



London Assembly investigation into airport capacity in London

Written evidence to the Transport Committee from the Aviation Environment Federation, 9th January 2013

The Aviation Environment Federation (AEF) is the principal UK NGO concerned exclusively with the environmental impacts of aviation. Supported by individuals and community groups affected by the UK's airports and airfields or concerned about aviation and climate change, we promote a sustainable future for aviation which fully recognises and takes account of all its environmental and amenity affects. As well as supporting our members with local issues, we have regular input into international, EU and UK policy discussions. At the UN we are the lead representative of the environmental umbrella organisation ICSA, which is actively engaged in the current talks aimed at agreeing global climate measures for aviation.

AEF does not oppose all airport expansion as a matter of principle. However, we consider that provision of new South East airport capacity cannot be justified on either environmental or economic grounds. Below we set out our reasons on both counts.

Both the Assembly and the Mayor are clearly very familiar with the extent of the noise problem at South East airports, and with the shortcomings both of the Leq metric and of existing noise measures; our evidence therefore does not address these issues. While it is clear that the Heathrow noise situation is uniquely bad in terms of numbers of people affected, it should also be noted that there are no feasible airport locations in the South East at which noise would not be a very significant concern for local people. In particular, Kent and Medway councils as well as surrounding borough and district councils are firmly opposed to the building of a Thames Estuary airport on the basis of noise and conservation concerns, while campaigners at Stansted – specifically mentioned in the Assembly's scoping document as a possible site for expansion – fought a longstanding campaign through the courts, the press and other channels to oppose the building of a second runway at the airport until finally BAA dropped its plans for expansion there. Any proposal for a new hub at Stansted would doubtless be fiercely opposed, as would plans at either Gatwick or Luton.

Section 1: South East airport expansion would be incompatible with climate change targets

The Mayor of London argued in his response to the Draft Aviation Policy Framework that building a major new hub airport at which demand would be unconstrained could be compatible with meeting climate change commitments. The following sets out why we disagree.

Background: the Climate Act, and the ongoing importance of pursuing effective climate policy

In 2004 the Government's Chief Scientific Adviser said that climate change posed a greater risk to the world than terrorism. Two years later, in 2006, economist Sir Nicholas Stern published his analysis of the potential costs of failing to tackle this threat, concluding that while taking effective action to mitigate climate risks presented some costs, the cost of unabated climate change (including costs for developed countries such as the UK) would be much greater. Two years after that, the UK, with very strong political support across all major parties, passed the Climate Act 2008, committing us to cutting emissions by 80% of 1990 levels by 2050. Such a cut was deemed to represent the UK's share of global action necessary to limit the risk of global warming exceeding 2 degrees to no more than 50%, though many environmental organisations and others thought the Act should have set tougher emissions targets to increase the probability of successfully limiting warming¹.

Climate change may not currently be at the forefront of political or media discussion, but the scientific evidence on the need to act has never been stronger, and it is essential that the UK continues its leading role in relation to developing effective climate change policy. The need to shape our future economy around our climate ambition is now widely accepted across industry as well as politics. In July 2012, for example, CBI Director-General John Cridland wrote in the foreword to the organisation's 2012 report *The Colour of Growth* "With the current levels of economic uncertainty, and prospects of only modest growth in the UK, it is easy to understand why some people are fearful that 'going green' might further dent the economic recovery. For me, this is a false debate. In this report, the CBI makes clear the case for tackling head-on the critical challenges of energy security, affordability and climate change. It isn't a lofty ideal to aspire to – there is a hard-nosed economic argument that moving to a low-carbon economy can drive significant business investment and create many new jobs across the country."²

Aviation emissions – the current UK policy situation

Like the Kyoto Protocol and successor global climate agreements, the Climate Act omitted emissions from aviation and shipping on the basis of difficulty in attributing them appropriately to nation states. Nevertheless, the Act required these emissions to be taken into account when setting budgets for other sectors, and made clear that they should be part of the long-term 2050 target. The latest Government statement on aviation and the Climate Act, in December 2012, says that international aviation and shipping should be treated in the same way as other sectors, that their emissions form part of the 160 million tonnes allowable by 2050, and that the question of whether they should be formally included in carbon budgets will be reviewed in the process of setting the fifth carbon budget in 2016³.

In the same year that the UK passed the Climate Act – 2008 – the EU agreed that from 2012 emissions from all flights entering or departing from the EU would be included in its Emissions Trading System. In December 2012, however, under intense pressure both from countries outside the EU who objected in

¹ In a policy paper published in December 2012 academics at the Tyndall Centre for Climate Change research write: "...the science already demonstrates that the *global* carbon budget underpinning the UK's *national* budget equates to a 63% chance of exceeding 2°C. Moreover, the UK's *national* budget is based on a very unfair proportion of the *global* budget - again in contradiction to UK commitments on climate change and equity." (Briefing note 47 *Aviation and shipping privileged – again? UK delays decision to act on emissions* <http://tyndall.ac.uk/sites/default/files/tynbn47.pdf>)

² http://www.cbi.org.uk/media/1552876/energy_climatechangerpt_web.pdf

³ International aviation and shipping emissions and the UK's carbon budgets and 2050 target http://www.decc.gov.uk/en/content/cms/emissions/carbon_budgets/carbon_budgets.aspx

principle to the EU regulating emissions taking place outside EU airspace, and in turn from EU aerospace manufacturers who feared a loss of trade from such states as a result of this dispute, the EU announced that it would be suspending the inclusion of all but intra-EU flights in the EU ETS for one year. During this period the EU hopes that ICAO, the UN body charged with working on aviation's environmental impacts, will make progress on agreeing a global measure for aviation emissions, and it seems likely that the terms of the EU ETS may be reviewed subject to these discussions. At present, therefore, while both the UK and (for example in its recent *Roadmap for moving to a competitive low carbon economy in 2050*⁴) the EU are committed to emissions reductions of at least 80% by 2050, including emissions from international aviation, no effective policy measures are in place to ensure that this level is not breached. It would seem to us, therefore, to be the responsibility of individual member states to take appropriate action to pursue this collective goal.

Latest CCC recommendations to Government in relation to aviation emissions

In April 2012, the Committee on Climate Change, created under the 2008 Climate Act and charged with advising Government on whether aviation and shipping should be included in the UK's carbon budgets from 2012, recommended that there were no longer good reasons to exclude either sector, arguing that data generated as a result of aviation's inclusion in EU ETS, together with the IMO shipping efficiency targets and projections, made inclusion possible. In December the Government announced that given the delayed inclusion of aviation in the EU ETS, it would postpone a decision about whether the sector should be included in carbon budgets until the setting of the fifth budget in 2016, and CCC issued a statement supporting this decision.

CCC also advised, however (in April 2012), that the Government should assume for planning purposes that (actual, untraded) international aviation emissions in the UK are no higher in 2050 than they were in 2005, in other words no higher than 35 MtCO₂e (million tonnes CO₂ equivalent)⁵. A detailed consideration of this advice is provided in an AEF briefing paper⁶ published in May last year. It is important to note that while CCC is a strong supporter of aviation's inclusion in the EU ETS, it argues that gross as well as net emissions should be considered for policy purposes⁷. Trading should, in other words, be considered only as a short to medium term solution and, even if re-introduced for aviation, will not mean that unfettered growth in the sector's emissions is permissible.

The CCC's 2012 recommendations in relation to gross emissions in fact tie in closely with analysis produced by Committee in 2009⁸ in response to the then Government target for UK aviation emissions to be no higher in 2050 than in 2005. CCC concluded that under such a target, growth in the sector was possible, but not at the level that was then forecast. Taking into account likely technological improvements, more efficient air traffic management, carbon pricing up to £200/tonne of CO₂ and the introduction of some aviation biofuels, passenger numbers could grow by around 60% of 2005 levels by 2050, said the Committee, but not by the 115% that could arise without additional policy measures

⁴ http://ec.europa.eu/clima/policies/roadmap/index_en.htm

⁵ Total UK emissions including from domestic aviation were 37.5 Mt CO₂.

⁶ <http://www.aef.org.uk/?p=1430>

⁷ The EU low-carbon roadmap (see note 4) similarly, states that "The transition towards a competitive low carbon economy means that the EU should prepare for reductions in its *domestic* emissions by 80% by 2050 compared to 1990".

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<http://downloads.theccc.org.uk/Aviation%20Report%2009/21667B%20CCC%20Aviation%20AW%20COMP%20v8.pdf>

beyond aviation's inclusion in EU ETS. CCC concluded that alongside aviation's inclusion in the EU ETS: "The combination of different policies (e.g. tax and capacity plans) should... be designed to limit total demand increase to a maximum of around 60%, until and unless technological developments suggest that any higher figure would be compatible with the emissions target."

At the time, CCC were basing their airport capacity assumptions on the 2003 White Paper and therefore assumed new runways at Edinburgh, Heathrow and Stansted. The DfT's 2011 forecasts for passenger demand and CO2 emissions, being published after the Coalition Government announced effective suspension of the 2003 White Paper for national policy purposes, assumed no new runways. Nevertheless, as a result of alternative assumptions about how readily demand transfers from one airport to another (as well as slightly different assumptions in relation to fuel efficiency and biofuels), the DfT forecasts for both passenger numbers and CO2 emissions were remarkably similar to CCC's. Even assuming (i) no new runways anywhere in the UK, (ii) growth in passenger numbers of just 2% per year, and (iii) full coverage of aviation emissions in the EU ETS (a policy that has now been delayed) DfT forecast an increase in passenger numbers of 123% over 2005 levels (as against CCC's target-compatible 60%), with emissions increasing to 49 MtCO2 rather than then target of 37.5 Mt.

AEF considers that, for several reasons, the CCC's assumption that UK aviation emissions will in gross (non-traded) terms be no higher in 2050 than in 2005, and the previous government's aviation emissions target of 37.5 MtCO2, are unjustifiably lenient toward the sector.

- (a) The CCC's reference level for international (excluding domestic) aviation emissions of 35 Mt is 4 Mt per year higher than its estimate of UK's share of the EU ETS cap for aviation – 31 Mt CO2e. We see no justification for this.
- (b) 35 MtCOe by 2050 represents 120% growth compared with 1990 levels, as against the 85-90% cuts expected from most other sectors of the economy, many of which are far less discretionary than air travel. Propensity to fly correlates closely with income, so it is primarily higher earners who benefit from its lenient treatment compared with other sectors. Neither CCC nor the Government has ever produced analysis demonstrating improved environmental or economic efficiency or social benefit arising from allowing aviation more generous terms than other sectors of the UK economy.
- (c) Neither the former emissions cap nor the CCC's planning assumption include a safety net for aviation's non-CO2 impacts. While work is still progressing to develop a metric for aviation's non-CO2 impacts that scientists regard as completely robust, a considerable body of research strongly indicates that aviation emissions are around twice as harmful in terms of global warming as CO2 alone. AEF believes that use of a 2x multiplier for aviation is very likely to generate less distortion than the current situation which foresees no account being taken of aviation's non-CO2 impacts between now and 2050.

Implications for airport capacity considerations

To better understand the implications for airport capacity of compliance with the UK aviation emissions target (on which the current Government has yet to state a view), WWF-UK asked AEF to assess the maximum terminal and runway capacity at UK airports, including both existing capacity and that for

which planning permission (or permitted development rights) had already been granted⁹. Based on an airport-by-airport review of all the airports identified in the 2003 Air Transport White Paper as requiring a master plan, and a national aggregation of these figures, AEF's work suggested that sufficient airport runway capacity exists today to accommodate the maximum level of growth considered possible by the Committee on Climate Change at both a national and regional level. The DfT has since published its own estimates of the maximum existing capacity of UK airports¹⁰; their view is that current capacity in fact allows for up to 6.6 million ATMs as against the 3.4 million per year in 2050 that CCC indicated in 2009 would be compatible with stabilising emissions at 2005 levels.

This suggests that to ensure that air traffic does not grow to levels that would be incommensurate with our climate change commitments available airport capacity options are:

- (i) No change to current capacity (and probably some additional constraints on demand)
- (ii) Development of new capacity being accompanied by the imposition of retrospective limits on the use of existing airport capacity (an expensive and difficult approach)
- (iii) Development of new capacity being accompanied by the withdrawal of existing capacity, for example by closing runways

The Liberal Democrats have adopted policy reflecting this third option, namely that there should be no net increase in runways in the UK: any new runway capacity that is built should be accompanied by the closing of a runway elsewhere.

It is sometimes argued that the introduction of EU ETS or a comparable global market-based measure for aviation would obviate the need for any restraint on runway capacity as market forces alone would then regulate aviation supply and demand within carbon constraints. But with much of the aviation industry, operating on very slim margins, focussed on maximising profit for shareholders in the short term, we consider that an approach to aviation capacity that relied too heavily on carbon markets to deliver climate change goals would be a very poor policy approach.

If significant expansion were to take place among airports all seeking to win market share for themselves during a period of low carbon prices (such as is currently the case), but carbon prices then rose rapidly as emissions permits became increasingly scarce (as is currently forecast for the period after 2030) then if EU ETS was allowed to run its course, infrastructure would be left idle, job hopes dashed, and businesses crushed. It seems inevitable that a future Government, faced with such economic and social impacts, would be very tempted to look for ways of abandoning or watering down the environmental limits on the basis that they had become too expensive to uphold: a classic case of "carbon lock-in", the dangers of which have long been recognised by scientists and noted by Lord Stern. It could be argued that the Government's approach to EU air quality laws, which the UK continues to breach, illustrates the danger of relying too heavily on high-level environmental policy together with market forces to deliver environmental targets.

CCC itself is reluctant to be drawn into any of the political debate about runways. Nevertheless, when asked recently about his view of the statement by Tim Yeo MP that as a result of aviation's inclusion in the EU ETS "We could cover the whole of Surrey with runways and not increase emissions by a single

⁹ <http://www.aef.org.uk/?p=1393>

¹⁰ UK Aviation Forecasts, August 2011, Table 2.6

kilogramme”, CCC’s Professor Sir Brian Hoskins said “If the European trading scheme worked in this sector and one built huge airports, those airports would not be used.”¹¹

Climate change and the Mayor’s proposal for a new hub airport

In his response to the Government’s Draft Aviation Policy Framework (dated October 2012), the Mayor of London argues that:

The CCC has demonstrated that substantial growth in the UK aviation industry is permissible within global climate change targets, if the industry continues to make improvements in aircraft design and performance.

The central case put forward by the committee was that UK-wide our airports can accommodate in the region of 150 million more passengers per annum by 2050 over current levels – while still adhering to our emissions commitments. This is compatible with development of a new hub airport.

There are two significant problems with this argument however:

- (i) It implies that there will be no increase in passenger numbers from current levels at any UK airports other than at a new designated hub. For such an outcome to be guaranteed, retrospective planning limits would need to be imposed on regional airports around the country, many of which currently have significant unused capacity which they have planning permission to use. As the UK currently has more than sufficient capacity to cater for the 60% growth in passenger numbers and 55% growth in ATMs that CCC estimates to be compatible with climate change obligations, it is clear that provision of a new 4-runway airport could be accommodated only if capacity was withdrawn elsewhere. And as Heathrow has only two runways, even the closure of Heathrow airport would not provide sufficient CO2 compensation.
- (ii) The CCC’s estimates for possible growth in passenger numbers and air transport movements were averages for the UK as a whole. Hub airports, however, by definition have far more long haul traffic than other airports. As it is these long haul flights that generate the majority of the sector’s emissions, while Heathrow carries only about a quarter of the UK’s air traffic¹², it is responsible for around half of UK emissions¹³. A 4-runway hub airport could reasonably be assumed to operate a similar mix of long-haul, short-haul and domestic flights as is currently operated at Heathrow, and thus from one airport to generate double the emissions of a 2-runway Heathrow – equivalent to sum of the emissions from all UK airports today. It is thus impossible to imagine a plausible scenario in which such an airport could be compatible with stabilising the sector’s emissions at 2005 levels.

The Mayor also argues in his response to the Draft Aviation Policy Framework that a hub airport operating without capacity constraints could achieve emissions reductions through its removal of aircraft ‘stacks’. The response states:

¹¹ GLA Health and Environment Committee meeting 16th October 2012

<http://www.london.gov.uk/moderngov/ieListDocuments.aspx?CId=256&MIId=4617&Ver=4>

¹² CAA statistics <http://www.caa.co.uk/default.aspx?catid=80&pagetype=88&pageid=3&sglid=3>

¹³ DfT Aviation Forecasts August 2011 . <http://assets.dft.gov.uk/publications/uk-aviation-forecasts-2011/uk-aviation-forecasts.pdf>

One could also achieve a valuable reduction in emissions with an operationally optimised hub airport – specifically, one with minimal capacity constraints. Heathrow is operating at up to 99% capacity and this has significant environmental consequences. At busy times, incoming aircraft can spend 30-40 minutes in stacks circling London. The CO₂ emissions of aircraft stacking at Heathrow represent an amount equivalent to around 10% of the total CO₂ emitted during the landing and take-off cycle (LTO) of aircraft arriving and departing at Heathrow.

Literature from Heathrow Airport¹⁴ indicates that its total Landing and Take-Off emissions (including those from aircraft turning on the ground as well as coming into or leaving the airport) are around 1.31 Mt CO₂; 10% of this is 0.131Mt CO₂. Including emissions from aircraft departing the airport, meanwhile, the Heathrow total is given as 18.9 by the DfT for 2010 (the most recent year for which data is available). 0.131Mt CO₂ of this figure is 0.69%.

Emissions arising from aircraft stacking at Heathrow airport are therefore 0.69% of those from the airport when flight emissions are also counted. There can be no valid argument, we conclude, for building a new airport with unconstrained flight numbers in order to tackle emissions from stacking. In fact, while it is right for efforts to be made to reduce air traffic inefficiencies, the existence of constraints at Heathrow appears to be prompting an increasing proportion of larger aircraft, thus generating lower emissions per passenger than would otherwise be the case, as passenger numbers at the airport have grown significantly faster than Air Transport Movements in recent years.

Section 2: Expansion of South East airports cannot be justified on economic grounds

It is often assumed that a Government decision on airport capacity necessarily involves balancing economic benefits of expansion against environmental disbenefits. Yet the economic benefits of aviation, while frequently referred to, are rarely demonstrated with convincing evidence. Meanwhile, the idea that the UK is facing an urgent capacity crisis is a myth. Each time the Government has revised its passenger demand forecasts since 2003, they have gone down.

The myth of capacity crisis

The latest forecasts of passenger demand were published by the Government in August 2011 and show a significant reduction in expected future levels of demand compared with the previous forecasts, produced as recently as 2009. In fact, this should come as no surprise. The aviation forecasts have been revised four times since 2003 and each time downwards.

In the heady days of the Air Transport White Paper, the Government's belief, based on its passenger forecasts, was that even though it would be wrong (for environmental reasons) to adopt a 'predict and provide' policy to airports in which all demand was met, new runways were nevertheless needed at Heathrow, Stansted, the Midlands and Scotland in order to cope with expected growth. The latest forecasts, by contrast, indicate that despite no new runways having in fact been built, there would be

¹⁴ <http://www.heathrowairport.com/about-us/community-and-environment/sustainability/environment/climate-change>

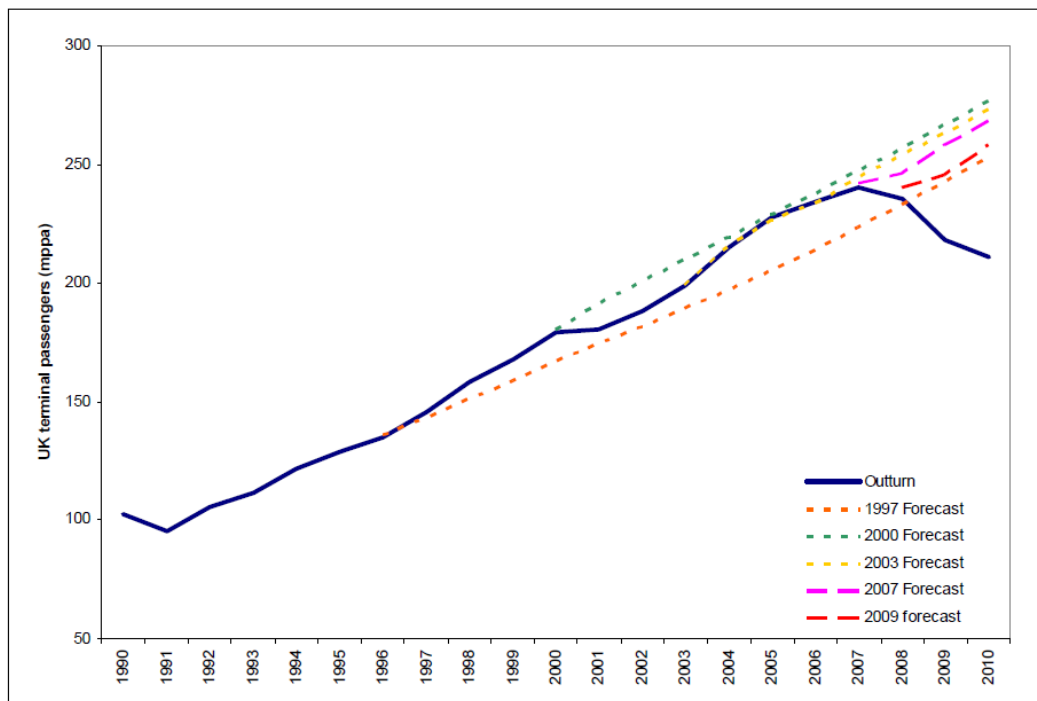
sufficient airport capacity, even in the South East, to cater for all passenger demand until nearly 2030. Even if no new runways were built anywhere in the UK, less than 3% of potential air traffic would be squeezed out by 2030. ('Constrained demand' at 2030 is 335mppa, compared with unconstrained demand of 345mppa.)

AEF has produced an extensive critique¹⁵ in relation to the DfT's passenger forecasts from which the emissions forecasts are derived which concludes that the forecasts up to 2030 may still be too high, as they assume:

- A resumption in economic growth at around 2% pa or above and continuing indefinitely, which AEF considers very uncertain
- No increase in oil prices (despite evidence of increasing demand and increasingly difficult and expensive approaches to extraction), and
- A continuation of aviation's tax exemptions (including no fuel tax and no VAT)

In fact there is a considerable history of passenger demand being overestimated: every time that the Government has revised its forecasts, the numbers have been downgraded. In the latest set of figures, which reflect to some extent the impact of recession, demand is down from 500 million passengers per year (mppa) at 2030 in the 2007 forecasts to 343 mppa in the 2011 forecast. This is illustrated in the DfT's own forecasts document from August 2011:

DfT Aviation Forecasts 2011 Figure 2.13: 1997, 2000, 2003 and 2007/9 demand forecasts versus outturn



¹⁵ <http://www.aef.org.uk/?p=1423>

A further revision of the figures is expected to be published early this year to inform the Airports Commission.

Passenger forecasts are directly relevant to considerations of the economic benefits of expansion. The figure once used by the Government, that a third runway would generate £5 billion for UK economy relied heavily on forecasts of economic growth and carbon prices that are no longer up-to-date. When the New Economics Foundation reran the Government's model in 2010 using updated figures, and adding in modest costs for environmental and community impacts, they concluded that building the runway would in fact result in a £5 billion loss to the UK.¹⁶

Aviation's value to the economy has been exaggerated and employment is falling

In the past, industry lobbying has focussed on the overall 'value' of aviation to the UK economy (both directly and indirectly) or the number of jobs it supports. However, in many cases these figures have been (i) hotly disputed and (ii) falling. Academic assessment in 2009, for example, of the analysis that has been undertaken concludes that claims about economic and job creation benefits have very often been overstated¹⁷, mirroring findings both of work by consultants CE Delft for HACAN¹⁸ and of GACC, which has estimated that in terms of Gross Value Added the aviation sector – a medium-sized industry – is of less economic importance than water, sewerage and waste management¹⁹. The numbers of jobs generated by the aviation industry, meanwhile, have been falling as check-in becomes increasingly mechanised and low-cost travel, within minimal staffing, has grown²⁰. In the Draft Aviation Policy Framework the Government's estimate of the number of jobs directly supported by aviation was significantly lower than the figure quoted just a year earlier in the scoping study.

More recently, the expansionist argument has therefore shifted towards a focus on aviation's role in providing 'connectivity' to facilitate growth of the UK economy more generally, with much of the debate taking as read the central importance of a hub airport in delivering this.

The economic impacts of a hub airport have not yet been analysed by Government

The assumption in Government policy that a hub airport is somehow central to the UK's economy is in fact fairly new.

As recently as June 2008, David Cameron wrote the following in the Evening Standard²¹:

¹⁶ NEF 2010 *Grounded: a new approach to evaluating Runway 3*

<http://www.neweconomics.org/publications/grounded>

¹⁷ D Gillingwater et al, January 2009, *Omega study 40 – Economic benefits of aviation technical report*, Loughborough University, <http://www.omega.mmu.ac.uk/economic-benefits-of-aviation.htm>

¹⁸ CE Delft 2008 *The Economics of Heathrow Expansion*

<http://www.hacan.org.uk/resources/reports/4504.final.report.pdf>

¹⁹ GACC September 2011, *The economic importance of aviation*

www.gacc.org.uk/resources/2.%20Economic%20benefit.doc

²⁰ Sewill B, 2009 *Airport jobs: false hopes, cruel hoax*, AEF

http://www.aef.org.uk/uploads/Airport_jobs_false_hopes_cruel_hoax.pdf

²¹ <http://www.standard.co.uk/news/comment-i-wont-back-gordons-great-heathrow-con-6928482.html>

[Gordon Brown's] economic case for Heathrow expansion is unravelling day by day. It's based on making Heathrow an even bigger "hub" airport, with a massive increase in the number of transfer passengers. As Bob Ayling, former chief executive of British Airways, has said: "This is a classic exercise in misguided central planning." Forget for a minute that the economic value of transfer passengers is hotly disputed - after all, they often spend only the price of a cup of coffee in the UK. The real issue is the "hub" model itself, which contributed to the bankruptcy of almost every US airline and Sabena in Europe too. Why? Because passengers are people, not statistics. They react to airport delays, missed connections and lost luggage with their feet and don't come back. And after the recent fiasco of Terminal 5, there must be severe doubt about whether the Government and BAA are even capable of managing the expansion of Heathrow to cope with more than 700,000 flights a year by 2030.

In November 2012, however, the Government set out the terms of reference for the Airports Commission specifically requiring it to 'identify and recommend to government options for maintaining the UK's status as a global aviation hub'. There has been no explanation given of how the Government reached the apparent conclusion that in fact the UK's economic wellbeing rests on our maintaining our hub 'status'. Research into the economics of the hub model was due to have been sought and examined as part of a Government 'call for evidence' following publication of the Draft Aviation Policy Framework but this work was abandoned with the setting up of the Airports Commission.

The direct economic benefit of transfer passengers, as noted by Cameron, is minimal, not least as they pay no APD.

Questions about hub airport expansion should not be conflated with questions about good connectivity

Many airports are keen to challenge the BAA line that business connectivity requires additional hub capacity. The Chief Executive of Birmingham Airport, which has now begun work on its runway extension and needs to fill it with aircraft, has publicly described Heathrow's implication that new routes to China will only be possible through Heathrow expansion as a 'con'²², while Gatwick is arguing that London will be best served through the development of competing airports, facilitated by keeping Heathrow at its current size but building second runways at both Gatwick and Stansted.

For those passengers flying to or from an airport in South East England, the fact that it operates as a hub as well as a terminating airport is of little relevance. Meanwhile, for those who do not live or work in South East England but want to do business abroad, having a hub airport in the UK is unimportant. There is no generalised advantage for someone flying from, say, Aberdeen to change plane at Heathrow or a Thames estuary airport compared with changing at Helsinki or Hong Kong. The need for passengers and for the UK economy is adequate *terminating* capacity.

'Connectivity' need not mean 'direct travel by air'

Even when disentangled from hub airports issues, the concept of business connectivity merits interrogation, as it has been presented by some as necessarily involving (a) travel by air and (b) direct travel. In fact, connectivity can take many forms, including other transport modes such as rail, or transport replacement such as videoconferencing.

²² <http://www.guardian.co.uk/world/2012/apr/22/heathrow-claims-con-birmingham-airport>

A recent report for Heathrow by Frontier Economics, *One hub or none*²³, generated a widely reported claim that the UK is losing out on £14 billion per annum in trade due to airport capacity constraints. The figure was derived by identifying countries to which other European hub airports have direct connections but Heathrow does not, and then comparing the amount of UK GDP generated through trade with that country as against trade between the country and other European 'rivals'.

In previous analyses, Frontier Economics, on behalf of Heathrow, has shown that the UK does more trade with countries to which there are direct flights. Yet it has never been able to show the direction of causality in this relationship. The £14 billion claim rests on an assumption that laying on flights to a given destination generates trade with that country, but this has never been shown to be true. The fact that the correlation exists between trade and direct flights could easily be explained by the fact that airlines will respond to demand – when enough people want to fly somewhere to do business, flights will be provided.

Business travel in London has been *falling* as a proportion of total demand

Evidence from WWF-UK suggests that while flying has traditionally carried prestige among business travellers, many UK businesses are finding that alternatives can be more efficient in terms of time and cost as well as environmental impact, causing what seems to be a genuine shift in travel behaviour²⁴.

This may help to explain why both the number of trips taken from the UK abroad for business, and the proportion of flights taken by business, has in fact fallen in recent years. This is true both in terms of national averages²⁵ and in London in particular, where the percentage of business trips has fallen at Heathrow, Gatwick and Stansted over the past decade.²⁶

There will never be more than a very small proportion of city-to-city or airport-to-airport pairs that have direct connections. Yet as it is already possible to travel from any UK airport to any other airport in the world, in this sense, we have full connectivity. Last year Virgin Atlantic announced a new service from Delhi to New York's JFK via Heathrow, following the success of its Delhi-Newark route which also connected at Heathrow. In direct contradiction of the concept that direct routes are always preferable, Stephen King, Virgin's general manager in India said: "Our increasing share to Newark shows that passengers prefer breaking the journey in half, stretching their legs and indulging in some duty-free shopping. We're looking forward to making this new service to JFK a success."²⁷

²³ <http://mediacentre.heathrowairport.com/Press-releases/One-hub-or-none-390.aspx>

²⁴ 2008 WWF-UK *Travelling Light: why the UK's biggest companies are seeking alternatives to flying* http://www.wwf.org.uk/what_we_do/campaigning/one_planet_mobility/new_report__travelling_light/, and 2011 WWF-UK, 2011 *Moving on: why flying less means more for business* http://www.wwf.org.uk/how_you_can_help/get_your_business_involved/one_in_five_challenge/

²⁵ February 2012 Health Protection Agency *Global and UK Travel Trends 2010* http://www.hpa.org.uk/webc/HPAwebFile/HPAweb_C/1317132797054

²⁶ Based on CAA survey data; full figures available on request

²⁷ <http://www.rediff.com/business/report/new-daily-delhi-new-york-flights-from-october/20120808.htm>

If routes to emerging economies are not being provided it's because demand isn't strong enough

The idea that the UK needs more direct flights to emerging economies such as the BRIC countries is often used as an argument for expansion. Yet airports operate whichever flights are most profitable to operate.

Heathrow is the only airport at which capacity is currently constrained, and its CEO Colin Matthews recently told the Transport Committee of the House of Commons²⁸ “we need a third runway at Heathrow, or some other hub solution, wherever that is, in order to continue to connect UK business to ... long-haul emerging markets.” Yet at Heathrow:

- 2012 saw the allocation of scarce new slots to Palma, Barcelona and Scotland
- Top ten destinations by passenger number in 2011 included Paris, Edinburgh, Frankfurt and Dublin
- The proportion of travel for business fell from 37.6% in 2001 to 31.3% in 2011, a pattern mirrored at other South East airports (see below)
- In 2009 (the latest year for which we have data) average seat occupancy on some routes fell below 60%²⁹
- Historical increases in passenger numbers (which are forecast to continue to grow despite capacity constraints) have not resulted in corresponding increases in the numbers of destinations served

Gatwick, meanwhile, which has considerable unused capacity, in 2012 laid on new routes to Russia, China, Vietnam and Korea, indicating that long-haul flights are not exclusively the preserve of Heathrow.

The economic interest of airport operators may not be the same as the economic interest of the UK

It is in the personal interest of many businesses to seek or promote aviation growth. Individual airports both want to secure as much as possible of any future demand for themselves and to convince shareholders and investors of their value. Consultants have found plenty of work in coming up with an array of schemes for new airports. Yet as former Aviation Minister Theresa Villiers said while in office “The commercial interest of BAA is one thing – it’s not necessarily the same as the economic needs of the overall economy.”³⁰ In the past, AEF has criticised the Government’s demand forecasts as being unrealistically high. Indeed, even the latest set of figures, the lowest ever since 2003, is expected to be revised downwards very shortly. But improvements have been made over time, and a national picture provides an important counterbalance to arguments that are necessarily self-interested.

²⁸ <http://www.publications.parliament.uk/pa/cm201213/cmselect/cmtran/uc765-ii/uc76501.htm>

²⁹ For 2009 (the latest year for which we have data): Heathrow – Jersey 46%, Heathrow – Sheremetyevo 57%, Heathrow – Milan 58%, and Heathrow – Brussels 59%

³⁰ 21 May 2012 Financial Times

Section 3: Conclusions and recommendations

Airport capacity questions must be addressed within an effective climate framework

AEF's environmental concerns go wider than climate change alone. Our response to the Draft Aviation Policy Framework, for example, called for a number of changes to the way in which noise is measured and managed, including recommending a plan for bringing aviation noise to within the levels recommended by the World Health Organisation. In relation to short-term questions about airport capacity in the South East, however, arguments can be made for and against various airports options in terms of noise impacts.

A consideration of climate change impacts is less equivocal. The Climate Change Act commits the UK to making cuts of at least 80% in 1990 levels of emissions by 2050. This is at the bottom end of the 80-95% range to which the EU as a whole has committed³¹. In December 2012 the Government confirmed that aviation should be treated in the same way as others in that its emissions should be counted towards the UK's 2050 emissions target even while they are not formally included in carbon budgets. This mirrors the approach that the Committee on Climate Change has taken so far. This statement was made subsequent to the publication of the Draft Aviation Policy Framework and we hope that the final version of the framework will clarify:

- (i) That aviation policy must be determined within the carbon constraints imposed by the Climate Act
- (ii) That aviation is counted as part of the EU's commitment to cut emissions by 80-95% of 1990 levels by 2050
- (iii) What UK policies will ensure that aviation emissions are kept to manageable levels given these two commitments

The postponement of aviation's entry in the EU ETS for all but intra-EU travel means that there is now no policy mechanism for controlling UK aviation emissions. Meanwhile the Airports Commission is to consider questions about possible airport expansion to meet the UK's economic needs, and indications are that the Government currently has already assumed that this will require more infrastructure³². In fact, we believe that if a full account is taken of both environmental and economic factors extra airport capacity will be out of the question.

2. An independent review should be conducted of what kind of aviation model will best serve the UK's needs

The extent to which this can be undertaken by the Airports Commission appears constrained given that its terms of reference predetermine that priority be given to hub operations. Yet this work is an essential part of any discussion about airports infrastructure and policy. Appropriate account should be

³¹ See note 4

³² The Coalition's Mid-Term Review, *The Coalition: together in the national interest* (7th January 2013) includes a commitment to invest infrastructure, partly by "supporting the Airports Commission, led by Sir Howard Davies, in its work of identifying the best way of maintaining the UK's global aviation hub status."
<http://www.number10.gov.uk/the-coalition/mid-term-review/>

taken of the falling air passenger forecasts, and fundamental questions about the role of hub operations should be addressed.

3. *Consideration should be given to whether existing infrastructure could be more effectively used, though effectiveness should be defined in environmental as well as economic terms*

In particular, the question of how to manage Heathrow demand may warrant further attention. In 2010 AEF participated as the sole environmental representative on the South East Airports Taskforce, set up specifically to look at ways of improving the passenger experience at Heathrow, Gatwick and Stansted and the final report made a number of operational recommendations. Though capacity issues fell outside the remit of the report's advice, it is worth noting that delays at the airport are partly caused by the fact that 98% of slots are in use; the creation of some slack in the system, for example by withholding 5% of the maximum slot capacity would be one way for Heathrow itself to improve the airport's resilience.

If there is to be a policy goal of providing more direct flights to emerging economies, it appears that not all airport slots are being most effectively used. Yet it is hard to imagine how Government or regulators could legally set aside slots for particular routes. A move towards slot auctioning would help to incentivise efficient use but requires EU assent and is currently opposed by many EU states. The Airports Package currently being debated in Brussels does not contain any proposals to move to a system of slot auctioning, but does propose to sanction the trading of slot rights which already takes place between airlines, particularly in the UK.

Changes to aviation taxation could be made unilaterally. When the Coalition Government first formed it promised to replace Air Passenger Duty with a duty per plane, which would have helped to incentivise higher load factors. But the idea was swiftly dismissed as likely to raise legal problems. AEF considers that the topic is worth revisiting. Some airports, meanwhile, are campaigning for differential rates of Air Passenger Duty to help drive traffic to regional airports, and, as highlighted in the press over Christmas³³, HMRC has conducted analysis indicating that a cost increase equivalent to a 5% increase in APD would be sufficient to shift some demand away from Heathrow to Birmingham, Luton or Stansted. AEF regards UK aviation as a whole to be undertaxed, and would consider supporting changes to the structure of Air Passenger Duty only on the basis that there was no reduction in the overall tax take. Any interventions to try to influence passenger demand at different airports should be undertaken only in the context of the climate constraints set out earlier in this document.

³³ 29th December, The Observer, *Tax Rise at Heathrow and Gatwick 'will force flyers to use provincial airports'* <http://www.guardian.co.uk/world/2012/dec/29/tax-rise-heathrow-gatwick-airports?INTCMP=SRCH>