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## ROYAL COMMISSION ON ENVIRONMENTAL POLLUTION NEWS RELEASE

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### THE FUTURE DEVELOPMENT OF AIR TRANSPORT IN THE UNITED KINGDOM: A NATIONAL CONSULTATION, RESPONSE BY THE ROYAL COMMISSION ON ENVIRONMENTAL POLLUTION

#### 1 Introduction

1.1 We welcome this opportunity to respond to the government's consultation documents<sup>[1]</sup> and particularly wish to commend the style of consultation. In our Twenty-third Report, *Environmental Planning* (Cm 5459), we cited the prospect of this consultation process as an example of policy making moving towards an approach that could provide a national framework for the sustainable development of an industry.<sup>[2]</sup>

1.2 Nevertheless, we believe that the documents forming the air transport consultation miss important opportunities to explore the full environmental impacts of meeting the increasing demand for air transport. The discussion of the implications of aviation for global climate change is incomplete and gives little indication of how the government intends to address the problem. We are also concerned by the inadequate treatment of both taxation and alternative modes of transport.

1.3 The Commission is not commenting on proposals specific to each region. This response addresses the national and global implications of the proposals in the consultation documents, and introduces the Commission's Special Report, *The Environmental Effects of Civil Aircraft in Flight*.<sup>[3]</sup> The Special Report, published today, is appended. It concludes that:

**“if no limiting action is taken, the rapid growth in air transport will proceed in fundamental contradiction to the government's stated goal of sustainable development.”**

The Sustainable Development Commission has also today published a paper on air transport and sustainable development, which reaches a similar conclusion.

#### 2 Environmental implications

2.1 In its First Report in 1971 (Cmnd 4585), the Royal Commission drew attention to the environmental impacts of air transport. The First Report warned that it would be 'dangerously complacent' to ignore the potential implications for the environment of the increasing number of commercial flights. Since then the Commission has maintained a strong interest in the issues raised by air transport.

2.2 In 1994, the Commission's Eighteenth Report, *Transport and the Environment* (Cmnd 2674), raised many of these serious issues, but has not yet received an official response. This report concluded that:

**“An unquestioning attitude towards future growth in air travel, and an acceptance that the projected demand for additional facilities and services must be met, are incompatible with the aim of sustainable development.”<sup>[4]</sup>**

The Commission returned to this theme in its response<sup>[5]</sup> to the government's consultation

document on the future of aviation.

2.3 The Commission was, consequently, disappointed by the sparse treatment of environmental impacts in the government's consultation documents. In the Twenty-third Report we emphasised the importance of assessing all major infrastructure projects within a framework of carefully considered national policies, policies which should take full account of environmental considerations. This should include recognition of national and local environmental objectives, showing how major projects contributed towards the achievement of those objectives. The consultation documents certainly make some gestures in this direction and much detailed work underlies the few paragraphs on environmental implications in each document. But we feel that a rigorous treatment of all the environmental consequences, both in the UK and globally, of the boom in air transport would have been more appropriate.

### 3 Climate Change

3.1 In its Special Report, the Commission has assessed the implications for global climate change of the increasing demand for air transport. The Special Report explains why a simple prediction based on carbon emissions is inadequate. The total radiative forcing due to aviation is some three times that due to the carbon dioxide emissions alone. This contrasts with factors generally in the range 1 - 1.5 for most other human activities.

3.2 Even the rather optimistic view of technological development used by Intergovernmental Panel on Climate Change (IPCC) in 1999<sup>[6]</sup> indicated that improvements to aircraft engines and airframes would not offset the projected increase in demand for air travel. Some proposed developments, for example more use of stratospheric near-sonic and supersonic aircraft, would result in very much higher impacts on the climate. Using the assumptions set out in the Commission's Twenty-second Report, *Energy - the Changing Climate* (Cm 4749), it is likely that by 2050 air transport, unless curbed, will be one of the principal contributors to climate change caused by human activities and, in particular, to global warming.

3.3 This emphasises the importance of exploring all demand management options. In its Special Report, the Commission has explained why short-haul flights are more polluting per passenger-kilometre than long-haul flights. We advocate a shift away from using aircraft to travel short distances, including UK domestic flights and many European flights. One way of securing this shift would be to restrict the number of airport slots available. Commercial pressures would then mean a higher tendency for airlines to concentrate on the more lucrative and (relatively) less polluting longer distances. The Commission recommends that the government should take this into account in deciding how much extra airport capacity, if any, should be provided in its forthcoming air transport policy.

### 4 Emission Charges

4.1 The fuel tax exemption applying to domestic flights represents a penalty on other industries emitting carbon dioxide in the UK. This is because emissions from domestic flights are included in the total domestic carbon dioxide inventory and so are covered by the Kyoto Protocol. The Commission explains in the Special Report why it is now important to correct this distortion of competition.

4.2 We recognise the complexity of the international agreements under the Chicago Convention, which make negotiation towards a fuel tax difficult. Instead of a fuel tax, therefore, the Commission proposes a Europe-wide emissions charge, which airports would be required to levy on all aircraft, passenger or freight, taking-off from or landing at European airports. At least some of this emissions charge would be likely to be passed on to passengers by the airlines in the form of a rise in ticket prices. An increase in ticket price would act to reduce demand, especially for short-haul flights. Similarly the growth in air freight would be restrained. The consultation documents point to the relative inelasticity of demand for air travel but the Commission does not consider this to be a reason for inaction.

4.3 The Special Report argues for the inclusion of aviation emissions in an emissions trading scheme. Because the total radiative forcing of aviation is about three times that of the carbon dioxide emitted, the aviation industry should acquire three carbon emission permits for each unit

of carbon that it actually emits.

## 5 Land Hubs

5.1 The consultation document for the North of England considers whether improved rail services could provide an attractive alternative to air services for travel between the North of England and London. The financial viability of such a project was not evaluated but improved rail services were estimated to be able to reduce domestic air point-to-point traffic by 40%. It is not clear why similar analyses have not been carried out for other parts of the UK, especially for Scotland, or why only a link with London has been considered.

5.2 The consultation document refers to a recent report by AEA Technology which claims that the total environmental impacts of high-speed rail and short-haul air journeys were similar. This is out of line with the results of other comparative studies and must be viewed with caution.<sup>[1]</sup> The Commission's Special Report states that for rail travel, carbon dioxide emissions and fuel use per passenger-kilometre are typically at least an order of magnitude lower than for a fully-loaded cruising airliner. The comparisons are even sharper for freight. Others organisations (for example, the Air Transport Action Group) have come to similar conclusions for carbon dioxide and suggest that emissions of other pollutants are similarly lower for rail.

5.3 Furthermore, figures published by Defra show carbon dioxide emissions per passenger-kilometre for the existing mix of trains - rather than for exclusively modern, high-speed electric trains - to be one third of those for short-haul flight. Allowing for the additional radiative forcing from air travel (see paragraph 3.1 above) leads to an order of magnitude difference between rail and air emissions, consistent with our own independent estimates.

5.4 For relatively short journeys, such as within the UK or to nearer parts of continental Europe, the environmental impacts of air travel are disproportionately high. These are the journeys for which efficient rail travel should be available. Promoting air rather than rail for these journeys is inconsistent with a properly integrated transport system. In the Special Report the Commission has advocated the development of land-air hubs at major airports, using trains rather than aircraft as short-haul feeders. Note that Schiphol, often cited as one of Heathrow's main international competitors, has excellent rail links to all parts of The Netherlands and beyond.

## 6 Conclusions

6.1 The Commission welcomes the consultation process but is disappointed over its content. The availability of cheap air transport currently enjoyed by the public is a very recent phenomenon. It is not a traditional 'right' in any sense, but a privilege enjoyed by the global elite. Climate change, in contrast, will affect every person and its consequences may be most damaging for those in the developing world.

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<sup>[1]</sup> Department for Transport (2002). *The Future Development of Air Transport in the United Kingdom: A National Consultation*.

<sup>[2]</sup> Twenty-third Report, paragraphs 8.52-53.

<sup>[3]</sup> Royal Commission on Environmental Pollution (2002). *The Environmental Effects of Civil Aircraft in Flight* (referred to as the Special Report). 48 pages, ISBN 0-9544186-0-3.

<sup>[4]</sup> Eighteenth Report, paragraph 5.33.

<sup>[5]</sup> Royal Commission on Environmental Pollution (2001). *Consultation on the future of aviation: Response by the Royal Commission on Environmental Pollution*. (see [www.rcep.org.uk/news/01-1c.html](http://www.rcep.org.uk/news/01-1c.html)).

<sup>[6]</sup> Intergovernmental Panel on Climate Change (1999). *Aviation and the Global Atmosphere*. Cambridge University Press, Cambridge.

<sup>[7]</sup> Royal Commission on Environmental Pollution (2002) (see ref 3).

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