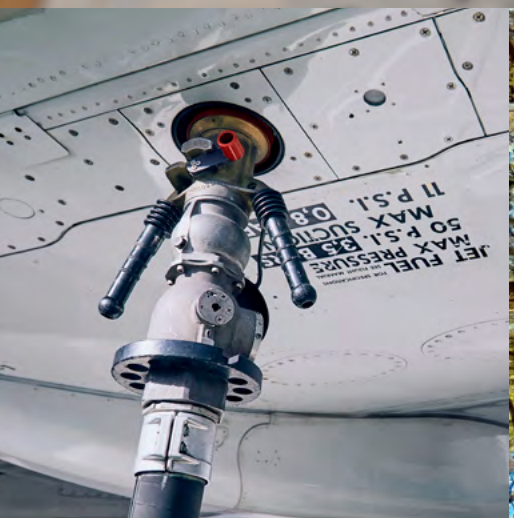
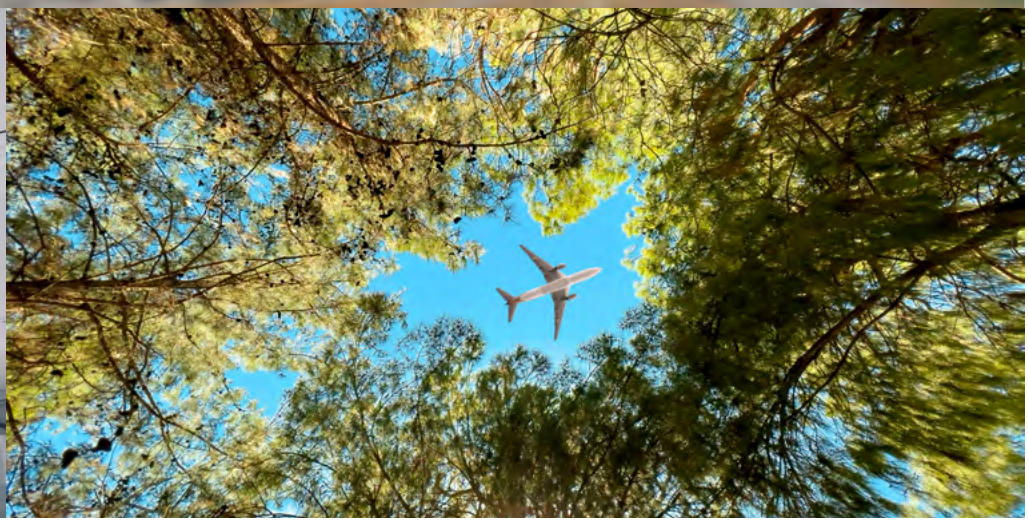
UK Civil Aviation Authority

UK CAA Environmental Sustainability Strategy 2026





CAP 2360

Environmental Sustainability Strategy

Since the CAA published its first Environmental Sustainability Strategy in May 2022, the political, regulatory, financial and social context- and our understanding of environmental challenges- has continued to evolve. The UK Government has put greater emphasis on economic growth, while also reaffirming its commitment to the legally binding Net Zero target by 2050.

We are mindful that delivering meaningful environmental improvements while enabling aviation growth remains a significant challenge for the sector. It is against this strategic backdrop that we have developed our refreshed Environmental Sustainability Strategy.

Advances in aircraft technology and operational efficiencies have already delivered improvements in noise and emissions. The Sustainable Aviation Fuels (SAF) mandate and revenue certainty mechanism, alongside investment in technology and operational improvements, will help enable further reductions in aviation's environmental impacts. Emerging technologies, such as hydrogen propulsion and Greenhouse Gas Removals, are likely to be an essential part of long-term progress. However, there are growing concerns that progress on emissions, noise, and air quality is not happening fast enough.

Setting long term goals

This updated strategy builds on the work we have already completed in our 2022 Strategy and provides a clear focus going forward, aligned with the CAA Strategy, Mission and Vision, while recognising the CAA's work is shaped by the broader policy and legislative context set nationally and internationally.

We have adopted an outcome driven strategy, which sets out our long-term intent, whilst enabling a more agile and flexible approach in the face of political, social, technology, and economic changes. This strategy sets out what we have already achieved, where we see the CAA's primary contributions towards these outcomes and what success might look like in the future.

While the CAA has a key role to play, we do not control all the levers needed to deliver these outcomes. We will continue to collaborate with industry, government, consumers and community groups, and other stakeholders, nationally and internationally, in pursuing the goals set out in this strategy.

Key to the CAA's role is ensuring consumers, communities, and the industry have accurate, trustworthy, unbiased information, advice and guidance to make informed choices and decisions about the environment impacts of aviation.

The CAA will lead by example and is committed to conducting all corporate activities in a responsible, sustainable, and environmentally conscious way. We are driving our operations towards being Net Zero by 2035, aligning our approach with ISO 14001 standards, and empowering our teams to consider and reduce our environmental impact, contributing to a low-carbon future.

CAA Sustainability Strategy

CLIMATE IMPACTS

By 2050, the UK aviation sector achieves system-wide Net Zero CO_2 emissions as defined by the IPCC, addressing all detrimental climate impacts, including non-CO_2 effects and, where possible, actively supports carbon removal to address the historic climate impacts.

PUBLIC HEALTH AND LOCAL IMPACTS

The impacts on public health and biodiversity of aviation, primarily from Noise and Air Quality, are understood, quantified, and, where practicable, are mitigated or reduced.

RESILIENCE & ADAPTATION TO CLIMATE CHANGE

UK aviation infrastructure and processes are resilient and adapt to the impacts of climate change, ensuring the long-term viability of air-travel in a changing environment.

WAYS OF WORKING

RESEARCHING
Supporting, driving, and partnering in research we will expand our understanding.

REPORTING
Reporting on aerospace's environmental performance.

INFLUENCING
Work with UK Government and ICAO to influence legislation, policy and standards.

REGULATING
Use CAA powers to balance growth with environmental sustainability.

www.caa.co.uk/environmental-sustainability

Outcome 1
Climate Impacts

By 2050, the UK aviation sector achieves system wide Net Zero Emissions (as defined by the IPCC), as well as addressing other detrimental aviation climate impacts, and, where possible, actively supports carbon removal to address the historic climate impacts of UK aviation.

Climate change is the most significant existential threat we face. The government has set a legally binding target to meet Net Zero emissions by 2050. Analysis by the Climate Change Committee (CCC) for The Seventh Carbon Budget suggests aviation is expected to be the UK's highest-emitting sector by 2040 with a 27% share of emissions compared to 8% in 2023. Government and industry roadmaps suggest the sector could reach Net Zero through a combination of measures including the roll-out of SAF, improved operational and technological efficiencies, electrification and new low carbon technology, and engineered removals. To meet the 2050 target, significant progress is still needed across all these measures.

5-year focus

1. Early stage low and zero emission aerospace technologies, including ground handling equipment and infrastructure, mature more quickly and reliably, supported by clear regulatory pathways that enable safe testing, validation, and progression toward commercial readiness.
2. Transparent, consistent reporting enables the assessment, tracking, and reduction of hard-to-abate emissions, while also providing consumers with clear, reliable information on the environmental impacts of their flight choices.
3. Airspace, aircraft, and airport operations are optimised through evidence-based regulation, strategic influence, and targeted research, enabling more efficient, safe and lower emission system performance.

What Success could look like

- Regulation, standards, and policy keep track with innovations for ZEF and proactively drives aviation towards Net Zero 2050.
  - By 2028, we will enable commercially viable hydrogen operations, and establish a clear regulatory pathway for certification and routine operational capability of ZEF.
- The whole lifecycle impact of aviation technology on the environment is incorporated in future standards, policy and legislation.
- We will achieve the aims outlined in the AER roadmap, including the reporting of the mitigation and removal of hard to abate emissions through SAF, carbon removals and emission trading schemes, and demonstrate consumers feel more informed on environmental impacts of aviation and aerospace.
- Where feasible, we will identify mechanisms to optimise airspace utilisation which helps negate or reduces emission increases from growth.

What we have achieved

- Through the Hydrogen Challenge and our wider work on innovation, we are continuing to support progress on Zero Emission Flight (ZEF) through our world leading regulatory sandbox, cross-sector industry working groups and development of regulatory guidance and standards which will enable the certification and operation of hydrogen and electric aircraft.
- Through the Aviation Environmental Review (AER) we are continuing to deliver an independent, evidence-based assessment of aviation's environmental performance, including quantified reporting on UK aviation emissions, noise exposure, air quality impacts.
- We have set out our policy to ensure customers receive accurate and transparent environmental information at the point of booking, helping customers make informed choices about how they travel.
- The CAA has reduced our corporate gross greenhouse gas emissions (scope 1 and scope 2) by 3% compared to 2022. This was primarily driven by the transition from petrol and diesel vehicles to electric vehicles.

Outcome 2
Public health and local impacts

The impacts on public health and biodiversity of aviation, primarily from Noise and Air Quality, are understood, quantified, and, where practicable, are mitigated or reduced.

Noise remains the most significant concern for communities affected by aviation, and is expected to intensify as the sector grows. Evidence shows aviation noise has direct adverse impacts on public health and on children's learning.

Air quality issues around airports, including exposure to pollutants such as nitrogen oxides and ultrafine particles, also have detrimental effects on health and are of increasing concern. While improvements have been achieved through technological advances, operational procedures, and regulatory measures, growth and emerging technologies will create new challenges for future improvements.

We have a role in supporting industry and primary air quality regulators to address these impacts, and are required to take noise into account when discharging key regulatory functions, including Aircraft Noise Certification and Airspace regulation.

5-year focus

1. Expand evidence-based understanding of the local public health impacts of aerospace activity, enabling proportionate, targeted interventions that protect communities and inform future regulatory decisions.
2. Airports, aerodromes and spaceports are designed and operated where practicable to mitigate impacts on people from noise and air pollutants.
3. Enhanced understanding of how airport operations affect local biodiversity to support policy, guidance and compliance activity that drive effective mitigation and habitat enhancement measures across the sector.

What Success could look like

- The impact of aerospace on noise and air quality on public health, and biodiversity around airports from existing and future aviation technologies (e.g. drones, eVTOL) is understood through working in collaboration with relevant communities and stakeholders.
- The effects of land and water pollution in and around airports, aerodromes and space ports are researched to understand the impacts and potential health and biodiversity impacts.
- Aerospace policy and regulation reflect latest insights and knowledge, on air quality, noise, pollutants, and biodiversity.

What we have achieved

- Since 2022, the CAA has continued to publish critical research on noise and noise impacts including; Aircraft Noise and Health Effects – a six-month update, Emerging Technologies: The effects of eVTOL aircraft noise on humans, Review of noise measurements from UAS and AAM aircraft, The effects of aircraft noise on biodiversity and Noise action plans review – Final report & summary of recommendations.
- The CAA has continued to discharge its statutory noise functions, advising government and supporting the effective use of noise management and mitigation measures.

Outcome 3

Resilience and Adaptation to Climate Change (Climate adaptation)

UK aviation infrastructure and processes are resilient and adapt to the impacts of climate change, ensuring the long-term viability of air travel in a changing environment and maximising any potential co-benefits of adaptation activities.

We are already living with the effects of climate change due to historic emissions. Increased flooding events, drought and extreme temperatures, changes in wind patterns, increases in adverse storms and worsening turbulence are increasingly disrupting aerospace operations. The potential direct and indirect impacts climate change could have on the aviation industry, consumers and the wider sector are significant. Alongside mitigating further greenhouse gas emissions, the sector needs to be prepared to adapt and respond to the emerging challenges that climate change is already creating.

A key issue identified by the Climate Change Committee (CCC) is the widening gap between the level of risk faced and the limited progress on climate adaptation strategies. The CAA plays a central role in ensuring the resilience of the UK aerospace sector.

> 5-year focus

1. Improved reporting on adaptation measures enables greater collaboration and support for mitigation across the aviation industry.
2. Industry understands the risks from climate change, including the impact this could have on consumes, and develops robust mitigation strategies.
3. We engaged on an international level to share best practice and learn from others, to ensure the UK establish itself as a leading voice in this area.

What Success could look like

- Improved reporting through an enhanced Adaptation Reporting Power (ARP) process allows better understanding of operational risks and sharing of best practice of mitigations.
- Airports and airlines have the right information and models on climate risks to develop robust long term adaptive plans for mitigation of climate change.
- Risk-based decision making on mitigation strategies is based on robust analysis.
- Continued scientific research and modelling reduces the uncertainty in our understanding of climate change impacts.
- Aviation and Aerospace policy and regulations are adapted to support climate adaptation planning.

What we have achieved

- This is a new area of work for the CAA which supports our wider work on resilience in the sector. The Halliwell report identified the need for greater cross industry co-ordination on climate resilience. DfT's 'Climate Adaptation strategy for transport' identifies a central role for the CAA to play in supporting the sector's approach to climate change adaptation. The CAA co-chairs the UK Climate adaptation working group with DfT and AirportsUK.

How we will deliver

Researching

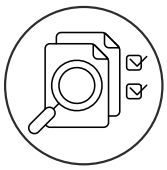
We will help to build a more robust evidence base on aviation's environmental impacts and the effectiveness of different policies and intervention, using research to guide policy and regulation. Building on our well-established expertise and credibility in areas such as noise, we will focus on areas critical to delivering against our 3 outcomes. Such as the with the Aviation Noise Attitudes Survey (ANAS) and The effects of aircraft noise on biodiversity.

At the same time, we will ensure that policies for innovative technologies are grounded in robust, credible evidence, e.g. to support the development of zero-carbon flight and progress towards Net Zero.

Influencing

Working closely with Government and international organisations, such as ICAO, we will continue to expand our sphere of influence as a leading voice, expanding from noise into all aspects of environmental sustainability, to drive the direction of legislation, policy and standards to support the delivery of Net Zero 2050.

We will work with Industry and academia to support the drive towards innovative solutions that deliver environmental sustainability improvements from cradle to grave.



Reporting

Reporting on the sector's environmental performance is one of the strongest environmental tools we have. Through the UK Aviation Environmental Review, our roadmap to changing environmental reporting, our customer information policies, and our wider environmental reporting activities (e.g. Aircraft Noise and Health Impacts reports) we will ensure Government, industry and the public consider the CAA as a trusted source of information, and have accurate, comprehensive and up to date information on airlines, airports and manufacturers.

This is critical to properly assess the effectiveness of different policies, investments or interventions, and building consumer confidence and trust in respect of environmental information to inform choices, decisions around sustainability and addressing greenwashing.

Regulating

The CAA has range of environmental duties and powers. Taking a balanced approach, we will continue to work with the aerospace sector to address environmental issues through our regulatory role, accepting there are limitations to what we can achieve through our current duties and powers.

We will continue to review our existing regulatory duties and powers with Government, for example on climate adaptation where there is a specific recommendation to explore this in DfT's Climate adaptation strategy for transport.

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