



AVON
FIRE & RESCUE



Environmental Report April 2020-March 2021

PREVENTING PROTECTING RESPONDING

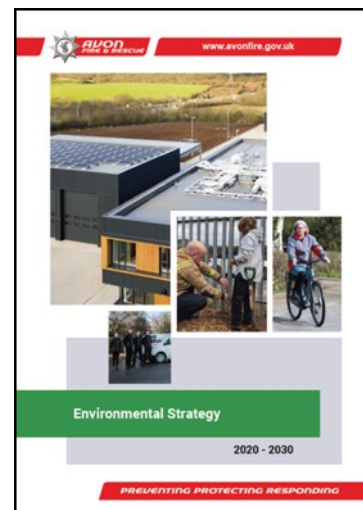
Introduction

Over the past year, Avon Fire Authority has taken significant steps to acknowledge the climate crisis and biodiversity loss that the world is facing, by declaring both a Climate and an Ecological Emergency. This followed the approval of Avon Fire & Rescue Service's (AF&RS) Environmental Strategy 2020-2030¹, which outlines the Service's approach to protecting the environment, managing the Service's impacts and being more climate-resilient.

Central to the Strategy are ambitious commitments of:

- Net Zero carbon by 2030
- Demonstrating environmental leadership in the Fire & Rescue sector

The Strategy is framed around 6 key principles, each of which includes specific aims, which are being progressed through an annual Action Plan.



During 2020-21, AF&RS continued to make significant environmental improvements and resource efficiencies. This report maps our environmental performance against the aims detailed in our Strategy and the underpinning annual Action Plan; as well as mapping our progress against the relevant UN Sustainable Development Goals in recognition of the shared responsibility to work towards global goals concerning people, planet and prosperity for all.

Net Zero Carbon by 2030 – Commitment Progress

In line with our Net Zero carbon by 2030 commitment, AF&RS has now replaced all environmental performance indicators with a single indicator: Annual Carbon Emissions Reduction from 2019/20 emissions towards Net Zero by 2030. AF&RS-reported carbon emissions are made up of building energy consumption (gas, electricity and heating oil), fleet vehicle fuel, and essential / casual and lease vehicle mileage claims. These are known as Scope 1 & 2 emissions and are from all activities, operations and sites over which we have direct control.

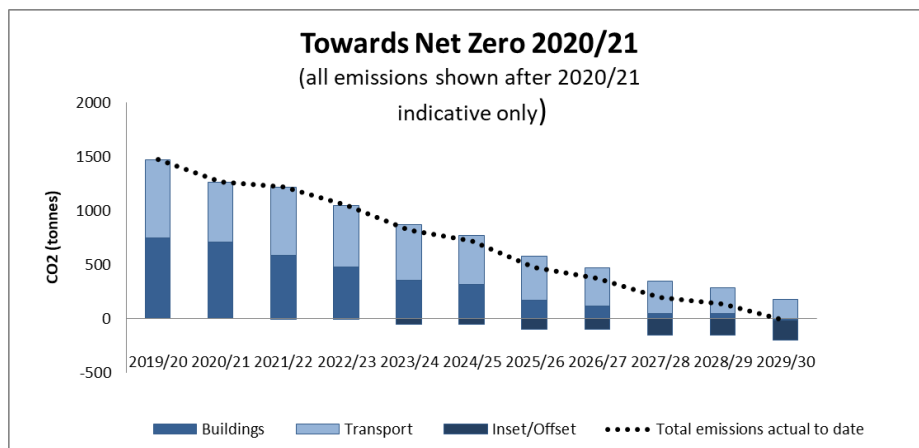
Performance Indicator	Target	Performance 2020/2021	Trend
Carbon Emissions	10% reduction/yr from 2019/2020	14%	↑

A linear trajectory would be 10% reduction per year, however in practice this will vary according to measures taken and technologies that are (or are not yet) available over the next 10 years. By the end of 2020/21 (Year 1), we have already achieved a 14% reduction which gives us a robust basis for future years. The actions taken which contribute to this reduction are detailed in the Action Plan review (Appendix 2).

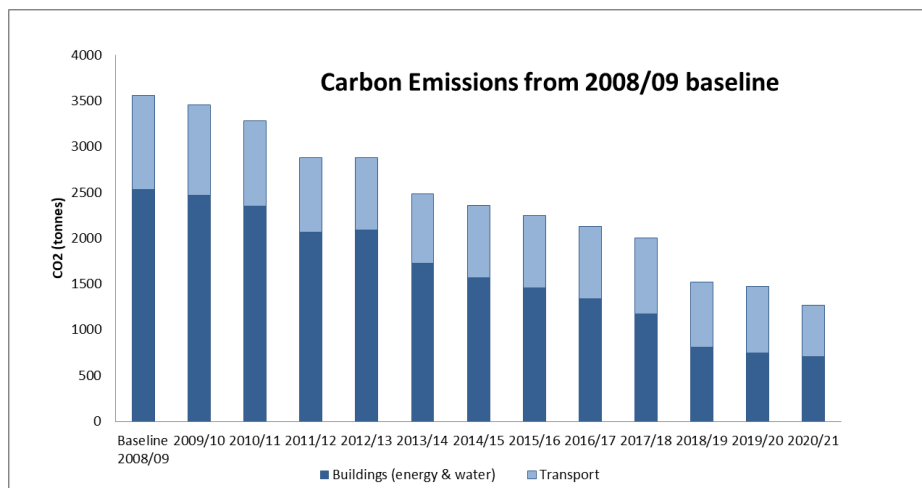
The graph below shows actual progress to 2020/21, then an indicative trajectory up to 2030. This assumes that any remaining emissions would be 'netted' off using minimal offsets or insets (e.g. tree planting to sequester carbon or investment in on- or off-site renewables) to deal with unavoidable

¹ <https://www.avonfire.gov.uk/documents/category/234-environment>

emissions, for example from diesel-fuelled fleet vehicles or essential air travel, which are not zero emission-capable by 2030.



The graph below also shows a 64% reduction in emissions from our historic 2008/09 baseline to demonstrate the longer-term progress being made.



The main contributory factors during 2020/21 have been:

- Fewer Fleet appliance movements due to changes in our automatic fire alarm response, the new system of On-Call Support Officers providing additional resource and of course, the impacts of COVID on incident frequency and type over the past year.
- Continued roll-out of energy efficiency measures including insulation, LED lighting and upgraded heating controls.
- Energy and fuel at a national level has become less carbon intensive as the UK increases the proportion of mains electricity from renewables and biodiesel in pump fuel; therefore the carbon factor we use in our calculations has changed, also reducing our carbon footprint.

Demonstrating Environmental Leadership in the Fire & Rescue sector – Commitment Progress

Good progress has also been made on this commitment including:

- The Avon Fire Authority's declaration of both a Climate and an Ecological Emergency and AF&RS's a sector-leading Net Zero by 2030 commitment
- One of the only Emergency Services awarded a £823,670 Public Sector Decarbonisation Scheme² (PSDS) grant in February 2021. This will help the Service reduce energy demand and carbon emissions across our estate, making further progress towards our Net Zero goal.
- Our continued involvement in the UK Emergency Services Environment and Sustainability Group, annual Fire & Rescue Services' Energy Saving competition and plan to represent the sector at the UN Climate Change Conference (COP 26) in Glasgow in 2021.

Environmental Performance

In addition to those listed above, key achievements include:

- Issue of a procurement tender for a renewable energy and low carbon technology contract - initially to deliver PSDS-funded projects to include air source heat pumps, solar electricity panels, and solar thermal and battery energy storage systems. The contract will also provide the Service with an on-going mechanism to deliver additional future projects as part of AF&RS Net Zero carbon commitment.
- Inclusion of Temple Fire Station in a successful PSDS grant application by Bristol City Council for connection into the city's new District Heating Scheme.
- Approval of an Electric Vehicle Salary Sacrifice Scheme for employees to be procured and rolled out in 2021/22
- Approval and procurement of an electric vehicle charging infrastructure to be rolled out across the Service's estate in 2021/22
- Inclusion of further electric vehicles for the Ancillary Fleet in the 2021/22 Fleet replacement programme
- Development a Net Zero route map and tool to help establish out a clear route to achieving Net Zero by 2030 of our direct carbon emissions (known as Scopes 1 & 2). This provides an on-going mechanism for calculating projected carbon emission reductions, setting specific targets for each year and financial estimates for carbon reduction measures.
- Initial work to develop a carbon footprint for indirect activities (known as 'Scope 3'), such as employee commuting and procured goods, with a route map to reducing those emissions

For details, see the Strategic Aims and Action Plan Reviews.

² <https://www.gov.uk/government/publications/public-sector-decarbonisation-scheme-psds>

Environmental Strategy 2020-2030: Strategic Aims
REVIEW 2020-2021

Key Principle / Strategic Aim	Progress	Status
1. An efficient & effective estate		
Average Display Energy Certificate (DEC) rating of our estate to be B by 2030 (from C in 2020)	Average DEC rating C (61) – up 1 scale point	On track
Meet industry best practice benchmarks at all sites by 2025 (for water consumption)	Industry benchmarks not yet published. 7,732 m3 water consumption. 16% less than previous year.	On track
Zero waste to landfill by 2025 (across all waste streams)	Aim embedded in main waste contract. New contract 2020 – full year data not yet reported.	TBC
To develop an organisational Biodiversity Strategy & action plan by 2023	Some measures taken. Scheduled for 2022/23	Planned
All AF&RS new build projects started from 2020 to be Net Zero carbon in operation	Embedded in Bath & Weston Briefs	On track
2. Renewable energy generation		
20% AF&RS' energy demand to be met from on-site generation by 2025	4% generated from solar PV & solar thermal systems	On track
Continued mains supply of 100% renewable electricity and 100% green gas	100% confirmed from Bristol Energy	On track
3. Cleaner transport & travel		
Estate-wide electric vehicle infrastructure network by 2023	Feasibility study completed & roll-out to commence 2021/22	On track
Over 30% of fleet vehicles to be low/ultra-low emissions by 2026	2 CFS electric vans; a further 6 planned in 2021/22	On track
4. Best practice in environmental protection		
100% alignment with Environmental Protection NatOG by 2022/23	Work programme in progress	On track
5. Sustainable procurement in practice		
Integrate sustainability risks and opportunities into all contracts by 2025	Work programme in progress, based on self-assessed using Public Sector Flexible Framework	On track
6. Ambitious environmental management		
Environmental Management System in place and certified to ISO14001 by 2022	On hold pending appointment of Environmental Officer	On hold

Environmental Strategy 2020-2030: Action Plan

REVIEW 2020-2021

Key Principle / Project	Description	Progress	Status
1. An efficient & effective estate			
Energy audits	Continue in-depth energy audits of energy-intensive sites	Partially complete as part of the PSDS grant (Heat Decarbonisation Plan)	To be completed 2021/22
On-going energy efficiency programme	Continue energy efficiency measures incl.: - LED lighting upgrades at Southmead, Yate & Patchway - HVAC improvements at Lansdown - Building controls upgrade at Southmead - Building fabric improvements (Estates strategy)	LED upgrades: Southmead & Yate (Patchway awaiting refurb programme 2021/22) Building control upgrade: Southmead Heat zoning upgrades at Lansdown Control Building fabric improvements at most On Call stations	On-going
Water management	Install data loggers at remaining sites & target identified reductions	Now installed and a number of reductions identified and actioned	Complete
Water management	Trade effluent consent works @ Clevedon, Nailsea, Southmead & Kingswood	Works undertaken at Clevedon. Liaison with Wessex Water to determine appropriate measures for all remaining sites where a consent for trade effluent is required for legal compliance. A major programme of works is currently under development.	In progress
Waste reduction	Single-use plastic audit to identify opportunities to eliminate & reduce	On hold pending appointment of Environmental Officer.	By 2022/23
Biodiversity & Wellbeing spaces	Develop Wellbeing Spaces: Hicks Gate, Radstock, Temple, Bath & Lansdown	All sites complete, in progress or subject to plans being agreed	To be completed by 2022/23
Biodiversity & Wellbeing spaces	Develop Biodiversity Strategy	On hold pending appointment of Environmental Officer. Measures progressed incl: Incorporation of ecologically sensitive areas (notably Sites of Special Scientific Interest) into our command control system with the identification of appropriate response tactics; No Mow May policy for AF&RS sites; AFA declaration of Ecological Emergency; link up with Natural History Consortium	By 2022/23
New builds	Develop Sustainability Outcomes for Bath & Weston [as part of Project Briefs]	Sustainability Briefs incorporating objectives for Net Zero Carbon in operation, reduced embodied carbon in construction, BREEAM Outstanding and Display Energy Certificate rating A have been embedded within the wider Briefs for both new builds.	Complete
2. Renewable energy generation			
Feasibility study	Estate-wide feasibility study for additional renewable generation capacity	Feasibility study undertaken for 5 of the Service's more energy-intensive sites as part of the PSDS grant application. Feasibility of remaining opportunities to be undertaken 2022/23.	2022/23
Decarbonisation	Install additional renewables identified in feasibility study	Install of the 5 sites to be undertaken, funded by PSDS grant; Development of a procurement tender for a renewable energy and low carbon technology contract - initially to deliver PSDS-funded projects	2021/22
Decarbonisation	Replacement of oil-boiler with ASHP at Lansdown (off-gas)	Project confirmed & procured, to be undertaken funded by PSDS grant	2021/22
Decarbonisation	Connection & supply for Temple from BCC district-heating network	Outline plan in place. Works being progressed and funded through Bristol City Council's PSDS grant	2021/22
Decarbonisation	Integrate renewables into all new builds and major refurbishments	Embedded in Environmental & Estates Strategies	Complete

Off-site renewables	Assess feasibility of future Power Purchase Agreements	On-going discussions with Bristol City Council (BCC) Energy Services to enter into a PPA using BCC & other locally generated renewable electricity, once existing electricity contract ends (2021).	2022//23
3. Cleaner transport & travel			
Sustainable travel	Develop travel policy based on travel hierarchy	To be reviewed as part of Transformation work on Policies	2021/22
Sustainable travel	ECU policy including emission standards	Revised policy consulted on & due for approval	2021/22
Sustainable travel	Introduce EV salary sacrifice scheme for staff	In progress; due for completion Q1/Q2 2021	2021/22
Sustainable travel	Support sustainable travel schemes	Annual Travelwest survey; promotion of Better by Bike initiatives e.g. e-bike trails, emergency bike kits on stations.	On-going
Sustainable travel	Capture emissions data from pre-booked transport in carbon reporting	On hold pending appointment of Environmental Officer.	2021
Transition to low emission fleet	Feasibility study for electric vehicle charging infrastructure	Feasibility study completed, business case approval received & Phase 1 planned	Complete
Transition to low emission fleet	Keep abreast of developments for low emissions fire appliances	On-going dialogue with manufacturers & other FRS	On-going
Transition to low emission fleet	Assess low emissions vehicles for fleet replacement	Inclusion of a number of electric vehicles for the Ancillary Fleet in the 2021/22 Fleet replacement programme	On-going
Fleet efficiency	Install telematics in fleet vehicles	Telematics installed in ancillary fleet vehicles / frontline Also: Changes in the Service's automatic fire alarm response based on better risk analysis; On-Call Support Officers providing additional resource to mitigate frequency of whole-time crews going on standby; Impacts of COVID on incident frequency and type.	On-going
Clean Air Zones	Monitor & address CAZ requirements: Bath & Bristol	On-going dialogue with B&NES and Bristol CC. Emergency Services/B&NES MOU in place; staff communications; tactical fleet replacements	On-going
4. Best practice in environmental protection			
NOG compliance	Work programme for Environmental Protection NOGs compliance	Programme in progress: Includes new Operational Information Notes (to replace SOPs) for all aspects of Environmental Protection in operations; development of environmental protection training for all operational staff; incorporation of ecologically sensitive areas into MDTs including identification of appropriate response tactics.	In progress. To be completed 2022/23
Environmental management	Update AFRS/Environment Agency MOU & working group	Liaison with Env Agency. Draft new MOU developed by AF&RS and awaiting EA input.	In progress
Fire-fighting foam procurement	Establish working group for research & procurement of foam	On hold due to staff resourcing issues.	2021/22
5. Sustainable procurement in practice			
Steps to sustainable procurement	Establish self-assessment mechanism	Self-assessed using Public Sector Flexible Framework. Currently on Level 1 of 5 in most areas. Action plan in place.	Complete
Steps to sustainable procurement	Identify training needs and suitable modules	Training needs analysis completed. Training for Procurement Team will take place by March 2022	On-going
Steps to sustainable procurement	Procurement mapping exercise	Work underway to quantify carbon emissions for different procurement categories/suppliers. This will inform wider mapping exercise	2021/22
6. Ambitious environmental management			
Management & governance	Continue to develop ISO 14001-compliant EMS	On hold pending appointment of Environmental Officer	2022/23

Management & governance	Review & update Environmental Policy	Put back due to workload associated with PSDS grant & lack of staff resources	2021/22
Management & governance	Carbon literacy training: all snr mgt & AFA	Awaiting development & trials of Carbon Literacy training by GMFRS & LFB	2021/23
Management & governance	Integrate environmental & climate change criteria into decision-making	Climate & Ecological Emergency Declarations made by AFA; Awaiting the establishment of Impact Assessment Working Group by Transformation team	2021/22
Training & behaviour change	Continue to roll out Environment Matters e-learning	75% staff have completed the module	On-going
Networking & collaboration	Partner with local authorities on net zero initiatives, procurements etc	Measures include: Member of Climate Leaders group (Bristol Green Capital Partnership); Member of B&NES Public Services Climate Emergency Group; Involvement with S. Glos Local Strategic Partnership - Climate and Ecological Emergency; collaboration with Bristol City Council for PSDS grant to connect Temple Fire Station to District Heating Network;	On-going
Networking & collaboration	Continue involvement in FRS energy competition	4th year of involvement	On-going
Networking & collaboration	Involvement with UKFRS in COP 26 (2021)	In discussion around opportunities for action & communications	2021/22
Networking & collaboration	Call for divestment of LGPS pensions	In communication with Avon Pension Scheme	On-going
Net Zero	Strategic feasibility study to map out the route to achieving net zero by 2030	Net Zero Route map developed including a spreadsheet tool to update with new projects & plans as they come on-stream	Complete
Net Zero	Review Carbon Calculation Methodology	Undertaken as part of Net Zero Route map Work started to establish a Scope 3 carbon footprint for indirect activities, such as employee commuting and procured goods	On-going