



Environmental & Sustainability Strategy 2022 – 2027

Our **Environment**



Staffordshire
Fire and Rescue Service
preventing • protecting • responding



Foreword

Welcome to Staffordshire Fire and Rescue Service's Environmental Strategy for 2022-2027. This strategy has been developed by Staffordshire Fire and Rescue Service and endorsed by the Staffordshire Commissioner Fire and Rescue Authority.

In Staffordshire we recognise that we have a key role to play in protecting our environment and this strategy outlines the national and local case for action on climate change and sustainable development. We have an incredibly diverse environment across the county and we are committed to work with communities to reduce the number of fires and the harmful carbon emissions that are created by them, whilst also making sure that our resources, like our emergency fleet, are as environmentally friendly as they can be whilst still being appropriate for the job.



We've made good progress in terms of reducing our carbon footprint since 2007, however we recognise there's more work to do, and this strategy outlines the targets we've set ourselves as a Service in order to continue to play our part in reducing our environmental impact as an organisation. Through a proactive approach to reducing our resource use, we will not only deliver reductions in our direct carbon dioxide equivalent emissions, but also achieve significant reductions in the environmental impact of our supply chain and our controllable costs.

To achieve our environmental journey, transforming our procedures and processes to become a more environmentally sustainable organisation, we will need the support of everyone who works for the service. Every change, no matter how small it seems, can have an impact on our carbon emissions, so staff engagement and participation in the activities we've put forward in this strategy will be key to reaching our targets.

Our progress against this strategy and the individual action plans will be reviewed through the Services' internal governance structure and by the Staffordshire Commissioner's Strategic Governance Board, ensuring we are held to account for playing our part in protecting our environment.

Rob Barber



Introduction

Staffordshire Fire & Rescue service launched its first Environmental Protection Strategy in 2011. Over the last ten years the need for action has intensified, driven by the 'climate emergency' we are now facing.

The early Strategy set out a strong foundation for environmental awareness and made a clear case for change. It's now essential that we accelerate this work, generating and implementing solutions to reduce our carbon footprint, better protecting our environment in any way we can.

We will assess what needs to be done and set out key measures to allow us to monitor areas that affect our environmental action plans. These will enable us to identify areas of concern, reduce our waste, emissions and improve air quality. It will also support a positive culture of change enabling all staff to increase their environmental knowledge and actively participate in protecting our environment.

In our previous strategy our carbon emissions equated to approximately 3,898 tonnes. Out of this total 3,192 tonnes were created through the use of our buildings and 706 tonnes came from fuel consumption. We must now work together to take bold steps to reduce these further. There are quick wins in general such as good housekeeping, recycling waste, turning lights off when not required, and some low cost ideas such as replacing light bulbs for low energy ones. However, it's now the time to think wider and implement solutions which will be more far-reaching.



Moving forward

Our work moving forward will need to ensure our ways of working are sustainable, in terms of being maintained and in terms of the environment, to influence the following three areas:



Environmental - Eliminating the use of climate change contributing pollutants



Social impact - Safe working environments, air quality impacts



Economic - Cost saving resulting in reduction of carbon footprint

All actions can make an impact and throughout the strategy implementation period we will continue to encourage staff to generate and implement ideas for environmental change. However, it's now time to plan the work and activity that will future proof our vehicles and buildings to support our environment, community and workforce.





Moving forward

Over the next 5 years, we will prioritise the following improvements:



1. Waste reduction



2. Reduce our energy usage



3. Air quality improvement



4. Operational incidents



5. Green space generation

We will focus on the following areas to create environmental improvements:



Buildings and infrastructure (waste disposal and utilities)



Vehicles and travel (fuel & mileage)



Incident prevention /mitigation (wild fires & building fires)



Culture (taking ownership, implementing schemes such as green spaces)



Is the environment still an issue?

A Stern warning:

“The investment that takes place in the next 10 to 20 years will have a profound effect on the climate in the second half of this century and in the next. Our actions now and over the coming decades could create risks of major disruption to economic and social activity on a scale similar to those associated with the great wars and the economic depression of the first half of the 20th century and it will be difficult or impossible to reverse these changes.”

Source: Stern Review The economics of climate change 2007

The UK government has set a target of net zero greenhouse gas emissions by 2050, compared to 1990 levels. Net zero refers to achieving an overall balance between the emissions produced and the emissions taken out of the atmosphere.

If we don't reduce our emissions, we face future climate change risks, which will affect us as a service, such as:



More frequent flooding, caused by wetter winters and stronger storms



High drought risk, with water shortages caused by hotter summers



More extreme wildfires, causing high carbon release and costs to wildlife and humans



More air and water pollution due to longer hotter summers



Areas of focus

There are two main elements we need to achieve, adaptation and mitigation.

Adaptation is where we change our practices to adapt and reduce our vulnerabilities to future climate change.

Mitigation is where we reduce and prevent the release of greenhouse gasses into the atmosphere in the first place.

There are 5 areas of focus in this strategy and key departments will be responsible for creating relevant action plans to reach the following aims.

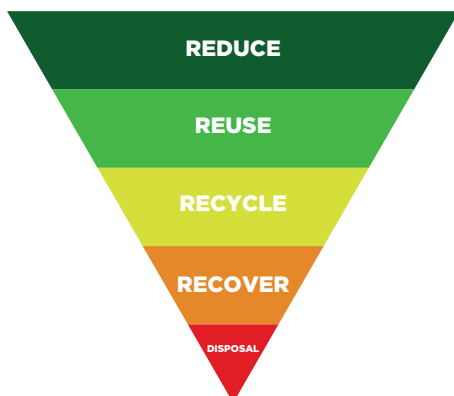


1. Waste reduction

Buildings and infrastructure (waste disposal)

We would like to reduce the amount of waste sent for incineration and encourage more recycling. We can reduce our use of single use materials by reviewing what we buy, encouraging staff to reuse products where possible to increase their lifespan and reduce waste. Waste reduction will bring other benefits to the service including possible cost savings.

- Encourage staff to use reusable drink / food containers
- Review site recycling
- Encourage staff to go paperless with due consideration of needs when paper may be necessary
- Have a stronger focus on waste management in our procurement process
- Reduce waste generated in vehicle workshops where possible, whilst finding better ways to reuse and dispose of the waste we can't avoid generating
- Source local sustainable food to reduce food miles
- Reduce the amount of single use plastic in our catering facilities





Areas of focus



2. Reduce our energy usage

Buildings and infrastructure (utilities)

Turning down a thermostat in a building by just one degree could save 10% on heating costs and carbon dioxide (CO₂) emissions. Lighting and electrical equipment account for a high proportion of energy use in the workplace. We will measure our energy use and carbon release throughout the strategy implementation to help us reduce our impact.

Water hungry lifestyles and climate change mean that although we are likely to experience more flooding issues in the future, we are also likely to experience water shortages. Most workplaces could reduce their water use by as much as 20-30 per cent with free or low-cost measures.

- We will review our buildings for energy efficiency and establish energy efficient practices
- Look at upgrading / adapting our lighting and heating
- Measure our carbon release on a station by station basis
- Encourage individual energy saving ideas and practices with consideration of people's personal temperature variances





Areas of focus

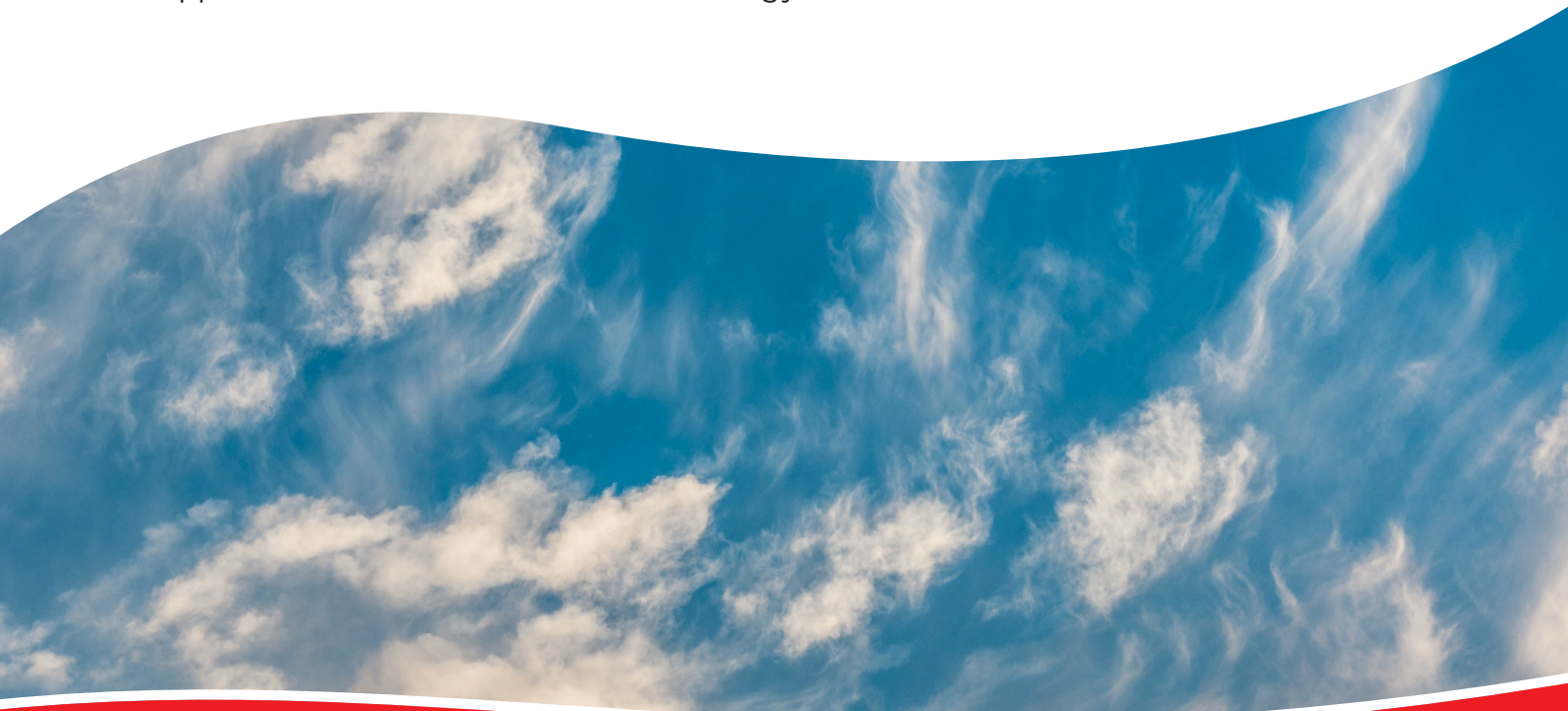


3. Air quality improvement

Vehicles and travel (fuel and mileage)

Poor air quality can affect both our health and environment. Our transport movements to and from work, use of service vehicles as well as the type of fuel we use, can all have an effect on our local air quality.

- Reduce distances travelled
- Start every new vehicle purchase plan with an aspiration for it to be Zero and Ultra Low Emission Vehicles (ULEV) – then justify, if not why not?
- Focus on removing the oldest and most polluting vehicles from our fleet
- Use “cleaner” vehicles to travel essential miles
- Change the way we work, encourage the use of virtual meetings
- Future proof for the most environmentally efficient fuel for the future – Electric, Hybrid, Hydrogen
- Support the Government’s Clean Air Strategy 2019





Areas of focus



4. Operational Incidents

Prevention and mitigation (wild fires & building fires)

The incidents we attend, such as wildfires, waste fires and building fires, release emissions to the atmosphere. We will work with partners to understand and tackle these issues before they begin. We've previously experienced issues within Staffordshire such as peat fires in the Moorlands and South Staffs, large fires on Cannock Chase and various waste fires at sites across Staffordshire.

A recent article by Swansea University explains the concern:

“Forests capture carbon from the atmosphere in the trees and soils. Some of this carbon ends up on the ground as fallen litter, and accumulates in the soil. Soils are one of the biggest carbon reservoirs on earth, storing more of this element than the atmosphere and the aboveground biomass put together.

When forests burn, vast amounts of the stored carbon is emitted; but, when vegetation in burned areas regrows, it draws this carbon back out of the atmosphere. This is part of the normal fire-recovery cycle. However, when the recovery of vegetation is very slow or incomplete, for example where tropical forests are replaced with agricultural land, the carbon that is not re-captured stays in the atmosphere and contributes to climate change. Rising carbon emissions caused by human activity, and increases in forest fires, especially deforestation and peatland fires, continue to pose a serious threat to global climate”

We would like to prevent these fires from occurring in the first place. We can do this through:

- Summer prevention plans
- Accidental dwelling and commercial building reduction focus
- Removal of Waste sites

At the same time, we can mitigate the effects if these incidents do occur by:

- Using new innovative equipment
- Applying tactics and new methods to extinguish fires quicker
- FOG (forward operations group)
- Building wildfire resilience into forest management planning
- Considering environmental protection when training and during incidents



Areas of focus



5. Green space generation

Culture (taking ownership, implementing schemes such as green spaces)

Green spaces benefit the environment, and our own wellbeing, through improved air and water quality.

It's important we promote the green spaces on our sites and protect sites within our County, such as the moorland areas and Cannock Chase. Supporting tree planting and encouraging office plants can improve air quality as well as the working environment. Indoor greenery can be particularly beneficial to office workers as it boosts oxygen levels and removes harmful pollutants.

- We will introduce plans that are more effective for our preventative work and work directly with our partners
- We will work with local NHS systems and professionals, including Sustainability and Transformation Partnerships and Integrated Care Systems; to promote the role greenspace plays in both individual and population health outcomes
- Where possible, promote our green spaces
- We will publicise green spaces through our wellbeing work
- Encourage staff to 'get outside and volunteer'





How are we doing?

We will use Key Performance Indicators (KPI) to measure our progress, these will enable us to identify areas of success and others that require further improvement. The following areas will be integral to monitor:



- Waste



- Mileage



- Diesel usage



- Electricity



- Gas



- Water



- Plastic

Emission measuring can be divided into three areas:

Scope 1 = Direct Green House Gasses (GHG)

Emissions from activities owned or controlled by our service such as, boilers, vehicles and production.

Scope 2 = Indirect emissions

Emissions released into the atmosphere associated with our consumption of purchased electricity, heat and cooling.

Scope 3 = Other indirect emissions

Emissions that are a consequence of our actions, which we do not own or control, such as waste disposal.



Calculating our carbon footprint

To calculate our carbon footprint, we take a measurement, such as KWH (electricity), and multiply by a carbon factor. This provides a carbon release figure in Kilograms, when this is converted into tonnes we have the final carbon footprint figure.

Breakdown of our carbon release and total carbon footprint for 2015/16.

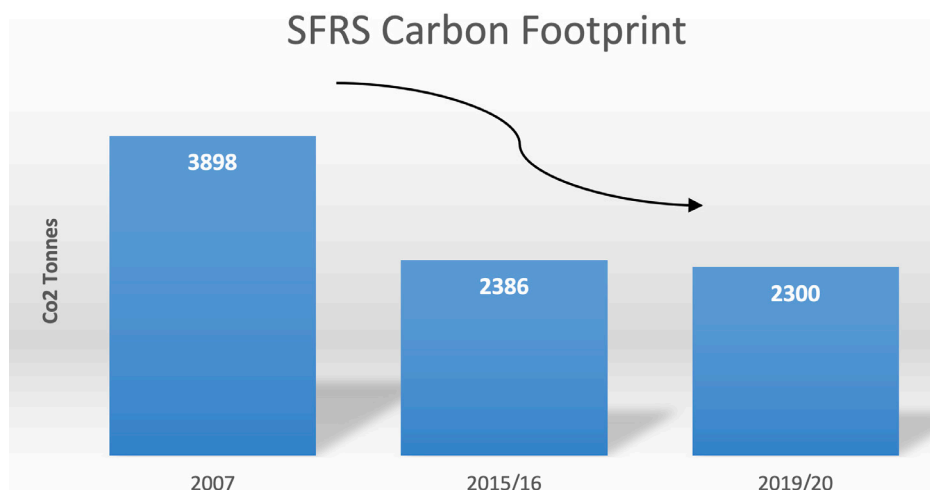
2015/16			
Electricity	KWH	Carbon Factor	kg CO ₂ e
	3,523,184	0.23314	821395
Gas (natural)	KWH (gross CV)	Carbon Factor	kg CO ₂ e
	4,595,334	0.18387	844944
Diesel	Lts	Carbon Factor	kg CO ₂ e
(2019/20 Figures)	263,201	2.54603	670118
Business miles	Miles	Carbon Factor	kg CO ₂ e
	174167	0.27108	47213
Waste	Tonnes	Carbon Factor	kg CO ₂ e
	107	21.317	2281
Total KG			2385950.93173
Carbon Footprint	2386	CO ₂ (Tonnes)	

Breakdown of our carbon release and total carbon footprint for 2019/20.

2019/20			
Electricity	KWH	Carbon Factor	kg CO ₂ e
	3,590,162	0.23314	837010
Gas (natural)	KWH (gross CV)	Carbon Factor	kg CO ₂ e
	4,040,833	0.18387	742988
Diesel	Lts	Carbon Factor	kg CO ₂ e
(2015/16 Figures)	263,201	2.54603	670118
Business miles	Miles	Carbon Factor	kg CO ₂ e
	178425	0.27108	48367
Waste	Tonnes	Carbon Factor	kg CO ₂ e
	83	21.317	1769
Total KG			2300252.73442
Carbon Footprint	2300	CO ₂ (Tonnes)	

(2019/2020 diesel figures had to be used as 2015/16 figures were not available.)

In summary, we are heading in the right direction with an overall reduction in our carbon footprint since 2007:





The challenge

To make significant change we need to set challenging but realistic targets for carbon reduction.

Working towards the targets set in the Climate Change Act 2008 for the UK to reach net-zero greenhouse gas emissions by 2050, compared to 1990 levels, we will also try to meet our own service targets:



Waste reduction

It is difficult to monitor our specific waste streams in our service however we do know that our waste is either recycled or sent for incineration. During the COVID pandemic, it was estimated that 85% of the waste collected by our contractor (including waste collected from other organisations, not just SFRS) was incinerated and 15% was recycled.

We intend to:

- Reduce the amount of waste incinerated to a figure between 35% - 50% by 2030



Energy usage

We will review electricity and gas usage at all our sites, finding innovative solutions to support the reduction.

We intend to:

- Reduce electricity use by 10% based on 2019/20 figures by 2030
- Reduce gas use by 20% based on 2019/20 figures by 2030



Air quality improvements

We will review electricity and gas usage at all our sites, finding innovative solutions to support the reduction.

We intend to:

- Reduce electricity use by 10% based on 2019/20 figures by 2030
- Reduce gas use by 20% based on 2019/20 figures by 2030



The challenge



Procurement and the supply chain

Procurement is to be considered as a cross-cutting theme throughout each of the priority areas identified in this strategy.

A close working relationship and early engagement between key stakeholders and Commercial Services will not only ensure alignment to our procurement plan, but will also ensure that we meet our environmental targets.

We intend to:

- Ensure environmental/sustainability factors are considered at the procurement strategy stage.
- Specify goods/services which are compliant with environmental standards.
- Consider the whole life cycle cost of a product.
- Includes a focus on environmental / sustainability risks in the performance management of key contracts.
- Measure and understand the environmental/sustainability impacts of our supply chain.
- Comply with government requirements such as the assessment of Suppliers' Net Zero Carbon Reduction Plans.



Culture

Changing mindsets so environmental issues are considered regularly in 'business as usual' will be vital to ensuring positive change. The adoption of green spaces as havens for wildlife and wellbeing will be a visible reminder of this change.

We intend to:

- Increase the biodiversity of our outdoor spaces by 2030



Next steps

We will encourage leads/departments to move this work forward whilst gathering support and ideas creative solutions from the whole service. We will ask the members of the Environmental Strategy Working Group to identify 'green champions' to drive and support this work for the next 5 years.

The following action plans will be created by key stakeholders and monitored through Service Delivery Board (SDB), to ensure appropriate activities are in place to meet the targets set in this plan:



Buildings and infrastructure (waste disposal and utilities)

= Property & Logistics



Vehicles and travel (fuel & mileage)

= JETS and Department Heads



Incident prevention /mitigation (wild fires & building fires)

= ERT/ CPP



Green space generation (culture - behaviour and attitude)

= WIC