CAA Environmental and Sustainability Panel

Meeting minutes

10:30 – 16:30 17 January 2024

Attendees		Apologies
Ruth Mallors-Ray (RMR)	Panel Chair	Mark Westwood (MW)
Alistair Lewis (AL)		
Anil Namdeo (AN)		
Charlotte Clarke (CC)		
Chikage Miyoshi (CM)		
David Lee (DL)		
Martin Hawley (MH)		
Rachel Sowerby (RaS)	CAA, (Item 3)	
Robert Stallard (RS)	CAA, (Item 3)	
Nathan Lambrinos (NL)	CAA, (Item 3)	
Bianca Vaghela (BV)	CAA, (Item 3)	
Sophie O'Sullivan (SO'S)	CAA, (Item 4)	
Helen Leadbetter (HL)	CAA, (Item 4)	
Garry Lathey (GL)	CAA, (Item 4)	
Nic Stevenson (NS)	CAA	
Abigail Grenfell (AG)	CAA	
Bronwyn Fraser (BF)	CAA, Secretariat	
Alison Harris	CAA, Panel Support	

1. Welcome and Administration

1.1 The Minutes from the previous meeting were approved.

1.2 Declarations of interest were noted.

2. CAA Update on Environmental Sustainability Strategy, implementation and development and update on wider CAA Strategy Development

UK Aviation Environmental Review 2023

2.1 The CAA noted that the UK Aviation Environmental Review 2023 (AER) was published in late December, and it will consult on the evolution of the AER in the spring of this year.

2.2 The Panel considered the AER was good document with a lot of useful content, and provided feedback on:

- the presentation of the document and how it could be promoted;
- the potential for including in future reports more granular information about air quality around airports and how this is changing over time;
- the need for more details within the recommendations on who should own them.

Refresh of the Environmental Sustainability Strategy

2.3 The CAA is refreshing its Environmental Sustainability Strategy, with support from the Panel as part of its 2023 - 2025 work programme. The Panel will consider this work in further depth at its next meeting.

Hydrogen

2.4 The Panel discussed the number of groups looking at hydrogen policy, including the Jet Zero Council and Hydrogen in Aviation (HiA - an alliance of six companies who are aimed at driving forward hydrogen research in aviation in the UK) and the Aerospace Technology Institute (ATI), and suggested the CAA should engage with them to discuss their hydrogen work programmes. The Panel also suggested that the CAA develops better understanding of the strategies and plans being developed to produce green and blue hydrogen.

3. CAA Airspace Modernisation Strategy (AMS) Team

3.1 RaS introduced the airspace modernisation strategy (AMS) and explained that the AMS team is seeking the Panel's views on how the CAA could applying the fourth strategic objective in the AMS, "Environmental sustainability will be an overarching principle applied through all airspace modernisation activities. Airspace modernisation should deliver the Government's key environmental objectives with respect to air navigation as set out in the Government's Air Navigation Guidance and, in doing so, will take account of the interests of all stakeholders affected by the use of airspace".

3.2 The Panel discussed the AMS team's proposed approach and made the following suggestions:

- The Panel considered that the current AMS environmental objective appeared to be more of a principle whereas the other three objectives (relating to safety, integration of diverse users and reducing complexity / improving efficiency) were much more directive. It suggested that the environmental objective could be tonally shifted to clearly state it will 'maintain or reduce environmental impacts' to have more of an impact.
- It advised the CAA to look at the environment with a completely clean sheet rather than trying to retrofit environmental benefits onto existing technology. It noted that many of the airspace modernisation initiatives have been developed to increase efficiency to allow for more capacity and there appears to be very little evidence backing up the claims that any particular airspace modernisation initiative will have environmental benefits. The Panel suggested that the CAA should be cautious about accepting their environmental claims on face value and potentially assuming environmental benefits of airspace modernisation initiatives without evidence.
- The CAA needs to take a neutral stance and ask 'what is the actual impact of these technologies on the environment' rather than asking 'how can maximum environmental benefits of these new technologies be unlocked?'
- The CAA should develop methodologies and evidence bases to calculate and understand the actual impact of airspace modernisation initiatives compared to the baseline. It gave some examples of similar methodologies at airports and in other sectors.
- The Panel noted the value of existing data – while there is work going on to measure fuel burn outside the aircraft, airlines are already measuring their fuel from within. It cautioned the CAA against making assumptions based on status quo, including about whether airlines would give up data on fuel burn, but should look at ways to unblock any constraints.
- The Panel also encouraged the CAA to consider and define whether any 'benefit' is on a single flight or sectoral basis. Comparison with vehicle industry – on a per vehicle basis they have become more environmentally sustainable, but overall there are more journeys so the overall benefit is not realised.

3.3 The Panel encouraged the AMS team to return to the Panel to continue to test its knowledge and blind spots.

4. CAA Future Safety & Innovation (FS&I) Team

Innovation

4.1 SO'S introduced the FS&I team, outlining recent changes to the team and proposed further changes. She explained that she was seeking the Panel's views on how the CAA could meet its aspiration to better integrate environmental sustainability into how it assesses innovative technology within the certification process, particularly in relation to how the CAA prioritises its workload and new applications.

4.2 The Panel:

- cautioned against trying to find the 'perfect' answer to building sustainability into prioritisation frameworks straight away, but to start with small steps. It suggested that the CAA could carry out a trial of key questions to build its knowledge and understanding of how innovators are considering the environment, possibly initially looking at just one or two key environmental impacts. This would be without judgment or effect on how applications are considered at this stage but could inform decisions on whether to change this in the future. This would send a signal to the market that the CAA is not taking these environmental claims at face value;
- suggested CAA could also start conversations about what an organisation has assumed regarding the environment – initially focusing broadly on the organisation rather than the technology. For example,
  - questioning the assumptions behind their projection of environmental benefits;
  - seeking to understand how industry and innovators consider environmental sustainability; and
  - providing consistent definitions of sustainability terms;
- suggested the CAA could then look to the standards setting process– CAA could use leadership and influencing role to develop work around what environmental standards could be;
- suggested CAA needs to build its own in-house capability to be able to carry out its own due diligence on the environmental claims, including connecting with academia in this area to build knowledge and confidence to push the boundaries;
- noted that a lot of the UAS technology is based on electric technology but some are starting to use hydrogen cells. The Panel discussed the issue of how the energy for powering this technology and for making the hydrogen was generated and suggested that the CAA should ask about this directly when assessing any environmental claims; and
- noted that there are already some standards that the CAA could use to drive questions to test environmental claims.

4.3 SO'S agreed that the CAA needs to have to standards and evidence thresholds to provide the necessary parameters to provide evidence for our decision-making, noting that the CAA has already had some legal challenges on the thresholds it is using. This includes consideration of noise as well as emissions. CC offered to provide a paper on noise standards.
ACTION: CC to send the paper on noise standard to AH to forward to the team.

Hydrogen

4.4 HL set out the CAA's plans for its Hydrogen Challenge, including an overview of a recent survey of the industry on what technology is being developed and of the sandbox programme that is about to start. She sought the Panel's advice on how the CAA could best engage with academia to support the Hydrogen Challenge.

4.5 The Panel noted the difference between what CAA must regulate and where it could take more of an influencing or leadership role, as hydrogen has many climate impacts. In particular, it noted that CAA is in a position to (and should) make clear that hydrogen is not a zero impact fuel but is a source of NOx, methane and ozone, and can also cause the formation of contrails (although it noted that these all needed to be better understood).

4.6 On the proposed questions for academia, the Panel noted:

- the difference between strategic and regulatory questions in the proposed list. It sought clarity from CAA on what it intended to do with the answers, while noting that it indicates CAA wants to build its knowledge beyond where it currently is; and
- that while CAA wasn't necessarily responsible for asking these questions, no one else is asking them. There is an opportunity for CAA to lead and influence (rather than do) in saying that the aviation industry needs to understand the answers to these questions. The Panel suggested CAA could take the questions to NERC for them to own development of a research programme.

5. Systems thinking challenge note - continuation from November Meeting

SAF:-

- The Panel raised some concerns about the definition of Sustainable Aviation Fuel (SAF) which allows for waste from other products and processes to be utilised. The Panel noted that some of this waste could be derived from fossil fuels and questioned whether this could be classed as a sustainable source?
- Panel also noted that some waste products being used in SAF production is not truly waste as it is already being utilised for other purposes.
- The Panel agreed to discuss this with the CAA in more detail.

Systems thinking

- The Panel discussed the scope of its 'systems thinking' challenge note, noting that it is very complex and far reaching. It agreed the purpose was to encourage the recognition that aviation is a system, and to educate on and mitigate the risks of not using systems thinking around environmental sustainability.
- The Panel agreed that it would draw on systems analysis in all its work for the CAA.

6. Challenge notes OR Knowns/unknowns

6.1 The Panel discussed how the CAA could use its sustainability strategy to balance how it regulates both now and in relation to future safety innovation technologies. It suggested a starting point could be to look at the Environment Act 2021 and think about how this could help the CAA achieve its aspirations through system thinking.

6.2 The Panel also considered the issue of waste and how this is dealt with, as all waste from aircraft is treated as international waste and so cannot be sent for recycling.

Summary of Upcoming Meetings

The Panel Interim meeting is on the 21 February 2024. The next Panel meeting is on 6 March 2024.

7. AoB

None.