

“MANAGING AVIATION NOISE”: CIVIL AVIATION AUTHORITY

CHAPTER 10

RECOMMENDATIONS

MANUFACTURE

The most significant potential noise reduction benefits in terms of reducing noise can be produced through enhancement in airframe and engine manufacture. It is through creating quieter aircraft that the significant benefits in noise reduction have been driven since the 1950s.

Airlines

The CAA urges airlines to continue to focus on improving noise performance when they purchase new aircraft. Measures to incentivise airlines to prioritise noise performance over and above other priorities are explored in the incentivisation section below. This is important as with the recent introductions of two new aircraft types with significant noise benefits over their predecessors (Airbus A380, Boeing 787), operators now have more options when considering new type purchases.

Policymakers

Policymakers should be aware of potential noise and carbon trade-offs when considering incentives around sustainability and ensure that perverse incentives are not introduced which lead to increasing noise impacting local residents.

Manufacturers

Aircraft manufacturers face a series of pressures when they come to consider new product innovations including cost, configurability, efficiency, emissions, comfort and noise performance. While many of these elements have an impact on aviation's externalities, improving noise performance uniquely improves life for people who may see little or no benefits from aviation. We would strongly encourage manufacturers to continue to work to drive noise improvements, working collaboratively, and ensuring that trade-offs with other elements do not mean increasing noise.

OPERATE

Continuous Descent Operations (CDO)

We recommend airports consider the potential for such league tables to add value in their efforts to reduce noise, and consider other measures to ensure airlines adopt CDOs.

Low power low drag

Airports should consider measures to incentivise airlines to deploy landing gear at the appropriate point to balance operational and safety requirements and noise reduction.

Reduced landing flap

Although a number of operators already use or will utilise the reduced landing flap technique, such a measure could be adopted relatively quickly by others to enhance noise benefits. Airports should work with their operators to enhance adoption of reduced landing flap.

Displaced landing thresholds

We will work with industry to gain a better understanding on the issues associated with displaced landing thresholds and will engage with industry, government and the Airports Commission to move forward operational assessment of the potential benefits.

Slightly steeper approaches

The aviation industry should consider the potential for slightly steeper approaches to impact on existing practices such as low-power/low-drag and reduced landing flap techniques as part of consideration of adopting this procedure where appropriate to mitigate noise.

Two-segment approaches

We will work with industry to explore the potential for two-segment approaches, and request that the broader aviation industry actively engage with the work we have initiated with British Airways, and consider the potential for this concept to significantly reduce approach noise.

Optimised lateral path

The CAA will continue to engage with industry through the Airspace Change Process and the Future Airspace Strategy programme to identify opportunities for optimised lateral paths to deliver noise benefits.

MITIGATE

Insulation funding

Airports should assess their insulation schemes within the context of their individual circumstances, but when insulation funding is offered, it is most effective where funding is available in full for those most seriously impacted by noise. It is also sensible to allow eligible households to source their own supplier, allowing market forces to drive down overall costs. Where part funding is available, the proportion funded by the airport should depend on the level of noise impact – with more funding offered to those who experience greatest noise.

Property removal

In the Airports Commission final report, a review of the potential impact of property removal alongside land rezoning in order to mitigate the highest noise and potential health impacts on local residents would help to give certainty that the numbers of people affected by new noise will be minimised.

Barriers and other noise absorption mechanisms

Airports, in particular when seeking to expand, should consider the potential to utilise noise absorption methods to limit the impact of aircraft ground noise – particularly to newly exposed populations.

Expenditure

Increasing spending on mitigation to compete with international best practice would be expensive given the UK's population density, particularly at Heathrow where noise affects

many more people than any other European airport. However, increasing spending significantly above today's levels would achieve greater equity between airports and communities, and the CAA believes that it is likely to be a pre-requisite for the significant expansion of any airport.

INDUSTRY INCENTIVISATION

When considering both manufacturing and operational improvements, policy makers and regulators often do not have direct powers to affect changes to improve noise performance. As such, consideration of a range of incentives to ensure the aviation industry fully reflects the environmental externality caused by noise in its decision-making is vital.

Landing charges

Airports which have not already done so should adopt the CAA's good practice principles for landing charges to encourage quieter operations set out in the Environmental Charges publication.

Facilitation

Where they don't already exist, airports should provide effective fora to coordinate and drive operational techniques to mitigate noise impacts.

Noise envelopes

The imposition a noise envelope for any new runway capacity developed in the south east, which would contain a series of trigger points to allow new capacity to be utilised only when noise limitations are met, could have benefit for noise management and community trust. Imposition of such an envelope would be a decision for the Airports Commission and Government. The final design of such an envelope could be agreed by the Airport Community Engagement Forum.

If such an envelope is proposed, in setting out their National Policy Statement, government should apply the CAA's suggested principals to setting the noise envelope. Planning authorities considering additional capacity elsewhere should consider the utility of introducing a noise envelope to manage community noise impacts, and apply the principles if they choose to impose one.

Noise tax

Government should consider the potential for a future noise tax to incentivise airlines to procure and operate fleets in the most noise efficient fashion possible, if other methods are not successful, and to internalise noise impacts in consumer decision making.

Were it to be considered, the design of such a tax should, as the French one does, reflect the individual circumstances of different airports and their varying noise impacts - ensuring that impacts are proportionate and based on a clear cost/benefit analysis. If introduced, the CAA believes that it would more equitable for revenues to benefit local communities, either directly via funding insulation measures or indirectly through supporting schemes which benefit the entire local area.

ENGAGING COMMUNITIES

Even taking all the measures set out above, aviation noise will not be reduced to a level which annoys nobody in the foreseeable future, particularly if capacity expansion aims to meet

demand growth. As such, alongside the proposals to minimise noise, more must be done to ensure communities are engaged with the aviation industry.

Information publication

The CAA will continue to develop proposals to make aviation's noise impact more easily understood to the public.

Airport Community Engagement Forum

An Airport Community Engagement Forum charged with ensuring clear, effective links and dialogue between local communities, the aviation industry, policy-makers and planners would help to facilitate community engagement and could help to ensure the Airports Commission's recommendations are delivered. For such a Forum to be effective, it must have respected, independent and objective governance to give weight to its recommendations around noise management strategies, community engagement and compensation measures. The Forum's core aim would be focussing on how new capacity is developed and utilised, rather than whether such capacity should be created – a decision which is for the Airports Commission and Government.

Financial incentives

Financial incentives for local communities could be an important part of compensating people for the negative impacts of aviation. The Airports Commission may propose such incentives in their final report – these are likely to be most impactful if local communities have a say in their design and if they are underwritten by law to ensure that residents can rely on them.

Landing charges and fines

Scheme proposers should consider the potential to do more to engage communities by spending more than they presently do on community engagement opportunities.

In reaching its final recommendation, the Airports Commission could consider the potential for hypothecating an element of the airport landing charges and slot fines to benefit local communities, either directly via payments or indirectly through local schemes. This could include considering the potential to enhance deliverability of the proposed project, weighed off against the impact on its financeability.

Ownership options

Although they are radical and likely to be challenging to implement, scheme proposers could consider the potential for utilising a novel ownership structure to better engage communities with airport success.

Tax breaks

Government and local authorities should consider the potential for tax breaks for local people and businesses to help to compensate local communities.