

## **Written evidence submitted by the Royal Aeronautical Society (AAS0019)**

### **1. The Royal Aeronautical Society (RAeS)**

1.1 The Royal Aeronautical Society is the only global organisation serving the entire aerospace, aviation and space community as both a learned society and a professional engineering institution. As such, the Society is independent, evidence-based and authoritative, relying on a body of knowledge going back more than 150 years. The Society plays a leading role in influencing opinion on aerospace, aviation and space matters, through various means including its publications, social media profile, interaction with Government and an extensive events programme.

### **2. Submission Summary**

2.1 Many organisations and companies in the aviation and airport space, and their trade associations, will be submitting evidence to you in respect of this inquiry. Many of these organisations are the Society's Corporate Partners. Rather than duplicate what will doubtlessly be their valuable evidence we respectfully submit some additional evidence on just three key areas: research and development; net zero; and skills and employment.

### **3. Research and development.**

3.1 It is vital that research and development funding is protected and expanded in the forthcoming CSR.

3.2 The National Engineering Policy Centre (NEPC), in its CSR submission, said that there needs to be an urgent ramp up of R&D investment in order to meet and make best use of the government's commitment to invest £22bn by 2024/25

3.3 <sup>1</sup>. We support and reiterate that call.

3.4 As outlined our response to the Government's Jet Zero consultation<sup>2</sup> early investment in technologies is vital to put us on the path to net zero

aviation but also to ensure the UK is a global leader and science superpower.

3.5 In particular, we strongly support the work of the Aerospace Technology Institute. It is vital that their work continues to be funded at a high and sustained level recognising the stimulating effect in private R&D investment this has.

3.6 The Society's full CSR submission to HM Treasury can be viewed here: <https://www.aerosociety.com/media/16983/2021-raes-csr-submission-final.pdf>

#### **4. Net Zero**

4.1 We would refer the Committee to our Jet Zero consultation response which outlines our position and our policy asks in this area in full: <https://www.aerosociety.com/media/16837/raes-jet-zero-consultation-response.pdf>

4.2 Put simply, we believe the Government has the right level of ambition, but that significant change and investment is going to be needed in order to achieve it.

4.3 The industry as a whole is committed to making the changes needed and is investing significantly in new technologies and new ways of working.

4.4 We need to continue to invest in SAF which is going to be an important part of the jigsaw for some time to come, but in itself is not a silver bullet. We must also continue to strive for zero-emission, fully electric and hydrogen aircraft.

4.5 In the meantime there are a number of relatively small operational changes which could all have an immediate impact on reducing aviation's carbon emissions:

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- Review noise abatement procedures to enhance fuel efficiencies and improved aircraft performance. While various factors make flying 'perfect green flights' very complex, a lot can be done to make flights

greener at every stage of a journey. For example, where possible, use the ICAO NADP 2 vs NADP 1 (Noise Abatement Departure Procedure).

- During the approach, flap and gear extension might be delayed beyond the current practice, given some slight changes to gear warning systems.
- Prohibit economic 'fuel tankering', whereby aircraft carry more fuel than they need to reduce or avoid refuelling at their destination airport. Carrying excess fuel has an environmental impact as the weight of the fuel itself increases fuel burn<sup>3</sup>.
- Displaying the Targeted Start-up Time (TSAT) on the ground enables aircraft to taxi to their departure runway in the shortest time possible and reduces waiting times.
- Better, fuel-optimised flight planning, including arrival sequencing at congested hubs would reduce holding.
- Changing the taxation regime to better reflect an individual's contribution to climate change.

## **5. Skills and employment**

- 5.1 The context for our submission on skills is that the aerospace and aviation sectors have been hit especially hard by Covid. Travel restrictions outbound from the UK, inbound from other countries, testing and quarantine measures have all had a hugely dampening effect on demand for travel. The impact on the sector has been huge.
- 5.2 Recent figures from the Office of National Statistics showed that the average number of UK daily flights in the week ending 5 September was at just 54% of 2019 levels<sup>4</sup> and even this is high compared to figures from the first half of 2021.
- 5.3 The financial pressure on companies in this sector is incredibly severe and many of them have had to make significant numbers of people redundant. It is vital that the government provides necessary support for employers and employees in the sector to ensure that skills are retained and so the industries can grow again in 2022 and beyond given the hugely important role they play in the wider economy. This is the essence of our submission to the Treasury in respect of the Comprehensive Spending Review and Budget.

- 5.4 In respect of apprenticeships given the difficult situation faced by many employers any downturn in apprentice recruitment will not reflect future skills needs. The Treasury should support employers in ways to use unspent levy funds, such as suspending the expiry period of unclaimed funds by two years and/or enabling their use to support other skills programmes. Financial support for specialist training providers, both independent and FE college departments - such as through grants or low-interest loans – should also be considered given the high costs associated with delivering advanced engineering and aircraft maintenance training against a backdrop of a temporary but significant, drop in apprentice starts which could affect the short-term viability of some training provision, thus impacting longer-term capacity to accommodate a surge in demand post-recovery.
- 5.5 Rapid development of new apprenticeship standards identified through employer Trailblazer groups as part of their workforce development requirements, and which may also help people transition to STEM roles from other sectors, should be a priority. While the recent introduction of flexi-apprenticeships indicates a welcome understanding by the Government of the different working and employment patterns among businesses, recent discussions with employers in our sector indicate these will not provide the solution to supporting the development of staff for skilled seasonal roles where complexities over security passes and other safety measures make sharing apprentices across organisations more challenging. Support should be given to other forms of flexible apprenticeship patterns which can accommodate breaks in on-programme delivery due to seasonal demand. ‘Fast-track’, or ‘condensed’ apprenticeships should be introduced to reskill engineers and aviation specialists into sectors such as space, defence and sustainable and emerging aviation, to help employers attract, recruit and develop new talent more quickly.
- 5.6 Furthermore, with a potential drop in Apprenticeship Levy funds due reduced wage bills from furlough and redundancy schemes, the Apprenticeship Levy should be reviewed to ensure it is sustainable in the long-term, fit for purpose and gives employers and providers the stability they need to invest in apprenticeships and other forms of training, as well as extending access to funds for employers who have been severely impacted by the pandemic.

**October 2021**

## **Endnotes**

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<sup>1</sup> <https://www.raeng.org.uk/publications/briefings-statements-letters/six-engineering-ambitions-for-the-uk-spending-revi>

<sup>2</sup> <https://www.aerosociety.com/media/16837/raes-jet-zero-consultation-response.pdf>

<sup>3</sup> See also <https://www.eurocontrol.int/sites/default/files/2020-01/eurocontrol-think-paper-1-fuel-tankering.pdf>

<sup>4</sup>

<https://www.ons.gov.uk/economy/economicoutputandproductivity/output/bulletins/economicactivityandsocialchangeintheukrealtimeindicators/9september2021>