

Mr Huw Merriman
Chair of the Transport Committee
House of Commons
London
SW1A 0AA

Dear Mr Merriman,

I am writing to thank you for inviting me to appear on last week's panel. The UK Civil Aviation Authority welcomes the opportunity to participate in the Transport Committee's inquiry into how alternative fuels can play a part in the future of aviation here in the UK. During my appearance I undertook to provide a more detailed written reply to Ms Cadbury's question regarding the reductions in CO₂ emissions that can be achieved through airspace modernisation.

As the Committee will be aware, one of the overall objectives of the CAA's Airspace Modernisation Strategy¹ is for cleaner journeys. The emissions savings that modernisation can deliver are a key component of the UK's commitment for the aviation sector to reach net zero by 2050. These savings can be achieved by:

- enabling aircraft to follow more direct flightpaths
- enabling flights in lower airspace that are transitioning between the take-off or landing phase and the cruise in upper airspace to climb and descend continuously (rather than in 'steps') more often
- reducing the need for aircraft to hold (queue) for landing or take off.

The aviation industry's decarbonisation roadmap suggests that air traffic management and operational improvements are likely to reduce the total CO₂ emissions from UK aviation by around 4.6% by 2050 relative to 2016, with the potential for additional savings from future innovations. Historically, airspace in the south-east of the UK has been particularly congested. A 2018 NATS report into the technical feasibility of airspace modernisation in the south-east, commissioned by the Department for Transport, suggested that under the scenarios modelled modernisation offers the potential to reduce future CO₂ emissions within the affected south-east airspace by up to 20% by 2050, compared with a growth scenario without modernisation and with increased delay.

As Ms Cadbury rightly pointed out, the creation of more airspace capacity through modernisation, while not directly generating more air traffic, can (where planning decisions allow it) also facilitate further traffic growth, because the outdated airspace design will eventually constrain the number of flights that the airspace can safely accommodate. This a key policy issue; it is important that we are able to achieve the benefits of modernised aviation while addressing its environmental impacts. The potential for such trade-offs – between more capacity and environmental impacts – is considered as part of the CAA's

¹ CAP 1711, *Airspace Modernisation Strategy*, CAA December 2018. www.caa.co.uk/cap1711 The CAA is currently consulting on a refreshed version of the strategy. <https://consultations.caa.co.uk/policy-development/draft-airspace-modernisation-strategy-2022-2040/>

airspace change decision-making process. When an airport is changing airspace (for a planned increase in capacity or any other reason) it must develop its design proposal in accordance with policy and law and follow our airspace change process. In its Air Navigation Guidance 2017, the Government has provided guidance to the CAA on how the decisions it makes can best give effect to the Government's key environmental objectives. Those environmental objectives are designed to minimise the environmental impact of aviation within the context of supporting a strong and sustainable aviation sector.

I trust this answers Ms Cadbury's questions. However, if the Committee does wish to discuss this further or we can be of any more assistance, please do not hesitate to contact me.

Yours sincerely

A handwritten signature in dark ink, appearing to be 'Rob Bishton', followed by a long horizontal line extending to the right.

Rob Bishton
Group Director