

# Climate Change

Annual Report 2020/21



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# Forward

**The consequence of climate change is getting ever more prominent and the scientific evidence is clear there is an urgency to start addressing the issues now before irreversible damage occurs.**

Staffordshire County Council has a key role to play in tackling climate change by reducing the emissions from our services, working with others to lower emissions and helping to create a county which is more resilient to climate change.

We take climate change very seriously and since declaring a climate change emergency in July 2019 we have been delivering projects and putting plans in place to identify how we will achieve net zero by 2050.

I am proud of the significant positive steps made last year. They have set us in the right direction to achieve our net zero target. This is our first Annual Report since declaring the Emergency and allows us to share our achievements, the plans we have in place and the ambitions for the future. We may still have many challenges to overcome if we are to achieve our target, although I am confident the work over the last year has set a strong foundation for our net zero journey.

**Simon Tagg**

*Cabinet Member for Environment, Infrastructure and Climate Change*



# Introduction

This annual report provides details of the performance of Staffordshire County Council (SCC) in the area of carbon management and monitoring. It presents our carbon emissions for 2019/20, sets out our achievements over the past year and also highlights the challenges ahead.

In July 2019 the Council declared a climate change emergency and a target to achieve net zero emissions by 2050. This replaced the previous commitment to reduce carbon emissions to 80% of the 1990 baseline.

As a first step towards achieving the net zero goal the Council published the first Climate Change Action Plan in November 2020.

The plan identified five key areas for action:

- **organisation carbon reduction**
- **air quality**
- **natural environment**
- **waste**
- **behaviour change**

The Strategic Development Framework released in February 2021 sets out how the authority will work towards achieving the revised carbon emissions target, using the five key areas identified for delivery in the Action Plan.

## Staffordshire County Council Emissions

The Council has made a commitment to monitor its carbon emissions each year and is calculated during the following financial year. The emissions presented in this report represent the financial year 2019/20.

Two additional activities of corporate fleet and Amey (Highways) grey fleet were included within scopes for the 2019/20 monitoring. As these activities only produced an additional 107 tCO<sub>2</sub>e (fleet 97 tCO<sub>2</sub>e and Amey grey fleet 10 tCO<sub>2</sub>e) it did not require an adjustment to the 2018/19 baseline.

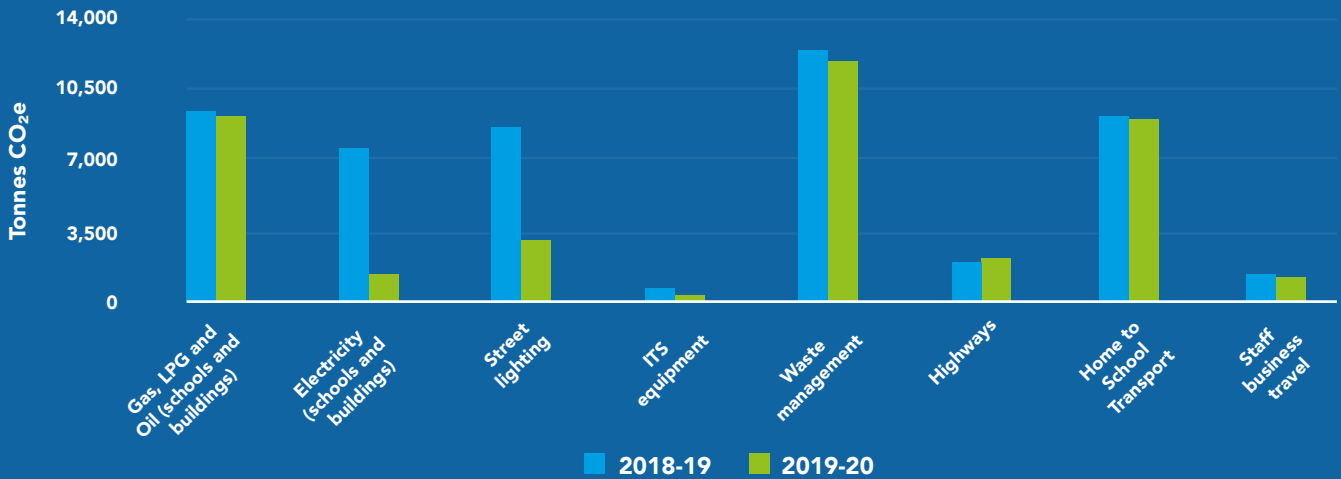
The Councils total emissions for 2019/20 was 37,967 tCO<sub>2</sub>e, a decrease of 12,685 from 50,652 tCO<sub>2</sub>e the previous year. This decrease is largely attributed to maintained schools and corporate buildings transferring to a renewable energy tariff in August 2019, as well as street lights and intelligent transportation systems (ITS) converting to a renewable tariff the following October. Although transferring to a renewable tariff has substantially reduced our carbon footprint we continue to investigate and prioritise reducing our energy needs across all our services.



Figure one compares the emissions by area of operation from 2018/19 to 2019/20. Apart from highways, which had a very small increase all other areas of operation experienced a decline in emissions from the previous year. The data for water supply and treatment for maintained

schools and corporate buildings was not available for 2019/20. Water only forms a small part of the total emissions and a constant of 99 tCO<sub>2</sub>e from the previous year was applied.

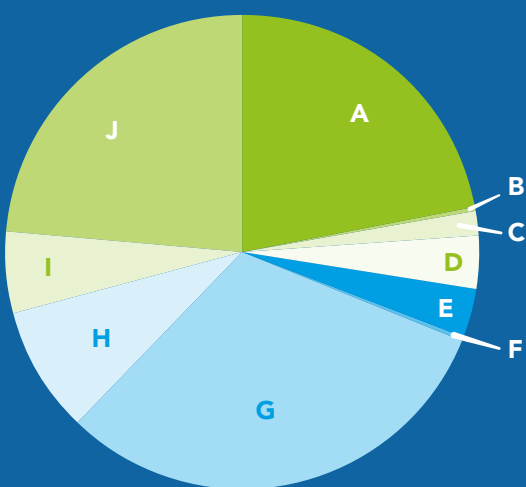
**Figure 1 Carbon emissions comparison by area of operation**



With the shift to a renewable energy supplier, waste management now forms the largest proportion of the Councils carbon footprint,

with home to school transport and heating of our schools and corporate buildings collectively making 79% of all the Councils emissions.

**Figure 2 carbon emissions by area of operation 2019-20 (tonnes CO<sub>2</sub>e)**



- A. Gas consumption - 8425
- B. LPG consumption - 35
- C. Heating Oil consumption - 673
- D. School and Buildings - Electricity consumption - 1293.8
- E. Fleet - 97
- F. Staff Travel- 1243
- G. Water Supply and Treatment - 99
- H. Waste Handling - 11775
- I. Electricity Street Lighting and ITS - 3312
- J. Highways (Amey) - 2095
- K. Home to School Transport - 8919



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# Achievements

## Organisational carbon reduction

**Schools and corporate buildings** – The Staffordshire County Councils maintained schools and corporate buildings transferred over to a renewable energy tariff in August 2019, which offset 5,175 tonnes of carbon in 2019/20. Almost £1.5 million pounds has been invested in 41 maintained schools on energy reduction projects to improve the heating systems and provide more efficient lighting. Just over £800,000 was invested in corporate buildings, such as children’s centres libraries and enterprise centres on heating systems, improved insulation and more efficient lighting. Chasewater Innovation Centre and Cannock Chase Enterprise centre installed biomass boilers to allow a transition to a renewable heating system.

**Renewables** – The County Council have photovoltaics (solar PV) installations on 10 libraries and 14 County Farms, which put 274,000 kwh back to the grid in 2019/20, the equivalent of saving 70 tCo<sub>2</sub>e. Options are being investigated for a large scale solar farm project. Provisional scoping work to consider potential sites and the investment required to develop the project is in progress.

**Street Lighting** – Staffordshire were successful in receiving Salix funding to upgrade existing street lighting to modern LED equivalents. The LED project will upgrade 47,700 lights work has started and will be delivered over a 4 year period, reducing emissions by 2,650t per annum and saving the council over a million pounds a year.

## Natural Environment

**Flood Management** – Staffordshire has been experiencing increased flooding, especially in the last few years. Last year 281 properties reported internal flooding with an estimated damage and recovery cost in excess of £8 million. Rather than just installing hard-engineering solutions, the Council is also investing in natural flood management designs and approaches. In 2020/21 £140,000 was invested in soft engineering works, such as community earth bunds and community fencing across 8 sites to reduce flood risk. Looking forward, the Flood Risk Team have conducted a Buildings at Risk Analysis and are also commissioning an innovative Community Vulnerability Assessment to better understand the risk of flooding and to help identify a forward plan of schemes.

programme. This will lead to enhanced community resilience through improved and innovative digital and physical infrastructure working with regional and public sector partners, universities and charity.

**Habitat management** – Our Regeneration and Highways teams continue to enhance the County’s prosperity through schemes including i54 and highways improvements, such as the Western relief road in Stafford.

This year as part of these schemes, thousands of native trees were planted to form woodlands and hedgerows for the enhancement of local landscape and biodiversity habitats, along with enhancing wetlands/ponds. All of which will have a positive effect on reducing our carbon impact.

The Flood Risk Team have also been successful in obtaining national funding for an innovative community resilience scheme across a 6-year



# Waste

**Waste campaigns** - 2020 saw the launch of the Waste Savvy Facebook page providing helpful information on waste and recycling, which achieved over 100,000 views. This was also supported with the recruitment of 25 'waste savvy' volunteers who throughout the year provided nearly 50 online sessions to community groups and schools on the importance of reducing, reusing and recycling more.

Compost improves the soil structure and can reduce the amount of watering needed, which is really important as we adapt to our changing climate. Discounted compost bins were offered to residents, with 1,500 bins issued over the year. This campaign has been supported by the Waste Savvy volunteer project who provided webinars, including on the do's and don'ts of home composting.

**Mixed Recycling Facility** – Staffordshire County Council is leading on the scoping for a new mixed recycling facility to take all of Staffordshire's kerbside recycling for sorting, with over 100 sites reviewed. An area has been identified which would offer the greatest reduction haulage/associated carbon miles and has received support from the District Councils.

**Highways** - The Councils Highways Contractor Amey, throughout the 2020/21 period, continue to trial new materials such as Warm Mix Asphalt as well as GI Pave which include bitumen additives to increase asphalt material shelf-life, longevity and wearability. These measures reduce carbon and waste output whilst maintaining quality highway maintenance and make the surface more resilient to the more extreme weather conditions of climate change. 100% recycling of used road construction material continues as well as operational depot/site waste achieving on average recycling of 80-90%.

# Air Quality

**Air Quality and schools** – Covid19 had a significant impact on school engagement last year. Online events and communications replaced the planned face to face events to deliver air quality messages.

Active travel to school is being encouraged. SCC awarded a charity £500 to build safe storage areas for bikes at 10 schools. A further 13

schools received £6,857 of funding through the Councils Climate Change grant for onsite school cycle parking and bike sheds.

£281,000 was invested in the Council Bikeability scheme and delivered 10,000 training sessions to provide children with the practical skills to cycle safely on the roads.



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# Behavioural Change

**Working with businesses** – SBEN launched the GROWTH mapping diagnostic tool for businesses in February 2021, with 17 businesses registering to have an assessment in just one month. The tool helps businesses to identify their strength and weaknesses on sustainability and provides advice on how to analyse and prioritise environmental sustainability goals.

SBEN deliver a Low Carbon Business Evolution Programme to help businesses across the Stoke and Staffordshire LEP reduce their carbon footprint and increase energy efficiency. Through offering free specialist low carbon reviews to businesses and grant funding of up to 60% to implement the recommendations the programme delivered a saving of 465 tonnes of carbon over the year for Staffordshire businesses.

**Climate Change funding** – The Climate change action fund, launched in November 2020 provided funding to local schools, community groups and parish councils to help reduce the impact of climate change. The scheme attracted a wide diversity of applications and awarded £76,000 across 114 applicants.

## Next steps

To achieve net zero the Council needs to achieve a reduction of 1600 tonnes of carbon each year from the 2018/19 baseline. Last year we exceeded this target through transferring to a renewable tariff for schools, corporate buildings and street light electricity. Although we are ahead of our target for carbon reduction we recognise that there are some significant challenges ahead with many of the easy quick win solutions now completed. We also recognise that we will not be able to eliminate all of our emissions by 2050 and will start investigating offsetting opportunities such as tree planting.

Successful applications ranged from upgrading lighting to LED in schools and community buildings, building bike shelters in schools and tree planting in schools and community spaces. For further information on the scheme see appendix 3.

**Our approach to managing climate change** - Following the Councils climate change declaration to achieve net zero carbon emissions by 2050 an action plan was published in November 2020. The Plan listed 22 initial actions for the Council to progress, based on 5 priority themes.

To complement the Climate Change Action Plan and to provide an update to the Green Shoots (2011) publication a Climate Change Strategic Development Framework was published in February 2021. This framework sets out the long term approach to delivery in working both internally, with partners and the Staffordshire community to achieve the net zero carbon emission target.

A refresh of the climate change action plan is in progress to identify new programmes and projects for the next five years. Extensive consultation with the diverse range of services the council provides has taken place to identify challenging practicable targets.

The last year has predominantly focussed on our internal processes and programmes. Our Strategic Framework identifies the importance of taking a coordinated action with other Staffordshire councils, businesses, the voluntary sector and residents. It is our ambition to work towards a co-ordinated approach to work towards achieving shared goals.



# 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 Councils Strategic Plan.

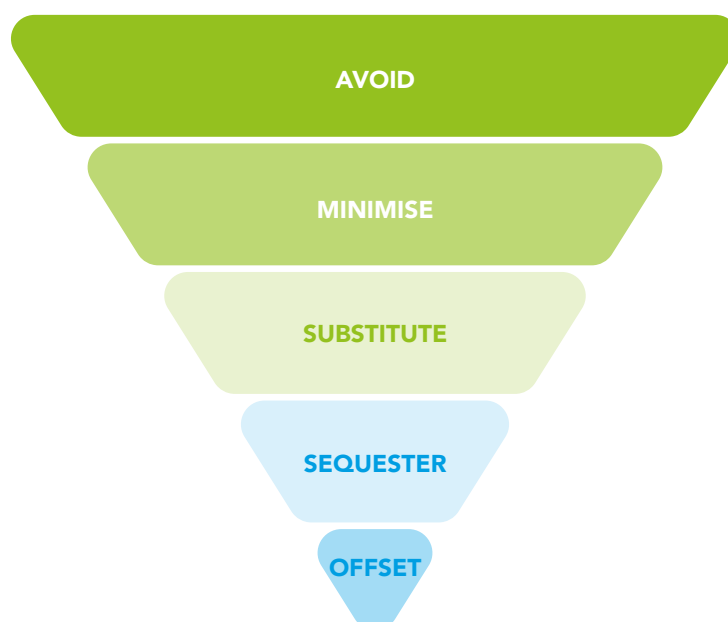
With the setting of new legislation in May 2019, through an amendment to the Climate Change Act 2008, the UK became the first major economy to pass a law requiring the country to bring all greenhouse gas emissions to net-zero by 2050. This means that the country needs to remove as much carbon from the 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 DEFRA 2019 carbon conversion factors, provided for use by UK and international organisations to report on greenhouse gas emissions have been used to calculate the 2019/20 emissions.

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.

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, emissions are zero.

**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 associated with Amey (Highways) operation
- home to school transport.



# Appendix 3

## Climate Change Action Fund

The climate change action fund ran from 2 November 2020 to 26 February 2021. Grants of up to £1000 were invited from schools, voluntary and community groups, societies, charities and parish councils. To encourage a spread of funding across the county, each county councillor received an allocation of £2,000 to award to their area.

148 funding requests were received, with £76,074 being awarded across 115 applicants. Of the 115 successful applicants, 72 of these received the full amount requested. Lower levels of funding were awarded to applicants where parts of the project were not considered eligible for funding or Councillors had insufficient budget to fund a project in full. Reduced funding was awarded to 43 applicants.

Projects which were considered high priority to receive full funding included:

- energy efficiency measures including LED lighting upgrades, improved insulation and improvements to glazing either to reduce excessive solar gain or improve thermal efficiency.

- bike racks and scooter pods to encourage more active travel and reduced car use
- tree planting

Projects representing little or no medium to long term carbon benefit or adapting to our changing climate were not funded and included:

- general biodiversity improvements, such as wildflower planting on areas not currently intensively managed
- outdoor play areas and equipment
- Improving environmental awareness, unless it specifically related to climate change.

For any project to be delivered the landowner had to demonstrate permission for the project was granted, a number of projects were unable to receive landowner permission.

