

Climate Change

Annual Report 2022/23



Foreword

Climate change has regularly made headlines in the past year. In 2022 the UK witnessed temperatures exceeding 40 degrees for the first time, along with extended periods of drought and storms. Scientific evidence shows that unless we take substantial steps to decrease emissions, these extreme events will become more frequent.

Combatting climate change continues to be a high priority for the Council. We ensure that the full effects of climate change are considered in all Cabinet decisions, enabling positive outcomes to continually be delivered for our communities.

The dedicated efforts of our staff in designing and delivering projects and programs with climate change in mind have led to a consistent decrease in the Council's carbon emissions each year, since our climate change declaration in 2019. While this is a significant accomplishment, we recognise that there's always more to do.

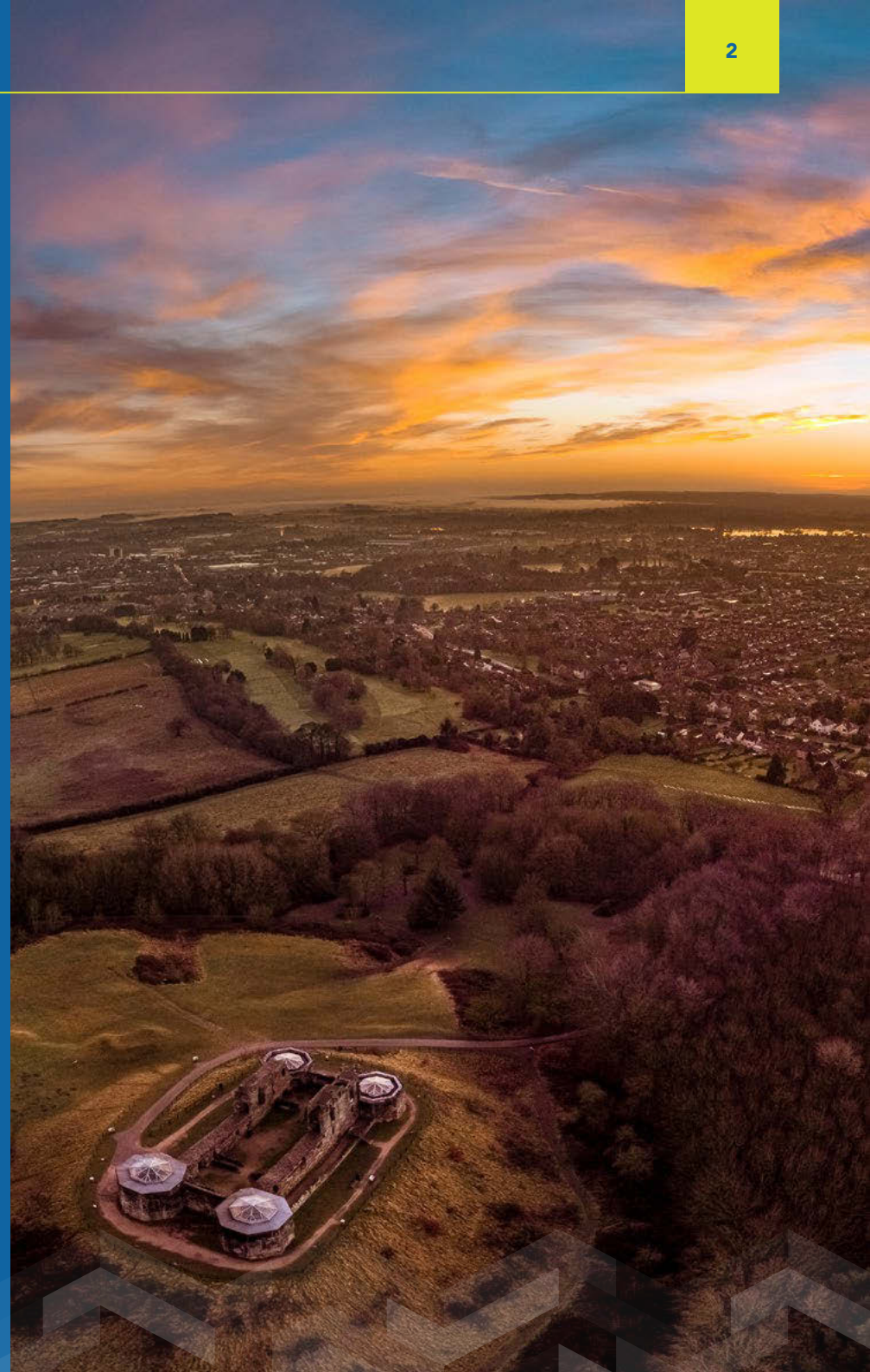
If greenhouse gas emissions are reduced to zero by 2050 or before, our local climate will still change. We need to prepare for this change. Over the next year, our main focus will be developing a plan to make our services more resilient in adapting to a changing climate. This plan will run alongside our efforts in our Climate Change Action Plan to decrease greenhouse gas emissions.

By building on our current work and looking ahead to our future plans, we can make a significant contribution to creating a stronger, more resilient future for our local environment, community, and economy.



Simon Tagg

Staffordshire County Council
Cabinet Member for Environment,
Infrastructure and Climate Change

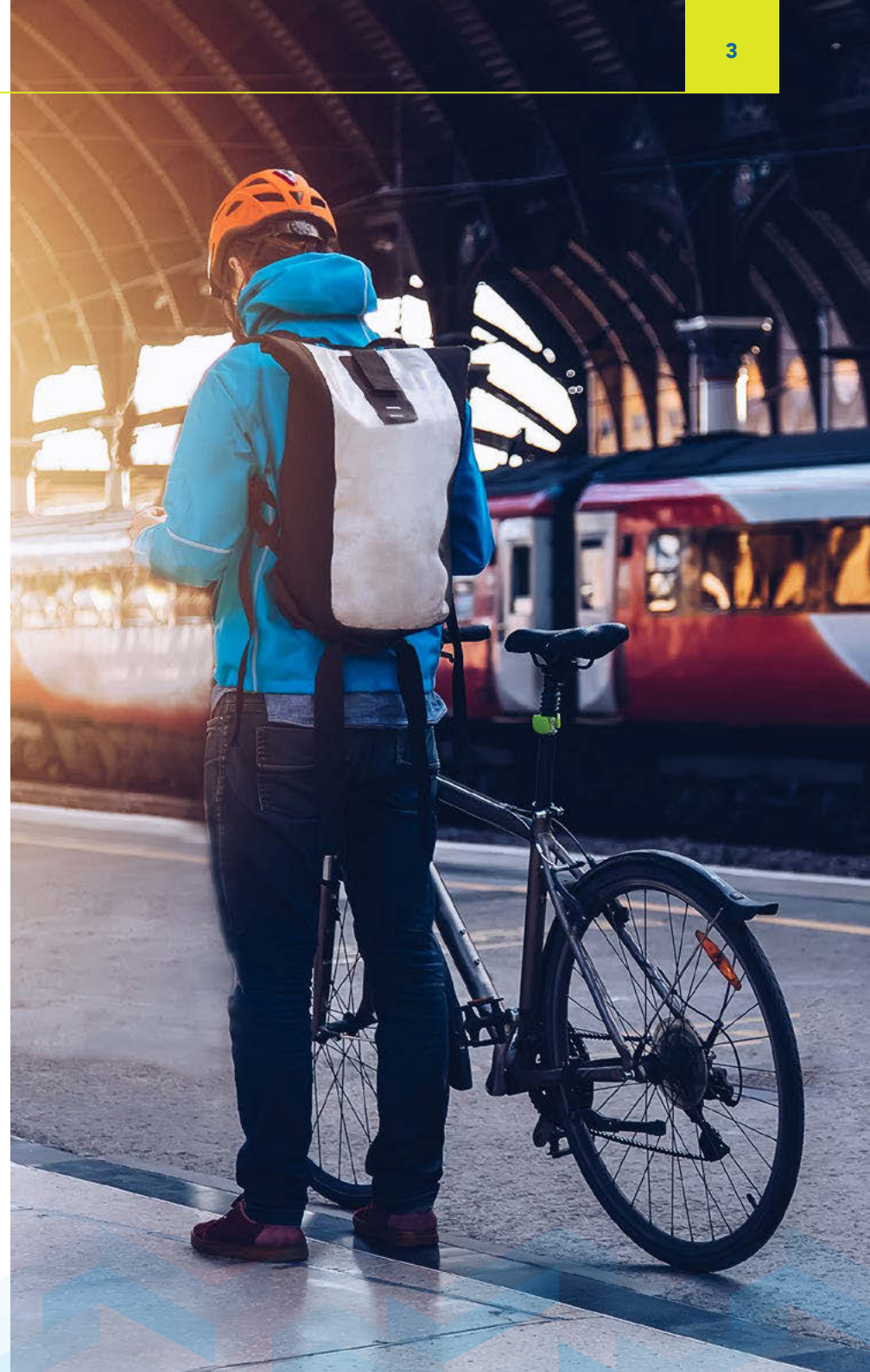


Introduction

Staffordshire County Council has committed to transform our corporate estate and services to be net zero by 2050. To achieve this, we are taking a wide range of actions outlined in the **Climate Change Action Plan 2021-2025** to reduce carbon emissions.

This report reviews our achievements during 2022 and 2023. It also refers to the difficulties we have faced and what we're planning to accomplish over the next few years. Previously, our annual report provided information on emissions from the preceding year, which was due to the methods we used for data collection and analysis. Now, we've changed it so we can share achievements and emissions for the same timeframe in one report. So, this report talks about the carbon emissions for both 2021/22 and 2022/23.

The Council's Climate Change Action Plan was reviewed and published in September 2022. This review allowed us to take stock of progress and identify areas where more targeted monitoring would be beneficial. Eleven actions were marked as complete and new actions were introduced to maintain our journey to net zero.



Emissions

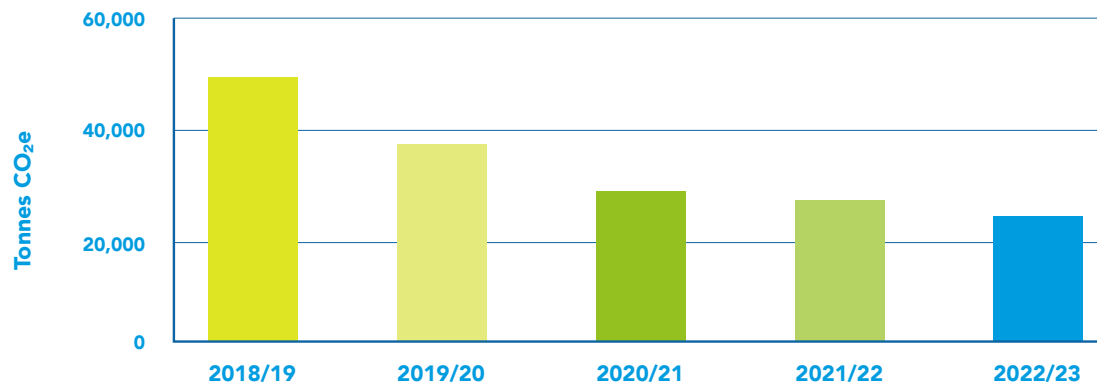
Calculating our carbon footprint

SCC greenhouse gas emissions

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

Greenhouse gas emissions for 2021/22 and 2022/23 are presented in this report. We have continued to reduce emissions, achieving a reduction of **916 tonnes**, taking our carbon footprint to **28,152** in 2021/22. Emissions fell by a further **2,611 tonnes** in 2022/23 to **25,541 tonnes**. This represents a **12% reduction** in emissions since 2020/21 and a **50% reduction** since 2018/19, see Figure 1.

Figure 1 Staffordshire County Council Carbon emissions





Staffordshire Sustainability Board

influencing change
across Staffordshire

Staffordshire Sustainability Board

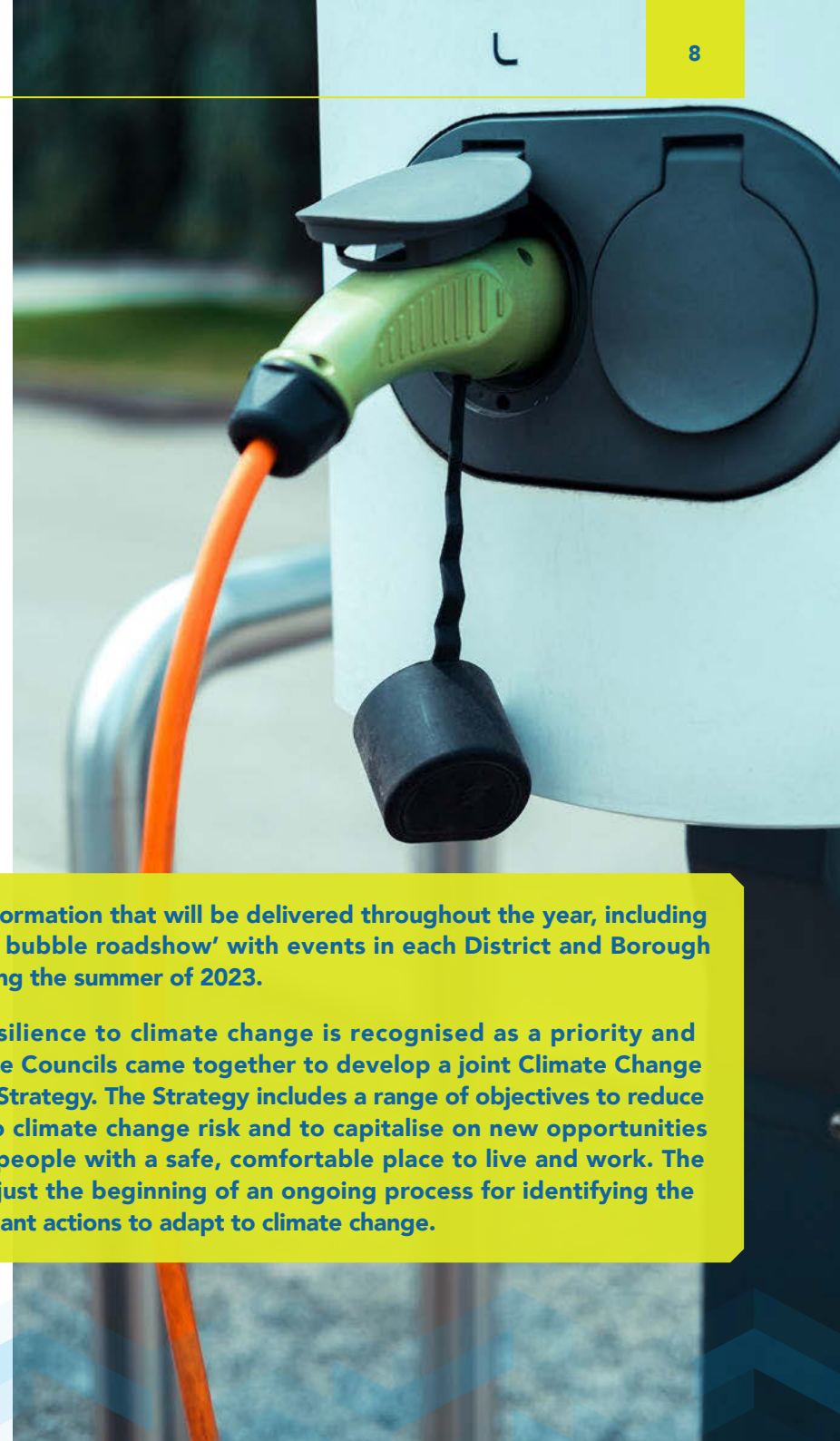
The Staffordshire Sustainability Board (SSB) is made up of elected members and supported by council directors and officers from all the local authorities within Staffordshire.

The Board facilitates a collaborative forum to influence change and encourage organisations and individuals across Staffordshire to join forces to combat climate change.

In January 2023 the Joint Waste Management Board successfully integrated with the SSB leading to a clearer focus on waste reduction as part of the Board's overall sustainability goals.

Notable achievements for the Board last year included:

- **Producing a Public Electric Vehicle Charging Infrastructure Strategy.** This document creates a framework to allow coordination and facilitation of safe and reliable access to changepoints across the county. The Strategy supports all modes of sustainable transport to ensure improvements enhance the full transport offered within Staffordshire to meet the anticipated increase in demand.
- **Developing a joint countywide communications plan** outlining how councils will work collaboratively to advise and encourage residents to make positive climate change choices. The Strategy identifies activities and targeted information that will be delivered throughout the year, including the 'carbon bubble roadshow' with events in each District and Borough Council during the summer of 2023.
- **Building resilience to climate change is recognised as a priority** and Staffordshire Councils came together to develop a joint Climate Change Adaptation Strategy. The Strategy includes a range of objectives to reduce exposure to climate change risk and to capitalise on new opportunities to provide people with a safe, comfortable place to live and work. The Strategy is just the beginning of an ongoing process for identifying the most important actions to adapt to climate change.



Achievements

**Bettering the county for present
and future residents**

Summary of Achievements during 2022/23

Reporting has been provided against the five key themes of the action plan:





Carbon Reduction

Highways introduce a more sustainable fuel

Hydrotreated Vegetable Oil (HVO) biofuel is a more sustainable, renewable and low-carbon fuel alternative to conventional diesel. Amey, the principal contractor for Staffordshire highways introduced a pilot project and trialled HVO in the gritting fleet and forklifts. The transition provided savings of 60 tonnes of carbon compared to the use of conventional diesel. HVO also produces less pollution than conventional diesel, reducing particulate matter by up to 84% and improving local air quality too.

Investment continues to upgrade street lighting and signalling

The County is working on upgrading the existing streetlights to modern LED equivalents. This four year project is due for completion by 2024 and should achieve a reduction in energy use by 43%. Investment made in 2022/23 will save the council £7,000 per year and result in an annual reduction in energy use of 18,400 kWh. That's an energy-saving equivalent of watching the TV constantly for 42 years!

Energy efficient Staffordshire History Centre

The Staffordshire History Centre decided that when they were building their new extension, they wanted to make sure that it was better than national building standards. They did this to create a centre that would be fit for the future. The four story archive storage extension will be designed to provide passive conditions including a high level of insulation, high air-tightness and heavy thermal mass. The new design provides a secure and stable environment for storing the historic records as well as minimising operational costs for heating and cooling. Energy use saved from this higher specification is estimated to save 2.5 tonnes of carbon a year.





Carbon Reduction Cont...

Retrofit to Tamworth library

Tamworth library underwent significant renovation work and improvements. This allowed for additional work to be completed to make the property more energy-efficient, including improved insulation in the walls and more energy efficient windows. A new Building Management system was installed to allow better control and monitoring of energy use and heating. It is estimated this work will save around 4 tonnes of carbon a year.

Conversion of Kingston Centre to a Primary school

The Kingston Centre building was originally a school built in the 1940s, it was extended and converted to offices in the 1990s until recently where it has been used as a Covid vaccination centre. A £4 million refurbishment project on the site is almost complete to build a new school to allow St Leonards Primary to relocate to a larger property. Funding of £795,000 was secured from the Governments Public Sector Decarbonisation fund to allow for higher specification energy efficiency technologies to be included in the retrofit. Six air source heat pumps have been installed for heating which will create a considerable carbon saving over conventional gas boilers. In addition, high levels of insulation and Solar PV are to be installed. In total, it is estimated adopting lower carbon technologies and greater insulation will save the school 150 tonnes of carbon each year.

Lifting people from fuel poverty with Warmer Homes Scheme

Helping people with rocketing energy bills and lifting them out of fuel poverty is a priority in Staffordshire. The Warmer Home Scheme helps residents in fuel poverty better insulate their homes and install more efficient heating systems so they can heat their home for less. The scheme has been running for a number of years and has delivered outstanding results. Last year, £5.75 million was awarded to 427 properties in Staffordshire, installing a total of 540 energy efficiency measures. This resulted in a reduction in the amount of energy needed to heat homes, lowering carbon emissions and saving residents money on home heating. Much of the success is down to a unique partnership, which includes all district and borough councils alongside delivery partners such as E.ON, Broad Oaks and Beat the Cold. The model and approach are recognised as an exemplar of good practice, having recently been commended in the Regional Energy Efficiency Awards and Finalists for both MJ and LGC Awards.

150 tonnes
of carbon
saved





Natural Environment

Native tree planting

Lymedale Business Park had 1,140 native trees and shrubs planted on just half a hectare of land. When these trees mature, this densely planted area will capture 2 tonnes of carbon per year.

Reducing flooding at Hyssop Close – Cannock

In 2021, flooding of local businesses on Hyssop Close resulted in damages of over £300,000. Working with Cannock Chase District Council and a local specialist, a trash screen to prevent the culvert blocking during heavy rainfall events was designed. Funding of £7,000 from the Environment Agency and £3,000 from the District Council allowed the new trash screen to be installed. Just two weeks after installation a flash flood occurred, and the trash screen saved the businesses from suffering further flooding. This is a great piece of collaborative work between Staffordshire County Council and Cannock Chase District Council.





Waste

Community Volunteer waste ambassadors

The 'waste savvy' volunteer programme managed through our contractor Garden Organic came to the end of its contract period. This programme has reached people of all ages and interests to help to increase awareness of the importance of reducing waste and how to recycle correctly. The volunteers have delivered at least 71 talks, provided information at over 150 events and reached in excess of 5000 people, what an achievement. The enthusiasm and hard work of the volunteers over the last few years to provide information at events and talks to schools and community groups has been very much appreciated. If you are interested in being involved in the new volunteer waste reduction programme, please contact:

wastesavvy@staffordshire.gov.uk

Reduction in waste to landfill

We have reviewed the way we manage the total waste stream when our Energy Recovery plants are undergoing maintenance. By decreasing the waste from external sources during maintenance periods, this increases capacity for our own household waste, thus mitigating the need to send over 1800 tonnes of waste to landfill this year. This drastically reduces the climate change impact of this waste and is a positive step for the environment.



Air Quality

Highway and Transport Capital Programme

Delivery of the 2022/23 highway and transport capital programme included an investment of over £4.5 million towards the development and construction of schemes that will improve the environment for walking and cycling in Staffordshire. In 2022/23, the Council secured a further £6 million through successful bids for active travel schemes that will contribute towards the delivery of the Local Cycling and Walking Infrastructure Plan (LCWIP).

Planning for the expansion of Electric Vehicle Infrastructure

The Staffordshire County Council Public EV Charging Strategy was agreed by the Council in January 2023 and is now in the process of being agreed and adopted across the district and borough councils.

A collaborative Staffordshire EV officer working group has been established to share best practice and local updates.

Staffordshire County Council have been notified that Local EV Infrastructure (LEVI) capability funding is available up to an indicative value of £613,000 and LEVI capital funding is available up to an indicative value of £4.5 million. It has been agreed in principle that Staffordshire County Council will work in partnership with neighbouring authorities (Derby City Council, Nottingham City Council and Nottinghamshire County Council) and Midlands Connect to create a consortium to secure the LEVI funding. Expressions of interest for the capability and consortium capital funding have been submitted to the Office for Zero Emission Vehicles (OZEV) and Energy Saving Trust.

Following initial work to develop and create the Staffordshire County Council Public Electric Vehicle (EV) Charging Strategy and in preparation for the upcoming LEVI funding it was recommended that a new role be established for an Electric Vehicle Infrastructure Delivery Manager. This post was fulfilled in December 2022.



Air Quality Cont...

Levelling Up Fund Award – Investing in Mid Staffordshire’s Major Road Network

In 2022/23, Staffordshire County Council was awarded Levelling Up Funding which included:

- **£3.6 million towards access for all improvements focusing on the walking and cycling environment along the A34 Cannock town centre and A34 Stafford (Lichfield Road, town centre and Gaol Square).**
- **£4.3 million towards kickstarting Staffordshire’s zero emission bus agenda in Cannock, Stafford and Burton.**

These projects are expected to be completed by March 2026. As well as contributing to the goal of reducing carbon emissions in transportation, promoting more active modes of travel will help tackle long-term health challenges. Additionally, it will make it easier for people to get to work and training opportunities, boosting economic well-being and community pride.

By giving buses priority on the road, it will make sure that public transport is more reliable and will keep travel times more consistent. Introducing zero emission buses on the busy A511 Burton and A34 Cannock to Stafford corridors will reduce carbon emissions and local air pollution.

Air Aware Staffordshire Summary

This year we once again promoted the Countywide Anti-Idling Campaign to schools, businesses and community organisations. The uptake was good with over 100 settings receiving a pack containing a railing banner, posters and signpost boards to raise awareness and remind visitors of their anti-idling commitments.

In schools we ran a total of 12 pupil-led anti-idling campaigns in key areas around the county, targeting parents who are picking up or dropping off at school. We also ran a series of campaigns targeting all schools throughout the year on key dates such as Walk to School Week and Walk to School Month to promote sustainable and active travel.

One school in Leek ran a term-long project to learn about and raise awareness of air pollution. The sixth form pupils at the Special Educational Needs and Disabilities (SEND) school performed outdoor studies within the town of Leek to measure levels of air pollution, to examine where the problem was greatest and ran campaigns to help reduce air pollution. They delivered a whole school assembly and ran a campaign to target visitors, parents and school transport operators to ensure they were switching off their engines when visiting the site.



Behavioural Change

The library service encourages people to make a difference

The library service received £2,500 of funding from the Green Libraries partnership grant fund to support environmental activity in libraries. Library staff were invited to become climate change champions and take a lead on developing small scale climate change projects. The champions developed creative displays and activities, such as delivering craft reuse workshops, to show that small behavioural changes can make a difference. Over 900 Staffordshire residents engaged with the project and positive feedback was received.

Libraires I.T reuse scheme

Staffordshire libraries service teamed up with the Community Foundation for Staffordshire to allow people to donate used IT equipment for distribution to the people in our communities who need it most. **The scheme** received over 260 public donations of used IT equipment and 123 laptop donations from organisations. Following refurbishment (where possible) 254 of these items have been gifted to individuals or families who are financially vulnerable, adults with disabilities, children with SEND, Ukrainian refugees, and care leavers.

Carbon literacy training for SMEs

Members of Staffordshire Business Environment Network (Sben) were invited to attend accredited carbon literacy training, funded by Staffordshire County Council. The training helped to raise awareness of climate change and how it can impact our lives and business. 47 businesses completed the training, with 41 going on to complete the assessment to achieve carbon literacy accreditation. Positive feedback was received from the course, with participants confirming they now have the confidence to identify climate change actions at work.





Behavioural Change Cont...

Climate Change Action Fund

Round three of the Climate Change Action fund was successfully delivered from September-December 2022. The Councillor led fund invited applications for funding between £500 - £3,000 from not-for-profit organisations, parish councils and schools. There was a high demand for the funds, with several of the County Councillor Divisions being oversubscribed. 92 applications were received, and 73 projects were awarded funding totalling £85,546 across the County. Successful projects included the conversion of lighting to energy-efficient LED, increasing insulation in properties, installing bike sheds in schools to encourage active travel, tree planting and awareness raising initiatives. Round 4 of the Climate Change Action Fund launched in July 2023.

Climate Change Conference

In September 2022, Staffordshire County Council organised its inaugural climate change conference, bringing together representatives from community groups, schools, and parish councils. The conference aimed to educate participants about climate change, increase awareness of critical factors, and motivate them to establish carbon reduction projects in their respective areas. The event saw 44 in-person attendees and 25 virtual participants. 85% expressed inspiration drawn from the conference and 90% indicated an intention to apply to the Councils Climate Change Action Fund scheme.

Climate change training for staff

Climate change is one of the Councils corporate priorities, and all staff are encouraged to take responsibility to tackle climate change. An online training module to raise awareness and empower staff to tackle change in their role was launched in 21/22 and is available for all staff to complete. The target to achieve 1000 staff members to complete the module has been achieved. Staff continue to be encouraged to complete the module.



Future

**The next steps to achieving our new goals
and the twist and turns associated**

Next Steps

Building Climate change resilience across Staffordshire

Since declaring a climate change emergency, the Council has prioritised developing and delivering action against the carbon reduction plans. We recognise the potential consequences the changing climate can have on our services and residents. The joint Adaptation Strategy with the District and Boroughs is in the process of being approved. The focus over the next year will be to develop a Staffordshire County Council Adaptation plan in combination with a refresh to the 'Climate Change Mitigation Action Plan'. We also aim to identify how we can strengthen our partnership by working with other public sector bodies such as the NHS, Police and Fire Service to work together on Climate Change initiatives.

Launch public EV site survey

Staffordshire County Council will continue to work with partners (including the district and borough councils) to develop EV infrastructure site lists and the LEVI business case. Upon the succession of LEVI capability funding, a new EV team will be created.

Staffordshire's new Local Transport Plan

Staffordshire County Council is preparing its fourth Local Transport Plan (LTP). The LTP is a statutory document that sets out the Council's vision for the transport

network, together with the policies, plans and programmes needed to deliver that vision. It includes walking, wheeling, public transport, car-based travel and freight, together with the management and maintenance of local roads and footways.

Transport decarbonisation will be a key theme in the new LTP, which will cover the period up to 2050, aligning with the Government's target to decarbonise the entire transport network. Details of how this will be achieved will be set out in a Transport Decarbonisation Strategy, which will bring together a holistic approach to delivering a decarbonised transport network while connecting the county and growing its economy. The Plan will set out how the Council will put the environment at the forefront of every decision it makes. It will identify key actions that need to be taken across operations, maintenance, and renewals to build resilience, ensuring the transport network can continue to deliver the expected level of service for residents and businesses. The Strategy will also define the environmental outcomes the Council wants to achieve and chart its course in delivering them.

Increasing the rollout of HVO fuel

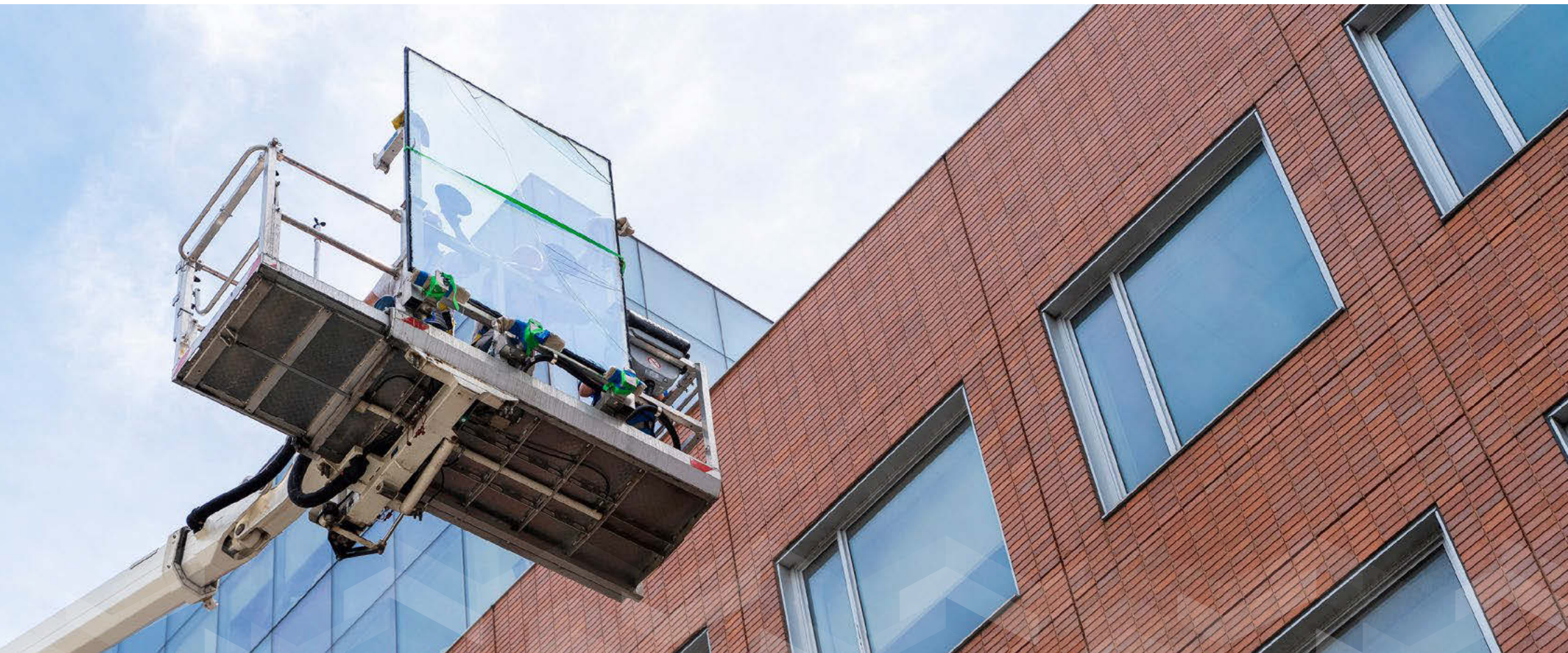
Following the successful trial using Hydrotreated Vegetable Oil (HVO) biofuel in the gritting fleet and highways forklifts, preparations to rollout for compatible vehicles at the recycling centres have been put in place. This will not only substantially reduce the carbon emissions from these vehicles, but pollution will also be reduced, improving the air quality for staff and users of the sites. HVO should be in use by summer 2023.



Risks and Issues

Local policy and decisions often rely on national policies and legislation. Without a strong direction to guide or mandate decisions, this can make decision-making at a local level challenging. For example, delays in the publication of the Resources and Waste Strategy for England have resulted in a hold up of potential changes to local waste and recycling services until National requirements are confirmed.

Achieving net zero requires considerable investment to retrofit properties and decarbonise our services, requiring all our services to make a positive change. Securing external funding is critical to achieving our targets and we are committed to seeking new funding opportunities. Over the year, we have been successful with some bids and unsuccessful with others. We will learn from these experiences to provide the best possible chance of success in future bids.



Planning to reduce flooding events

Norton Canes Community Library

Norton Canes library has suffered several surface flood events over recent years. Flood Mitigation Measures are proposed through the FCRIP Fair Project. An investment of £58,000 will incorporate Natural Aquifer solutions – the first of its kind to be installed in Staffordshire. Being underground allows the opportunity to support planting to be done above ground, improving the local biodiversity of the area and improving groundwater quality.

Dunston Village

Dunston village can often be cut off from nearby facilities by flooding. School children from nearby St Leonard's first school can have up to a 20-mile diversion to get to the school when the village floods. Funding from the Environment Agency of £68,000 and further investment by the Council of £300,000 will allow a new highway bridge in the village to be built and reduce the risk of the village being cut off during flood events. It is intended this project will be delivered in the early winter of 2023.

Bishops Wood

Bishops wood has historically suffered from flooding, causing widespread damage to residential properties. Working in collaboration with the local community, Local Parish, and private landowners an innovative project has been developed with funding of £142,000 from the Environment Agency. The project includes a ditch around the west side of the village and a flower plugged embankment wall, which will assist overland flows to be directed to a nearby watercourse. The self-growing wall will transform a current grassed area and encourage greater biodiversity. The programme for delivery will start in early 2024.

Wyrley Brook Mitigation Scheme

Staffordshire County Council is working in partnership with Severn Trent to design the Wyrley Brook Mitigation Scheme. To date £50,000 has been secured to assist Severn Trent to investigate and scope options to discuss with the wider community. This project will not only reduce the impact of flooding but, will hopefully with agreement, incorporate new wetland habitats and new public open spaces. This is a long term project and will not be fully delivered until 2029 with delivery of certain phases starting in 2025. This project is expected to achieve £2.5 million in Flood Grant Aid and £6.5 million in Severn Trent Funding.

Festival Court Cannock

The thriving local community hub of Pye Green Road Cannock has flooded consistently for the past 5 years. To address this problem, a Flood Grant of £8,000 has been obtained to look into the local drainage system. The plan includes creating two new tree pits that can hold excess floodwater. These pits will use a natural underground water storage solution beneath the parking areas. This approach aims to manage flooding and water buildup more effectively in the area. This scheme is now on the National Environment Agency pipeline programme and will attract £74,000 in grant aid and will be delivered in 2024/2025.





Appendices



Appendix 1

Staffordshire County Council approach to Climate change

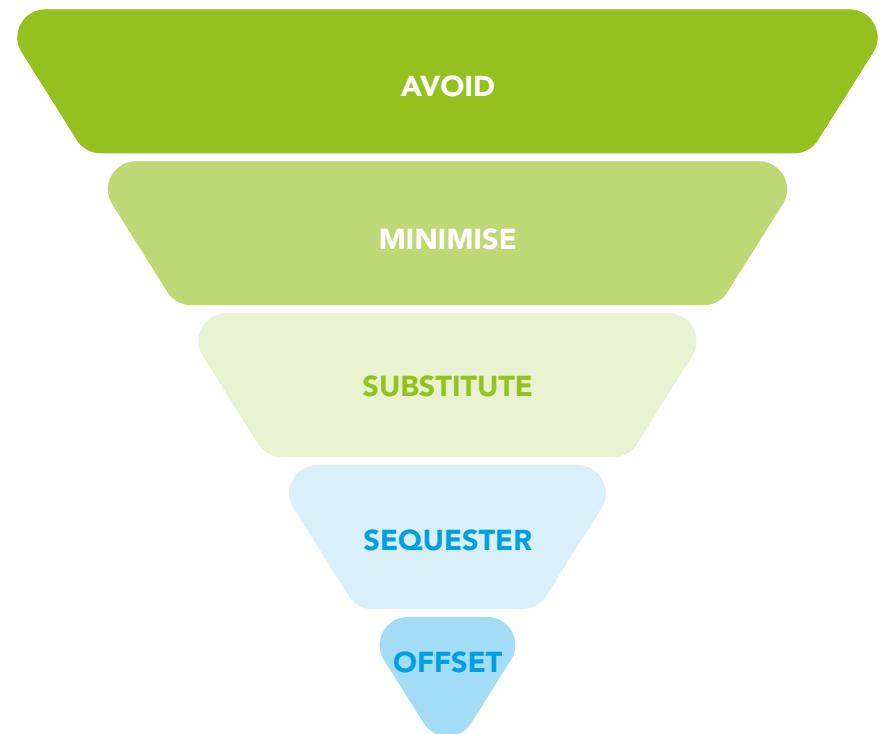
The County Council has championed the climate change agenda for many years and our carbon reduction strategy, Green Shoots, published in 2011 built on previous commitments to this agenda. Staffordshire County Council recognises that climate change is the biggest environmental challenge facing the world 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 legislation, 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 attributed to many of our schools converting 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 adhere to the carbon hierarchy principles of avoiding and reducing emissions as a priority, where emissions cannot be reasonably reduced any further we consider sequestering.



We also recognise that we need to put in measures so we can adapt to our changing climate.

Appendix 2

How we measure our carbon emissions

Each year Staffordshire County Council monitors its carbon emissions although it has no statutory duty to report these emissions. Due to the complex structure of the Council's operations, with many services operated under contract or lease, SCC has selected to report on emission sources which it has operational control over, i.e. those services which the Council has the full authority to introduce and implement its operating policies.

The Department for Environment, Food and Rural Affairs (DEFRA) carbon conversion factors provided for use by UK and international organisations to report on greenhouse gas emissions have been used for the calculations. Emissions are reported as CO₂e to account for other greenhouse gases such as methane and nitrous oxide in addition to carbon dioxide. We measure carbon emissions each year from April to March. The DEFRA conversion factors, which provide the data to allow emissions to be calculated are provided by calendar year. To calculate the Council's annual emissions we use the emissions factors which correspond with April to December as most of the reporting falls within this period and apply this to the full reporting period of 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.

A renewable energy tariff is in place for all corporate properties, schools and street lighting. Carbon emissions for electricity use is split into two categories, generation use which is counted as zero emissions for renewable energy and transmission and distribution. The transmission and distribution element is included in the emissions footprint to demonstrate carbon emissions related to purchased renewables. Schools which have converted to academies are no longer included as a Council emission. Academy schools are in total control of their operations and Staffordshire County Council receive no income for their operation or management. The Council is however committed to sharing information with the academies to encourage adoption of the key strategies and so reduce their energy consumption and emissions too.



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.



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