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All Party Parliamentary Group on Heathrow Expansion and Regional Connectivity

Building Aviation Back Better

Photo provided courtesy of Airbus

1st Report of the All Party-Parliamentary Group for Heathrow Expansion and Regional Connectivity

February 2021

Contents

Foreword

The COVID-19 pandemic has created the biggest crisis the aviation sector has ever experienced and has laid bare its importance to the economy and local communities. There is a huge task ahead to rebuild the UK economy, to protect people's livelihoods and deliver a more sustainable aviation industry. As a global trading nation, it is essential that the UK helps to restart international trade and travel in a way that is safe and sustainable.

However, the recovery from the pandemic will not see a return to normal. There is a huge opportunity for the UK to deliver a sustainable future by playing a leading role in decarbonising global aviation. The Government must ensure that the industry is appropriately incentivised to deliver technology improvements, the development of low and zero carbon fuel, and investment in carbon removals to balance its remaining emissions.

In order for aviation to build back better it is vital that Government policy on aviation places local communities and workers at its centre. Opportunities for retraining and upskilling must be prioritised to help those workers at risk, particularly those on the lowest pay. The recovery also provides the opening for a new approach to the management of the environmental, health and social impacts aviation has and to ensure that open and robust engagement is at the core of the relationship between industry and local communities.

Ruth Cadbury MP

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APPG on Heathrow Expansion and Regional Connectivity

www.appgheathrowexpansion.com

All-Party Parliamentary Groups are informal groups of members of both Houses with a common interest in particular issues. The views expressed in this report are those of the Group.

Scope of the Inquiry

The APPG invited views on how Government policy can best support the industry to build back better for a more sustainable aviation sector. The call for evidence lasted eight weeks from 21st July until 14th September 2020.

The APPG received forty written submissions from a range of organisations including businesses, trade unions, environment and community groups, as well as a number of individuals.

The inquiry sought views on a number of key areas including Decarbonisation, Community Impacts, Jobs, Regional Balance, Bailouts, Taxation and the Aviation White Paper. A full list of questions can be found in the Appendix.

This report summarises the range of responses received and variety of opinions expressed. It makes a number of recommendations for consideration by Government.

Respondents

Type of Respondent	Number
Business	3
Trades Union	2
Community Group	10
Environmental Organisations	2
Individual	23

Areas responses received from

- London
- North East England
- North West England
- Scotland
- South East England

Contact

If you have any questions about the report or would like further information please contact the Secretariat on APPGheathrow@gmail.com

Recommendations

1. Include aviation emissions in 6th carbon budget.

- The Government should accept the advice of the Climate Change Committee to amend the Climate Change Act to formally include international aviation (and shipping) in carbon budgets.

2. Better regulation for aircraft noise.

- Introduce statutory, regulation of aircraft noise, administered by an independent and expert body with powers to enforce its decisions.
- Consider mechanisms for improving the monitoring and evaluation of noise assessment.
- Explore improvements to noise assessments to ensure that change scenarios are properly incorporated.
- Consider the impact of airspace congestion performance targets to see if emissions can be lowered through better management of UK airspace.
- Commission research on the health and environmental impacts on local communities of the intensification of flight paths.

3. Set and enforce clear emissions reduction targets.

- Government should set an ambitious aviation emissions reduction trajectory that requires industry to achieve interim targets through the roll out of low/zero emission technology or demand management.
- Government to promote investment initiatives that support the decarbonisation of the aviation sector.
- Government should set zero-carbon targets for aviation with specific restrictions and penalties on airlines and other aviation sector businesses that fail to meet those targets.
- Government should publish its climate change policy on aviation as soon as possible with reference to the latest advice by the Climate Change Committee.

4. Longer period of night flight restrictions at designated airports.

- Government to consider a reduction in the number of aircraft movements permitted at night.

- Explore the health and economic impact of an 8 hours night flight operational ban.

5. Support for workers

- Government to consider a financial mechanism to support any workers who are made redundant, whether as a result of the pandemic or further automation, by the creation of green jobs pathways, with particular support for those on low pay.

- Government should establish a National Skills Fund. This could help provide aviation sector workers, particularly those impacted by the pandemic, with greater financial and training support.

- Government should support the establishment of a Just Transition Commission to examine the retraining and reskilling opportunities that will be vital for workers to transition to jobs in the zero-carbon economy.

6. Public Transport Improvements

- Government should commission a study to look at the optimal design balance for integrating different transport modes at airports.

- Government to set out investment plans to support transport schemes that can increase the public transport access to airports, including strategic rail connections.

7. Regional Investment

- Explore opportunities to reform the use of PSOs and slot allocations mechanisms to ensure appropriate support can be provided for regional connectivity.

8. COVID-related Bailouts

- Any direct financial support to contain strict criteria, including a moratorium on dividend payments and legally binding targets for emission and noise reductions.

9. Taxation

- Government should review aviation taxes and ensure that they full reflect the environmental impact of the sector.

- Government should explore the introduction of a frequent flyer levy to ensure that those who fly the most pay the highest price whilst also protecting the right for families to enjoy a holiday abroad.

10. Further Research

- Government should make a full study of the change in working patterns as a result of the COVID-19 pandemic and any possible reduction in demand for air travel.

- Commission further research into the non-CO_2 impacts of aviation emissions.

Key Issues

1. Policy Framework for Decarbonisation

What would these targets and incentives look like?

Many respondents stressed the urgent need for an aviation decarbonisation strategy, and for International Aviation and Shipping (IAS) emissions to be formally included in carbon budgets. Further, the damaging effects of air travel on the climate have been underlined by a new study that shows the non- CO_2 impacts of aviation emissions,

> *"are currently warming the climate at approximately three times the rate of that associated with aviation CO_2 emissions alone".*[1]

Many respondents called for strict targets for UK aviation (which should include departing flights to international destinations), enforced by strict penalties or an enforced reduction in operations if these are not met. These targets should include all emissions from aviation including carbon dioxide (CO_2), nitrogen oxides (NOX), sulphur oxides (SOX), unburnt hydrocarbons (HC), carbon monoxide (CO), particulate matter (PM) and soot. Breaches should result in prohibition notices on operators and airports as well as meaningful fines.

Many believe that any expansion of Heathrow would be in direct opposition to the UK Government's declaration of a Climate Emergency and its legal commitment to an 80% reduction in carbon emissions by 2050, relative to their 1990 levels.

Heathrow believes the most significant step to accelerate carbon reductions in the 2020s and secure a path to achieve Net Zero emissions by 2050 is to rapidly scale up production and use of Sustainable Aviation Fuels (SAF). They suggest that SAF can deliver life-cycle carbon savings of at least 70% compared to kerosene and also offers significant economic opportunities. It says that production of SAF could generate up to £2.7 billion for the economy and support around 18,800 jobs across the UK.

Heathrow assert that Government should support the industry by providing £500 million of match-funding or loan guarantees to help construction of the first two commercial SAF plants within two years for them to start producing by 2025.

The Chartered Institute of Highways Transport (CIHT) suggest that setting targets for specific measures are not appropriate but rather progress should be measured alongside each 5-year carbon budget. The UK Government should participate fully in the International Civil Aviation Organisation's (ICAO) Carbon Offsetting and

[1] https://www.sciencedirect.com/science/article/pii/S1352231020305689

Reduction Scheme for International Aviation (CORSIA) and set individual aircraft emissions standards, which include targets.

However, many respondents assert that emissions reductions should be not be achieved by offsetting as this does not result in net reduction in carbon required.

FiveAero highlighted that reducing congested airspace would offer a significant benefit to lowering emissions. The impact of this congestion at Heathrow and Gatwick alone in 2019 was:

- almost 0.9 Megatonnes (Mt) of unnecessary CO_2 emitted
- 0.3 Mt of unnecessary fuel use which cost airlines £143M
- almost 1 billion passenger delayed minutes estimated to cost them £300M.

They also suggest that the imposition of congestion performance targets (addressed by reduced over-scheduling and new technologies) would bring environmental, financial and resilience benefits. This could help stimulate introduction of technology that will improve efficiency. Airports and airlines may have to reduce peak scheduling if they cannot find suitable technical solutions.

What role might be played by electric and hybrid aircraft?

The industry responses see a golden opportunity for the UK to be among the leaders in developing electric aircraft combining it with improving regional connectivity by embarking on a programme of electric or hybrid aircraft on a network of regional air services, in particular for routes not well served by rail.

FiveAero suggest that 'air taxis' could give a new lease of life to smaller regional airports and the areas they serve. Further, converting domestic flights and surface access traffic to electric or hybrid aircraft would support the Government's levelling up agenda by increasing the viability of regional commuting in areas with poor road or rail infrastructure and encourage traffic from smaller airports into towns and cities.

However, the Aviation Environment Federation (AEF) highlighted a report commissioned jointly by Department for Transport (DfT) and the Committee on Climate Change (CCC) which anticipates that fully electric aircraft will not be commercially available until after 2050 for anything but the shortest routes (which by definition generate a very small proportion of emissions). A new report by the International Energy Agency (IEA)[2] shows that even in a 'sustainable development scenario', electrification will only cover up to 40% of flights and 10% of aviation emissions even by 2070 – 20 years after the sector needs to achieve net zero emissions.

Many respondents expressed scepticism about the ability of electric and hybrid aircraft to be operational quickly enough to make a difference by 2050. There is no

[2] https://www.iea.org/topics/energy-technology-perspectives

certainty that electric and hybrid aircraft could provide a viable solution at pace and scale.

Several respondents noted comments in a letter from the CCC[3] to the Secretary for State for Transport, stated that a 1.4% annual improvement in fuel efficiency might be achieved. This reflects uptake of more efficient engines, including some deployment of hybrid-electric aircraft in the 2040s. Further, the CCC's view is that hybrids will make up less than 10% of kilometres flown in 2050 and that full-electric aircraft are unlikely to be feasible by 2050. These assumptions may be optimistic if the industry does not invest at the rate anticipated by the CCC, particularly in the wake of the COVID-19 pandemic.

Are any changes required to the Renewable Transport Fuels Obligation?

Heathrow called for Government to increase the multiplier in the RTFO to help support investment in aviation rather than road fuels and also include recycled carbon fuels in the RTFO.

Several respondents suggested that the RTFO should include e-kerosene as this would provide an incentive for industry to progress alternative and more sustainable options. Further, as SAF are developing rapidly, they will shortly require robust regulation.

Many respondents highlight that the CCC consider that biofuels will need to be phased out by 2030 for surface transport and so offer no realistic use for aviation. Further, many uncertainties remain around synthetic fuels to put any figure on their usage or uptake.

Several respondents again highlight the view of the CCC that sustainable biomass is likely to be in limited supply and better used in applications where it can provide a semi-permanent carbon store such as construction, building efficiency and carbon capture and storage (CCS) facilities.

Recommendations

- Government should include International Aviation and Shipping (IAS) emissions to be formally in carbon budgets.
- Commission further research into the non-CO_2 impacts of aviation emissions.
- Consider the impact of airspace congestion performance targets to see if emissions can be lowered through better management of UK airspace.

[3] https://www.theccc.org.uk/publication/letter-international-aviation-and-shipping/

2. Community Impacts

Do current noise impact assessments consider changes in the noise environment?

Some community groups were critical of the way that most airports report noise using an average noise level metric (LAeq), which is not the way people experience aircraft noise. The use of this metric enables the industry to assert that the noise environment is improving when its adverse impacts are likely to be increasing.

Further, the majority of noise assessment focuses on areas of higher average noise and excludes areas where average noise is below the government's Lowest Observed Adverse Effect Level (LOAEL). There is extensive evidence that people in areas where noise is below LOAEL suffer substantial adverse effects.

Many respondents feel that UK airspace governance arrangements are designed to override the concerns of overflown local communities and their MPs. They highlighted that local communities are at a constant disadvantage to be able to challenge data produced by the sector because the lack of truly independent specialist knowledge and science-led advice in this very complex area.

Many respondents feel that it is unfair to ask communities to comment on airspace change proposals without basic data about where and when new flight paths will be introduced.

CILT highlight that there are arguments about how well the metrics represent perception, with the unsolvable issue that averages will never represent individual views. They suggest it is now normal practice to present a range of metrics which give a good overall representation of impact.

Several community groups believe that the Government, without any consultation or discussion with people affected, has adopted three recommendations of the Airspace Change Organising Group (ACOG) with no consideration of the environmental effects upon communities. They referenced a comment from ACOG that, "*With a higher appetite for airspace change, the current emphasis on noise mitigation at lower altitudes is likely to come into greater conflict with network designs that seek to maximise flight efficiency and combat emissions*". This reflects the challenge of balancing noise and carbon impacts when changing airspace use.

Some community groups suggest the Government include specific targets for arrivals that would result in planes remaining higher for longer and descending more steeply. They feel that airports should also set specific operating procedures that have proper consideration for overflown communities. Similarly, for take offs, many responses called for the removal of reduced thrust departures and called for aircraft to ascend higher and quicker.

Some respondents called for noise impact assessments to use accurate local data. This has not always been the case in the past when a model based on one airport

has been assumed to be usable at other airports. Increases in noise relative to the baseline in a community should be assessed. They asserted that continuous monitoring and re-evaluation is essential to keep assessments relevant.

What impact will the intensification of existing flight paths have on local communities?

Respondents highlighted that the intensification of existing flight paths will mean that a number of communities will experience less noise but at the expense of other communities who will suffer greater noise intrusion and the resulting impacts on health and wellbeing. Many believe that it is absolutely essential that airports, and National Air Traffic Services (NATS) work with communities to arrive at solutions that improve the quality of life and health for those communities overflown.

This inevitably creates a conflict because the best route to minimise noise for communities may not be the best route commercially for an airline. So there need to be clear guidelines as to which has priority and how the costs to communities and the environment will be considered.

Dispersed and multiple routes on departures would help to alleviate these potential issues but respondents were critical of the reluctance of the aviation sector to divulge this information until the last moment and which is seen by many as disingenuous.

Many communities already suffer under concentrated flightpaths who state that industry and Government should do more than simple try to minimise the numbers impacted. The current approach appears to impose a significant burden on communities directly under the concentrated flight paths who have received insufficient engagement in the process.

Intensification of flight paths is likely to have profound impacts on those under them including in relation to health, air quality and asset values. Although this issue has been self-evident for many years the Government has failed to take it seriously, declining both to set a suitable policy framework and failing to undertake any research into the subject despite numerous requests to do so from the Aviation Communities Forum and other groups.

CILT's view is that precision and certainty is better than randomness, although managed dispersal may be better than concentration on one route.

The most pressing concern of community groups and local residents is that an evidence base does not exist (in the UK or globally) showing how Performance Based Navigation (PBN) technologies can be introduced over residential communities without causing significant damage to the health and quality of life of substantial numbers of people. They stated that the introduction of PBN will not necessarily improve performance, has fallen way short of the predicted benefits in the USA and has ended up with numerous lawsuits and reversion of the flight paths, due to community outrage.

Many respondents highlighted the 2014 trails where Heathrow ran PBN departure trials but had to be abandon them early in the face of mass public protest. Around Gatwick, the Civil Aviation Authority's (CAA) approval of new PBN routes was referred to the Court of Appeal for failing to protect overflown communities from new routes.

Consequently, they called for the impact of any airspace change and introduction of highly concentrated flight paths to be examined independently at arm's length from the CAA and DfT advisers and with specialist involvement from Public Health England (PHE) and the Department for Environment, Food and Rural Affairs (DEFRA). The community representatives on the DfT's Airspace and Noise Engagement Group have made repeated requests for the Government to undertake research on the health impacts of concentrated flightpaths.

Respondents highlighted that the recently revised World Health Organisation (WHO) community noise guidelines noted that a change in noise can lead to higher levels of annoyance. The last Government aircraft noise study, the Survey of Noise Attitudes 2017 (SoNA), was criticised by some by some community groups because its random sampling approach failed to interview enough respondents who had recently experienced an airspace change, potentially underestimating community reaction.

How can improvements in local air quality be secured for the long term?

Many respondents suggested the best way to improve local air quality is to introduce demand management to help reduce total levels of aviation traffic. In the long term, only technological improvement in aircraft engines and a move to electric or hybrid planes will have any significant effect.

Community groups called for any failure to meet air quality targets to result in enforcement action, including limiting the number of flights using an airport that breaches legal limits.

Nearly all respondents agreed that lower levels of aviation demand in future would help to reduce these impacts.

Several respondents believe that greater research is required on the direct impact of aviation on air pollution, particularly in relation to non- CO_2 emissions and ultrafine particles from aircraft.

Government should also ensure adherence to legal limits on local air quality and continue to promote the progressive replacement of road vehicles by hybrid and then pure electric types, coupled with support and investment in public transport, walking and cycling in communities around airports.

What schemes or incentives are required to increase the number of people accessing airports via public transport?

Heathrow highlighted that they have developed a two-runway surface access strategy which uses the same targets as the Airports National Policy Statement, including for example the percentage of air passengers using public transport. They urged the Government to play its part by continuing to enable Network Rail to progress the Western Rail Link and to enable the private sector to bring forward the Southern Rail Link. However, several individual respondents highlighted that airports should provide the majority of funding for schemes for which they are the primary beneficiary.

Many respondents suggest that free transport for workers at airports should be introduced with convenient pickup and drop off points. Public transport networks should offer significant monetary savings to travellers as an incentive not to bring cars to airports.

Heathrow Southern Railway (HSR) highlighted that their project to improve rail access to Heathrow from the south is fully aligned with need for infrastructure investment to be consistent with a sustainable, zero-carbon future. They suggest that their scheme is forecast to increase rail's modal share by 4%, remove around 3 million car journeys from the road network around Heathrow each year, which will avoid the release of 2 tons of NOx and 8,600 tons of CO_2 into the atmosphere.

Several respondents suggested that airports should be required, through planning or other mechanisms, to increase the number and proportion of people accessing them by public transport. Failure to meet these targets should result in enforcement action, including limiting the number of flights using the airport.

Can the impact of night flights be mitigated?

Several respondents stated that it is difficult to mitigate the impacts of night flights except through partial or full night curfews.

The majority of respondents called for a ban on night flights, lasting 8 hours as per WHO recommendations about the amount of sleep people require. Suggestions were also made for only the quietest aircraft to be allowed to be operational in the hour before and after the night time period. Too often commercial considerations trump the concerns of those overflown and this should be challenged more vigorously.

Some community groups highlighted that the publication of the Survey of Noise Attitudes (2014 – Night) has not yet been published, despite many requests by community members at the Heathrow Community Noise Forum and promises by the CAA being made that it was 'almost there.'

Many respondents highlighted Frankfurt Airport, where a ban on operations between 2300 and 0500 has been successfully implemented, as evidence as what can be achieved when there is the political will to do it.

Recommendations

- Consider mechanisms for improving the monitoring and evaluation of noise assessment.
- Explore improvements to noise assessments to ensure that change scenarios are properly incorporated.
- Enable progress that can be made on key rail connections to airports.
- Commission research on the health and environmental impacts on local communities of the intensification of flight paths.
- Extend the length of night time restrictions at designated airports.

3. Jobs

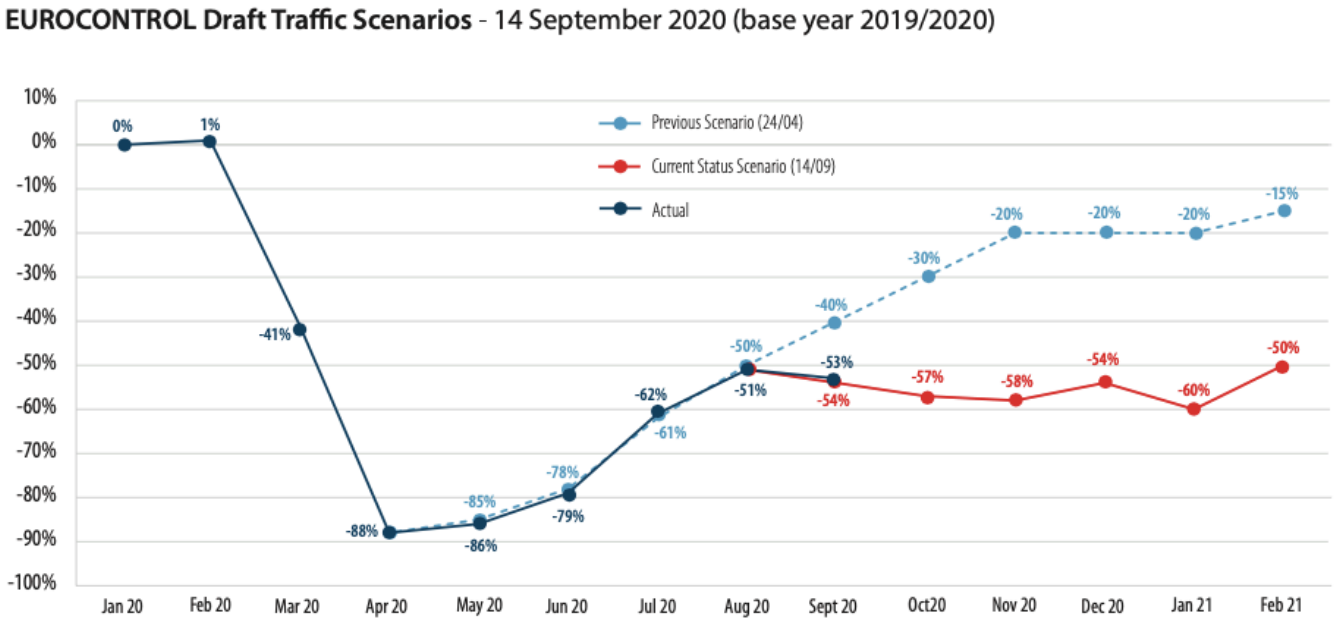
What level of demand is likely to return to aviation in the next few years and at what pace?

Heathrow Airport noted that passenger numbers declined by over 95% in June 2020, and passenger demand in August 2020 declined by 81.5% compared to 2019, with 1.4 million passengers travelling through Heathrow. This is less than a fifth of typical demand levels during the summer holiday period. They suggest that traffic isn't likely to return to pre-pandemic levels until at least 2023.

Similarly, CILT believe that total UK 2019 passenger numbers may not be reached for another 3-5 years. 2021 levels will be well below 2019, as passengers adjust, and COVID-19 hotspots remain. There will be some 'permanent' changes as connections are replaced by online meetings, but tourism cannot take place online and the desire to travel remains strong. Freight demand has not reduced to anywhere near that of passengers, and should return to 2019 levels more quickly, possibly even by 2021.

The GMB union feel that with further restrictions on aviation quarantine rules, recovery of demand levels is likely to be very long and slow for years to come.

Moreover, FiveAero highlighted statistics from Eurocontrol[4] which show that so far demand recovery has been considerably slower than anticipated earlier in 2020.



[4] https://www.eurocontrol.int/publication/eurocontrol-draft-traffic-scenarios-september-2020-february-2021

Some respondents suggest that aviation will be in decline for many years as the sector struggles to adapt to lower demand, particularly from business traffic. There are also suggestions that the recovery may result in airlines running into serious financial difficulty which could lead to some consolidation in the market that may have a longer-term effect of increasing ticket prices and further supressing demand.

However, a number of respondents including the Aviation Communities Forum (ACF), stated that in the current circumstances, it is extremely difficult to accurately predict demand levels due to the changing nature of regulations, particularly in the travel sector, due to the pandemic. Therefore, any concrete predictions of demand, especially in 2021, should be treated as speculative at this time.

What policy options does Government have to protect workers (particularly low-skilled and lower-paid workers) in the sector?

The GMB are deeply concerned that although some layoffs are inevitable, some companies were using COVID-19 as justification to reduce jobs and employment terms. For example, British Airways are proposing to make up to 42,000 people redundant only to then outsource 30,000 jobs on "inferior terms". The GMB argues this is morally and ethically outrageous. They also suggest that companies within the Heathrow supply chain may drastically reduce its workforce or even just pull out of its contracts.

The AEF stated that investment in a green recovery, including the delivery of a 'Just Transition' for workers into sustainable employment in low carbon sectors, must be the priority. They suggest that Government focus on supporting aviation workers to find alternative employment in the green economy. Insufficient work has been undertaken, in their view, on how this can be practically be delivered.

It was suggested by several respondents that a condition of any loan from Government should be that aviation companies must not be allowed to fire and rehire staff in order to reduce their pay or provide less favourable working conditions.

What skills and training do workers require to transition into alternative sectors?

Many respondents believe that the recovery period provides an opportunity to re-examine what alternative employment and career opportunities are available to local people, particularly where they can be retrained for sustainable green jobs. If there are particular unemployment blackspots around airports, it may be appropriate for skills and training to be designed for their circumstances.

Some respondents highlighted that the aviation sector does provide some good quality employment. However, they also believe that it creates large numbers of low paid low skilled jobs (e.g. baggage handling, security screening). Moreover, larger airports tend to crowd out other local businesses by pushing up their rents and staff costs, thus creating a monoculture of jobs. This leaves local economies overly vulnerable to a downturn in aviation.

The GMB has members working in the aerospace industry who are highly skilled and report that they have been stripped of their livelihood and future opportunities because of a lack of comparable work available. Many are forced to take much lower paid jobs in sectors such as retail. However, the GMB is particularly concerned for low skilled workers in the sector, as they have fewer opportunities to re-train or move into other sectors.

A couple of individual responses highlighted a recent report by the New Economics Foundation (NEF), the Trades Union Congress (TUC) and Possible[5], which reveals that jobs per passenger in aviation have been steadily falling for many years, probably as a result of increasing automation at airports and an increase in the proportion of low-cost travel. It is suggested that Government should focus on supporting aviation workers to find alternative employment in the green economy. The report recommended a 'right to retrain and reskill', supported by a National Skills Fund, which would cost less in the long-term than supporting people through the welfare system. The report suggested establishing a Just Transition Commission to make recommendations on this issue.

Several respondents stated that the skills required to enable workers to secure jobs in other sectors depends on the nature of those sectors but that it would make great sense to accelerate job growth in industries and services aimed at reducing and minimising environmental impact. The most obvious skilled area is conservation and development of sustainable forms of transport and energy as well as alternative forms of propulsion. This is likely to be a growth area and employment in this field should be encouraged.

Recommendations

- Government should make a full study of the change in people's working patterns as a result of the COVID-19 pandemic and the likely reduction in demand for air travel before making any recommendations and policy decisions regarding the aviation sector.

- The Government should establish a National Skills Fund. This could help provide aviation sector workers, particularly those impacted by the pandemic, with greater financial and training support.

- Government should support the establishment of a Just Transition Commission to examine the retraining and reskilling opportunities that will be vital for workers to transition to jobs in the zero-carbon economy.

[5] https://neweconomics.org/uploads/files/aviation-workers.pdf

4. Regional Balance

What support do regional airports require from Government?

CILT state that the aviation industry should receive financial support from central Government only where special economic or political considerations apply.

Aviation business FiveAero suggest that regional airports need Government to stimulate demand, inward investment and regional connectivity to global destinations, including direct links through major hubs overseas. This is particularly important, as they assert that regional airports will probably recover later than London airports unless they are specifically assisted.

The GMB supports the levelling up of economy and prosperity across the country. In terms of growth, they believe that there is a strong case for expansion at both Heathrow and Gatwick, as well as at other airports across the UK, as without additional airport capacity the UK will be unable to compete in the global market place.

Environmental organisations like AEF remain concerned that any growth at regional airports will inevitably result in an increase in emissions. Although many respondents suggest that any further expansion of airports in the South East of England will inevitably remove opportunities for growth in the Midlands and the North, as well as in Scotland.

Community groups from around Edinburgh, Liverpool and Newcastle airports all believe passengers would much prefer to fly from their local regional airport and that local airports will be able to more easily meet environmental targets.

Several also called for limited residual demand for business travel to be catered for with "point to point" travel from the major regional airports. Such a shift in business travel could help ensure that UK regions can have global connectivity for both passengers and freight.

Regional community groups suggested that it is far too difficult to access their respective local airports by public transport. They highlight evidence from Newcastle Airport Masterplan that 55% of passengers and 85% of staff access the airport by car.[6] They also assert that many regional airports are loss making and carry significant debts (e.g. Liverpool John Lennon and Newcastle).

Remote or island locations rely on air transport for lifeline services, particularly the Highland and Islands region of Scotland and will continue to require financial support to maintain links with the wider world.

[6] https://www.newcastleairport.com/2035-masterplan/

Although not directly cited by respondents, the question of how important regional links are serviced, maintenance and funded raises a number of questions for Government:

1. Is there an opportunity to reform the use of Public Service Obligations (PSOs) to support vital regional connections?

2. Will the freedom delivered by leaving the European Union enable the Government to adopt a new approach to the allocation of slots and the funding of unprofitable routes?

3. Can the Government deliver a new mechanism of financial support to help regional airports to level up, offer direct global connectivity and build back better?

Where would growth in aviation best deliver economic benefit within existing environmental targets?

FiveAero highlighted growth at regional airports. within environmental targets, may deliver greater growth than would be delivered by expansion at London airports. They suggest that growth at London's airports will increase congestion, delay and diminish environmental performance.

However, the GMB state that many regional airports seek connectivity with Heathrow because it is the UK's only international hub airport. Although they suggest that the pandemic has resulted in a dramatic reduction in aircraft movements which is likely to remain the case for a few years and that the capacity pressure at Heathrow has temporarily gone away.

Some community groups suggested that greater use of regional airports could provide improved operating resilience at the London airports normally subject to congestion. Further, by encouraging more direct flights from regional airports, it should be easier to keep the negative impacts on communities and the environment within acceptable limits.

However, other community groups state that an increase in air traffic movements is not necessary, as many aircraft operate with considerable spare capacity. It is also noted that there is spare existing runway capacity at many airports around the UK and therefore better use should be made of existing infrastructure as opposed to building a new runway in the South East.

Several respondents called on the Government to commission a study to detail how and why passengers originating from a regional airport choose a particular hub when making long haul connections.

What investments in surface transport are required to facilitate fewer car journeys to regional airports?

CILT suggests that improved connections to a range of regional airports would facilitate fewer car journeys and that the Government threshold for public investment of 10 million passengers per annum is not appropriate. Examples of airports that could benefit from new or improved public transport access include Aberdeen, Glasgow, Inverness, Newcastle, Teesside, Leeds-Bradford, Liverpool, Doncaster, Bristol, Exeter, Southampton and Cardiff.

Many respondents state that investments in transport should focus on:

- Improvements in walking and cycling infrastructure;
- Better provision for and investment in electric cars;
- Increased public transport provision within and between cities to allow for the greater social distancing now required;
- Free public transport for airport workers to their place of work to minimise individual car usage.

Several regional respondents highlighted that Airport Master Plans (e.g .Liverpool) specifically encourage car journeys to their airports, since it enables them to secure car parking fees. They suggest that the best way to ensure fewer car journeys to airports is road pricing immediately around them, with the proceeds used to subsidise the cost of public transport.

Most respondents called for the construction of rail, light rail, bus or other public transport links to prioritise convenience, so that passengers and staff can walk comfortably and for minimal distance into the terminal building, adding to the incentive to use public transport when travelling to an airport. Several highlighted suggested that Frankfurt Airport is an excellent example of how this can be achieved.

The importance of investing in Western and Southern rail links to Heathrow Airport was stressed by multiple respondents as this would help reduce employee and passenger car journeys as well as create a considerable number of new journey opportunities on public transport.

Heathrow Southern Rail Ltd (HSR) highlighted that their scheme is forecast to remove around 3 million car journeys from the road network each year, around half of which are taken from the M3/M25/M4. They estimate this will avoid the release of 2 tons of NOx and 8,600 tons of CO_2 into the atmosphere.

Recommendations

- Government should commission a study to look at the optimal design balance for integrating different transport modes at airports.
- Explore opportunities to reform the use of PSOs and slot allocations mechanisms to ensure appropriate support can be provided for regional connectivity.
- Provide investment plans to support transport schemes that can increase the public transport access to airports.

5. Bailouts

What financial support should Government be willing to offer to the aviation sector?

Heathrow Airport have called on the Government to support the aviation industry by:

- Offering 12 months business rate relief to airports in England and Wales;
- Extending the Job Retention Scheme as recovery in aviation is likely to lag behind many other sectors;
- Develop a Common International Standard for health screening measures – including beginning passenger COVID-19 testing in aviation.

FiveAero suggest that Government should seek to invest in initiatives that reduce UK regions reliance on the connectivity through London's airports and provide support for all airports to ensure that they effectively participate in the UK's airspace modernisation programme.

The GMB have asked the Government to put together an aviation-specific economic package to protect the industry without the need for redundancies, to ensure that any 'state-aid' comes with requirements which protect worker's rights and creates a greener industry. They suggest that if the UK is serious about investing in cleaner and greener planes and the possibility of carbon neutral flights then making engineers and workers in the industry unemployed is not the solution.

CILT's view is that Government financial support for aviation should be by exception as they do not support specific sector related support.

Environmental groups such as the Aviation Environment Federation (AEF) oppose the provision of Government support to the aviation sector by way of bailouts. They state that,

> *"Many airlines have benefited from Government loans and made extensive use of the staff furlough scheme during the pandemic. In recovering, they should make a fair contribution towards rebuilding public finances, and on the spending necessary to support a green recovery."*

Many community groups and individual responses suggest that any further financial support must contain strict criteria, including a moratorium on dividend payments and legally binding targets for emission and noise reductions.

What conditions should be attached to any financial support?

AEF assert that the conditions attached to support of individual airports and airlines in other European countries are unlikely to be effective in reducing aviation

emissions. Many of them simply repeat commitments already made and are in many cases unenforceable.

Other respondents suggest that conditions should include:

- Rapid replacement of noisier and more polluting aircraft;
- Strict emissions reduction targets;
- Introduction of tax on aviation fuel;
- Restrictions on planned growth.

Are there any regulatory mechanisms or legislative changes required?

Many respondents believe that aviation should only be offered support that is available to all UK businesses. Using taxpayers' funds to further support an industry that has neglected its adverse environmental impacts for so long appears difficult to justify in the current economic context.

AEF strongly oppose any reduction, even temporary, in Air Passenger Duty (APD) and suggest that instead the Government should ensure that the aviation sector:

- Is fully accounted for in the economy-wide drive to achieve Net Zero emissions;
- Is equitably taxed to help fund the green recovery and to reduce demand for flying;
- Is required to invest in the radical new technologies that will be needed for any zero-carbon flight, and to balance its emissions through paying for genuine, long-term carbon removals.

Some individual responses called for the introduction of a noise levy that would not only deter the use of noisy aircraft but will also deter aircraft being flown in a way that causes extra noise to people on the ground.

Several community groups supported a proposed ban on aircraft movements between 10pm and 7am, except in national emergencies.

Respondents also highlighted the need to support the creation of alternative jobs in the environmental sector where economic benefits could be secured while reducing impact on the environment and the climate.

Heathrow reiterated calls for the Government to turn their words on testing into action. If testing is introduced, these vital changes would show the Government understands how critical the restoration of air travel is to this country's economic recovery.

Recommendations

- Government to consider a financial mechanism to support any workers who are made redundant through creation of green jobs pathways.

- Any direct financial support to contain strict criteria, including a moratorium on dividend payments and legally binding targets for emission and noise reductions.

- Government to consider investment initiatives that support the decarbonisation of the aviation sector.

- Government to consider a reduction in the number of aircraft movements permitted at night.

6. Taxation

Are existing aviation taxes fit for purpose?

All respondents believe that aviation taxes are not fit for purpose and are grossly unfair and prejudicial to other forms of transport.

Many asserted that current taxes do not reflect the environmental cost. Failure to tax aviation fuel duty means that more environmentally friendly forms of transport such as rail cannot compete with cheap, subsidised flights. They suggest VAT should be imposed on kerosene and APD should be increased exponentially.

There were also calls for a new community levy on airline tickets to help fund technical support for communities to bring about noise and other pollution reductions for residents. The money raised from this levy should be administered by community representatives, not by the airport.

Conversely, industry calls for a review of APD are well established. CILT's overall view is that APD should be replaced by a proper, credible carbon price and offsetting arrangement, such as planned eventually for the ICAO CORSIA scheme. They also highlight that the aviation sector contributes to general taxation through taxes on profits, employment taxes (National Insurance) business rates and VAT on non-fares purchases.

FiveAero suggest that APD could be reformed to incentivise travel from regional airports outside of the London area and better address environmental objectives, for instance, by providing funds for environmental projects at airports.

How can Government ensure that all aviation companies make a fair contribution to the reduction of emissions?

Many respondents asserted that planes flying in British airspace should be taxed according to the emissions they generate. The introduction of tax on aviation fuel could incentivise airlines to modernise their fleets and dispose of the most polluting aircraft.

AEF highlight that one of the obstacles preventing a more rapid transition to lower carbon fuels is the absence of an effective carbon pricing scheme.

The Aviation Communities Forum (ACF) argue that Government should set and enforce zero carbon targets for aviation. These should include an ambitious aviation emissions reduction trajectory and a requirement for the industry to achieve interim targets through the roll out of both low and zero emission technology or demand management. The targets should take full account of the aviation industry's non-CO_2 climate effects.

CILT assert that Government must facilitate international agreement on effective net zero technologies. They suggest that ICAO's CORSIA scheme requires greater focus and a stronger scientific base, and that ICAO emissions standards need progressive strengthening over time. Such improvements could lead to Government setting clear dates for the progressive, mandatory and airline funded replacement of aircraft with higher emissions.

Many respondents suggest that Air Passenger Duty should be increased year-on-year on domestic flights to encourage mode switching to surface transport, especially to rail for longer distance journeys.

Several respondents highlighted that individual organisations have limited ability to reduce emissions. The improvements available from aircraft and engine design are already incentivised. Further reductions are potentially available through collaboration, target setting and shared accountability.

Should revenue raised from aviation taxes be directed to investing in emissions reductions technologies?

Many respondents believe that the costs and risks of investment in emissions reductions technologies should be borne fully by the polluter - the industry and its customers - not by the taxpayer.

Several community groups support the introduction of a per ticket levy which is then "ring fenced", in a similar style to the model at Vienna Airport, to provide funding of independent research for resident groups. Part of any such passenger levy could also be directed for research into redefining metrics on noise and for technologies to reduce emissions.

AEF argue that tax revenues should as a first preference, be used to invest in the green economy and in alternatives to air travel such as domestic tourism, and the electrification of surface transport.

CILT suggest that it is better to press for specific investments rather than advocating for taxes which may not raise the sufficiently large amounts of capital required.

Recommendations

- Government should review aviation taxes and ensure that they full reflect the environmental impact of the sector.
- Government should set zero-carbon targets for aviation with specific restrictions and penalties on airlines that fail to meet those targets.

7. Aviation White Paper

Is the mantra of 'growth everywhere' still feasible in a post-pandemic world?

Nearly all respondents felt that the current situation provides an opportunity to re-evaluate existing policy on aviation and examine alternatives and improvements which can help to deliver genuinely sustainable development.

Many also highlighted that the vast majority (around 89%) of UK air travel is for leisure purposes and that there needs to be a debate about the purpose and need for a significant proportion of this travel.

The GMB suggest that aviation policy must strike an equitable balance between the benefits aviation brings and its adverse environmental, economic and health costs. They highlighted that industry has pledged to reduce its net carbon emissions to zero by 2050 with the help of new technologies and renewable fuels.

The majority of respondents stated that 'growth everywhere' is not feasible given the UK emissions reduction targets. Many highlighted the advice of the CCC that states that,

> *"Measures should be put in place to limit growth in demand to at most 25% above current levels by 2050."*[7]

Some businesses felt that managed growth, consistent with the 2050 Net Zero target would be more appropriate. They suggest that growth can be achieved utilising improved technology, improved procedures and larger aircraft.

Reference was made by individual respondents to the Environmental and Energy Studies Institute who highlight that,

> *"passenger air travel is producing the highest and fastest growth of individual emissions, despite a significant improvement in efficiency of aircraft and flight operations over the last 60 years."*[8]

A prominent criticism of the Aviation Strategy Green Paper was the failure to set out any meaningful climate change policy or targets against which expansion plans could be assessed. The Government was also criticised for failing to produce anything like a policy plan for delivering Net Zero aviation or to revise its plans for aviation growth.

How much growth in aviation is compatible with the Net Zero targets?

[7] https://www.theccc.org.uk/wp-content/uploads/2013/12/1785a-CCC_AdviceRep_Chap3.pdf
[8] https://www.eesi.org/papers/view/fact-sheet-the-growth-in-greenhouse-gas-emissions-from-commercial-aviation

Environmental groups stated that the question of whether growth in aviation is compatible with the Government's Net Zero targets has yet to be seriously addressed, but it is predicted that air travel will need to be kept to below pre-pandemic levels.

They also highlight that the CCC's proposed economy-wide pathway to Net Zero in fact amounts only to a 96% reduction in emissions, with 35 Mt of emissions still above the 'zero' line in 2050, perhaps because of anticipated limits on the maximum capacity for carbon removals. Emissions of 30 Mt from one sector alone – aviation – seem hard to justify in this context.

Many individuals and community groups believe that no growth is possible. They assert that expansion at Heathrow or elsewhere is likely to blow any hope of the UK meeting its climate commitments. They also called for a review of the Government's support for airport capacity growth plans.

It was also suggested that ICAO's range of measures is wholly unrealistic to negate the proposed growth in aviation and should not be relied upon.

What incentive and penalties should be mandated to ensure technological improvements are delivered?

The CILT suggest that, Government policy should through charges, taxation, and investment support, incentivise delivery of technological improvements which achieve emissions reductions in line with the Government's overall climate change and economic strategies.

Many respondents highlight that aviation fuel should be taxed as the only plausible mechanism to help reduce emissions. Respondents felt that with the 'polluter pays principle' should be enshrined on ticket prices and that money raised from such taxes should be used to fund research into genuinely sustainable fuels.

There was equally strong sentiment expressed in support of a frequent flyer levy.

Some respondents suggested that the industry's achievement of targets and compliance with the associated framework should be monitored and reported on regularly. If targets are not achieved, then, enforcement action should be taken, including limiting the number of flights using the airport.

Some respondents were critical of ICAO's CO_2 standard which only covers aircraft designs from 2020 and those already in production by 2023. Given the long life-span of aircraft this was not considered to be effective soon enough.

Other respondents called for a more regularly published update to the aviation demand and CO_2 forecasts, last produced in 2017, to better understand the scale of the challenge in closing the gap between likely emissions and Net Zero targets.

There were also calls for Government to publish an assessment of how the appropriate technology solutions for aviation (such as zero carbon fuels) will be delivered between now and 2050, and what policy and market interventions will be needed to ensure that these are delivered across the aviation sector.

What options should be considered for demand management?

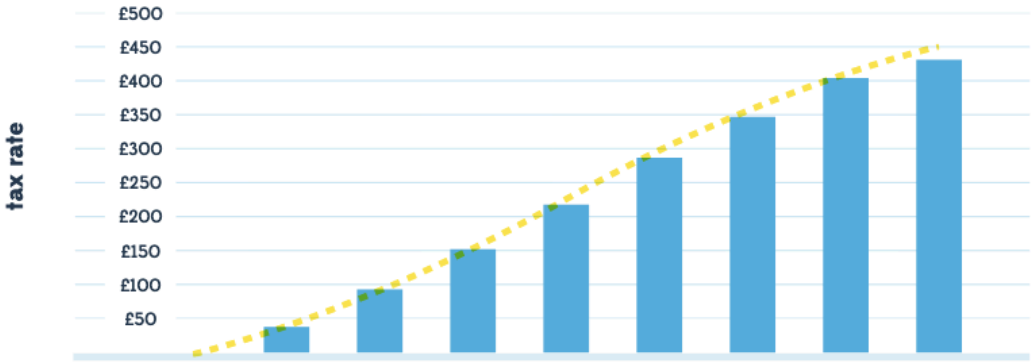
Many respondents were keen to ensure that airline ticket prices reflect the environmental harm caused. Current pricing of plane tickets does not include externalities such as the impact of noise and air pollution, as well as carbon emissions.

Incentives to encourage travellers to switch to rail or other forms of public transport, when that is a feasible alternative, should be prioritised by Government.

Reference was made to a report by New Economics Foundation[9] proposing a scheme whereby passengers are charged a rising levy for each additional flight taken per year. The levy would not apply to the first return flight but would apply from the second flight. The table below illustrates the rates for the levy proposed by NEF. The main principal to is enable most people to take a holiday whilst ensuring those who fly and thus pollute the most would pay a commensurate cost.

flight rank	1st	2nd	3rd	4th	5th	6th	7th	8th	9th
Tax rate	£0	£40	£90	£155	£220	£290	£350	£405	£435

figure 9 - tax schedule for business exemption scenario in base period



FiveAero suggest that Government could consider use of a simple congestion charge and variable application of APD to influence demand, in order to stimulate economic activity in the UK regions compared to London and, to disincentivise excessive growth of traffic at congested airports. They suggest that a variable APD rate could be considered to stimulate business traffic nationwide.

[9] https://neweconomics.org/uploads/files/58e9fad2705500ed8d_hzm6yx1zf.pdf

Conversely, the CILT suggest that carbon pricing and offsetting, primarily through the ICAO CORSIA scheme would be sufficient.

The AEF drew attention to a study from the Centre for Climate Change and Social Transformations (CAST)[10] at Cardiff University found that levels of public concern about climate change have remained high despite the Covid-19 pandemic. In a recent survey of over 1500 people, the researchers found that

> *"support for climate change mitigation policies, including measures to decrease meat consumption and flying, was higher during the COVID-19 pandemic than in 2019, which already represented a high point for public concern on climate change"*

Recommendations

- Government should publish its climate change policy on aviation as soon as possible with reference to the latest advice by the Committee on Climate Change.

- Government should explore the introduction of a frequent flyer levy to ensure that those who fly the most pay the highest price whilst also protecting the right for families to enjoy a holiday abroad.

[10] https://cast.ac.uk/wp-content/uploads/2020/08/CAST-Briefing-04-Covid-low-carbon-choices-1.pdf#page=11

Appendix – List of Questions

Policy Framework for Decarbonisation

In order to meet Net Zero targets there will need to be a robust framework for decarbonisation from Government with strict targets and incentives to help boost investment and innovation.

- What would these targets and incentives look like?
- What role might be played by electric and hybrid aircraft?
- Are any changes required to the Renewable Transport Fuels Obligation?

Community Impacts

The operations of aviation have significant impacts on local communities near airports and under flight paths. As demand returns to pre-pandemic levels there is an opportunity to ensure that the most robust mitigation measures are in place.

- Do current noise impact assessments consider changes in the noise environment?
- What impact will the intensification of existing flight paths have on local communities?
- How can improvements in local air quality be secured for the long term?
- What schemes or incentives are required to increase the number of people accessing airports via public transport?
- Can the impact of night flights be mitigated?

Jobs

It is vital that transition arrangements are put in place which ensure that good quality employment in the sector is protected, while also facilitating the development of the skills necessary for roles in the future.

- What level of demand is likely to return to aviation in the next few years and at what pace?
- What policy options does Government have to protect workers (particularly low-skilled and lower-paid workers) in the sector?
- What skills and training do workers require to transition into alternative sectors?
- What options should be considered for demand management?

Regional Balance

Government policy is to help rebalance the economy and this should seek to focus any growth in aviation in the regions, within existing planning constraints and ensure that this is compatible with net zero climate targets.

- What support do regional airports require from Government?

- Where would growth in aviation best deliver economic benefit within existing environmental targets?
- What investments in surface transport are require to facilitate fewer car journeys to regional airports?

Bailouts

It is likely that many aviation sector businesses will need financial assistance. The UK Government could include social and environmental objectives in any bailout approach as has happened in other European countries.

- What financial support should Government be willing to offer to the aviation sector?
- What conditions should be attached to any financial support?
- Are there any regulatory mechanisms or legislative changes required?

Taxation

The Government is due to review the tax arrangements of the aviation sector.

- Are existing aviation taxes fit for purpose?
- How can Government ensure that all aviation companies make a fair contribution to the reduction of emissions?
- Should revenue raised from aviation taxes be directed to investing in emissions reductions technologies?

Aviation White Paper

The delay to the publication of the Aviation White Paper provides an opportunity to pause and rethink its priorities to ensure that it delivers for the whole country.

- Is the mantra of 'growth everywhere' still feasible in a post-pandemic world?
- How much growth in aviation is compatible with the Net Zero targets?
- What incentive and penalties should be mandated to ensure technological improvements are delivered?