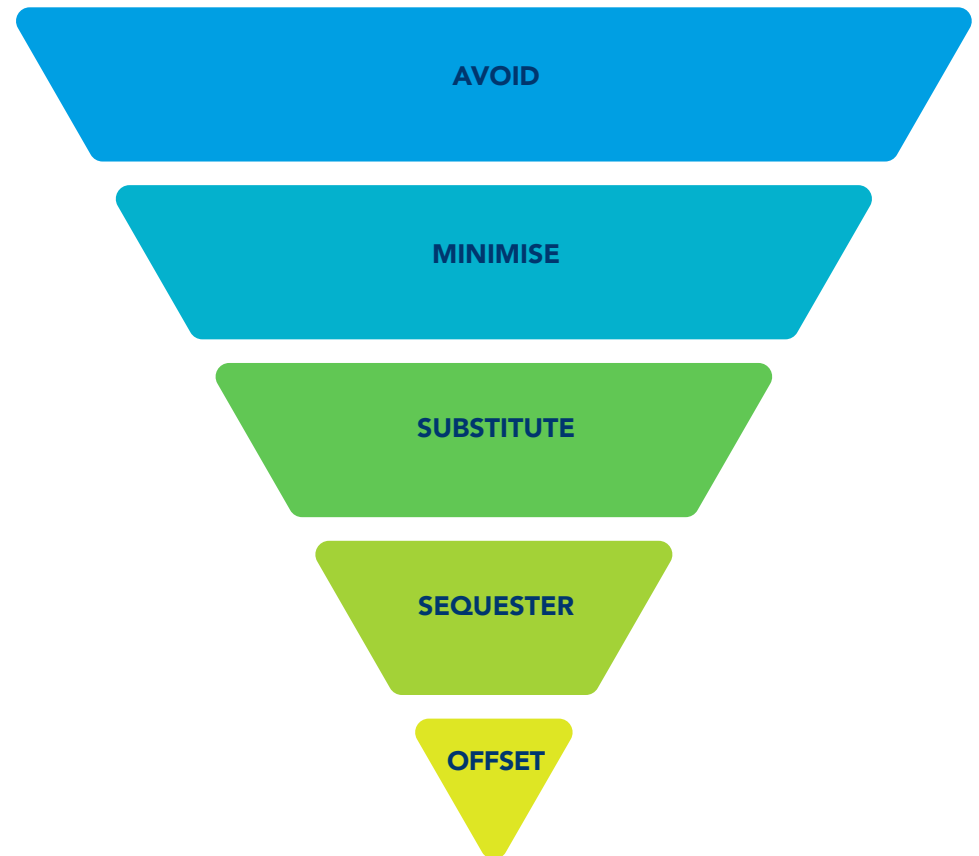
The County Council has championed the climate change agenda for many years and our carbon reduction strategy, Green Shoots, published in 2011 built on previous commitments to this agenda. Staffordshire County Council recognises that climate change is the biggest environmental challenge facing the world today and has reflected this by identifying climate change as one of the four key principles in the council's Strategic Plan.

With the setting of new legislation in May 2019, through an amendment to the Climate Change Act 2008, the UK became the first major economy to pass a law requiring the country to bring all greenhouse gas emissions to net-zero by 2050. This means that the country needs to remove as much carbon from the atmosphere as it emits.

Following the publication of this new legalisation, the County Council committed itself to this agenda by declaring a climate change emergency in July 2019 to also achieve net zero emissions by 2050. This replaced the previous commitment to reduce carbon emissions to 80% of the 1990 baseline.

We have seen a considerable reduction in our carbon emissions from the initial 1990 baseline of 200,000 tonnes. This is partially because many of our schools converted to academies which, once converted are not included as council emissions. A number of carbon reduction measures have been implemented since this time which has reduced the carbon impact of our services.

The County Council recognises that a range of actions are needed to reduce the council carbon emissions. We follow the carbon hierarchy principles, shown in figure 1 of avoiding and reducing emissions as a priority, where emissions cannot be reasonably reduced any further, we consider sequestering.



Appendix 2

How we measure our carbon emissions

Each year, Staffordshire County Council tracks its carbon emissions, even though it's not required by law. Because the council's operations are complex, with many services run under contract or lease, it only reports on emissions from services it directly controls and can manage.

We use carbon conversion factors from the Department for Environment, Food and Rural Affairs (DEFRA) to calculate greenhouse gas emissions. These factors help us report emissions as CO₂e, which includes other gases like methane and nitrous oxide, not just carbon dioxide. We measure emissions from April to March each year. Since DEFRA provides conversion factors by calendar year, we use the data which corresponds with our April to December data for our calculations and apply it to the full reporting period from April to March.

In 2018/19 we reviewed what we reported against and established a new baseline incorporating a wider range of activities, including services previously unrecorded in the baseline such as home school transport and waste disposal/recycling.

We have a renewable energy tariff for all maintained corporate properties, schools, and street lighting. Carbon emissions from electricity use are divided into two categories: generation (which is zero for renewable energy) and transmission and distribution. We include the transmission and distribution part in our emissions footprint to show the carbon emissions from purchased renewables.

Schools that have become academies are no longer counted in the council's emissions because they are fully independent, and the council doesn't manage or receive income from them. However, the council is committed to sharing information with academies to help them reduce their energy use and emissions.

Greenhouse gas emissions are recorded against the three standard scopes for reporting.

SCOPE 1 | All direct emissions

These emissions arise as a direct result of our activities under our control. For Staffordshire County Council this includes:

- **gas consumption from all maintained schools and corporate buildings**
- **liquified petroleum gas (LPG) usage from corporate buildings**
- **heating oil consumption from maintained schools**
- **fuel used for fleet vehicles**

Scope 2 | Indirect emissions

These emissions are our emissions associated with the consumption of electricity purchased for maintained schools and corporate buildings. Where the electricity is 100% sourced from a registered renewable supplier, only transmission and distribution emissions are included.

SCOPE 3 | All other indirect emissions

This includes a much wider remit and includes the activities which we do not own or directly control, for example services under contract.

This includes:

- **business miles associated with staff travel**
- **passenger kilometres associated with staff travel via train**
- **water consumption (supply and treatment) from all maintained schools and corporate buildings**
- **contracted waste operations and processes**
- **electricity consumption associated with street lighting and ITS equipment**
- **fuel consumption associates with Amey (Highways) operation**
- **home to school transport.**