

CAA Environmental Sustainability Panel Work Programme April 2025 – March 2027

CAP 3097



Published by the Civil Aviation Authority 2025

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First published Month April 2025

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www.caa.co.uk/CAP3097

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Chair's Forward

As we embark on the 2025–2027 work programme, I am proud to reflect on the remarkable progress our Environmental Sustainability Panel has achieved over the past year. Our collective expertise has fostered a collaborative environment, enabling us to provide the Civil Aviation Authority (CAA) with insightful, evidence-based advice on integrating environmental sustainability into aviation.

In the past year, we have actively supported the CAA's Environmental Sustainability Strategy by reviewing its strategic components and offering feedback on workshops designed to inform its evolution.¹ Our discussions have clarified the CAA's potential roles in environmental sustainability, enhancing its knowledge and awareness of pertinent topics. We have also provided technical advisory support across various CAA teams, including the Future Safety & Innovation team, the Hydrogen Challenge team, and the Airspace Modernisation Strategy team, ensuring that environmental considerations are integral to their initiatives. Our collaboration with the CAA's Consumer Panel has further enriched our perspectives and we look forward to continuing this work over coming years. We have supported the CAA in its work on issues such as contrails, airspace efficiencies, and the impacts of noise on public health and air quality. Through these efforts, we have built the CAA's knowledge and understanding of environmental sustainability, equipping it to consider sustainability in its projects and programmes from the outset.

Looking ahead, our Panel remains committed to working as an effective team, providing the CAA with the guidance and support necessary to navigate the complex intersection of aviation and environmental stewardship. Together, we will continue to champion sustainable practices that balance the growth of aviation with the imperative to protect our environment for future generations.

Dr Ruth Mallors-Ray OBE FRAeS

Panel Chair

¹ More details of the wide-ranging topics we have considered can be found in our Annual Report at: <https://www.caa.co.uk/CAP3062>.

About the CAA Environmental Sustainability Panel

The CAA Environmental Sustainability Panel (the Panel) is a non-statutory group of independent experts who bring together scientific, technical, and strategic experience and expertise on a wide range of environmental sustainability topics relevant to the CAA. Our members' biographies can be found at the end of this document.

The Panel acts as a critical friend, supporting and challenging the CAA as it delivers its Environmental Sustainability Strategy (the ES Strategy)¹, giving expert advice to the CAA as policy is being developed, identifying areas where further research might be needed, and helping to embed environmental sustainability considerations into the CAA's thinking and work programme where it is related to environmental sustainability.

We provide insight and expertise across a wide range of topics relating to noise, emissions and air quality, as well as on operational efficiencies and new technology, to inform the CAA on potential short, medium and long-term developments in our areas of expertise that are relevant to build the CAA's understanding of issues that may impact upon aviation mitigating its environmental sustainability impacts.

We provide advice to CAA teams and to the CAA Leadership both reactively and proactively to enable both the CAA and the Panel to effectively drive the CAA's role in facilitating a sustainable aviation industry:

- Reactively, by responding to requests from the CAA for input and expertise on matters in its work programme seeking to incorporate environmental sustainability into its work; and
- Proactively, by drawing on our expertise, reviewing areas in the CAA's forward work programme and assessing the CAA's levels of knowledge and awareness to identify where we consider the CAA can either make a significant difference or simply to be better informed on environmental matters that are constantly evolving.

Recognising that many areas of the CAA's work have implications for both the environment and consumers, we continue to build our relationship and work collaboratively with the CAA Consumer Panel² where there are synergies between each panels' remit.

The Panel is a small, specialist policy resource for the CAA and delivers high-quality, evidence-based advice in a way which is designed to maximise our impact. Our work is also limited to those activities that fall within the CAA's statutory remit or reasonable

² <https://www.caa.co.uk/our-work/about-us/caa-consumer-panel/>: The Strategy sets out the CAA's roles in relation to environmental sustainability as leader, regulator, influencer, and observer of developments, with an overarching imperative to communicate widely, iteratively and consistently.

influence. We therefore prioritise our work carefully, asking six key questions before embarking on any given project:

- Does it fall within the Panel's remit?
- Is it an area where the CAA is best placed to effect change?
- Is it (or could it be) a priority for the CAA?
- Is it an area which is poorly understood or not represented which could benefit from additional focus?
- Is the requirement of the Panel explicitly clear in the activity?
- Does the impact of the work have the potential to inform future developments to enable aviation to mitigate its environmental sustainability impacts?

The Panel does not:

- Review or comment on individual regulatory decisions.
- Campaign publicly.
- Represent or correspond directly with air travellers, industry or community groups unless requested to do so by the CAA.
- Get involved in or comment on operational issues or complaints raised by individuals, such as noise from flight paths.

Work programme April 2025 - March 2027

Development of this work programme

This work programme has been developed in consultation with the CAA, focussing on its requirements to continue to develop and deepen its knowledge and understanding of environmental sustainability whilst focusing on the delivery and evolution of its ES Strategy. This is against the broader context of a rapidly evolving move towards sustainability, not just in aviation but across all aspects of how we live and work. In considering how we shape our work over this two-year period, we have reflected on both the need for the CAA to clearly articulate the ways we can most effectively assist them through their Annual Strategic Objectives, while also considering how we can use our expertise and position to support the CAA to consider the broader environmental sustainability landscape.

Over the course of this work programme, we will support the CAA's Environmental Sustainability Team (the ES Team) in evolving and maturing the ES Strategy by working in four key areas, some driven by the CAA's work and others driven by issues identified by the Panel. We will work to support the CAA by:

1. Providing strategic advice and independent scrutiny of relevant Environmental Sustainability issues including responding to requests from the CAA's Board and Executive Committee;
 - a. The Panel will provide the CAA with independent advice on emerging issues in environmental sustainability where new evidence, research or innovation developments may affect aviation operations, airside or airspace.
 - b. The CAA will identify specific topics where the Panel's independent expert advice and knowledge of environmental issues, claims and emerging developments will enable it to better discharge its duties and functions, as well as supporting and challenging the industry in its journey to improving and mitigating aviation's environmental impacts.

Potential themes MAY include:

- Contrail Avoidance – a landscape view on research in this area to provide a view on confidence levels of the science.
 - Public Health and Aviation – independent perspective on the latest research regarding aviation's impacts on public health because of air pollution and / or noise levels.
2. We will work with CAA teams on specific Annual Strategic Objectives (ASO)s where environmental sustainability can be influenced and /or affected through strategic interventions.

The CAA Strategy³ sets out ASOs prioritised for annual delivery and the Panel will support delivery of four ASOs that the CAA has identified as a priority in terms of environmental sustainability:

- CAA Annual Strategic Objective: Implement UK Airspace Design Service to progress delivery of airspace modernisation.
 - Environmental Panel Supporting Activity: two panel members will work closely with the Airspace Modernisation Strategy Team to provide focussed support on issues and policy developments. In addition, the AMS team will come to the Panel for broader discussions.
- CAA Annual Strategic Objective: Ensure appropriate regulation of Heathrow including delivery of H8 price control including consideration for Heathrow expansion to protect consumers and users.
 - Environmental Panel Supporting Activity: two panel members will work closely with the Economic Regulation and Competition Policy Team to provide focussed support on issues and policy developments. In addition, the Price Control team will come to the Panel for broader discussions.
- CAA Annual Strategic Objective: Enable greater accountability through enhanced environmental information.
 - Environmental Panel Supporting Activity: the ES Team will establish three working groups to develop the AER and Panel members will support these groups. The groups include Air Quality, Emissions and Noise. In addition, the Panel will support ES Team in developing a 5-year roadmap for the AER in 2025/26.
- CAA Annual Strategic Objective: Develop regulations to safely enable hydrogen-powered flight.
 - Environmental Panel Supporting Activity: support the Hydrogen Challenge Team on issues relating to technology developments, provide advice on regulatory developments and bring insights to the broader economic challenges of Hydrogen adoption

The CAA team responsible for the identified ASOs will come to the Panel meetings on a regular basis to provide updates on delivery and to seek insights on how to drive forward environmental development in the ASO.

3. Support the delivery of the ES Strategy's objectives by providing advice and challenge on other projects that support the ES Strategy, leveraging the insights on latest research from across the aviation sector.

The ES Strategy sets out how the CAA will support the industry's transition to more sustainable aviation. This is important because it signals to stakeholders the CAA's role, approach and priorities, as well as the specific projects it is undertaking to deliver its ES Strategy.

³ <https://www.caa.co.uk/our-work/about-us/our-strategy/>

4. The ES Team is refreshing the ES Strategy and has discussed this with the Panel several times. As the ES Strategy is refreshed and annual objectives are set for the ES Team, the Panel will support delivery of these objectives by:
 - a. Receiving updates on delivery of the ES Strategy, including progress of the projects which underpin it, offering independent advice and insight to support the CAA in strategy execution and wider engagement, and challenging the CAA to ensure that environmental considerations are properly embedded into relevant CAA areas of work.
 - b. Leveraging knowledge and experience of the panel members to support environmental strategy implementation and sharing of best practices from other organisations also holding environmental responsibilities (for example in annual reporting and in meeting statutory obligations).
 - c. Providing technical advisory support on CAA work programmes in response to specific requests for input.
 - d. We will also continue to collaborate with the CAA Consumer Panel to add value by bringing awareness of consumer and environmental thinking to the forefront of CAA work, focussing on their respective remits and areas of expertise.

Projects that support the ES Strategy in 2025 include:

- Aviation Noise Attitudes Survey
 - Noise Action Plan Review
 - Consumer Environmental Information Policy
 - Aviation Emissions - Policy on Calculation methodologies
5. The ES Strategy ensures the CAA is focussed on the ways it can drive aviation towards environmental sustainability. This requires the CAA to have the right skills and knowledge and to develop a sustainability culture. We will continue to support the CAA in bringing awareness and understanding of environmental sustainability matters, including the wider national and international R&D landscape by:
 - a. The ES Panel Members delivering up to 6 webinars a year across a range of topics engaging the wider CAA community.
 - b. The ES Panel delivering an annual internal conference programme for the CAA's Senior Leadership Team relating to emerging issues and opportunities relating to aviation and environmental impact.
 - c. The ES Panel continuing to share latest research, reports, articles etc for capture in the ES Knowledge Portal building a knowledge bank of reference collateral

We will regularly review these mechanisms, in consultation with the CAA, and be willing to evolve or change them should there be more effective ways to embed environmental sustainability knowledge.

Who We Are

Chair

Dr Ruth Mallors-Ray OBE FRAeS

Ruth has a broad and extensive understanding of both the aviation industry and the complex relationships between government, industry, academia and the public. A Non-Executive Director of the National Composite Centre and Chair of the Strategic Advisory Board of the Digital Supply Chain Innovation Hub, and the former Chief Operating Officer of the Aerospace Technology Institute, Ruth has significant experience of strategy development and execution with a focus on challenge led innovation with impact. She is an experienced chair of technical and advisory panels, focusing on engagement and consensus building on complex topics, with a strategic approach to act in the best interests of the whole and achieve the outcomes for a range of stakeholders.

Members

Professor Charlotte Clark

Charlotte is a Professor in Environmental Epidemiology at City St George's, University of London. She is an expert in applying social science to the issue of noise effects on health and communities, and has broad experience working with airports, regulators, governments and communities. Charlotte will bring objective and evidence-based advice on the impacts of noise on the community to the Panel.

Dr Martin Hawley

Martin is an expert in Air Traffic Management (ATM), with nearly thirty years' experience working at the interface of business, technology and operations – in airport, terminal and enroute contexts. He has a long-standing interest in sustainable aviation and has analysed the impact of numerous new technologies and innovative operations on improving flight efficiency. He is a strategic thinker with international experience and a background in academic research.

Professor David Lee

David is a Professor of Atmospheric Science and Director of the Centre for Aviation, Transport, and the Environment (CATE) at Manchester Metropolitan University. With 25 years of experience as a specialist in climate science, having participated in many assessments of the Intergovernmental Panel on Climate Change, he is skilled in developing the links between science and policy. He has particular interest in the policy aspects of mitigating the impacts of aviation on climate.

Professor Alastair Lewis

A Professor of atmospheric chemistry at the University of York, Alastair has over 25 years of experience in scientific research on the environmental impacts of transport, fuels and combustion on public health, climate change and the response of ecosystems. He is also the Science Director for the National Centre for Atmospheric Science, and is passionate about communicating science, technology and risk to the general public.

Professor Anil Namdeo

Anil is a Professor of Air Quality and Net Zero at Northumbria University. His research focuses on environmental and sustainability assessment of land use, transportation and other developmental policies. Passionate about translating scientific information in easy-to-understand language, his overall focus is on developing win-win policies by providing scientific expertise to support analysis and trade-offs between carbon, noise and air quality.

Professor Mark Westwood

Mark is a Professor and Head of Centre for Aeronautics at Cranfield University. A technology leader and specialist in aerospace and autonomous systems, including R&D in drone and advanced air mobility sectors, he is passionate about exploring the opportunities presented by new technologies and developing them into sustainable, practical real-world applications.

Professor Brian Pearce

Brian is an Honorary Professor at University College London, and Executive Director of UCL's Air Transportation Systems Laboratory. He is also President of the European Aviation Conference Institute, a Visiting Professor at Cranfield University and a Fellow of the Royal Aeronautical Society. Brian was previously Chief Economist at the International Air Transport Association, during which he was a member of Air New Zealand's Sustainability Panel and an expert adviser to the Airports Commission. Previous appointments include: Director of Sustainable Investment at Forum for the Future, Technical Director at ERM, and head of global economics at SBC Warburg Dillon Read.

Dr Ralitsa Hiteva

Ralitsa is a Principle Research Fellow within the Science Policy Research Unit at the University of Sussex Business School with 15 years of leading research in economic regulation across energy, ICT, transport, water, waste, and healthcare and brings deep expertise in environmental sustainability, decarbonization, and Net Zero. Her research focuses on innovation, business models, and consumer vulnerability, particularly in the context of digitalization and decarbonisation.