



House of Commons  
Environmental Audit  
Committee

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# The Airports Commission Report: Carbon Emissions, Air Quality and Noise

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First Report of Session 2015–16

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First Report of Session 2015–16

*Report, together with formal minutes relating  
to the report*

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## Environmental Audit Committee

The Environmental Audit Committee is appointed by the House of Commons to consider to what extent the policies and programmes of government departments and non-departmental public bodies contribute to environmental protection and sustainable development; to audit their performance against such targets as may be set for them by Her Majesty's Ministers; and to report thereon to the House.

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The constitution and powers are set out in House of Commons Standing Orders, principally in SO No 152A. These are available online at [www.parliament.uk](http://www.parliament.uk).

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### Committee staff

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## Summary

The purpose of this inquiry was to examine the Government's willingness to address the significant environmental implications of the Airports Commission's recommendation in relation to carbon emissions, air quality and noise. It was not to reopen the debate over airport capacity expansion, nor to reopen the debate over locations of additional capacity. If the Government decides to accept the Commission's recommendation, we will invite the Secretary of State for Transport to give evidence to the Committee on the Government's approach to these issues.

If the Government decides to go ahead with the Commission's recommended option, it needs to demonstrate a step change in their approach to mitigating the environmental impact. Ministers will need a high degree of certainty that their own policies are robust enough to deliver the mitigations required. They will need to set out, before making the final decision to go ahead, clear and binding responsibilities and milestones to ensure environmental standards are enforced and measures can be implemented, monitored and evaluated in a timely way. Failure to do so could see the project caught up in protracted legal disputes, lead to environmental standards being missed and introduce an element of commercial risk.

On carbon emissions, the Commission set out a theoretical approach that could deliver airport expansion within current planning assumptions for aviation emissions. However, we found a significant gap between that approach and the current policy environment. This is a major concern and the Government should demonstrate at the earliest opportunity it can close that gap by setting out its approach to international negotiations on aviation emissions and putting in place a strategy to deliver aviation emissions by 2050 no higher than those in 2005.

On air quality, the Government will need to re-examine the Commission's findings in the light of its finalised air quality strategy. Meeting legal limits and protecting health and wellbeing are vital. The Government should be clear that significant deterioration in air quality on the roads leading to Heathrow will not be permitted simply because another area of London is more polluted. Progress on air quality will depend to a large extent on how far a modal shift can be achieved, moving passengers from private road vehicles to public transport. Before making its decision, the Government should set out its assessment of what would be required in terms of infrastructure improvements, agreed responsibilities for funding and milestones for completion.

On noise, we strongly support the Commission's proposed ban on night flights. We also urge the Government to establish an Independent Aviation Noise Authority and a Community Engagement Board in the next year, whether or not it proceeds with expansion at Heathrow. The Government also needs to establish how noisy a future three-runway Heathrow would be relative to a future two-runway airport.

# 1 Introduction

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1. In September 2012, the previous Government asked Sir Howard Davies to chair an independent commission to identify and recommend options to maintain the UK's position as Europe's most important aviation hub. The Commission produced an interim report in September 2013 and its final report in July 2015. The final report unanimously recommended the construction of a new, third, runway at Heathrow Airport. In its final report the Commission considered two other options: the construction of a new, second, runway at Gatwick Airport and the extension of the existing northern runway at Heathrow. The Prime Minister has said the Government will make a decision on whether to accept the Commission's recommendations "by the end of the year."<sup>1</sup>

2. Our aims in undertaking this inquiry were to assess the implications for wider environmental policy of the Airports Commission's recommendation and to scrutinise the way in which the Government addresses the questions of carbon emissions, air quality and noise in making its decision. The purpose of this report is to identify some of the key issues that arose in our evidence and which the Government will need to address if it decides to support airport expansion at Heathrow in line with the Airports Commission's recommendation.

3. We have adopted a two-stage approach. In the first stage we issued a call for evidence on the Commission's recommendation. We received nearly 100 submissions from a wide range of companies, non-governmental organisations (NGOs), campaign groups and members of the public. We are grateful to everyone who submitted written evidence for taking the time to do so. We also held four public hearings with Sustainable Aviation, the Aviation Environment Federation, Transport for London (TfL), the London Borough of Hounslow, the 2M London Boroughs, Heathrow Airport and Sir Howard Davies alongside former colleagues from the Commission. Again, we are grateful to all our witnesses for giving the time to appear before us.

4. **The Government has said it will set "a clear direction" on airport expansion by the end of the year.<sup>2</sup> If the Government is minded to go ahead with the Commission's recommendation, it is likely that this will be followed by a further period of consultation. The Government should use this period to address the recommendations in our report, before making a final decision on whether to go ahead with the scheme and seek the approval of Parliament through a National Policy Statement or Hybrid Bill.**

5. We intend to invite the Secretary of State for Transport to appear before the Committee, should the Government proceed with expansion at Heathrow in line with the Commission's recommendation. As such, this can be regarded as an interim report.

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1 House of Commons debates, 1 July 2015, Col. 1473

2 Official Report, 1 July 2015, Col. 1485

## 2 Carbon Emissions

### The Policy Framework

6. The UK Government has a legally binding target under the Climate Change Act 2008 (“the 2008 Act”) to reduce greenhouse gas emissions by at least 80% by 2050 compared to 1990 levels. The Act requires the Government to set legally binding “carbon budgets” – a cap on the amount of greenhouse gases emitted in the UK over a five-year period.

7. The Committee on Climate Change (CCC) provides advice to the Government on the appropriate level of each carbon budget. These budgets seek a cost effective path to achieving the target. The first four carbon budgets have been put into legislation. The CCC recently provided advice to the Government on the fifth carbon budget.

8. The 2008 Act did not initially require the inclusion of international aviation emissions within either carbon budgets or the 2050 target. In 2009 the then-Government set a target that UK gross aviation emissions will be no more than 2005 levels – 37.5 MtCO<sub>2</sub> – in 2050. The CCC set out a range of options to meet this target and built a “planning assumption” into carbon budgets to cover aviation emissions.<sup>3</sup> The CCC has built an assumption of meeting the planning assumption alongside 60% passenger growth into the reductions it recommends for other sectors of the economy. Professor Dame Julia King, a former Member of the Airports Commission who also sits on the CCC, told us that, as a result, “by 2050 the rest of the economy will be looking at reductions above 80%, approaching 90%.”<sup>4</sup> The CCC has said, in a letter to the Commission, that this is “at the limit of what is feasible”.<sup>5</sup>

### The Impact of Expansion

9. Sir Howard told us that, without mitigation, the construction of a third runway would increase the projected carbon dioxide (CO<sub>2</sub>) emissions of UK aviation by a little under 10%. He observed that, at present, aviation comprised around 6% of emissions, but that over time the proportion would increase because of specific challenges involved in converting jet engines to low carbon fuels. By 2040 the Commission estimated aviation would comprise around 24% of national emissions.<sup>6</sup>

10. The Commission’s final report focused primarily on the “Assessment of Need” demand scenario. Some witnesses questioned whether the Commission’s final report took sufficient account of the range of possible carbon policies and air quality outcomes that would result under different demand scenarios.<sup>7</sup> There has also been criticism that the scenario “project[s] the present into the future with essentially linear trends, even predicting which routes will be flown from where. The modellers’ future world is much like it is now, only busier.”<sup>8</sup> ***The Government, when making a decision, will need to consider its carbon emissions mitigation against the full range of demand scenarios modelled by the Commission.***

3 [Aviation Factsheet](#), Committee on Climate Change, accessed November 2011

4 Oral evidence, 4 November 2015, Q 142

5 [Letter from Lord Deben](#), Chair of the Committee on Climate Change, to Sir Howard Davies, July 2013

6 Oral evidence, 4 November, 2015, Q 166

7 Written evidence, Fellow Travellers

8 John Kay, [Heathrow versus Gatwick, the Flawed Case for Expansion](#), Financial Times, November 3 2015

## The Commission's Approach

11. The Commission modelled demand for aviation against two carbon policy scenarios. The first was a carbon-capped scenario which assumed no international action to limit aviation emissions and UK policy action to limit emissions to the CCC's planning assumption. Under this scenario, the Commission modelled a theoretical national carbon price of £334 per tonne of CO<sub>2</sub> by 2050 to limit aviation demand such that the CCC's planning assumption could be met with no expansion (the current UK carbon price floor is £18.50).<sup>9</sup> The Commission also modelled a number of additional measures - use of biofuels, operational improvements and larger, more efficient aircraft.<sup>10</sup> The combined effect of these measures allowed the Commission to meet the planning assumption by 2050 under its central "Assessment of Need" scenario for aviation demand with a third runway at Heathrow.

12. The second carbon policy was a carbon-traded scenario which assumed the operation of the European Emissions Trading System in respect of aviation until 2030. After that it assumed a "complete liberalised global market" for carbon emissions which would allow aviation to "buy in" credits from other sectors of the economy. Here, the carbon price assumed was just under £200 per tonne by 2050, in line with forecasts made by the Department for Energy and Climate Change and those used by the CCC in their 2009 review of aviation (the current EU Emissions Trading Scheme Phase III price is €8.54).<sup>11</sup>

13. The former Commissioners told us that the two policy scenarios were extremes, and that the reality was likely to be somewhere between the two.<sup>12</sup> They also stressed that they had not made concrete policy proposals; preferring to leave that to the CCC.<sup>13</sup>

**14. The former Airports Commissioners told us they relied heavily on the work of the Committee on Climate Change when undertaking their work. They denied that their modelled carbon prices and policies were policy recommendations - feeling that the CCC were better placed to take on this role. Governments have in the past been reluctant to accept CCC policy recommendations on aviation. The Government cannot credibly rely on the Commission's analysis as evidence that Heathrow expansion can be delivered within the limits set by the 2008 Act if this continues to be the case. We recommend that the Government give the CCC the opportunity to comment on the Commission's forecasting of aviation emissions and the feasibility of its possible carbon policy scenarios. The Government should act on any recommendations they make.**

## Views on the Commission's Approach

15. A significant theme that emerged in the evidence we received were doubts about whether the theoretical policies underpinning the Commission's analysis could be achieved in practice. Cait Hewitt of the Aviation Environment Federation (AEF) summarised two key points that were made to us by a number of organisations:

9 [Carbon Price Floor](#), Standard Note, House of Commons Library

10 [Carbon Policy Sensitivity Test](#), Airports Commission, July 2015, Table 3.9 sets out the contribution of each measure towards meeting the planning assumption; the technological improvements are incorporated within the level of emissions assumed by the Commission, Oral Evidence, 4 November, Q 158, Sir Howard Davies

11 Airports Commission, Final Report, para. 3.50

12 Oral evidence, 4 November 2015, Q 164, Phillip Graham

13 Oral evidence, 4 November 2015, Q 140, Sir Howard Davies

What comes through from the Committee on Climate Change work, from the Government's own forecasts and even from the Airports Commission's forecast—which is significantly lower in CO<sub>2</sub>, in fact, than the Government's—is that they anticipate, even with the baseline before you add capacity, that emissions are going to overshoot the level recommended of 37.5 million tonnes. Very briefly, the second challenge is that in adding new capacity the Airports Commission has admitted that you are going to increase the scale of that challenge, yet they have made no recommendations in terms of concrete policy proposals for how the Government should mitigate that. In fact it quite openly put the challenge back to Government in terms of tackling the climate change impact.<sup>14</sup>

16. The evidence we received from the industry was more positive. Virgin Atlantic, Rolls Royce and others pointed to work that has already been done to reduce carbon emissions from flights.<sup>15</sup> John Holland-Kaye, CEO of Heathrow Ltd., told us that, since the Commission's report, the international industry had signed up to “no growth in net carbon emissions from 2020.” He believed that Heathrow and the industry could prosper even under the carbon-capped scenario.<sup>16</sup> Dr Andy Jefferson, Director of Sustainable Aviation, told us:

Using the DfT's forecast of 2013 and the aviation forecast of 2015, [our carbon] roadmap shows that, based on what we could see being achievable through improved airspace efficiencies; through improved operating techniques; significantly, through new aerospace technology developments and the integration of those new technologies in new aircraft being purchased by UK airlines; and, finally, through sustainable fuels for aviation, you can, effectively, achieve growth in aviation without any significant increase in absolute CO<sub>2</sub> emissions.<sup>17</sup>

17. **The Commission's indicative carbon prices and policies were not intended as recommendations. Nonetheless, they give an indication of the scale of intervention likely to be required to bring aviation emissions within 2005 levels by 2050. Before making any decision on Heathrow expansion, the Government should publish an assessment of the likely impact on the aviation industry - particularly regional airports - and wider economy of measures to mitigate the likely level of additional emissions from Heathrow.**

### Biofuels

18. The Commission's analysis used biofuel use as a key policy measure to reduce emissions.<sup>18</sup> Biofuels also play a key (and much larger, according to Dame Julia) role in Sustainable Aviation's “roadmap” for lower aviation emissions.<sup>19</sup> Industry witnesses urged the Government to support the development of biofuels, whilst evidence from Rolls Royce

14 Oral evidence, 14 October 2015, Q 1; see also written evidence from Friends of the Earth: England, Wales and Northern Ireland, WWF, RSPB

15 Written evidence, Virgin Atlantic, Rolls Royce

16 Oral evidence, 4 November 2015, Q 73

17 Oral evidence, 14 October 2015, 2015, Q 2

18 Oral evidence, Professor Dame Julia King, 4 November 2015, Q 156

19 Sustainable Aviation, [CO2 Roadmap](#), pg 1

and Virgin Atlantic stressed their progress on sustainable fuels to date.<sup>20</sup> Dr Jefferson urged the Government to invest in a “relatively modest grant scheme that would be less than £2 million” to demonstrate it was serious about these fuels.<sup>21</sup> He also anticipated some of the criticisms from environmental groups set out below, by telling us they were researching “advanced fuels” that did not incur land use change or impact on the sustainability of food supplies - for example by using waste products.<sup>22</sup>

19. Environmental groups were cautious about the potential take-up and effectiveness of moving to biofuels. WWF argued that it should be encouraged, but that the life-cycle impact of the fuels needed to be taken into account, including the impact of changes in direct and indirect land use.<sup>23</sup> More widely, the use of some biofuels has to be integrated with food security concerns to limit potential negative impacts.<sup>24</sup> Fellow Travellers noted that biofuel use had increased overall emissions from road transport in Europe. They argued the CCC’s 2009 estimate of biofuel penetration now seemed “improbably high.”<sup>25</sup> Finally, AEF noted that the Department for Transport currently envisages a very small role for biofuels by 2020 and questioned whether the Government and industry would accept the level of intervention to support biofuels envisaged by the Commission in the carbon-capped scenario.<sup>26</sup>

20. *The Government should consider developing a policy framework to advise industry about how to prioritise trade-offs between noise and carbon pollution when adopting biofuels thus giving guidance on priorities.*

21. **The Commission, industry and Committee on Climate Change envisage biofuels playing a limited role in controlling aviation emissions. However, the use of biofuels is not without its own risks and uncertainties. The Government must either examine the options to encourage aviation to move to advanced fuels that are sustainable across their entire life cycle (including indirect land use change and impacts on food supplies) or identify ways in which corresponding emissions reductions will be achieved.**

### Market-based Emissions Mechanisms

22. A particular cause of contention was the role of emissions trading or mandatory offset schemes. There was a degree of agreement that aviation emissions were best addressed within an effective international framework. The Government has held off accepting some CCC recommendations on aviation in anticipation of such a framework.<sup>27</sup> Whilst the European Union Emissions Trading System (EUTS) applies to aviation, much of it is “paused” ahead of agreement by the International Civil Aviation Organisation of international measures next year.<sup>28</sup>

20 Written evidence, Rolls Royce; Virgin Atlantic; Manchester Airport Group

21 Oral evidence, Dr Andy Jefferson, 14 October 2015, Q 32

22 Oral evidence, 14 October 2015, Q 8

23 Written evidence, WWF, para. 17-18

24 High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security, Rome 2013

25 Written evidence, Fellow Travellers, para. 18

26 Oral evidence, 14 October 2015, Cait Hewitt, Q 24; Written evidence, AEF

27 John Holland-Kaye, Heathrow Ltd., Oral Evidence, 4 November 2015, Q 86; [Government Response to the Seventh Annual Report of the Committee on Climate Change: Mitigation](#), Department for Energy and Climate Change, paras. 5.26 - 5.28

28 Airports Commission Final Report, para. 2.66

23. Sustainable Aviation told us that a market-based scheme would be a necessary part of their “road map” towards a net reduction of 50% in UK aviation emissions by 2050.<sup>29</sup> Heathrow advocated integrating a carbon price into the cost of air travel through a market-based mechanism involving other sectors. Matt Gorman told us:

People pay more to travel; that gets invested in stimulating the low-carbon economy we need in the UK and more broadly.<sup>30</sup>

24. However, there was scepticism among other witnesses that the measures currently proposed were sufficient. AEF submitted detailed written evidence suggesting that the currently discussed proposals at the International Civil Aviation Organisation would result in weaker measures than those modelled by the Commission. They also observed that the Commission’s carbon traded scenario did not - in itself - lead to the planning assumption being met.<sup>31</sup> Fellow Travellers pointed to weaknesses in the operation of the EUETS.<sup>32</sup> The Commission had also assumed that carbon “credits” from other sectors would be “fully available”, something that Richmond Heathrow Campaign questioned.<sup>33</sup>

***25. The Government should set out its approach to the International Civil Aviation Organisation negotiations as the previous Government did ahead of the COP 21 negotiations in Paris. It will need to demonstrate either that the agreement it is seeking can incentivise the absolute carbon emission reductions required to meet the planning assumption or what measures it is prepared to take and to what timescale in order to make up the shortfall.***

## Operational and Fleet Improvements

26. Dr Jefferson observed that fuel was the second largest cost involved in aviation and that there was a strong market incentive on airlines to pursue fuel efficiency.<sup>34</sup> Evidence from the industry pointed to improvements they had made - whether through fleet design, reductions to taxing and standing time or reducing the amount of weight carried on aircraft. Virgin Atlantic, for example, said they had reduced their CO<sub>2</sub> per Revenue Tonne Kilometre by 10% since 2007.<sup>35</sup> Heathrow argued that expansion would allow them to eliminate the routine “stacking” of planes.<sup>36</sup> Several witnesses noted that the Commission’s assumptions around operational improvements had been praised for “uncommon reasonableness”.<sup>37</sup>

27. Whilst AEF acknowledged the Commission’s analysis had been sceptical about fuel efficiency through direct routing, they raised some concerns about the scale of improvements envisaged by the Commission. They argued some of the improvements mandated by the Commission in the carbon-capped scenario would be likely to meet industry opposition. They also queried a 15% reduction in the level of forecast emissions for 2050 relative to the last Department for Transport (DfT) forecast in 2013.<sup>38</sup> The

29 Oral evidence, 14 October 2015, Q 4

30 Oral evidence, 4 November 2015, Q 80

31 AEF, supplementary written evidence

32 Supplementary written evidence, Aviation Environment Federation; written evidence, Fellow Travellers

33 Oral evidence, 4 November 2015, Q 163; Written evidence, Richmond Heathrow Campaign

34 Oral evidence, 14 October 2015, Q 24

35 Written evidence, Virgin Atlantic

36 Oral evidence, 4 November 2015, Q 90

37 For example, Written Evidence, Amec Foster Wheeler Environment & Infrastructure UK Limited

38 Written evidence, AEF, para. 15

Commission argued this had emerged out of a substantial piece of work they had done on the use of larger, more efficient aircraft.<sup>39</sup>

28. *There are some areas of the Commission's work on operational and technological improvements that are still the subject of significant disagreement. We urge the Government to produce and publish its own thorough evaluation of the forecasts, including its assessment of whether take-up is likely to be sufficient without Government intervention.*

## Carbon Emissions - Overall Conclusions

29. We draw four conclusions from the evidence we heard on carbon emissions. Firstly, because the planning assumption requires additional decarbonisation from other sectors, passenger growth in aviation cannot be seen in isolation from the progress on emissions reduction made by the rest of the economy. Secondly, the industry has taken steps to reduce its carbon emissions and, in areas such as fuel efficiency, market incentives are likely to ensure further progress. Thirdly, these measures in themselves are highly unlikely to achieve the planning assumption and further measures, including demand management, will be required. Finally, there is a significant gap between the theoretical models of how a mixture of these measures might allow the planning assumption to be met and the proposals currently on the domestic and international policy tables.

30. *We recommend that any Government decision on airport expansion should be accompanied by a package of measures to demonstrate a commitment to bringing emissions from international aviation within the economy-wide target set by the 2008 Act. They should also, as a minimum, commit to accepting the Committee on Climate Change's advice on aviation in relation to the fifth carbon budget, introducing an effective policy framework to bring aviation emissions to 2005 levels by 2050 no later than autumn 2016 and pressing for the strongest possible international measures at the International Civil Aviation Organisation next year.*

## 3 Air Quality

### Introduction

31. The impact of air pollutants on human health has increased in profile over the last few years. Partly this has been due to growing scientific evidence about the level of harm that pollutants such as nitrogen oxides (NO<sub>x</sub>) can cause.<sup>40</sup> It is also due to increasing awareness of the level of these pollutants emitted by modern diesel vehicles as discussed at our recent hearings on Diesel Emissions and Air Quality.

32. Air quality in the UK is regulated by a series of international agreements and domestic law. These were detailed by Heathrow Ltd. in their written evidence and are also discussed by the Airports Commission in their report.<sup>41</sup> The Commission found:

Even with additional runway capacity in place, none of the air quality receptors around Heathrow which would have implications for human health, such as at schools or residential buildings, are forecast to exceed air quality limits in 2030.<sup>42</sup>

33. However, the Commission did find that a third runway could, without mitigation, result in up to 47,000 homes around Heathrow experiencing higher nitrogen dioxide (NO<sub>2</sub>) levels. Whilst the Commission observed that the number moving into the “at risk” category would be “very small” (14), Hounslow Council pointed to preliminary work done by the Commission’s consultants estimating costs of between £2.8 million and £10.8 million in additional medical appointments resulting from worsening air quality.<sup>43</sup> ***Before the Government makes its decision, it should make its own assessment of the likely costs of preventing an adverse impact on health from expansion at Heathrow and publish it.***

### The Clean Air Directive

34. Although the Commission discussed a number of international agreements relating to air quality, its concerns and the evidence we received, focused almost entirely on the emission of NO<sub>x</sub> (specifically NO<sub>2</sub>) in relation to UK compliance with EU Directive 2008/50/EC on ambient air quality and cleaner air for Europe (“the Directive”).

35. The Directive limits values in respect of certain key pollutants - including an annual mean limit value of 40 µg/m<sup>3</sup> NO<sub>2</sub>.<sup>44</sup> Compliance is assessed through measurements carried out by “receptors” placed at the high-polluting areas within the region (subject to certain exemptions relating to work places, the carriageways of roads and areas where people do not normally access). A region is deemed to be in breach of the Directive if receptors exceed the limit values. The deadline for compliance was 2010 but a number of areas in the UK remain above the limit values, including Greater London.<sup>45</sup> At the time the Commission’s report was being finalised, the Greater London region was not forecast

40 [Statement on the evidence for the effects of nitrogen dioxide on health](#), Committee on the Medical Effects of Air Pollution, 2015; Walton, H., et al. (2015) [Understanding the Health Impacts of Air Pollution in London](#). A report for Transport for London and the Greater London Authority

41 Airports Commission, Chapter 9; Heathrow Ltd. written evidence

42 Airports Commission Final Report, page 27

43 Oral evidence, Cllr Amrit Mann, Q 43; [Air Quality Local Impact Assessment](#), Airports Commission, Table G5

44 Micrograms per meter cubed.

45 Airports Commission Final Report, para. 9.54; [The Clean Air Handbook](#), Client Earth, April 2014

to be compliant with the directive until 2030 - in line with the Government's air quality strategy of the time.<sup>46</sup>

## Heathrow and the Commission's Findings

36. John Holland-Kaye told us:

Heathrow today complies with EU air quality limits. It is an issue we take very seriously. We have a very good and robust plan in place to make sure that even with expansion we will continue to do that. We have some mitigating factors we can take.<sup>47</sup>

However:

There are two monitoring stations on the M4 to the north of Heathrow that are higher than the 40 measure. The reason for that is through traffic on the M4. The real issue for air quality is vehicle traffic, not the airport. In terms of those two monitoring stations, DEFRA forecast that they will both be compliant by 2020.<sup>48</sup>

37. However, the Commission did find that Heathrow expansion could result in a breach of EU limits. It is worth quoting the Commission's findings in full, as their interpretation of the Directive was criticised in the evidence we received:

In order for the Commission to determine that a scheme can be delivered in compliance with the Air Quality Directive, it would require assurance that the scheme would not delay the date by which the sector within which the scheme was located would reach compliance with the limits set out within the Directive. In the case of the Heathrow schemes, the relevant sector is the Greater London Agglomeration area. It would therefore need to be demonstrated that, by 2030, receptors in the vicinity of the expanded airport site would not report the highest concentrations of NO<sub>2</sub> in the sector. Without Heathrow expansion, the Marylebone Road is expected to report the highest concentrations in 2030.

The Commission's dispersion modelling has shown that using pessimistic assumptions and without actions to mitigate emissions, both of the Heathrow schemes would result in NO<sub>2</sub> concentrations on the Bath Road in 2030 which would be higher than those on the Marylebone Road. Therefore, absent mitigation, both schemes would delay compliance with the Directive and hence would not be deliverable within the legal framework.<sup>49</sup>

38. The Commission and Heathrow ltd. both believed that, with additional mitigation measures, the sites on Bath Road could be brought below the level of Marylebone Road by 2030. Heathrow ltd. argued it would be lower purely on existing measures - but was prepared to consider additional mitigation despite this.<sup>50</sup> In its supplementary written evidence Heathrow ltd. broke its mitigating measures into three - a package of measures

46 Airports Commission Final Report, para 9.77

47 Oral evidence, 4 November 2015, Q 103

48 Oral evidence, 4 November 2015, Q 105; Written evidence, Bureau Veritas UK

49 Airports Commission, Final Report, paras. 9.81 - 9.82

50 Airports Commission Final Report, para. 9.87; Written evidence, Heathrow Airport Ltd., 3.2.12

to improve surface access to the airport, a package of measures relating to the use of aircraft and a further package of measures that the Airports Commission suggested might be necessary.<sup>51</sup>

39. The Commission recommended:

Firm action will be needed on the part of the airport operator to ensure that emissions related to the airport are minimised, together with an effective national strategy to address broader background air quality issues primarily associated with road traffic. Any new capacity should only be released when it is clear that air quality around the airport will not delay compliance with EU limits.<sup>52</sup>

## Criticisms of the Commission's Findings

### Interpretation of Compliance

40. We received a number of submissions that were critical of the Commission's decision to define compliance with reference to the performance of central London. Richard di Cani, of TfL, said:

The Commission has adopted a particular interpretation of EU guidance, which basically allows air quality to get worse provided it is no worse than the worst link in the zone, and that is the assessment they have adopted. The proposals do not improve air quality anywhere. They make it worse. As a basic approach we would disagree with their interpretation of the guidance that they have adopted.<sup>53</sup>

41. Daniel Moylan argued that road schemes in London were evaluated against a requirement that the scheme should not cause air quality to deteriorate and that this should be the minimum standard.<sup>54</sup> Clean Air in London took the view, and commissioned a Q.C.'s opinion in support of it, that the Directive prohibits actions that would significantly deteriorate air quality within a zone that was already in breach of the limit values.<sup>55</sup>

42. Sir Howard stated the Commission had also taken legal advice and believed that its interpretation of the Directive was the correct one.<sup>56</sup> Phillip Graham denied that the approach taken by the Commission implied the limit values would not be met. He argued that the Commission had used Marylebone Road as a measure by which to ascertain the likelihood of Bath Road being compliant.<sup>57</sup>

**43. *Many of our witnesses interpreted the Commission's interpretation of the Air Quality Directive as implying that significant increases in NO<sub>2</sub> resulting from Heathrow expansion would be allowable because of worse performance elsewhere in London. This***

51 Heathrow supplementary written evidence

52 Airports Commission Final Report, para. 13.65

53 Oral evidence, 14 October 2015, Q 41 and Transport for London written evidence; see also Q 38 and written evidence, Aviation Environment Federation; written evidence Communities Against Increased Aircraft Noise; Friends of the Earth England and Wales; Gatwick Airport; Richmond and Twickenham Friends of the Earth

54 Oral evidence, 14 October 2015, Q 48

55 Written evidence, Clean Air in London, para 6

56 Sir Howard Davies, [letter to the Secretary of State for Transport](#), 7 September 2015

57 Oral evidence, 4 November 2015, Q 188

*would make no sense in terms of protecting public health and wellbeing. The Government should make clear that this is not the position it intends to take when assessing the scheme for compliance with the Directive.*

### Timeframe

44. Critics of expansion argued that the Commission's use of 2030 as the point of analysis was mistaken. The Supreme Court ruled in April 2015 that the Government had to consult on a new air quality strategy. This plan was published by the Department for Environmental, Food and Rural Affairs (DEFRA) in September 2015 and forecast compliance within London by 2025.<sup>58</sup> Client Earth, who bought the Supreme Court case, argued that the Commission was therefore evaluating compliance against a target that had been found to be unlawful.<sup>59</sup>

45. At the other end of the scale, several residents argued that compliance should also be measured in 2050, when the airport would be operating at full capacity. Their view was that it was unfair to calculate the economic benefits of expansion on the basis of full capacity whilst only calculating environmental impacts based on less than full capacity.<sup>60</sup> Richard di Cani, of TfL, agreed:

The Davies Commission has tested a particular scenario in terms of Heathrow demand in 2030, based on certain assumptions around passenger movement, employees and mode splits. We would normally, for something so significant, look beyond the year of opening to a full utilisation and test that in a number of different scenarios so we can see the best and the worst case from it.<sup>61</sup>

46. Sir Howard was open to the idea that the new air quality strategy might require reconsideration of the air quality picture. Although he had not studied the DEFRA consultation in depth, he believed that additional Government measures to improve air quality would improve the chances of compliance from an expanded Heathrow.<sup>62</sup>

**47. Before the Government makes its decision, it will need to demonstrate that its revised air quality strategy can deliver compliance with legal pollution limits within the timescales agreed in the finalised plan to be approved by the European Commission. It will also need to show that this can be maintained even when the expanded airport is operating at full capacity. Heathrow's existing air quality strategy should also be revised to meet the new targets. Failing this, Heathrow should not be allowed to expand.**

### Enforceability

48. As described above, the Commission recommended that slots at an expanded Heathrow should only be released once it could be shown that the area around Heathrow

58 [Consultation on Draft Plans to Improve Air Quality](#), Department of Environment, Food and Rural Affairs, para. 40

59 Client Earth, written evidence; other witnesses also argued that the change in target date for compliance introduced uncertainty around the Commission's analysis - for example, written evidence, Manchester Airports Group, South Buckinghamshire Council.

60 Written evidence, Maureen Williams, Stephen Clark; also Friends of the Earth England and Wales and Friends of the Earth Twickenham and Richmond

61 Oral evidence, 14 October 2014, Q 47

62 Oral evidence, 4 November 2015 Q 175

would not delay compliance with the Directive. Heathrow have expressed their willingness to abide by this condition and confidence that it could be met.<sup>63</sup>

49. Several witnesses expressed doubts as to how enforceable this would be in practice. Manchester Airports Group stressed the complexity of disaggregating the various polluting factors around an airport - a subject we return to below - and argued this created a degree of uncertainty which would be difficult to manage.<sup>64</sup> The 2M Boroughs also pursued this theme, raising the prospect that capacity might be built and then unused.<sup>65</sup> Hounslow Council questioned whether, in such circumstances, Government would be willing to hold Heathrow to the standards that had been set.<sup>66</sup>

50. **The Commission recommended that the release of capacity at an expanded airport should be conditional on air quality standards being met. The Government should not approve expansion at Heathrow until it has developed a robust framework for delivery and accountability. This should have binding, real-world milestones and balance the need for investor certainty with assurances that a successor Government cannot set the conditions aside if they become inconvenient.**

### Disaggregation

51. As noted above, the immediate vicinity of Heathrow complies with the EU standards. The breaches of limit values take place around nearby roads. Heathrow Ltd. argued in their written evidence that the airport accounts for only a relatively small proportion of the traffic, and therefore of the NO<sub>2</sub>, in the surrounding area. For example, they provided figures suggesting that only 16% of NO<sub>2</sub> recorded at Hillingdon - 2km north of the airport - could be attributed to the airport or airport-related traffic.<sup>67</sup> John Holland-Kaye told us that one of the receptors at Bath Road would still be in breach of EU standards even if the airport did not exist.<sup>68</sup>

52. The local authorities however, argued that Heathrow was already unsustainable in terms of air quality because of its role in contributing to already congested roads.<sup>69</sup> Hounslow Council and others argued that the Commission's condition on the release of capacity at Heathrow should go further afield:

It would be relatively easy for the owners of the Airport to achieve compliance within or close to their own boundaries by, for example, using electric vehicles for terminal activities or by employing a congestion charging scheme at their perimeter. But such measures would not of themselves improve air quality in Boroughs such as ours which are affected by petrol and diesel powered road vehicles running to and from the airport as well as by pollution from aircraft overflying us. Indeed, some of the proposed mitigation measures outlined by the promoter such as an alternative congestion charging zone could simply

63 Heathrow Ltd. Written Evidence; Oral evidence, 4 November 2015, John Holland-Kaye, Q 103

64 Written evidence

65 Written evidence, para 2.26

66 Hounslow Borough Council, written evidence, para. 2.11

67 Heathrow Airport, written evidence, Figure 3.2

68 Oral evidence, 4 November, Q 121

69 Written evidence, 2M, para. 2.15 - 2.17

result in an increase in congestion on the road network in our Borough through traffic displacement.<sup>70</sup>

**53. Disaggregating the impacts of Heathrow on local traffic, and therefore air quality, is complex and contested by the airport and the local authorities. The Government must establish clearly delineated responsibilities for meeting air quality limits before deciding to go ahead with the scheme. We foresee significant legal and commercial risks further down the line if this is not done, for example, if central Government tried to hold local authorities to account for a failure to meet the targets that they attributed to airport expansion or to penalise the airport for pollution that it attributed to background traffic.**

### Surface Transport

54. Road access to the airport was considered by many of our witnesses (and the Commission itself) to be the key factor in determining the impact of expansion on air quality.<sup>71</sup> The Commission recommended:

Heathrow Airport Ltd. must be held to performance targets to increase the percentage of employees and passengers accessing the airport by public transport, reducing pressure on local roads and air quality. The introduction of a congestion or access charge scheme should be considered.<sup>72</sup>

55. Heathrow ltd. set out a package of measures aimed at reducing the use of motor vehicles to access the airport. They told us that their analysis and that of the Commission showed public transport could increase to over 50% of journeys by 2030 and possibly as high as 60% with the right measures.<sup>73</sup> These included reducing prices on Heathrow Express, expanding the airport travelcard scheme and employee car share scheme and promoting the use of low emissions taxis and buses.<sup>74</sup> Heathrow ltd. also argued that an expanded Heathrow would be better laid out - allowing easier access to the various parts of the airport without the use of taxis or other vehicles.<sup>75</sup> Finally, they told us Heathrow would benefit from a number of upcoming public transport schemes including Crossrail, HS2 and the Western Rail Access.<sup>76</sup> These factors led John Holland-Kaye to make a commitment to us that:

We will have no more cars on the road as a result of Heathrow expansion.<sup>77</sup>

56. The difference between Heathrow's forecast and that of TfL could not have been more stark. TfL estimated that there would be an additional 40,000 journeys on the roads and 112,000 by public transport in 2030 following expansion. Indeed, they argued that these estimates were probably on the low side - citing freight, increased business activity in

70 Hounslow Borough Council, written evidence para. 2.9 also Oral Evidence, 14 October 2015, Q 58

71 Airports Commission Final Report, page 28

72 Airports Commission Final Report, page 32

73 Heathrow Ltd, written evidence; Airports Commission Final Report, para. 8.27

74 Supplementary written evidence, Heathrow Ltd.; Oral evidence, John-Holland Kaye, Q 106

75 Oral evidence, John-Holland Kaye, Q 106

76 Oral evidence, John-Holland Kaye, Q 119-120; written evidence and supplementary written evidence, Heathrow Ltd.

77 Oral evidence, John-Holland Kaye, Q 106

the Heathrow area and new London population figures released since the Commission's report as reasons to believe that the figures might be higher.<sup>78</sup>

57. TfL and the local authorities agreed that Heathrow was trying to pursue the right goal in seeking a level of public transport above 50%. However, they questioned whether it could be achieved within the proposals put forward by Heathrow and the Commission based on past performance, the capacity of the public transport system and the ability to change behaviour.<sup>79</sup> They argued that a transport solution to achieve modal shift for Heathrow had to be embedded within an integrated transport solution for west London, it could not be treated in isolation.<sup>80</sup>

### Costs and Funding

58. There was further disagreement about the costs of public transport improvements that would be needed to achieve the levels of modal shift which all sides agreed was desirable. The Commission found:

It is clear that with or without airport expansion, the Government will need to take decisive action to address long-term capacity issues arising from background demand growth. This may involve the provision of new infrastructure, demand management, or a combination of the two. The additional challenges presented by airport expansion are not a transformative factor that would significantly change the scale of these challenges.<sup>81</sup>

59. Heathrow ltd. told us they were willing to pay a proportionate share of the costs - as they had for previous schemes - and had set aside over £1 billion in funding as their contribution towards public transport improvements.<sup>82</sup> The Airports Commission estimated around £5 billion in total capital costs for surface access.<sup>83</sup> TfL told us it would cost £15-£20 billion to fund the total transport infrastructure required.<sup>84</sup>

60. Heathrow ltd. disputed the TfL figure in our evidence session, saying the figure included the whole of Crossrail 2 and other projects not immediately arising from Heathrow expansion.<sup>85</sup> TfL subsequently wrote to the Committee to say that the figure did indeed reflect their estimate of the surface access infrastructure "required" by an expansion of Heathrow. They did not, however, deny that the improvements would have benefits for non-airport users or claim that the costs should be entirely borne by the airport.<sup>86</sup>

61. **The aspiration of moving the majority of journeys to public transport with no increase in road traffic is shared by all. Transport for London told us this would require large-scale modal shift of the scale seen in central London over the last 15 years.<sup>87</sup> However, there is no agreement between them and the Commission over the extent of infrastructure improvements required to achieve this, the resulting costs or,**

78 Written evidence, Transport for London; Oral evidence, Richard Di Cani, Q 51

79 Oral evidence, 14 October 2015, Q 54-56; Written evidence, 2M, section 3

80 Oral evidence, Cllr Mann, Daniel Moylan Q 57

81 Airports Commission Final Report, para. 8.25

82 Oral evidence, John Holland Kaye, Q 117

83 Airports Commission, Final Report, Table 11.2

84 Oral evidence, Richard di Cani, Q 53

85 Oral evidence, Matt Gorman, Q

86 Transport for London, supplementary written evidence

87 Richard di Cani, Oral evidence, 14 October 2015, Q 55

by implication, the extent to which individual parties would meet those costs. *Before the Government decides to go ahead with Heathrow expansion it should set out its assessment of what would be required in terms of infrastructure improvements, agreed responsibilities for funding and milestones for completion. This should be part of a wider transport strategy for West London to minimise the risk of unintended consequences. The Government must make a binding commitment that Heathrow will fund the infrastructure improvements necessary to accommodate an expanded Heathrow.*

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## 4 Noise

### Introduction

62. Over the past 50 years aircraft have become less noisy. But during the same period air traffic has increased, so as the Airports Commission noted, people living close to airports continue to have significant concerns about the impact of aviation noise not only on their daily lives, but on their health and on their children's education. The Commission said:

Aviation noise is therefore a central issue in assessing the impacts of any proposal for expansion. It is also important to consider the most effective approaches to mitigating or compensating for noise impacts, to ensure that they are managed and reduced wherever possible.<sup>88</sup>

The Commission's noise assessment informed its recommended means of managing and reducing noise impact—in particular, its key recommendation of a Heathrow “noise envelope”: a restriction on the amount of noise produced at the airport after its expansion.<sup>89</sup>

### Assessing People's Experience of Aviation Noise

63. The Commission used several metrics to assess the noise impact on people of an expanded Heathrow. It established noise contours—areas around an airport in which certain average noise levels are experienced by people—for an expanded Heathrow, based on average noise experienced at 57dB<sup>90</sup> and 54dB between 7am and 11pm; average noise experienced at 55dB over 24 hours; and single noise events exceeding 70dB between 7am and 11pm and 60dB between 11pm and 7am.<sup>91</sup> Sir Howard and his team said they measured single noise events, as well as average noise experienced, because they recognised “it is not only the noise level which is important but also the number of flights that are experienced”.<sup>92</sup>

64. Residents near Heathrow and others who submitted evidence were keen to demonstrate that the average noise metric alone did not reflect their actual experience of noise. Richmond Heathrow Campaign referred to “the type of aircraft, aircraft height, take-off or landing engine power... location relative to the flight path, and time (day, evening or night),” and said, “These variations matter but are not fully reflected by average noise indicators.”<sup>93</sup> Mr Paul McGuinness, a Teddington resident, noted that average noise contours were not designed to measure “the very thing that disturbs people, which is peak noise”.<sup>94</sup> We also heard that average noise contours might not account for large numbers of people living in areas overflowed infrequently but loudly. Stephen Clark, an infrastructure consultant, explained that Twickenham and other areas nearby were overflowed only when the wind came from the east, about 30% of the time. But when they were, he said, they were “severely impacted for over 17 hours a day, with literally hundreds of flights, many generating 70-90 decibels.” He added, “By using averages these areas are excluded

88 Airports Commission, [Airports Commission: Final Report](#), July 2015, pp169-170

89 Airports Commission, [Airports Commission: Final Report](#), July 2015, p278

90 Decibel (dB)

91 Airports Commission, [Airports Commission: Final Report](#), July 2015, p170

92 Airports Commission, [Airports Commission: Final Report](#), July 2015, p170

93 Richmond Heathrow Campaign, [ACR0066](#), Annex 3, 1(iii)

94 Mr Paul McGuinness, [ACR0074](#)

from the Commission's Study Area."<sup>95</sup> Mr Clark also noted that Heathrow Ltd. had itself commissioned more in-depth analysis, measuring average noise contours separately on easterly and westerly operations.<sup>96</sup>

65. The Commission acknowledged the problem with using only average noise experienced and said if single noise events were measured: "The layman may find it easier to relate to the thought that 'within this area, I am likely to hear noise exceeding x limit more than 100 times a day'." But the Commission also explained that these measures did not differentiate between the level of noise above a certain threshold, or the duration of noise events, so a 10-second event at 71dB(A) would count for the same as a 40-second event at 91dB(A).<sup>97</sup> As HACAN has acknowledged, the Commission therefore recommended using a combination of measures.<sup>98</sup>

66. Government aviation noise policy was most recently articulated in 2013. The then-Government noted there was no firm consensus on the way to measure noise impacts and said, "We will keep our policy under review in the light of any new emerging evidence." Their policy said average noise metrics were important for showing historical noise trends around airports, but encouraged airports to develop other measures, too, in consultation with local communities.<sup>99</sup>

67. **The Commission highlighted the inadequacy of relying purely on averages when measuring the impact of noise on communities. People living close to Heathrow do not experience noise from flights into and out of the airport as a constant decibel level throughout the day or night. So, although the measurement of average noise experienced provides a helpful snapshot of noise over a short period, and a useful historical comparison, it does not reflect a range of variables such as the type, height or engine power of an aircraft. Nor does it account for peak noise events. And, if it lacks detail, it may also ignore a swathe of people who are overflowed infrequently but loudly. The Government, when assessing the noise impact of an expanded Heathrow, should do so against a full range of metrics and not just average noise experienced. These metrics need to be measured against international standards such as World Health Organisation recommendations and inform a change in Government policy on aviation noise.**

### **An Aviation Noise Survey**

68. People were concerned to ensure not only that a range of metrics were used to measure people's experience of noise, but that the average noise threshold constituting significant annoyance, of 57dBLAeq<sup>100</sup>, was reassessed.<sup>101</sup>

<sup>95</sup> Stephen Clark, [ACR0021](#)

<sup>96</sup> Stephen Clark, [ACR0021](#). The Heathrow report referred to was, [Westerly and Easterly Departure Trials 2014--Noise Analysis and Community Response](#), July 2015.

<sup>97</sup> Airports Commission, [Discussion Paper 05: Aviation Noise](#), July 2013, p23

<sup>98</sup> HACAN, [ACR0008](#), para 14; Airports Commission, [Airports Commission: Final Report](#), July 2015, p278

<sup>99</sup> HM Government, [Aviation Policy Framework](#), Cm 8584, March 2013, p58

<sup>100</sup> dBLAeq refers to "Equivalent continuous level" - in effect the average of an uneven pattern of noise over a set period of time.

<sup>101</sup> In the most recent policy announcement on aviation noise, Ministers said they would continue to use 57dB LAeq as the onset of significant community annoyance. HM Government, [Aviation Policy Framework](#), Cm 8584, March 2013, p58

69. The Commission recommended that in the event of expansion, Heathrow be legally bound to operate within a noise envelope—a cap, or limit, on noise.<sup>102</sup> It was criticised for not including any detail on this proposal,<sup>103</sup> but it was the Government that was blamed—for failing to provide clearer noise guidance on which the Commission could base more comprehensive recommendations. The 2M group of London Boroughs said the Commission had been unable to go into detail because there was no policy framework in which to limit noise levels or numbers of flights.<sup>104</sup> It therefore suggested that the Government commit to a “robust social survey” of aircraft noise which could then be used as the scientific basis for further noise mitigation strategies.<sup>105</sup> Hounslow Council agreed, stating it wanted a “robust and independent social survey” before expansion was allowed.<sup>106</sup> But it was not only those representing local people who wanted further work. The industry body Sustainable Aviation also called on the Government to support independent research to improve its understanding of people’s reaction to aircraft noise events, “to reduce the number of individuals annoyed by aircraft noise.”<sup>107</sup>

70. We heard that the last such survey was carried out over 30 years ago.<sup>108</sup> The findings of the Aircraft Noise Index Study (ANIS), undertaken in 1982, are still reflected in the use of the 57dB LAeq threshold. A more recent exercise took place in 2007 but was not adopted as government policy.<sup>109</sup> Commentators did not accept all findings of the Attitudes to Noise from Aviation Sources in England (ANASE, 2007), but its conclusion that more people are now annoyed by a given level of aircraft noise exposure than they were when ANIS was conducted was, according to the Commission, “generally accepted.” World Health Organisation (WHO) guidance, released in 1999, also identified a lower threshold than ANIS, 55dB LAeq, for the onset of serious annoyance during the day.<sup>110</sup> The WHO was due to update its guidance in late 2015,<sup>111</sup> while the DfT is also apparently undertaking a review of public sensitivity to aviation noise, the results of which may be available in 2016.<sup>112</sup>

71. Some witnesses suggested the WHO threshold should be adopted. Daniel Moylan of TfL told us that the 57dB limit “was recommended for tightening to 55 12 or 13 years ago... the Government refused to implement it because of the limiting effect it would have had on Heathrow’s operation.”<sup>113</sup> The Aviation Environment Federation recommended its adoption, too, but thought that doing so with expansion was “very hard to envisage.”<sup>114</sup> We were also reminded that different people might experience the same noise level in different ways. Lord True, representing the 2M group of councils, said, “the rest of us

102 Airports Commission, [Airports Commission: Final Report](#), July 2015, p278. The Commission said the envelope could relate to the physical area of noise contours, using any or a combination of the noise metrics it had used; to the number of people within a noise contour or group of contours; or to a points-based system in which individual aircraft are rated by their noise impacts.

103 See, for example, Q63 [Daniel Moylan], [Lord True]

104 2M, [ACR0056](#), para 2.7

105 2M, [ACR0056](#), para 2.11

106 London Borough of Hounslow, [ACR0059](#), para 2.18

107 Sustainable Aviation, [ACR0073](#), para 4.3

108 Q63 [Lord True]; Stephen Clark, [ACR0021](#)

109 Q198 [Philip Graham]

110 Airports Commission, [Discussion Paper 05: Noise](#), July 2013, pp33-34

111 Dr Charlotte Clark, Centre for Psychiatry, Barts & the London School of Medicine, Queen Mary University of London, [Aircraft noise effects on health](#), Prepared for the Airports Commission, May 2015, p26

112 Stephen Clark, [ACR0021](#)

113 Q49; See also Heathrow Associates, [ACR0072](#), para 10

114 Aviation Environment Federation, [ACR0057](#), para 34

might be inured to 55 or 57, but there will be hundreds and thousands of people who have not experienced that before.”<sup>115</sup>

72. Sir Howard suggested that an Independent Aviation Noise authority, another Commission recommendation, could undertake this survey.<sup>116</sup> HACAN thought it should be introduced regardless of whether and where new runways were built.<sup>117</sup> If it did this piece of work, Sir Howard said, “you could start to get some clarity on a lot of the debates about which particular noise level, who it should be measured by, and what social attitudes would be.”<sup>118</sup>

**73. *The Commission recommended the establishment of an Independent Aviation Noise Authority. This body will need a more up to date understanding of people’s attitudes to noise if it is to be credible. One of the first tasks of such a body should be to undertake a survey of people’s attitudes to aviation noise. The results of this survey should underpin both its own work and future Government policy on managing noise. In particular, they should form part of a piece of work to develop a set of metrics to assess noise impact.***

### A Noise Benchmark

74. The Airports Commission concluded that with new, quieter aircraft and redesigned flight paths dispersing noise more widely, “It would be possible to ensure that noise from the airport... would not exceed current levels across a wide range of metrics, both during the day and at night.”<sup>119</sup> Heathrow Ltd. drew on this in its submission and, under the heading “Better than today”, stated: “The Airports Commission’s analysis shows that across all metrics, the noise impact of an expanded Heathrow will reduce compared to today.”<sup>120</sup>

75. TfL was, however, critical of the Commission’s statement that its proposed mitigations could ensure noise did not exceed current levels. TfL said this was contrary to the DfT’s Transport Appraisal Guidance (TAG) methodologies for noise assessments, which require a comparison between doing something and doing the minimum for the same future year.<sup>121</sup> Steve Mitchell, a fellow of the Institute of Acoustics, expanded on TfL’s point, noting the Commission’s own Appraisal Framework stated that noise would be assessed in relation to the Commission’s “do-minimum” scenario.<sup>122</sup>

76. The 2M group of councils summed up the perceived problem with benchmarking noise against current levels, stating that a noise envelope that ensured fewer people were affected by noise than today was “not an acceptable objective for communities who require

<sup>115</sup> Qq63, 65

<sup>116</sup> The Commission said an independent aviation authority could work with developers, operators and communities to, among other things, define a noise envelope and balance aviation growth and noise control; and provide statutory advice to the Secretary of State for Transport and Civil Aviation Authority in respect of the proper structure for noise compensation schemes. See Airports Commission, [Airports Commission: Final Report](#), July 2015, p304

<sup>117</sup> HACAN, [ACR0008](#), para 16

<sup>118</sup> Q198

<sup>119</sup> Airports Commission, [Airports Commission: Final Report](#), July 2015, p26

<sup>120</sup> Heathrow Airport Limited, [ACR0081](#), para 3.3.11

<sup>121</sup> Transport for London, [ACR0075](#), para 4.1. In Heathrow’s case, doing something means expansion, while doing the minimum means retention of a two-runway facility.

<sup>122</sup> Steve Mitchell, [ACR0071](#), paras 10,11

an improvement on the current unacceptable levels of noise.”<sup>123</sup> We put this point to the Commission’s former Chair, Sir Howard Davies, who said:

On some noise measures, a new three runway airport would in fact be less irritating than an existing two runway airport, partly because of the different configuration of the flights. You could put them further to the north and overfly fewer people. You have the flights coming in at higher level, so some of the flights that are coming in low over central London in the morning would not be coming in low over central London in the morning, they would be coming in over less populated areas a bit further to the north and they would be higher.<sup>124</sup>

77. We received submissions voicing concerns about the assumptions the Commission had made in its noise modelling. For example, 2M said the National Air Traffic Control Service had already cautioned the Commission that assumed landing rates using new curved approaches might not be attainable in practice.<sup>125</sup> But, based on the Commission’s modelling, we found that the question of whether a future three-runway airport could be less noisy than a future two-runway airport depended on which operational scenario, noise contour and year were assessed.

78. The Commission considered three future airport operational scenarios: one that minimised the total number of people affected by expansion; one that minimised the number of people newly affected; and one that maximised people’s respite from overflying. Irrespective of the scenario, the Commission’s figures showed that on the 57dB LAeq noise contour in 2030 there would be between 13,000 and 27,000 net newly affected people; in 2040, 23,500 and 42,000; and in 2050, 23,100 and 45,000.<sup>126</sup> On the “maximise respite” scenario, at 54dB LAeq 16-hour contour in 2030 and 2040, however, three runways were shown to affect fewer people than two, while in 2050 three runways were shown to affect more people than two.<sup>127</sup> On the 55dB Lden 24-hour metric and the maximise-respite scenario, an expanded Heathrow was shown to affect fewer people than a two-runway airport in 2030, 2040 and 2050, while on the other two scenarios results were less consistent.<sup>128</sup>

### Respite

79. The evidence we received from residents showed that length and predictability of respite was something they valued highly.<sup>129</sup> The future airport operational “maximise respite” scenario, in which people’s respite from overflying was prioritised, showed more consistently--based on the Commission’s modelling--that a future three-runway Heathrow could be less noisy than a future two-runway airport. Respite currently allows residents close to Heathrow to benefit from relief from overflying for about half the operating day, although these period are sometimes infringed. In future the Commission said:

123 2M, [ACR0056](#), para 3.8

124 Q201

125 2M, [ACR0056](#), paras 2.10, 2.16

126 Civil Aviation Authority, [Noise Modelling for the Airports Commission: Compendium of Results](#), June 2015, table c3

127 Civil Aviation Authority, [Noise Modelling for the Airports Commission: Compendium of Results](#), June 2015, tables A27-A41

128 Civil Aviation Authority, [Noise Modelling for the Airports Commission: Compendium of Results](#), June 2015, table c4

129 See for example Richmond Heathrow Campaign, [ACR0066](#), Annex 3, (1)(b)(iv)

A third runway would allow periods of predictable respite to be more reliably maintained, even if respite periods from runway alternation would be reduced with additional capacity.<sup>130</sup>

80. Under expansion the Commission said respite would reduce to one third of the operating day. TfL made two criticisms of this proposal. First, it said the promise of more predictable respite relied on the airport not being capacity constrained, and the Commission's own findings suggested Heathrow would be "effectively full up" shortly after opening.<sup>131</sup> Second, Daniel Moylan from TfL noted that:

For over half of the communities it [respite] will fall to only 25% of the day and for the others it will be 50%, so that the 30% is an average and includes 50% of the affected population.<sup>132</sup>

81. *For residents around Heathrow, noise is a major part of their day to day lives. Understandably, they are deeply concerned about the impact of an expanded airport. The Government needs to demonstrate that, in assessing the case for expansion, it has based its decision on whether an expanded Heathrow would be noisier or less noisy than a two runway Heathrow at the same point in time - taking into account respite and the need for predicable relief from overflying.*

### Night Flights

82. When the Commission compared noise from an expanded Heathrow with that of current operations, it found that it could be less noisy than today during both the day and night. The Commission therefore also concluded that the extra capacity with expansion would allow for a ban on night flights at the airport between 11.30pm and 6am. The Commission's detailed analysis, which found that in certain circumstances an expanded Heathrow could be less noisy than a future two-runway airport, also came to these conclusions having compared daytime and night time operations.

83. Local residents and councils were particularly keen to see night flights banned, given their perceived impact on health. Some residents proposed a longer period without flights. Evidence from the industry, however, was resistant to the idea of an absolute ban because of the impact on certain high value routes.<sup>133</sup>

84. *The Commission's recommended ban on night flights was a key part of the package proposed by the Commission. The Government should publish a plan, including a series of binding milestones, to deliver the proposed ban as part of any announcement to proceed with expansion at Heathrow as recommended by the Commission.*

### Trust

85. A lack of trust towards Heathrow was a theme in some of the submissions we received from residents' groups.<sup>134</sup> Hounslow Council told us it was "acutely aware that the promises made by Heathrow's owners during the Terminal 5 inquiry and on other occasions [had]

130 Airports Commission, [Airports Commission: Final Report](#), July 2015, p31

131 Transport for London, [ACR0075](#), para 4.5

132 Q67

133 See for example, ABTA, [ACR0026](#), para 8

134 See for example Mr Paul McGuinness, [ACR0074](#); Mr Steve Mitchell, [ACR0071](#); and Maureen Williams, [ACR0070](#)

not been honoured,” although they also gave the new management credit for being “a lot more engaging”.<sup>135</sup> When Sir Howard appeared before the London Assembly, he heard how Heathrow Ltd. management had told local politicians, “Terminal 5 and that is it. We will never need anything again, ever.”<sup>136</sup>

86. One area this lack of trust manifested itself was the response to Heathrow Ltd.’s offer to spend more than £1 billion in the local community, including £700 million on noise insulation. Richmond Heathrow Campaign noted that Heathrow Ltd. had promised to refit 42 schools and community buildings in 2005. This work was completed earlier this year at a cost of £4.8 million. The Campaign questioned how long it would take to invest £700 million.<sup>137</sup>

87. The Commission recommended the establishment of an Independent Aviation Noise Authority to provide impartial expert advice and to help communities and airports to agree noise management strategies.<sup>138</sup> Lack of trust was also one reason why it recommended a new Community Engagement Board, “with real influence over spending on compensation and community support and over the airport’s operations ... set up under an independent chair.”<sup>139</sup> Heathrow Ltd. itself was supportive in principle of both the Commission’s recommended bodies but wanted the Government to define and consult on the detail of how they would work in practice.<sup>140</sup>

***88. Levels of trust between Heathrow and the local community are an historical and enduring issue which has impaired effective community engagement. If the Government decides in favour of expansion it should put in place a framework to ensure that mitigating measures are introduced promptly. The Airports Commission also recommended the establishment of two bodies - an Independent Aviation Noise Authority and a Community Engagement Board - to address this. As part of the efforts to restore trust and effective community engagement, these should be introduced in the next year, even if the Government decides against Heathrow expansion. One of the first pieces of work for the Community Engagement Board should be to establish the extent to which commitments made at the time of Terminal 5 have been met.***

135 London Borough of Hounslow, [ACR0059](#), para 1.7; Oral Evidence, Cllr. Armit Mann, Q66

136 London Assembly, Plenary Meeting , 8 September 2015

137 Richmond Heathrow Campaign, [ACR0066](#), Annex 3, (1)(b)(vi)

138 Airports Commission, [Airports Commission: Final Report](#), para 14.16

139 Airports Commission, [Airports Commission: Final Report](#), p 32

140 Heathrow Airport Limited, [ACR0081](#), executive summary

## 5 Conclusion

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89. *The Government should not approve Heathrow expansion until Heathrow ltd. can demonstrate that it accepts and will comply with the Airports Commission conditions, including a night flight ban, that it is committed to covering the costs of surface transport improvements; that it is possible to reconcile Heathrow expansion with legal air pollution limits, and that an expanded Heathrow would be less noisy than a two runway Heathrow. In each case - climate change, air quality and noise - it needs to set out concrete proposals for mitigation alongside clear responsibilities and milestones against which performance can be measured. It should report regularly to Parliament, through this Committee and others, on progress. The Government should not avoid or defer these issues. To do so would increase the risks of the project: delay through legal challenge, unquantifiable costs resulting from unclear responsibilities, economic risks through constraint of other sectors to meet increased aviation emissions and long-term costs to public health from the impact of air pollution and noise.*

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# Conclusions and recommendations

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## Introduction

1. The Government has said it will set “a clear direction” on airport expansion by the end of the year. If the Government is minded to go ahead with the Commission’s recommendation, it is likely that this will be followed by a further period of consultation. The Government should use this period to address the recommendations in our report, before making a final decision on whether to go ahead with the scheme and seek the approval of Parliament through a National Policy Statement or Hybrid Bill. (Paragraph 4)

## Carbon Emissions

2. The Government, when making a decision, will need to consider its carbon emissions mitigation against the full range of demand scenarios modelled by the Commission. (Paragraph 10)
3. The former Airports Commissioners told us they relied heavily on the work of the Committee on Climate Change when undertaking their work. They denied that their modelled carbon prices and policies were policy recommendations - feeling that the CCC were better placed to take on this role. Governments have in the past been reluctant to accept CCC policy recommendations on aviation. The Government cannot credibly rely on the Commission’s analysis as evidence that Heathrow expansion can be delivered within the limits set by the 2008 Act if this continues to be the case. *We recommend that the Government give the CCC the opportunity to comment on the Commission’s forecasting of aviation emissions and the feasibility of its possible carbon policy scenarios. The Government should act on any recommendations they make.* (Paragraph 14)
4. The Commission’s indicative carbon prices and policies were not intended as recommendations. Nonetheless, they give an indication of the scale of intervention likely to be required to bring aviation emissions within 2005 levels by 2050. *Before making any decision on Heathrow expansion, the Government should publish an assessment of the likely impact on the aviation industry - particularly regional airports - and wider economy of measures to mitigate the likely level of additional emissions from Heathrow.* (Paragraph 17)
5. *The Government should consider developing a policy framework to advise industry about how to prioritise trade-offs between noise and carbon pollution when adopting biofuels thus giving guidance on priorities.* (Paragraph 20)
6. The Commission, industry and Committee on Climate Change envisage biofuels playing a limited role in controlling aviation emissions. However, the use of biofuels is not without its own risks and uncertainties. *The Government must either examine the options to encourage aviation to move to advanced fuels that are sustainable across their entire life cycle (including indirect land use change and impacts on food supplies) or identify ways in which corresponding emissions reductions will be achieved.* (Paragraph 21)

7. *The Government should set out its approach to the International Civil Aviation Organisation negotiations as the previous Government did ahead of the COP 21 negotiations in Paris. It will need to demonstrate either that the agreement it is seeking can incentivise the absolute carbon emission reductions required to meet the planning assumption or what measures it is prepared to take and to what timescale in order to make up the shortfall. (Paragraph 25)*
8. *There are some areas of the Commission's work on operational and technological improvements that are still the subject of significant disagreement. We urge the Government to produce and publish its own thorough evaluation of the forecasts, including its assessment of whether take-up is likely to be sufficient without Government intervention. (Paragraph 28)*
9. *We draw four conclusions from the evidence we heard on carbon emissions. Firstly, because the planning assumption requires additional decarbonisation from other sectors, passenger growth in aviation cannot be seen in isolation from the progress on emissions reduction made by the rest of the economy. Secondly, the industry has taken steps to reduce its carbon emissions and, in areas such as fuel efficiency, market incentives are likely to ensure further progress. Thirdly, these measures in themselves are highly unlikely to achieve the planning assumption and further measures, including demand management, will be required. Finally, there is a significant gap between the theoretical models of how a mixture of these measures might allow the planning assumption to be met and the proposals currently on the domestic and international policy tables. (Paragraph 29)*
10. *We recommend that any Government decision on airport expansion should be accompanied by a package of measures to demonstrate a commitment to bringing emissions from international aviation within the economy-wide target set by the 2008 Act. They should also, as a minimum, commit to accepting the Committee on Climate Change's advice on aviation in relation to the fifth carbon budget, introducing an effective policy framework to bring aviation emissions to 2005 levels by 2050 no later than autumn 2016 and pressing for the strongest possible international measures at the International Civil Aviation Organisation next year. (Paragraph 30)*

### Air Quality

11. *Before the Government makes its decision, it should make its own assessment of the likely costs of preventing an adverse impact on health from expansion at Heathrow and publish it. (Paragraph 33)*
12. *Many of our witnesses interpreted the Commission's interpretation of the Air Quality Directive as implying that significant increases in NO<sub>2</sub> resulting from Heathrow expansion would be allowable because of worse performance elsewhere in London. This would make no sense in terms of protecting public health and wellbeing. The Government should make clear that this is not the position it intends to take when assessing the scheme for compliance with the Directive. (Paragraph 43)*
13. *Before the Government makes its decision, it will need to demonstrate that its revised air quality strategy can deliver compliance with legal pollution limits within the timescales agreed in the finalised plan to be approved by the European Commission.*

*It will also need to show that this can be maintained even when the expanded airport is operating at full capacity. Heathrow's existing air quality strategy should also be revised to meet the new targets. Failing this, Heathrow should not be allowed to expand. (Paragraph 47)*

14. The Commission recommended that the release of capacity at an expanded airport should be conditional on air quality standards being met. *The Government should not approve expansion at Heathrow until it has developed a robust framework for delivery and accountability. This should have binding, real-world milestones and balance the need for investor certainty with assurances that a successor Government cannot set the conditions aside if they become inconvenient. (Paragraph 50)*
15. Disaggregating the impacts of Heathrow on local traffic, and therefore air quality, is complex and contested by the airport and the local authorities. *The Government must establish clearly delineated responsibilities for meeting air quality limits before deciding to go ahead with the scheme. We foresee significant legal and commercial risks further down the line if this is not done, for example, if central Government tried to hold local authorities to account for a failure to meet the targets that they attributed to airport expansion or to penalise the airport for pollution that it attributed to background traffic. (Paragraph 53)*
16. The aspiration of moving the majority of journeys to public transport with no increase in road traffic is shared by all. Transport for London told us this would require large-scale modal shift of the scale seen in central London over the last 15 years. However, there is no agreement between them and the Commission over the extent of infrastructure improvements required to achieve this, the resulting costs or, by implication, the extent to which individual parties would meet those costs. *Before the Government decides to go ahead with Heathrow expansion it should set out its assessment of what would be required in terms of infrastructure improvements, agreed responsibilities for funding and milestones for completion. This should be part of a wider transport strategy for West London to minimise the risk of unintended consequences. The Government must make a binding commitment that Heathrow will fund the infrastructure improvements necessary to accommodate an expanded Heathrow. (Paragraph 61)*

### Noise

17. The Commission highlighted the inadequacy of relying purely on averages when measuring the impact of noise on communities. People living close to Heathrow do not experience noise from flights into and out of the airport as a constant decibel level throughout the day or night. So, although the measurement of average noise experienced provides a helpful snapshot of noise over a short period, and a useful historical comparison, it does not reflect a range of variables such as the type, height or engine power of an aircraft. Nor does it account for peak noise events. And, if it lacks detail, it may also ignore a swathe of people who are overflowed infrequently but loudly. *The Government, when assessing the noise impact of an expanded Heathrow, should do so against a full range of metrics and not just average noise experienced. These metrics need to be measured against international standards such as World Health Organisation recommendations and inform a change in Government policy on aviation noise. (Paragraph 67)*

18. *The Commission recommended the establishment of an Independent Aviation Noise Authority. This body will need a more up to date understanding of people's attitudes to noise if it is to be credible. One of the first tasks of such a body should be to undertake a survey of people's attitudes to aviation noise. The results of this survey should underpin both its own work and future Government policy on managing noise. In particular, they should form part of a piece of work to develop a set of metrics to assess noise impact. (Paragraph 73)*
19. *For residents around Heathrow, noise is a major part of their day to day lives. Understandably, they are deeply concerned about the impact of an expanded airport. The Government needs to demonstrate that, in assessing the case for expansion, it has based its decision on whether an expanded Heathrow would be noisier or less noisy than a two runway Heathrow at the same point in time - taking into account respite and the need for predicible relief from overflying. (Paragraph 81)*
20. *The Commission's recommended ban on night flights was a key part of the package proposed by the Commission. The Government should publish a plan, including a series of binding milestones, to deliver the proposed ban as part of any announcement to proceed with expansion at Heathrow as recommended by the Commission. (Paragraph 84)*
21. *Levels of trust between Heathrow and the local community are an historical and enduring issue which has impaired effective community engagement. If the Government decides in favour of expansion it should put in place a framework to ensure that mitigating measures are introduced promptly. The Airports Commission also recommended the establishment of two bodies - an Independent Aviation Noise Authority and a Community Engagement Board - to address this. As part of the efforts to restore trust and effective community engagement, these should be introduced in the next year, even if the Government decides against Heathrow expansion. One of the first pieces of work for the Community Engagement Board should be to establish the extent to which commitments made at the time of Terminal 5 have been met. (Paragraph 88)*

### Conclusion

22. *The Government should not approve Heathrow expansion until Heathrow ltd. can demonstrate that it accepts and will comply with the Airports Commission conditions, including a night flight ban, that it is committed to covering the costs of surface transport improvements; that it is possible to reconcile Heathrow expansion with legal air pollution limits, and that an expanded Heathrow would be less noisy than a two runway Heathrow. In each case - climate change, air quality and noise - it needs to set out concrete proposals for mitigation alongside clear responsibilities and milestones against which performance can be measured. It should report regularly to Parliament, through this Committee and others, on progress. The Government should not avoid or defer these issues. To do so would increase the risks of the project: delay through legal challenge, unquantifiable costs resulting from unclear responsibilities, economic risks through constraint of other sectors to meet increased aviation emissions and long-term costs to public health from the impact of air pollution and noise. (Paragraph 89)*

# Formal Minutes

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**Thursday 26 November 2015**

Members present:

Huw Irranca-Davies, in the Chair

Peter Aldous	Peter Heaton-Jones
Jo Churchill	Mr Peter Lilley
Mary Creagh	Caroline Lucas
Geraint Davies	John Mc Nally
Zac Goldsmith	Rebecca Pow
Margaret Greenwood	

Draft Report (*The Airports Commission Report: Carbon Emissions, Air Quality and Noise*), proposed by the Chair, brought up and read.

*Ordered*, That the draft Report be read a second time, paragraph by paragraph.

Paragraphs 1 to 8 read and agreed to.

Paragraph 9 read.

Amendment proposed, in line 6, at end insert—“However, it would be absurd to try to ration carbon dioxide emissions by rationing runway capacity. Emissions should be rationed (if at all) by price (set at a level of the calculated external cost they may impose) or by capping allowances. Regulating secondary targets like the number of flights or runway capacity is necessarily sub-optimal.” (Mr Peter Lilley)

Question put, That the Amendment be made.

Question negatived.

Paragraph agreed to.

Paragraphs 10 to 13 read and agreed to.

Paragraph 14 read.

Amendment proposed, in line 7, after “case” insert—“In which case the Act may need to be modified.” (Mr Peter Lilley)

Question put, That the Amendment be made.

Question negatived.

Paragraph agreed to.

Paragraphs 15 to 28 read and agreed to.

Paragraph 29 read.

Amendment proposed, in line 7, leave out from “assumption” to “Finally” and insert—“The Government will therefore face an unpalatable choice between introducing demand management i.e. rationing who will be allowed to fly or relaxing the overall emissions reduction target in the Climate Change Act.” (Mr Peter Lilley)

Question put, That the Amendment be made.

Question negatived.

Paragraph agreed to.

Paragraphs 30 to 89 read and agreed to.

Summary agreed to.

*Resolved*, That the Report be the First Report of the Committee to the House.

*Ordered*, That the Chair make the Report to the House.

*Ordered*, That embargoed copies of the Report be made available, in accordance with the provisions of Standing Order No. 134.

Written evidence was ordered to be reported to the House for publishing with the Report, in addition to that ordered to be reported for publishing on 16 September, 14 October and 4 November.

[Adjourned till Wednesday 2 December at 2.00 pm]

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## Witnesses

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The following witnesses gave evidence. Transcripts can be viewed on the Committee's inquiry page at [www.parliament.uk/eac](http://www.parliament.uk/eac).

### Wednesday 14 October 2015

*Question number*

**Dr Andy Jefferson**, Director, Sustainable Aviation, and **Cait Hewitt**, Deputy Director, Aviation Environment Federation.

**Lord True CBE**, Leader, Richmond Council, 2M Boroughs, **Daniel Moylan**, TfL Board Member/Mayor's Adviser on Aviation and Crossrail 2, Transport for London, **Richard de Cani**, Managing Director, Planning, Transport for London, and **Councillor Amrit Mann**, Deputy Leader of the Council and Cabinet Portfolio Holder for Environment, London Borough of Hounslow

[Q1-71](#)

### Wednesday 4 November 2015

**John Holland-Kaye**, Chief Executive Officer, Heathrow Airport Holdings Ltd, and **Matt Gorman**, Director, Sustainability and Environment, Heathrow Airport Holdings Ltd

**Sir Howard Davies**, former Chairman, **Philip Graham**, former Secretary, **Professor Dame Julia King**, former Commissioner, and **Eirik Pitkethly**, former Deputy Head of Secretariat, Airports Commission

[Q72-202](#)

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## Published written evidence

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The following written evidence was received and can be viewed on the Committee's [inquiry web page](#). ACR numbers are generated by the evidence processing system and so may not be complete.

- 1 ABTA - The Travel Association ([ACR0026](#))
- 2 Amec Foster Wheeler Environment & Infrastructure UK Limited ([ACR0050](#))
- 3 Aviation Environment Federation ([ACR0057](#), [ACR0090](#))
- 4 Biopure Fuels ([ACR0025](#))
- 5 Bryan Tomlinson ([ACR0010](#))
- 6 Bureau Veritas UK Ltd ([ACR0053](#))
- 7 Catherine Coebergh ([ACR0037](#))
- 8 CHATR (Chiswick Against Third Runway) ([ACR0089](#))
- 9 Clean Air in London ([ACR0034](#))
- 10 Clientearth ([ACR0094](#))
- 11 Communities Against Increased Aircraft Noise ([ACR0052](#))
- 12 Department for Transport ([ACR0006](#))
- 13 Dr Avril Horn ([ACR0009](#))
- 14 Elizabeth M Balsom ([ACR0035](#))
- 15 Englefield Green Action Group ([ACR0033](#))
- 16 Fellow Travellers ([ACR0038](#))
- 17 Friends of the Earth ([ACR0077](#))
- 18 Friends of the Great Barn at Harmondsworth ([ACR0051](#))
- 19 Gatwick Airport Ltd ([ACR0069](#))
- 20 Gatwick Diamond Business ([ACR0004](#))
- 21 Greenpeace UK ([ACR0085](#))
- 22 Hacan ([ACR0008](#))
- 23 Heathrow ([ACR0092](#))
- 24 Heathrow Airport Ltd ([ACR0081](#))
- 25 Heathrow Associates ([ACR0072](#))
- 26 Heathrow Hub Ltd/Runway Innovations Ltd ([ACR0065](#))
- 27 Home-owner ([ACR0012](#))
- 28 Hounslow & Brentford Friends of the Earth ([ACR0046](#))
- 29 Hylton Garriock ([ACR0040](#))
- 30 Iver Parish Council ([ACR0055](#))
- 31 J Langrish ([ACR0041](#))
- 32 James Biggs ([ACR0016](#))
- 33 James Page ([ACR0058](#))
- 34 Joan McIntyre ([ACR0060](#))

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- 35 Joyce Painton ([ACR0032](#))
- 36 L B Hillingdon ([ACR0056](#))
- 37 Local Authorities' Aircraft Noise Council (LAANC) ([ACR0063](#))
- 38 London Borough of Hounslow ([ACR0059](#))
- 39 London Forum of Amenity and Civic Societies ([ACR0002](#))
- 40 Malcolm Russell ([ACR0024](#))
- 41 Manchester Airports Group ([ACR0082](#))
- 42 Mark Middleton-Smith ([ACR0020](#))
- 43 Maureen Williams ([ACR0070](#))
- 44 Member of Parliament for Vauxhall ([ACR0045](#))
- 45 Mott Macdonald Ltd ([ACR0048](#))
- 46 Mrs Davies ([ACR0029](#))
- 47 Neil Arden ([ACR0013](#))
- 48 Neil Spurrier ([ACR0005](#))
- 49 Northumberland Walk Residents Association ([ACR0015](#))
- 50 Paul McGuinness ([ACR0074](#))
- 51 Plane Stupid ([ACR0049](#))
- 52 Professor Tom van Vuren ([ACR0003](#))
- 53 Rachael Webb ([ACR0031](#))
- 54 Ricardo Energy & Environment ([ACR0027](#))
- 55 Richings Park Residents' Association ([ACR0043](#))
- 56 Richmond & Twickenham Friends of the Earth ([ACR0042](#))
- 57 Richmond Heathrow Campaign ([ACR0066](#))
- 58 Robert Buick ([ACR0064](#))
- 59 Rolls-Royce Plc ([ACR0088](#))
- 60 Royal Society for the Protection of Birds ([ACR0017](#))
- 61 South Bucks District Council ([ACR0044](#))
- 62 South East Green Party ([ACR0054](#))
- 63 Stephen Clark ([ACR0021](#))
- 64 Steve Mitchell ([ACR0071](#))
- 65 Stop Heathrow Expansion ([ACR0079](#))
- 66 Sustainable Aviation ([ACR0073](#))
- 67 Teddington Action Group ([ACR0011](#))
- 68 Transport for London ([ACR0075](#))
- 69 TUI Group ([ACR0068](#))
- 70 Virgin Atlantic ([ACR0030](#))
- 71 West London Friends of the Earth ([ACR0080](#))
- 72 WWF-UK ([ACR0084](#))

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## List of Reports from the Committee during the current Parliament

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All publications from the Committee are available on the Committee's website at [www.parliament.uk/eac](http://www.parliament.uk/eac).

### Session 2015–16

First Special Report	Local Nature Partnerships: Government Response to the Committee's Twelfth Report of Session 2014–15	HC 377
Second Special Report	Climate change adaptation: Government Response to the Committee's Tenth Report of Session 2014–15	HC 590

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