

Consultation on Draft Airports National Policy Statement: New runway capacity and infrastructure at airports in the South East of England



Response from the Aviation Environment Federation

25th May 2017

Question 1: The Government believes there is the need for additional airport capacity in the South East of England by 2030. Please tell us your views.

We disagree that there is a need for additional capacity. Meanwhile, the need to (a) protect the health and wellbeing of communities in London, and to avoid demolishing people's homes and communities and (b) meet legal requirements on both air quality and climate change have not, as argued in response to later consultation questions, been adequately addressed.

The Government's consideration of this question appears to have been heavily influenced by the work of the Airports Commission. It was impossible, however, for the Commission to take an independent and dispassionate view on the subject given both:

- (i) restrictive terms of reference that focussed on maintaining the UK's hub status rather than considering what was in the general interest of the UK as a whole, including economic and environmental considerations, and the impacts on UK regions, and
- (ii) a timetable of work that had the first year set aside for the question of whether we should build a new runway, with the second year (determined in advance) for the question of where it should be located.

Fundamentally, we feel that while a case may have been made that there is sufficient *demand* for a new runway (under certain assumed conditions and at the time of the Commission's investigation¹), the question of *need*, after taking into account appropriate environmental conditions, has yet to be established.

The Government's expansion case rests fundamentally on assumptions about economic and related benefits associated with expansion. We believe however that these assumed economic benefits have been overstated.

The draft NPS makes a number of claims in section 2 about the situation in the absence a new runway, by which a case for 'need' is implied, which we consider in turn.

¹ The delay to the publication of the Department for Transport's revised aviation forecasts prevents any scrutiny of whether the demand case remains valid. IATA had predicted that Brexit could result in a significant fall in UK passenger demand, at least in the short term.

“International connectivity will be restricted as capacity restrictions mean airlines prioritise their routes, seeking to maximise their profits.”

The focus on international connectivity appears to relate to ideas about the importance of business travellers being able to make direct connections into and out of Heathrow. It is of course the case that airlines prioritise their routes in order to maximise profits. To the extent, that there is anticipated demand for flights from business passengers who are relatively insensitive to the price of air tickets, airlines will surely tend to prioritise that demand.

Evidence meanwhile that (i) businesses suffer if travellers have to take a connecting flight, or that (ii) laying on direct flights generates business activity between the two locations is insubstantial.

We note that in any case most of the additional capacity at Heathrow is forecast to be used to increase the number of flights to existing destinations, and that meanwhile both the number of destinations served by regional airports, and the anticipated growth in their passenger numbers, will fall as a result of expansion. This connectivity impact is not presented and considered in the NPS.

Impact on passenger numbers at regional airports

The Airports Commission published forecasts of passenger numbers at UK airports both with and without South East runway expansion. A summary of the relevant figures is available on our website². The Commission presented two sets of figures. The ‘carbon traded’ scenario effectively represents the ‘business as usual’ case under which no new policies are introduced to constrain emissions. The ‘carbon capped’ scenario assumes that the Government acts to limit aviation emissions in line with the Climate Change Act.

- Even under the carbon traded scenario the majority of regional airports are set to lose out as a result of Heathrow expansion, with passenger growth levels lower than they would have experienced if Heathrow had not expanded.
- Under the carbon capped scenario, every single airport in the UK other than Heathrow would lose out, in terms of anticipated passenger growth, if Heathrow expands.
- Under both scenarios a) an increased proportion of passenger growth shifts to London as a result of Heathrow expansion, lowering average growth outside the South East and b) aside from marginal growth at London City, all London airports other than Heathrow would lose out as a result of the third runway.

“Domestic connectivity into the largest London airports will decline.”

This may be so. But since the Airports Commission found that even with expansion it will fall compared to today, it is questionable whether this is really a compelling reason for expansion, especially when the opportunity exists to switch to less carbon-intensive forms of transport and the Government is building HS2 to improve connectivity.

The number of domestic connections is anticipated to increase compared to a ‘no expansion’ scenario, but only slightly. Airports Commission analysis suggests that the number of domestic

² <http://www.aef.org.uk/uploads/2017/03/Heathrow-R3-impact-on-UK-airports.pdf>

destinations served daily by Heathrow will fall from seven today to four in 2030 even if Heathrow expands³.

While Heathrow has claimed that it can increase its domestic destinations to fourteen by 2030, despite such routes apparently being unprofitable, it is unclear how frequently these destinations would be served and, of course, neither Government nor the airport can guarantee (i) that these routes will materialise and (ii), if they do, that they will be maintained. The requirement in the NPS is only for “Heathrow Airport to demonstrate it has worked constructively with its airline customers to protect and strengthen existing domestic routes, and to develop new domestic connections, including to regions currently unserved.” (3.33)

Meanwhile, along with the reduction in passenger growth set out above, the number of destinations served directly by regional airports is likely to be 4-5% *lower* if Heathrow expands than if it does not⁴.

“Passengers will experience fare increases and delays.”

We note that over 90 percent of the £61 billion claimed benefit of expansion relates to passenger benefits (rather than to the wider economy). We don’t accept, however, that building a new runway is an efficient way of delivering passenger benefits, a view shared by the previous coalition Government when developing and implementing its ‘better, not bigger’ agenda.

Our view is that air fares are already, in fact, artificially low given the absence of fuel duty levied on the aviation industry, and the zero rating of VAT on tickets, and that the industry pays for a small proportion of its environmental impact. While congestion may suppress demand, leading to increased costs for passengers, catering for growth leads to a bigger environmental footprint with significant consequent costs for society.

“The rest of the economy will experience costs over time.”

As noted above, we do not consider the argument that airport expansion delivers economic growth to be straightforward or persuasive. If aviation emissions are not controlled, meanwhile, other sectors of the economy will have to bear more of the cost of meeting our legally binding carbon reduction targets.

The NPS claims that Heathrow would generate benefits to the UK economy of up to £61 billion over 60 years (a benefit which, it is implied, would represent a cost to the economy if not realised). We have several concerns about the £61 billion benefit claim:

- (i) It is a fraction of the claims made by the Airports Commission of £211 billion, or – in the final analysis – £147 billion, on which the case for expansion was originally built and on which the airport has based its claims (repeated as recently as in the publication of

³ <http://content.tfl.gov.uk/landing-the-right-airport.pdf#page=24>

⁴ Airports Commission, Strategic Fit: Forecasts, Tables 5.11, 5.12, 6.33 and 6.34. Figures are totals for 'other modelled airports' comparing 'baseline' with Heathrow NW in 2050.

Heathrow 2.0⁵) about economic job and apprenticeship creation in the regions. For this disparity between the Commission's analysis and the Government's work to pass with so little comment is a cause for concern.

- (ii) It includes benefits but not costs. We can see no justification for this approach. If costs are included using a WebTAG approach, the NPV for a third runway drops to just £0.3 to 6.1 billion over sixty years.
- (iii) Even adjusted for the costs included in Table ES.2 of the *Further Review and Sensitivities* report, the figure is necessarily too high as it fails to reflect the cost of keeping CO2 emissions to a level consistent with the Climate Change Act. This has not gone unnoticed by the Committee on Climate Change, who have criticised the analysis for failing to present a business case for expansion under which UK aviation emissions are limited to 37.5 Mt. The cross-party Environmental Audit Committee has similarly criticised the presentation of cost-benefit figures for Heathrow expansion that are “based on a hypothetical international framework to reduce emissions which would leave international aviation emissions 15% higher than the level assumed in the Fifth Carbon Budget (2028–2033).”⁶

The reason for this apparent oversight, despite the Airports Commission having developed modelling under a carbon cap, can surely only be that there would be no economic case for expansion if emissions were kept to a level consistent with the Act. The Government's claim elsewhere in the document that it has yet to take a decision on whether to continue to accept the framing provided by the CCC is implausible given the fact that modelling of the economic impacts of expansion under this framing have been omitted.

If it is assumed that the overshoot in aviation emissions associated with runway expansion will be offset through CO2 reductions in other sectors, then the cost of delivering climate mitigation simply shifts to the rest of the economy.

Job creation

The NPS states that “The Heathrow Northwest Runway scheme is expected to generate up to 77,000 additional jobs in the local area by 2030, with Heathrow Airport also pledging to provide 5,000 additional apprenticeships by this time.” We note, in relation to this claim:

- That this is the figure drawn from the work of the Airports Commission and not from the update on the Commission's work performed by the DfT itself which reflected its concerns about ‘a number of uncertainties’ in the Commission's approach. The DfT's re-analysis generated an estimate less than half that claimed by the Commission: 37,740⁷. It is unclear what the justification is for using the higher estimate, not least given that Government has used its own figures for the economy-wide impact of expansion.
- That the number of people employed at Heathrow has fallen over the past decade (from ‘nearly 79,000’ in 2007 to 76,000 in 2017) even as passenger numbers have increased.

⁵ <http://www.heathrow.com/company/community-and-environment/heathrow-2-0>

⁶ <https://www.publications.parliament.uk/pa/cm201617/cmselect/cmenvaud/840/84003.htm>

⁷ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/562160/further-review-and-sensitivities-report-airport-capacity-in-the-south-east.pdf

This is of course consistent with increases in automation and in low-cost flights but suggests that airport expansion may not be an effective way to create jobs in future.

- That the Government has avoided any comment on the likely number of jobs to be created nationally, suggesting a lack of confidence in the approach taken by Heathrow Airport on the basis of the Airports Commission's original estimate of economic benefit, which it has promoted extensively in order to secure support for the NPS.

Question 2: Please give us your views on how best to address the issue of airport capacity in the South East of England by 2030. This could be through the Heathrow Northwest Runway scheme (the Government's preferred scheme), the Gatwick Second Runway scheme, the Heathrow Extended Northern Runway scheme, or any other scheme.

Our view is that the Government should focus its attention and resources on delivering the infrastructure that is needed to decarbonise the UK economy and for ensuring a good quality of life for UK residents. When it comes to aviation this should include delivering measures to limit growth in passenger demand to within sustainable levels. We believe that existing measures are insufficient to manage the environmental impacts of expansion and consequently we don't support the construction of a new runway anywhere in the South East.

Question 3: The Secretary of State will use a range of assessment principles when considering any application for a Northwest Runway at Heathrow Airport. Please tell us your views.

The application of the numerous principles listed can be effective only for matters that are within Heathrow's control. The NPS should not be approved in the absence of appropriate plans from Government to tackle key issues that cannot be resolved by Heathrow, such as air pollution and climate change. We have commented in detail on these issues in response to questions 5 and 6.

Government must also set out its assessment principles for wider impacts. For example, there is currently no policy setting out the criteria against which the public safety risk associated with expansion will be judged. Airport-related risk at Heathrow and Gatwick is already orders of magnitude greater than regulatory criteria would allow from other major industrial sites. Yet the NPS as drafted mentions only the minimal increase in background risk of a crash, rather than the much larger increase in airport-related risk, thus implying that public safety, and the planning constraints that arise from a property falling within a Public Safety Zone contour, are not significant issues. With London facing increasing housing pressures, the likely impact on the provision of new homes may be significant.

To ensure that the costs and benefits of a third runway are given due consideration, the NPS should not be designated until the Government has (i) clarified how the acceptability or otherwise of the additional risk to the public from the third runway (an increase of around 60%) will be determined, (ii) provided maps showing the anticipated change to the airport's Public Safety Zone, and (iii) demonstrated how the public safety risk will be effectively mitigated.

Further detail about the treatment of public safety impacts in the NPS is provided in an appendix to this submission.

Question 4: The Government has set out its approach to surface access for a Heathrow Northwest Runway scheme. Please tell us your views.

The statement that “The Government also wishes to see the number of journeys made to airports by sustainable modes of transport maximised as much as possible” is completely meaningless.

The requirement for a percentage increase in the proportion of passengers using public transport is inadequate as it fails to prevent a road traffic increase in absolute terms. It also fails to address the problem that the volume of freight vehicles is likely to increase.

Question 5: The draft Airports National Policy Statement sets out a package of supporting measures to mitigate negative impacts of a Heathrow Northwest Runway scheme. Please tell us your views. Are there any other supporting measures that should be set out?

In particular, please tell us your views on:

5.1. Air quality supporting measures

We assume that question 5 refers specifically to the subsections of chapter 5 of the draft NPS that are titled ‘mitigation’. This is, however, far from explicit. We comment separately on what conditions we would expect Government to apply in each of the areas listed: air quality, noise and climate change.

Evidence, including from the Appraisal of Sustainability, suggests that it will not be possible to deliver sufficient supporting measures to effectively mitigate the scheme. The measures so far proposed are inadequate.

The NPS states that: “The Secretary of State will need to be satisfied that the mitigation measures put forward by the applicant are acceptable”, that “an extensive range of mitigation measures is likely to be required” and that “Heathrow Airport should continue to strive to meet its public pledge to have landside airport-related traffic no greater than today.” It then lists a number of possible mitigation measures that Heathrow may choose to implement.

As noted by the Government’s consultants however, Heathrow airport has very little control over whether NO₂ concentrations breach legal limits, since the greatest risks arise in relation to roads in central London, where even a marginal increase in traffic volume may cause an exceedance. The ‘with measures’ scenario described by the consultants refers not to measures implemented by Heathrow, which it considers almost irrelevant, but to measures implemented by central Government.

The Government’s draft air quality plan, published during this consultation, fails to explicitly demonstrate how Heathrow expansion can be accommodated while remaining below legal limits, as set out in detail in response to question 6.

5.2. Noise supporting measures

The draft NPS repeats Government noise policy that “The noise mitigation measures should ensure that the number of people significantly affected by aircraft noise is limited and, where

possible, reduced.” Specific mitigations described as necessary are the following:

- Heathrow should put forward plans for a noise envelope based on consultation and expert advice, for example from the independent noise commission if created. In the absence of meaningful noise targets or limits imposed by Government, however, this simply requires Heathrow to say what it can achieve on noise without limiting capacity that would compromise profits. Self-regulation does not have a good track record.
- It should also put forward plans for a runway alternation scheme, although the duration of periods of respite that currently apply will be reduced, with predictability provided “to the extent that this is within the applicant's control.” The proposal is therefore for less respite with no guarantee of increased predictability.
- A ban on scheduled night flights for a period of six and a half hours, between the hours of 11pm and 7am, should be implemented, with the precise timings to be determined through consultation. Such a ban may not prevent late arrivals however, and would be 1 ½ hours shorter than the minimum quiet period recommended for protecting public health by the WHO⁸.

While information was provided for consultation on anticipated noise contours, no maps were included of where the flight paths would be located, making it difficult for local people and their representatives, including those who would be newly overflown, to get an accurate sense of the location of overflights.

5.3. Carbon emissions supporting measures

The applicant is expected, the draft NPS states, to take measures to limit the carbon impact of the project, such as the use of renewable energy in the airport and of low carbon construction material. However, as the Government’s consultants have noted, 97% of the emissions associated with an expanded Heathrow would be from aircraft in flight⁹. No measures at all are proposed for these emissions and we believe this is a serious omission given the legally-binding requirements of the Climate Change Act, as set out in detail in response to question 6.

5.4. Compensation for local communities

There are perhaps several distinct categories of compensation that need to be considered. Overall, the view of some of our members is that no level of compensation can make up for the loss of enjoyment of their homes and communities that would result from expansion at Heathrow.

First is the requirement that people who would lose their homes should be effectively compensated for moving costs. The personal, emotional cost for individuals and families will of course in some cases be larger than the financial cost of losing their home. We note that the consultation states that Heathrow Airport must fulfil its statutory obligations on compensation,

⁸ <http://www.euro.who.int/en/health-topics/environment-and-health/noise/publications/2009/night-noise-guidelines-for-europe>

⁹ Appraisal of Sustainability, 7.4.99

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/613864/aos-draft-airports-nps-main-report.pdf

while acknowledging and welcoming the airport's voluntary commitment to a community compensation package which paying homeowners 125% of unblighted market value, plus stamp duty, legal fees and moving costs, for compulsory purchases and homes in a larger voluntary purchase zone. We are not in a position to comment on how this offer compares with the standard approach in relation to infrastructure development.

Second is the proposal for Heathrow to pay towards insulation costs for those households that will experience an increase in noise as a result of expansion. We consider such contributions in fact to constitute a form of mitigation as distinct from compensation, however, since insulation is specifically designed to mitigate noise impacts. We note from the display materials at the DfT's consultation events that Heathrow Airport has committed to provide full noise insulation for residential properties within the 60dB LAeq noise contour of an expanded airport, and a contribution of up to £3,000 per residential property for noise insulation for homes within the 57dB LAeq or 55dB Lden noise contour of an expanded airport. This LAeq values appear somewhat arbitrary to us, however, particularly the reference to a 60LAeq contour.

Longstanding government policy, restated in the Aviation Policy Framework, is that 57 Leq represents the approximate onset of significant community annoyance from aircraft noise. The research commissioned by the DfT from the CAA's ERCD and published alongside the consultation on airspace change and noise policy, however, makes clear that the threshold for annoyance has reduced on average, and that a similar proportion of people are now annoyed by aircraft noise at 54 Leq as used to be disturbed at 57 Leq. References to a 57 Leq contour should be revised in light of this evidence. Insulation may have particular relevance, however for night noise. We note in this context the advice of WHO Europe that for the protection of public health, environmental noise at night should not exceed 40 dBLAeq, with 55 dBLAeq representing only an interim target value. A strong case could be made, we consider, for providing insulation to all those experiencing aircraft noise above this level as a result of the expansion.

Thirdly, many of our members consider that compensation should be paid in addition to the contributions towards specific mitigation measures such as insulation, to reflect the fact that this can never fully address the noise impact of expansion (the effect of people's experiences of outdoor spaces such as streets, parks and gardens for example, or of the residual noise even in a fully insulated building including when doors or windows are opened).

Question 6: The Government has set out a number of planning requirements that a Heathrow Northwest Runway scheme must meet in order to operate. Please tell us your views. Are there any other requirements the Government should set out?

It is hard to determine from the NPS as presented what the planning requirements are. We assume that this question refers specifically to the subsections of chapter 5 of the draft NPS that are titled 'decision making', however. Our comments relate to the key topics identified in question 5 on 'mitigation'.

Air quality

The Heathrow area has remained persistently in breach of legal limits for NO₂, with previous hopes that vehicle emissions in the area would fall significantly having failed to materialise.

Forecasts from both the Airports Commission and the Government show that expansion would act to further increase NO₂ as a result extra emissions from aircraft together with associated passenger and freight traffic on the roads.

The official air quality forecasts conducted so far and published by DfT identify risks of breaching or worsening the expected exceedances of both NO₂ limit values and the National Emissions Ceilings Directive as a result of Heathrow expansion. The Airports Commission concluded that expansion was likely to have a detrimental impact on air quality. Meanwhile, the latest draft air quality plan (which focuses on compliance with the NO₂ legislation) makes no mention of Heathrow and appears not to have assumed the development of a third runway in its modelling, yet indicates that the Government does not expect the London area to be compliant even in 2030. While the plan considers a number of possible actions that could reduce NO₂ pollution it makes few firm commitments to implement these, instead shifting responsibility firmly on to local authorities (who have no say over whether or not Heathrow expands, but who are planning to judicially review the decision if it proceeds).

The consultation states that:

“The applicant should undertake an assessment of the project, to be included as part of the environmental statement, demonstrating to the Secretary of State that the construction and operation of the Northwest Runway will not affect the UK’s ability to comply with legal requirements. Failure to demonstrate this will result in refusal of development consent.”

We are concerned that this approach is insufficiently precise. The Airports Commission advanced an argument that even if Heathrow was in an area of non-compliance and that expansion exacerbated the problem, this would not technically delay compliance with legal limits as long as there was at least one area in London with even worse air quality. While this argument has been criticised both legally and morally, it is unclear whether or not the Government considers it a valid test of ‘legal compliance’.

While the focus so far has been on achievement of EU limit values for nitrogen dioxide, the Appraisal of Sustainability indicates in sections 7.4.92-7.4.94 that in addition:

- * Total UK emissions of NO_x in 2030 are expected to meet the current Gothenburg Protocol emissions reduction target for 2020 but are currently expected to exceed the NECD commitment for 2030; emissions of PM_{2.5} are currently projected to exceed their targets for 2020 and 2030.
- * The current baselined NAEI 2030 projections are 129.4% of the NECD 2030 NO_x target with the proportion increasing to 130.0% with the additional runway. However Defra will publish new projections in Spring 2017.
- * LHR-NWR is expected to increase total UK emissions of PM_{2.5} by around 0.2% of the NECD 2030 target. The baseline NAEI 2030 projections are 161.2% of the NECD 2030 PM_{2.5} target, increasing to 161.3% with the second runway. [We assume that this is an error and that the reference should be to a third runway. There are also errors in the referencing.]

We are further concerned that the updated national air quality plan will not be finalised until after the close of the consultation period and it is unclear whether it will pass legal scrutiny (initial comment from Client Earth, which has brought successful court actions against the UK in the past, describes the latest draft plan as “woefully inadequate”). We are therefore being asked to comment on the acceptability or otherwise of a 50% increase in flights and a significant likely

increase in vehicle traffic without being able to judge the likely compatibility of this expansion with the UK's air quality strategy.

Finally, we cannot support the proposal for Heathrow itself to be responsible for predicting the level of air pollution it believes will result from expansion. The airport is self-evidently not well-placed to make an independent assessment of this. No conditions are proposed for restrictions on the runway use if the airport's predictions turn out - as has always been the case in the past - to be optimistic. No enforcement is proposed, and Heathrow lacks the necessary powers to impose controls on activities outside the airport boundary that contribute to background emission levels.

Our view is that the Government should specify that the DCO will be granted only if it can be conclusively shown that the airport's construction and operation would neither cause non-compliance nor worsen existing non-compliance with respect to NO₂ limit values or NECD limits within a zone. The right to continue to use the runway should be contingent on these conditions continuing to hold.

The draft Airports NPS should be reconsulted on once a legally compliant plan for managing air quality at a national level is available to allow members of the public and professionals a chance to consider whether the Government's analysis of the impact of expansion on achievement of this plan is robust.

Noise

The draft NPS requires only that due regard must be given to Government policy on noise, and repeats the aims set out in the Noise Policy Statement for England, namely that the proposals must:

- Avoid significant adverse impacts on health and quality of life from noise;
- Mitigate and minimise adverse impacts on health and quality of life from noise; and
- Where possible, contribute to improvements to health and quality of life.

As noted elsewhere in the consultation, "There is no European or national legislation which sets legally binding limits on aviation noise emissions." We consider this a significant shortcoming in the regulatory environment for noise. The claim meanwhile that "over recent decades, there have been reductions in aviation noise due to technological and operational improvements, and this trend is expected to continue" quotes as its only source an industry publication. The reality is that while individually aircraft have become less noisy, annoyance from aviation noise is increasing, as shown by the DfT/CAA SoNa study. A Defra survey published in 2015 reported that as many as 1 in 3 people in the UK are bothered, annoyed, or disturbed to some extent by aircraft noise.

The Government's policy seeks to limit and, where possible, reduce the number of people in the UK significantly affected by aircraft noise, but 'significant' impacts are not defined, leaving Heathrow to interpret what may or may not be acceptable. The Government should set out meaningful, quantitative health-based objectives for noise reduction, based on the latest available evidence from the WHO. In fact, without such targets, it is difficult to see how the airport can demonstrate that mitigation proposals such as a ban on night flights are cost-

effective in line with requirements in Regulation 598/2014. Even in the absence of more effective national policy or legislation, the DCO should be contingent on Heathrow recognizing health-based evidence and committing to implement effective noise measures. The required 'supporting measures' for noise listed in response to question 5 should be strengthened.

The draft NPS should be reconsulted on with the inclusion on maps showing where new flight paths would be and how heavily these are likely to be used.

Carbon emissions

Seven years ago, a judge told the Government that it could not proceed with Heathrow expansion in the absence of a legally sound climate change policy, with claims that aviation policy was divorced from requirements of the 2008 Climate Change Act described in court as 'untenable in law and common sense'.¹⁰ No meaningful progress has been made in the intervening years to address this question.

In December last year, the UN's aviation body ICAO agreed that from 2020 any increase in aviation emissions would need to be offset through the purchase of emissions credits. AEF has been an active participant in ICAO's work including the discussions leading to this agreement. We consider the scheme, known as CORSIA, to represent a step forward in terms of starting to bring international aviation into line with climate change ambition at a global, sectoral level. But agreement of the CORSIA does not mean that the Government has dealt with the emissions challenge linked to Heathrow expansion.

The Climate Change Act requires that CO₂ emissions from all UK sources will be cut by 80% of 1990 levels by 2050. This target was set prior to the global 'Paris Agreement', under which the UK's level of ambition is likely to need to increase.

The five-yearly carbon budgets that ensure that the target will be met do not currently include aviation (given accounting difficulties relating to the sector's treatment under the EU Emissions Trading Scheme and the UN scheme) but have been set by Government such as to take the sector's emissions into account. The CCC has consistently advised that under the Act, aviation CO₂ emissions cannot be higher than 37.5 Mt by 2050 (equivalent to the level in 2005). Beyond this, the cuts required from other sectors would be beyond what can feasibly be achieved, CCC says.

While the Government has always implicitly accepted this limit, it has never set out how it will be achieved. Forecasts from both the DfT and the Airports Commission illustrate the need for new policy action on the issue, with CO₂ emissions from aviation shown as exceeding the maximum level even without expansion, and being higher still with a new runway. The Government's latest forecasts for aviation demand and CO₂ emissions were published in 2013. They anticipated that assuming no new runways, emissions from UK aviation would reach 47 Mt by 2050 in a central scenario. The Airports Commission's emissions forecasts were lower, with anticipated annual carbon efficiency improvements of over 1% (in contrast to the 0.9% per annum improvements anticipated by both DfT and – previously – the Committee on Climate Change). Despite this, and

¹⁰ <http://www.panda.org/?191864/Heathrow-airport-expansion-in-tatters-as-judge-slams-3rd-runway-plans>

despite lower forecasts for passenger growth at regional airports, the Commission predicted that UK aviation emissions would reach 39.9 Mt without expansion or 43.3 with a third runway at Heathrow.

Both sets of forecasts already assume agreement of a global carbon trading scheme. CORSIA – which in many ways falls short of the kind of trading scheme anticipated in the modelling – is therefore essentially irrelevant to the problem. We set out our views on this in October 2016 in a briefing titled *Why the UN carbon offsetting deal for aviation can't close the UK policy gap*¹¹. WWF-UK has since published its own critique: *Grounded: ten reasons why international offsetting won't solve Heathrow's climate change problem*¹². The need for action to close the gap between anticipated emissions and the maximum recommended by CCC has been set out clearly by the Committee, most recently in a letter to the Energy Secretary which spells out that the aviation emissions limit should be met “without the use of international credits”. The CCC’s approach to the issue of offsets has been reflected by the European Commission which recently announced that international offset credits cannot be used to meet the requirements of Europe’s climate ambition.

The Government claims that the question of whether Heathrow expansion would be compatible with climate ambition has been answered by the Airports Commission. But the Commission’s work extended only to modelling demand under a ‘carbon capped’ scenario, with the question of what policies would be needed to achieve the carbon cap being deferred to the Government to answer. Instead, the Government has simply stopped presenting the carbon capped case, having acknowledged that it is in fact ‘unrealistic in future policy terms’¹³, a conclusion presumably based on the Government’s finding that once the cost of implementing measures to achieve this was incorporated into the cost benefit analysis (essentially pricing people out of using flights at other UK airports to offset the emissions increase from Heathrow), there was no economic case for expansion. This analysis has not therefore been included in the DfT’s final papers accompanying the NPS and is not referred to in the NPS itself.

The draft NPS requires that Heathrow must implement appropriate mitigation measures in relation to design and construction such that their carbon impact is not “unnecessarily high”. As noted above, however, aside from having no meaningful target, this condition ignores the problem that 97% of the emissions associated with expansion would arise from aircraft. In relation to these emissions the draft NPS states: “Any increase in carbon emissions alone is not a reason to refuse development consent, unless the increase in carbon emissions resulting from the project is so significant that it would have a material impact on the ability of Government to meet its carbon reduction targets, including carbon budgets.”

We consider that this criterion cannot be satisfied without fundamental change to how carbon budgets are currently treated, with the Act being reinterpreted and watered down to exclude aviation or to shift from gross, actual emissions accounting to net targets. This would mean significant divergence from the advice of the CCC, and a failure to meet the UK’s minimum requirements to tackle climate change let alone to take a leadership position in the context of

¹¹ <http://www.aef.org.uk/2016/10/24/new-aef-briefing-why-the-un-carbon-offsetting-deal-for-aviation-cant-close-the-uk-policy-gap/>

¹² <https://www.wwf.org.uk/Heathrow2017>

¹³ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/562160/further-review-and-sensitivities-report-airport-capacity-in-the-south-east.pdf#page=15

the Paris Agreement. Any such move should be made transparently, with full consultation, and *before* key infrastructure decisions such as a vote on the Airports NPS lock us in to a particular carbon future.

The Government's current intention to develop a climate change policy for aviation some time further down the line once the NPS is passed, while claiming that there is no necessary conflict between Heathrow expansion and the UK's climate change commitments, is a failure of process likely to mislead the MPs being asked to vote on the NPS. The NPS should make clear that a DCO will not be granted for expansion unless Heathrow can demonstrate convincingly that total UK aviation emissions, including those from the flights departing from an expanded Heathrow, will not exceed 37.5 Mt by 2050. The NPS should be reconsulted on once the Government has developed (and fully consulted on) its policy for tackling aviation's climate change emissions.

Question 7: The Appraisal of Sustainability sets out the Government's assessment of the Heathrow Northwest Runway scheme, and considers alternatives. Please tell us your views.

The Appraisal of Sustainability includes assessment of the likely impacts of each of the short-listed schemes and makes clear that each one would have a significantly negative environmental impact. AEF is opposed to expansion at any of the short-listed sites.

In relation to Heathrow expansion in particular, the appraisal assesses the likely impact after taking account of a range of mitigation measures (Table 7-3). It concludes that in relation to the three key topics discussed above – noise, air quality and climate change – the residual effect of expansion after taking account of mitigation measures would be 'significant negative'. In addition, residual (after assuming mitigation) 'significant negative' effects were identified in relation to each of: community, quality of life, biodiversity, soil, water, resources and waste, historic environment and landscape.

Question 8: Do you have any additional comments on the draft Airports National Policy Statement or other supporting documents?

We consider the consultation on the draft NPS to be inadequate for allowing a proper consideration of the likely impact of Heathrow expansion in terms of noise, air quality and climate change, for all the reasons outlined above.

We were surprised by the claim that: "Communities will wish to participate fully in the development and delivery of expansion, and the Government expects them to be able to do so." The possibility of communities remaining opposed to expansion and committed to ensuring that it is not delivered does not appear to be acknowledged.

Question 9: The Government has a public sector equality duty to ensure protected groups have the opportunity to respond to consultations. Please tell us your views on how this consultation has achieved this.

We have no comments on this question.

Appendix: Further information on aspects of Public Safety

1. This Appendix, the contents of which has been developed in collaboration with one of AEF's members, provides more detailed arguments and evidence to substantiate the following points referred to in our response to Question 3:

- The treatment of public safety in the NPS is superficial and misleading, in that it focusses on the minimal increase in background risk, thus implying that public safety is not a significant issue
- The airport-related risk is much larger than background, would increase significantly, and is already orders of magnitude greater than regulatory criteria would allow from any other major industrial site
- No information is provided in the NPS on what proportion of crashes would occur outside the airport boundary, how the risk would vary spatially across nearby communities and the numbers of people exposed to different levels of risk, or the extent to which planning restrictions on new development, or moving people out of the area, might be necessary for safety reasons
- No criteria are stated against which public safety risk will be judged.

The NPS is misleading in focussing on background risk

2. To the very limited extent to which it considers public safety, the NPS relies on the Airports Commission report [1], which in turn was based on a risk assessment [2] by the Health and Safety Laboratory (HSL). As explained below, there are very serious omissions and weaknesses in the consideration of public safety in [1] and to a lesser extent in [2]. By relying on these reports in the NPS, the Government's rationale and evidence in support of an additional runway are similarly flawed.

3. The treatment of public safety in [1] is remarkably superficial, and completely inadequate to inform policy. It focusses on HSL's prediction that there would be minimal change in background crash rate as a result of any of the expansion schemes considered. Para 12.25 of [1] is the only mention of public safety in over 300 pages. It states that *...the Commission asked the Health and Safety Laboratory to review the scale of increase in crash risk associated with each of the schemes. The review concluded "that the changes to the background crash rate are minimal, regardless of whether or not expansion takes place at the airports"* (our underline). Similarly, the NPS has just one paragraph (3.46) on public safety, also quoting only the statement about background risk increasing minimally.

4. Background crash rate is a measure of the risk away from the influence of any particular airport. The HSL report [2] states that background crash rate is related to *aircraft cruising in UK airspace* [2, page 3] and that it *applies to areas that are greater than 10 km from the airports* [2, page vi]. It is therefore entirely unsurprising that background crash rate would not increase significantly as a result of expanding Heathrow or Gatwick – indeed this is almost true by definition. The statement that the increase is minimal is at best uninformative, and misleadingly optimistic if used, as the NPS appears to have done, as a basis for airports policy. It seems

designed to imply that public safety is not a significant issue. By selectively quoting it, the NPS perpetuates the misleading picture given by the Airports Commission.

5. The NPS is also silent on other factors that would be important in assessing an application, such as:

- what proportion of crashes would occur outside the airport boundary, how the risk would vary spatially across nearby communities and the numbers of people exposed to different levels of risk
- the extent to which planning restrictions on new development, or moving people out of the area, might be necessary for safety reasons

Airport-related risk will increase significantly, and is already high

6. It is normal practice in risk assessment to focus on the people most exposed: in this case those living, working or gathering at or close to the airport. Within about 10 km of an airport, the airport-related risk, that from aircraft taking off and landing, is much higher than background [2, page 16] and increases more directly in line with the number of movements to and from the airport. Airport-related risk is therefore a much more informative and important metric than background risk.

7. In fact, HSL did estimate airport-related risks [2, page 15], finding that a new north-west runway at Heathrow would lead to a **60% increase** in airport-related crash rate, such that a crash could be expected to occur **once in 16 years**. For Gatwick, they estimated that a new runway would more than double the airport-related rate, to 1 in 22 years. These findings were however omitted from the executive summary and conclusion of the HSL report.

8. A crash could easily kill many people on the ground outside the airport boundary (especially in the built-up environment around Heathrow) in addition to those on board the aircraft and people at the airport.

9. The UK has no authoritative risk tolerability criteria specifically intended for application to airport expansion. However, major accident frequencies of once in a decade or so are orders of magnitude greater than the criteria that UK regulators set for other industries. For example, the Office for Nuclear Regulation assesses nuclear installations against (*inter alia*) an upper limit of 1 in 10,000 years for accidents leading to 100 or more fatalities, with an objective (representing modern standards and expectations) of 1 in 10 million years [3]. For other industrial installations, such as chemical plant or gas storage sites, the Health and Safety Executive (HSE) [4] proposed that *for any single major industrial activity affecting the existing population, the risk of an accident causing the death of 50 or more people in a single event should be regarded as intolerable if the frequency is estimated to be more than 1 in 5,000 per annum.*

10. When judged against regulatory criteria applied to other major industries, therefore, the airport-related risk posed by Heathrow would seem to be completely intolerable. Despite this *prima facie* case to answer (why should an airport be allowed to pose far higher societal risk than a chemical plant or a nuclear power station?), the HSL report contains no serious discussion of tolerability, and there is no evidence that the Airports Commission even considered it.

11. This cursory treatment of public safety is disappointingly at odds with the UK's generally robust approach to safety.

12. In an attempt to find out whether Government had in fact considered the topic in more depth, one of our members contacted the DfT. Their initial response did little more than refer back to the HSL report and other published information, and to state the role of the CAA. In response to a second question asking for more specific information, DfT stated that the increase in airport-related risk was '*considered by the Airports Commission and safety advisers to be within acceptable limits*'. When asked what these 'acceptable limits' were, and how they had been established, DfT gave no clear answer, but pointed to HSL's statement in [2] that crash risk would be '*lower than that assumed by the inspector at the Heathrow Terminal 5 public inquiry*'... *who concluded that, despite this risk, T5 could be approved*'. In parallel, a FOIA request was made, asking for any reports, meeting minutes or other communications (other than the HSL report itself) in which the safety advisers had given their assessment of the acceptability of the increased risk. DfT replied that they held no such information.

13. It remains unclear, therefore, whether or how Government considered risk tolerability. However reliance on the Terminal 5 analogy – the only specific criterion mentioned by DfT – would be a very weak basis for such a judgement. The fact that a slightly higher predicted risk (1 in 14 years) was accepted as part of overall planning balance for Terminal 5 does not mean that a similar risk should automatically be accepted from any other expansion scheme: the balance of positive and negative impacts, the constraints, and what safety measures are reasonably practicable will be different in every case.

14. Reliance on the Terminal 5 analogy is also a highly selective use of the Inquiry inspector's conclusions. The inspector also stated, for example, that:

- '*the fact that more people would be exposed to a material risk represents a real and substantial objection to Terminal 5 ... the number of aircraft movements should be limited and measures taken to restrict the number of landings that involve flying over the heavily developed areas of London...*' [5, Para 34.5.25].

and

- '*I agree with BAA ... that a third main runway at Heathrow would have such severe and widespread impacts on the environment as to be totally unacceptable.*' [5, Para 34.5.30].

15. The significant increases in airport-related risk predicted by HSL would also violate the Commission's own safety criterion *to maintain and where possible enhance current safety performance* [1, para 12.2].

16. In view of the considerations in paras 2- 14 above, it is surprising, and of concern, that airport-related risk was not even mentioned in the NPS or Airports Commission report.

No criteria are given against which public safety risk can be judged

17. Given the high level of public safety risk, and the fact that it would increase with expansion, one would have expected Government to have given it serious consideration, both in developing

its rationale for supporting expansion at Heathrow, and in setting assessment principles and criteria for any future schemes.

18. Currently there is a policy and regulatory vacuum for consideration of public safety in relation to airport expansion proposals. The Government's Public Safety Zone policy [6] is concerned with controlling development around existing airports, not with decisions about whether or how much airports should expand [7]. And neither the CAA nor HSE regulate or enforce public safety matters in relation to airport expansion. (In response to a question from AEF about the HSE's roles and views regarding airport public safety, HSE stated that they were unable to comment as these matters did not fall within their enforcement remit. They referred us instead to the CAA and local planning authorities for assistance. However, the CAA focusses on the safety of aircraft occupants; and has shown no inclination to become involved in public safety matters beyond its current responsibility for administering PSZ policy. In airport expansion applications to date, the issue has been left to the planning process to decide, on a case-by-case basis [7]. The NPS makes no attempt to fill this policy and regulatory gap.

19. A more complete consideration of public safety cannot responsibly be left to later stages of planning, design and regulation. The predicted increases in crash frequency are largely driven by, and hence roughly proportional to, the increase in the number of aircraft movements. It would be unrealistically optimistic (and, arguably, wrong in principle) to rely on advances in safety management and technology to reduce per-movement risks sufficiently to compensate for such an increase.

Summary and recommendations

20. The consideration of public safety in the NPS is superficial and misleading. It fails to mention the most important aspect: airport-related risk. The Government's rationale in support of a north-west runway at Heathrow (or indeed any additional runway) is therefore unsound. A thorough assessment of airport-related risk should be carried out.

21. The NPS provides no useful basis for assessing public safety in applications for airport expansion. To ensure that the costs and benefits of a third runway are given due consideration, the Airports NPS should not be designated until the Government has (i) clarified how the acceptability or otherwise of the additional risk to the public from the third runway will be determined, (ii) provided maps showing the anticipated change to the airport's Public Safety Zone, and (iii) demonstrated how the public safety risk will be effectively mitigated.

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