

HACAN CLEARSKIES

NIGHT FLYING RESTRICTIONS AT HEATHROW, GATWICK AND STANSTED FROM 30 OCTOBER 2005

RESPONSE BY HACAN CLEARSKIES TO DEPARTMENT FOR TRANSPORT STAGE 1 CONSULTATION DOCUMENT

OCTOBER 2004

“Although the Government said in 1993 that the restrictions imposed on night operations at the London airports protected local people from excessive aircraft noise at night, that view did not emerge from a clear or coherent assessment leading to a specific definition of excessive noise levels. I find it very hard to understand how the policy can be implemented fairly and openly in the absence of a measure or definition of what is an excessive noise level.”

Roy Vandermeer QC (Terminal 5 Planning Inspector)
The Heathrow Terminal Five and Associated Public Inquiries: Report to Government (November 2000)
Paragraph 21.2.24

“If I am right in my interpretation of current Government policy, noise at night could be allowed to become excessive if it was considered that the harm caused by such noise levels were outweighed by the benefits to the competitive position of Heathrow and the airlines and the wider employment and economic implications.”

Vandermeer
Paragraph 21.2.27

“British Airways argued that the number of flights in the night quota period had changed very little since 1978. Even if the need grows, British Airways demonstrated that they could double the number of seats available on their own South-East services by the use of larger aircraft if Terminal 5 were built. On that basis they would need eight fewer flights in the night quota period. They are also willing to give an undertaking that there should be no increase in their movements during the night quota period.”

Vandermeer
Paragraph 21.4.28

“The forecasts on which the local authorities rely raise some practical difficulties. Their predictions for the critical 06.00-07.00 hour are very much higher than those of British Airways and BAA both with and without Terminal 5 and appear to ignore the very real constraints on the capacity of the existing terminals.”¹

Vandermeer
Paragraph 21.4.33

“In my view, a progressive improvement in the night noise climate could be achieved through the existing system working towards a long-term objective of removing the need for night flights.”

Vandermeer
Paragraph 32.5.45

¹The local authorities predicted 52 arrivals with T5 and 45 arrivals without T5. BAA predicted 38 arrivals with T5 and 30 arrivals without T5. British Airways predicted 42 arrivals with T5 and 23 arrivals without T5. There are currently 57 scheduled arrivals and 36 scheduled departures without T5.

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1. INTRODUCTION

1.1 This document is the response by the Heathrow Association for the Control of Aircraft Noise (HACAN ClearSkies) to the Department for Transport consultation document of July 2004: *Night Flying Restrictions at Heathrow, Gatwick and Stansted - Stage 1 of Consultation on Restrictions to apply from 30 October 2005*.

1.2 HACAN considers this response to be in the public domain. We have no objection to the Department copying or disclosing all or part of the document to third parties; or making the response publicly available to third parties on request.

HACAN ClearSkies

1.3 HACAN ClearSkies is a voluntary association that campaigns to reduce noise and other forms of pollution, hazard and disruption resulting from the operations of Heathrow Airport. We are members of Airport Watch, the Aviation Environment Federation (AEF), and the European Union against Aircraft Nuisances (UECNA). We co-operate with other organisations in the UK and overseas that are concerned about the impact of air transport on the environment.

1.4 HACAN is made up of individual members and affiliated residents groups and other voluntary groups. The majority of the members live in the local authorities closest to Heathrow: the London Boroughs of Hillingdon, Hounslow and Richmond upon Thames, Spelthorne Borough Council and the Royal Borough of Windsor and Maidenhead. We also have members in the following London Boroughs to the east of Heathrow: Camden, Ealing, Hackney, Hammersmith and Fulham, Greenwich, Islington, Kensington and Chelsea, Lambeth, Lewisham, Southwark, Wandsworth, and Westminster; and in the following local authorities to the west of Heathrow: Bracknell, Runnymede, Slough, South Buckinghamshire, South Oxfordshire, West Berkshire, Wokingham and Wycombe.

HACAN position on night flights

1.5 The Stage 1 consultation document states that proposals for night flying restrictions at Heathrow, Gatwick and Stansted will be published in the Stage 2 consultation document. HACAN nevertheless feels that it would be helpful to the Department if we set out at this stage our basic position on night flights.

1.6 Noise from air traffic at Heathrow between 23.00-07.00 hours causes disturbance and distress to people living near Heathrow or under the Heathrow flight paths. We estimate that half a million people are affected.

1.7 The noise from night flights has increased steadily since 1993, despite the operation of night flying restrictions. Future noise levels are likely to increase still further if the demand for night flights continues to grow. HACAN therefore calls for:

- A ban on movements at Heathrow between 23.00-07.00 hours that breach the World Health Organisation guideline values for night noise. This would require a ban on night flying at Heathrow

1.8 HACAN recognises that night flights are profitable for the airlines and stimulate a limited amount of wider economic activity. But we do not consider that night flights are crucial for the local or the national economy. And we consider that UK passengers who would not be able to use Heathrow between the hours 23.00-07.00 hours could do so between 07.00-23.00 hours.

1.9 Transit and transfer passengers account for an increasing proportion of Heathrow passengers between 23.00-07.00 hours, growth that the Government has encouraged by exempting the airlines from paying air passenger duty on transit and transfer passengers. In order

to reduce the demand for night flights at Heathrow, HACAN calls for air passenger duty to be charged on transit and transfer passengers.

1.10 HACAN recognises that a ban on night movements at Heathrow may result in the diversion of transfer and transit passengers to other airports in the UK and the EC. In order to prevent this from happening, the Government should promote an EC-wide ban on movements that breach the World Health Organisation guideline values for night noise.

Summary of HACAN views on the Stage 1 consultation document

1.11 HACAN is disappointed that the Stage 1 consultation document fails to include key information on or objective assessments of: (a) the noise climate at Heathrow; (b) the demand for night flights at Heathrow; and (c) the economics of night flights at Heathrow. In particular:

- The Stage 1 consultation document does not state how many people living around Heathrow or under Heathrow's flight paths are exposed to levels of night noise that exceed the World Health Organisation's recommended noise limits.
- The Stage 1 consultation document does not include an assessment of whether the noise climate has improved or deteriorated since the night flying restrictions were introduced in 1993.
- The information in the Stage 1 consultation document about night flight noise in 2003 dilutes the noise impact by averaging the noise over 8 hours (23.00-07.00 hours) and 6.5 hours (23.30-06.00 hours) whereas night flights take place only between 23.00-23.30 hours and 04.30-07.00 hours, with the noise concentrated into those hours.
- There is no forecast of demand for night flights over the next five years, with and without night flying restrictions.
- There is no assessment of whether demand for night flights would be reduced if airlines were charged air passenger duty for transit and transfer passengers.
- There is no assessment of the economic benefits of night flying.

1.12 HACAN is concerned that the Stage 1 consultation document appears to say that the Stage 2 consultation document will provide only limited changes to the night flying restrictions. HACAN considers that it is time for a thorough review of night flights, in view of: (a) the worsening of the noise climate around Heathrow over the last ten years; (b) the recent judgement on night flights by the European Court of Human Rights; (c) the publication of World Health Organisation *Guidelines for Community Noise*; and (d) the adoption of Directive 2002/49/EC on the assessment and management of environmental noise.

2. STRUCTURE OF THE CONSULTATION

2.1 HACAN ClearSkies welcomes the Department's intention to consult in two stages on the future night flying restrictions at Heathrow, Gatwick and Stansted. But we are concerned that information that should have been made available at the outset of the consultation was not included in the Stage 1 consultation document; and that the proposed scope of the Stage 2 consultation document is too limited.

2.2 Our concerns about the information that is missing from the Stage 1 consultation document are set out in more detail in Section 4 of this response. HACAN regards this information as essential for a balanced consideration of night flights at the three airports. We urge the Department to include the missing information in the Stage 2 consultation document.

2.3 The Stage 1 consultation document appears to assume that the Department will continue to authorise night flights at the three airports, possibly with some changes to the existing night flying restrictions. HACAN considers that there should be a more fundamental review of the environmental effects and economic significance of night flying in view of the following developments since the existing night flying restrictions were introduced in 1999:

- The increase in air traffic noise at night at Heathrow since 1999.
- The ruling on night flights by the European Court of Human Rights in the case of *Hatton and Others v. the United Kingdom*.
- The agreement of the World Health Organisation *Guidelines for Community Noise*;
- The adoption of Directive 2002/49/EC on the assessment and management of environmental noise.

Q1. Are there any other matters that you think we should cover in this consultation in addition to those set out in paragraph 2.4 of the consultation document?

For the reasons set out in Section 4 of this response, HACAN considers that more information is needed about:

- Past, present and future demand for night flights at the three airports.
- Present and future capacity of the three airports to meet the present and future demand for night flights;
- The effect of past, present and future night flights on the noise climate around the three airports and under their flight paths.

For the reasons set out in paragraphs 2.1-2.3 above, HACAN considers that there should be an assessment of the economics of night flying, including consideration of the following issues:

- The loss to the UK economy that has been caused by the night flying restrictions in operation at the three airports since 1993; and the gain for the economies of other EC Member States that have laxer airport restrictions than the UK (taking into account the availability of flights at the three airports either side of the night period).
- The loss to the UK economy that would be caused by a ban on night flights at the three airports (taking into account the availability of flights at the three airports either side of the night period).
- The extent to which any loss to the UK economy caused by night flying restrictions or a ban on night flights at the three airports would be mitigated by night flying restrictions or a ban

on night flights in all EC Member States (justified on the grounds of protection for the environment and fair competition between Member States).

- The proportion of present and future passengers on night flights at the three airports who are transit or transfer passengers.
- The extent to which present and future levels of demand from transit and transfer passengers depends on their continued exemption from air passenger duty.
- The extent to which the exemption of transit and transfer passengers from air passenger duty is compatible with EC rules on State aid.

3. GENERAL BACKGROUND

World Health Organisation Guidelines for Community Noise

3.1 The Stage 1 consultation document states (paragraph 3.12) that achieving the *Leq* and *Lmax* values recommended for night noise in the World Health Organisation's *Guidelines for Community Noise* would be "very difficult if not impossible" in the short to medium term without "draconian measures"; and suggests that for aircraft noise at night the 30 year time horizon of the White Paper *The Future of Air Transport* provides a suitable "longer term" parameter for achieving the WHO values.

3.2 HACAN ClearSkies considers that the Stage 2 consultation document should include:

- An assessment of the extent to which the noise levels from air traffic at night at Heathrow, Gatwick and Stansted exceed the WHO values.
- The evidence upon which the Department has made the judgement that the WHO values could not be achieved in the short to medium term without draconian measures.
- An indication of the nature of the draconian measures that would have to be taken to achieve the WHO values in the short to medium term in respect of aircraft noise at night.

3.3 The Stage 2 consultation document should also explain why the WHO *Leq* value is so difficult to achieve in the short to medium term for night flights, given that since at least 1994 the Government has advised developers and planning authorities that night flights at new airports should observe the same value as the WHO *Leq* value².

3.4 In the absence of the information referred to in paragraph 3.2 and 3.3 above, it is difficult to see how the Department or anyone else could make a judgement on whether the existing and proposed night flying restrictions strike a reasonable balance between the environmental costs and the economic benefits of night flights.

Project for the Sustainable Development of Heathrow

3.5 The Stage 1 consultation document states (paragraph 3.14) that the project for the sustainable development of Heathrow will "interface" with the Stage 2 proposals for night flying restrictions at Heathrow because "runway capacity and the way the present runways are operated in the early morning peak hours, including the 06.00-07.00 hour, are key considerations".

3.6 HACAN views the Project as partial re-nationalisation of Heathrow for the purpose of increasing capacity at Heathrow - in the short term, through mixed mode between 07.00-23.00 hours; in the medium term, through a third runway - while ensuring that the levels of nitrogen dioxide recorded around Heathrow do not exceed EC limit values.

3.7 As mixed mode is already in operation during the night period, it is not clear why there should be any "interface" between increasing capacity at Heathrow and night restrictions at Heathrow, bearing in mind in particular that:

- The Secretary of State for Transport, Local Government and the Regions did not make restrictions on night flying a condition for the development of Terminal 5, despite the recommendation of the Planning Inspector that tighter restrictions should be introduced because Terminal 5 would increase night flights between 06.00-07.00 hours³.

² *Planning Policy Guidance: Planning and Noise (PPG 24)*, Department of the Environment (September 1994).

³ Letter of decision, Department for Transport, Local Government and the Regions (20 November 2001), paragraphs 63-71.

- The Department for Transport consulted in 2003 on the basis that airport capacity and night noise are separate issues⁴.
- The Stage 1 consultation document does not envisage any “interface” between measures to mitigate night noise at Heathrow, Gatwick and Stansted and the implementation of Directive 2002/49/EC on the management and assessment of environmental noise, despite the fact that the Directive applies to major airports (see paragraphs 3.12-3.15 below).

European Convention on Human Rights

3.8 The Stage 1 consultation Document states (paragraph 3.19) that the majority judgement on the night flying restrictions regime 1993-1998 by the Grand Chamber of the European Court of Human Rights in the case of *Hatton and Others v. the United Kingdom* provided “much needed legal clarity” and cleared the way for a “thorough review” of night flights policy.

3.9 As indicated in paragraph 2.3 above, HACAN ClearSkies considers that the Stage 1 consultation document falls well short of a thorough review of policy on night flights at Heathrow, Gatwick and Stansted.

Directive 2002/30/EC: Noise Related Operating Restrictions

3.10 The Stage 1 consultation document refers (paragraph 3.23) to the requirements of Directive 2002/30/EC concerning the information that must be taken into account before a Member State introduces noise related operating restrictions at an airport.

3.11 HACAN is concerned that much of the information required by Directive 2002/30/EC is not included in the Stage 1 consultation document; and that much of the information required by Directive 2002/30/EC that is included in the Stage 1 consultation document is ambiguous or otherwise difficult to understand. Our concerns are set out in more detail in Section 4 of this response.

Directive 2002/49/EC: Assessment and Management of Environmental Noise

3.12 The Stage 1 consultation document states (paragraph 3.25) that the new night flying restrictions at Heathrow, Gatwick and Stansted would not be modified when the Government implements Directive 2002/49/EC in the UK; and (paragraph 5.3) that the new night flying restrictions will operate until the end of the summer season 2011.

3.13 Under Directive 2002/49/EC, all major airports (defined as a civil airport with more than 50,000 movements per year) must have strategic noise maps by no later than 30 June 2007 and action plans (designed to manage noise issues and effects) by no later than 18 July 2008. The Directive makes specific provision for assessing the noise climate over an 8-hour night period (*L_{night}*). The public must be consulted on the proposals for action plans prior to their adoption.

3.14 The strategic noise maps must be reviewed, and revised if necessary, at least every five years after the date of their preparation (i.e. by 30 June 2012 at the latest). The action plans must be reviewed when a major development affects the existing noise situation and at least every five years after their adoption (i.e. by 18 July 2013 at the latest, assuming no major development).

3.15 Since Heathrow, Gatwick and Stansted are all major airports within the meaning of Directive 2002/49/EC, it is not clear upon what legal basis the Department can exclude the new night flying restrictions from the implementation of Directive 2002/49/EC. In particular, there

⁴ “Night noise is a completely independent issue since the number of flights by aircraft at night is a matter of regulatory policy rather than runway capacity”, *The Future Development of Air Transport in the United Kingdom: South East (Second Edition)*, Department for Transport (February 2003), p.65.

would be a lack of coherence and transparency in the strategic noise maps and the action plans for the three airports, because:

- The strategic noise maps and action plans must address **all** noise sources from major airports (i.e. noise from taxiing aircraft; road traffic to and from and within the airport; loading and unloading goods and supplies; engineering works, etc. as well as noise from airborne aircraft) over day (12-hour), evening (4-hour) and night (8-hour) periods.
- Operating new night flying restrictions at Heathrow, Gatwick and Stansted from autumn 2005 until summer 2011 - and presumably with new restrictions from autumn 2011 - would exclude noise from night flights from the first strategic noise maps and action plans for the three airports (due in summer 2007 and summer 2008 respectively); and presumably from the first review of the strategic noise maps and action plans for the three airports (due in summer 2012 and 2013 respectively).

4. ESTABLISHING THE BASE CASE AND FURTHER ASSESMENTS

Introduction

4.1 In order to comply with the requirements of Directive 2002/30/EC, the Government must publish more information than it has done in the past about the environmental and economic effects of night flights. But HACAN ClearSkies considers that some of the information required by the Directive is difficult to understand as presented in Annex B (“Information referred to in Directive 2002/30/EC, Annex II, Section 1: Current Inventory”) and Annex C (“Base case noise assessments and forecasts without new measures”) of the Stage 1 consultation document; and that much of the information required by the Directive is not included in either Annex B or Annex C.

Interpretation of night noise data

4.2 The Stage 1 consultation document includes noise exposure data for 2003 and refers to the limit values in the World Health Organisation (WHO) *Guidelines for Community Noise*, but states that interpreting the data is uncertain; that the WHO limit values are not achievable in the short term without “draconian measures”; and that the evidence supporting the WHO limit values is questionable.

4.3 HACAN considers that interpretation would be less problematic if data were provided for all the years since 1993 and for the periods of the night when aircraft movements actually take place. Recent research from Germany supports the limit values in *Guidelines for Community Noise*. Any doubts that the Department has about their applicability to the three airports should be resolved by surveys of people living within the noise contours at and above the WHO limit values during periods of the night when movements take place.

4.4 HACAN considers that the noise exposure data in the Stage 2 consultation document should indicate by how much the night noise climate around the three airports exceeds the WHO *L_{max}* and *Leq* guideline values⁵. This information would enable interested parties to judge the extent to which “draconian measures” would be needed in order to meet the WHO guidelines in the short to medium term. The information is also relevant for judging whether the Department strikes the right balance between protection of the environment and protection of the economic benefits of night flights.

Clarification of information in Annex B

4.5 **Separate assessments:** It would be helpful if the Stage 2 consultation document sets out free-standing assessments for each airport - as required by Directive 2002/30/EC - rather than the confusing composite assessment for all three airports (divided between Annex B and Annex C) in the Stage 1 consultation document.

4.6 **Balanced approach for measures to reduce aircraft noise:** Article 4.1 of Directive 2002/30/EC requires Member States to adopt a “balanced approach” in dealing with noise problems at airports. Article 2 of the Directive defines “balanced approach” as an approach under which Member States shall consider the available measures to address the noise problem at an airport, namely: the foreseeable effect of a reduction of aircraft noise at source; land-use planning and management; noise abatement operational procedures; and operating restrictions.

⁵ The Government’s *Planning Policy Guidance: Planning and Noise (PPG 24)* recommends the same outdoor value - 45 dB - for the onset of night disturbance as the WHO. The relevant ISO standards do not recognise the claim in *PPG 24* that for aircraft noise at night there should be a 2-decibel allowance on account of ground reflection. A 2-decibel allowance should in any case result in data for exposure to 47 dB, not 48 dB as shown in Figures 7-12 in Annex C.

Article 4.1 also provides that Member States may consider economic incentives as a noise management measure.

4.7 It would be helpful if the Stage 2 consultation document re-grouped under the balanced approach sub-headings the measures listed in Annex B (pages 39-50) as already implemented to reduce aircraft noise. HACAN suggests the following re-grouping:

- Reduction of aircraft noise at source: no measures identified.
- Land use planning and management: planning guidance notes.
- Noise abatement operational procedures: operational procedures, operating restrictions and noise preferential flight routing.
- Operating restrictions: night restrictions regime.
- Economic incentives: funding noise insulation schemes, fines for breach of noise limits (including night noise limits) and noise component of landing charges.

Information missing from Annex B

4.8 **Airport capacity and runway mix:** Paragraph 1.1 of Annex II of Directive 2002/30/EC requires Member States to provide information about the present capacity and runway mix of each airport under consideration. This information was not included in Annex B (or Annex C). HACAN considers that it would not be sufficient to comply with the Directive to include in the Stage 2 consultation document only the capacity and runway mix with the present night restrictions at Heathrow, Gatwick or Stansted. Information should be provided about the maximum capacity of the three airports throughout the night period (23.00-07.00 hours) on the assumption of no operating restrictions and unlimited demand for night flights.

4.9 **Flight paths:** It would be helpful if the Stage 2 consultation document included the residential areas under the arrival and departure flight paths in use between 23.00-07.00 hours.

4.10 **Measures to reduce aircraft noise:** It would be helpful if the Stage 2 consultation document included as assessment of the extent to which each of the measures that are listed in Annex B (between pages 39-50) has contributed to reduced noise levels between 23.00-07.00 hours.

Clarification of information in Annex C

4.11 **Separate assessments:** It would be helpful if the Stage 2 consultation document set out free standing assessments for each airport, as required by Directive 2002/30/EC, rather than the confusing composite assessment for all three airports (divided between Annex B and Annex C) in the Stage 1 consultation document.

4.12 **Number of aircraft movements:** It is not clear whether the *Leq* noise exposure assessments in Annex C are based on **all movements** during the assessment periods or only on movements by aircraft to which the numbers limits and noise quotas apply. HACAN considers that all movements (i.e. movements by aircraft below QC/0.5 and by aircraft that are at or above QC/0.5 but which do not count as part of the noise quota, including movements scheduled for outside the night period that take place during the night period behind or ahead of schedule) should be included in the assessments in order to comply with Directive 2002/30/EC.

4.13 **Totals for noise exposure data in 2003:** The data for *Lden* and *Lnight* (8-hour) in Annex C are given in totals per noise band, in accordance with the requirements of Directive 2002/49/EC. The data for *Lnight* (6.5-hour) are given in cumulative totals, in accordance with the annual reports on daytime noise at Heathrow, Gatwick and Stansted. It would be helpful if

the Stage 2 consultation document adopted a common approach. Totals per band are more informative than cumulative totals, but should be supplemented with an overall total for exposures at or above the lowest reported value. For example, the four Figures in Annex C for Heathrow should be presented as follows:

Figure 1: *Lden* Heathrow 2003

Contour band (dBA)	Area (sq km)	Population	Households
55-59.9	160.8	531,200	244,000
60-64.9	54.8	161,500	69,600
65-69.9	25.3	52,100	21,000
70-74.9	10.6	10,800	4,000
>75	5.8	1,700	600
Totals >55	257.3	757,300	339,200

Figure 4: *Lnight* (8-hour) Heathrow 2003

Contour band (dBA)	Area (sq km)	Population	Households
50-54.9	54.1	180,400	80,400
55-59.9	25.1	49,400	19,800
60-64.9	8.6	16,600	6,400
65-69.9	2.8	2,500	800
>70	1.7	>100	>100
Totals >50	92.3	249,000	107,500

Figure 7: *Lnight* (6.5-hour) Heathrow 2002-3

Contour band (dBA)	Area (sq km)	Population	Households
48-50.9	26.0	67,200	29,100
51-53.9	13.1	28,800	11,100
54-56.9	7.0	17,800	7,100
57-59.9	3.8	6,600	2,400
60-62.9	1.8	2,200	800
>63	2.2	1,400	400
Totals >48	53.9	123,000	50,900

Figure 8: *Lnight* (6.5-hour) Heathrow maximum use within existing quotas

Contour band (dBA)	Area (km sq)	Population	Households
48-50.9	27.1	72,300	31,300
51-53.9	13.5	28,300	11,400
54-56.9	7.1	17,600	7,000
57-59.9	3.9	7,300	2,700
60-62.9	1.9	2,200	800
>63	2.2	1,600	500
Totals >48	55.7	129,300	53,700

4.14 **Comparing 8-hour noise exposure with 6.5-hour noise exposure:** It is difficult to compare the noise exposure data for 8-hour *Lnight* and 6.5-hour *Lnight* because different scales of values are used for the two periods. The 5-decibel interval for exposure at and above 50 dB is a minimum requirement of Directive 2002/30/EC for 8-hour *Lnight* and should be used for both periods in the Stage 2 consultation document in order to facilitate comparisons.

4.15 ***Sel* footprints:** It is not clear why the *Sel* footprints in the two tables on page 55 of Annex C consultation document refer to “gross area” whereas the *Leq* contours in Figures 1-12 refer to “area”.

4.16 It would be helpful if the Stage 2 consultation document adopted a common format for the presentation of the data for *Leq* and *Sel*, including giving the numbers for population and households either in full (as per Figures 1-12) or in thousands (as per the two tables on page 55).

4.17 It would be helpful if the Stage 2 consultation document indicated the basis upon which each flight path is selected for use for night flights, the number of movements that occur on each flight path per year, and the areas over flown by each flight path.

4.18 **Forecast noise exposure:** Page 63 of Annex C states that maximum usage of the present night noise quota at Heathrow would lead to a “minor worsening of the noise climate compared with 2003 but not beyond that already permitted and taken into account in establishing the restrictions” HACAN questions this assessment on two counts:

- The forecast *L_{night}* (6.5-hour) in Annex C shows that maximum use of the Heathrow quota would increase the number of people exposed to >48 dB from 123,000 to 129,300, an increase in the exposed population by 6,300 that can hardly be dismissed as “minor”
- The Aviation Minister gave a commitment that the reduction in the Heathrow quota in 1999 would prevent a worsening of the night noise climate compared with the mid-1990s, not permit a worsening of the night noise climate compared with the mid-1990s (see paragraph 4.21 below).

Information missing from Annex C

4.19 **Noise exposure data for years prior to 2003:** Paragraph 1.3 of Annex II of Directive 2002/30/EC requires Member States to provide information about noise exposure for the present year and for previous years. Annex C provides some of this information for 2003 but not for the years prior to 2003. It is therefore difficult to assess from Annex C whether the Heathrow noise climate has improved or deteriorated in recent years.

4.20 In 1998, the former Department of the Environment, Transport and the Regions (DETR) made the following statement on trends in the night noise climate around Heathrow between the winter season 1993-4 and the summer season 1998:

*Since the introduction of the present noise restriction regime in October 1993 there has been an improvement in the noise climate around Heathrow during the night quota period between 11.30pm and 6.00am. This assessment is based on the total of the quota count (QC) ratings of aircraft counted against the noise quota: see Appendices B and C/1. However, there has probably been a deterioration over the full night period between 11.00pm and 7.00am as a result of the growth in traffic between 6.00am and 7.00am.*⁶

4.21 In 1999, the Aviation Minister made the following commitment that there would be no future deterioration in the Heathrow noise climate during the quota period relative to the noise climate since 1993:

*The decision to reduce the noise quotas for Heathrow to nearer the level of current usage, and in the case of the winter season to a level below usage in winter 1998/9, will help safeguard the improvement in the noise climate during the noise quota period brought about since 1993 under the current regime.*⁷

4.22 The table below reproduces the Heathrow noise quota use from winter 1993-4 to summer 1998 (as set out in Appendix B of the DETR second stage consultation document on night flight restrictions in 1998); and from winter 1999-2000 to summer 2003 (as set out on page 58 of Annex C). The table shows that noise climate deteriorated in nearly every season between winter 1999-00 and summer 2003, with exceedence of the winter noise quota during the last two winters (2001-2 and 2002-3). The table shows also that the noise climate has deteriorated since the summer 1997 and winter 1997-8 compared with earlier years, despite the commitment by the Aviation Minister (see paragraph 4.21 above).

⁶ *Night Restrictions at Heathrow, Gatwick and Stansted: Second Stage Consultation*, November 1998, paragraph 1.2

⁷ DETR News Release, 10 June 1999.

Winter Season	Noise Quota	Noise Quota Use	Summer Season	Noise Quota	Noise Quota Use
1993-4	5,000	4,384	1994	7,000	5,109
1994-5	5,000	5,020	1995	7,000	5,159
1995-6	5,000	4,760	1996	7,000	4,340
1996-7	5,000	3,901	1997	7,000	4,276
1997-8	5,000	3,858	1998	7,000	4,668
1998-9	5,000	4,422	1999	7,000	No data
1999-0	4,140	3,972	2000	5,610	4,967
2000-1	4,140	4,118	2001	5,610	4,694
2001-2	4,140	4,257	2002	5,610	5,051
2002-3	4,140	4,316	2003	5,610	5,156

4.23 As regards the noise climate between 06.00-07.00 hours, more than ninety scheduled movements (arrivals and departures) now take place during this period. But in the absence from the Stage 1 consultation document of noise exposure data for 06.00-07.00 hours, it is not possible to say whether the noise climate has improved or deteriorated in recent years compared with the worsening noise climate reported by the DETR in 1998 (see paragraph 4.20 above).

4.24 HACAN considers that the Stage 2 consultation document should, in order to comply with the Directive 2002/30/EC, include data on noise exposure between 23.00-07.00 hours for years before 2003.

4.25 **Effect of the night flying restrictions regime:** Page 57 of Annex C states that the restrictions have prevented an increase in the number of movements at night. But British Airways advised the Terminal 5 (T5) public inquiries that flight numbers at Heathrow had remained virtually unchanged since 1978; and that even with T5 there would be no demand for more flights before 06.00 hours. The numbers limit may therefore have had only a theoretical impact on the night climate at Heathrow, because the permitted number of movements is not less than the level of demand. It also appears that the restriction on numbers has not prevented an increase in noise during the quota period since 1997 (see paragraph 4.22 above).

4.26 The ban on movements by aircraft in QC categories 4, 8 and 16 between 23.00-07.00 hours is likely to have had a more practical impact on the Heathrow noise climate. But any benefit may have been off-set by the unregulated growth in the number of movements between 06.00-07.00 hours, as the former DETR acknowledged for the years 1993-1998 (see paragraph 4.20 above).

4.27 The misleading statement in Annex C suggests that the Department has not undertaken an informed assessment of the effects of the night flying restrictions on the noise climate around Heathrow, thus compounding the failure to provide data on noise exposure prior to 2003.

4.28 **Future capacity and demand for night flights:** Paragraph 2.1 and 2.2 of Annex II of Directive 2002/30/EC requires Member States to publish information about:

- Projected future traffic mix.
- Estimated growth.
- The benefits of making planned extra capacity available.

4.29 Page 57 of Annex C states that T5 will increase Heathrow's annual passenger capacity by 30 million. Pages 61 and 63 of Annex C state that there would be an increase in night movements at the three airports if night flying restrictions were ended, possibly at the rate of growth seen recently at certain other (unspecified) European airports.

4.30 As regards the period before 06.00 hours, the Inspector who conducted the T5 public inquiries advised the Government that BAA and British Airways did not expect any increase in

movements before 06.00 hours; that British Airways had given an undertaking not to increase the number of movements before 06.00 hours; and that British Airways would need eight fewer movements before 06.00 when T5 comes into operation, due to the use of larger aircraft. HACAN considers that the Stage 2 consultation document should, in order to comply with Directive 2002/30/EC, include a forecast of the demand for additional movements at Heathrow before 06.00 hours⁸.

4.31 As regards the period between 06.00-07.00 hours, the T5 Inspector advised the Government that BAA and British Airways expected an increase in movements. The number of movements between 06.00-07.00 hours has in fact increased significantly ahead of the forecasts given to the T5 public inquiries⁹, even before T5 has come into operation, and will presumably continue to increase in future, although the 480,000 movements limit may provide a break when T5 comes into operation in 2008. HACAN considers that the Stage 2 consultation document should, in order to comply with Directive 2002/30/EC, include a forecast of the demand for additional movements between 06.00-07.00 hours¹⁰.

4.32 HACAN considers that it would not be sufficient to comply with the Directive to include in the Stage 2 consultation document only the projected future traffic mix and estimated growth with the proposed new night flying restrictions regime. There should be an assessment of the demand for night flights with and without the existing and proposed new night flying restrictions.

4.33 The Stage 1 consultation document does not include an assessment of the benefits of making T5 available for movements between 23.00-07.00 hours. HACAN considers that the Stage 2 consultation document should include sufficient information to enable consultees to cross-examine claims about the benefits of making T5 available for more night flights.

4.34 **Forecast noise exposure data:** Paragraphs 2.3-2.5 of Annex II of Directive 2002/30/EC require Member States to publish information about:

- The effect on the future noise climate without new noise restrictions.
- Forecast noise data with new restrictions.
- An evaluation of the consequences and possible costs of not taking action to lessen the impact of increased noise.

4.35 HACAN considers that the limit on the number of movements per year (480,000) at Heathrow when Terminal 5 comes into operation in 2008 is a planned noise-related operating restriction within the meaning of paragraph 2.3 of Annex II of Directive 2002/30/EC. The Stage 2 consultation document should therefore include an assessment of the effect of the limit on the demand for night flight slots from 2008, compared with more profitable slots outside the night period.

4.36 Annex C includes forecast noise exposure for *L_{night}* (6.5-hour) if the present noise quotas were used to the maximum. HACAN considers that the Stage 2 consultation document should, in order to comply with Directive 2002/30/EC, include noise exposure forecasts for *L_{den}* and *L_{night}* (8-hour), with and without the existing and the proposed night flying restrictions.

⁸ The strategy of the air transport White Paper was based on forecasts by the Department of demand at UK airports over the next thirty years, so the Department should be able to produce forecasts for the demand for night flights over the period of the next night flying restrictions regime.

⁹ There are currently 57 scheduled arrivals and 36 scheduled departures. At the T5 public inquiries, the local authorities forecast 52 arrivals with T5 and 45 arrivals without T5; BAA forecast 38 arrivals with T5 and 30 arrivals without T5; and British Airways forecast 42 arrivals with T5 and 23 arrivals without T5.

¹⁰ See footnote 8 above.

4.37 **Assessment of additional measures:** The Stage 1 consultation document explains that proposals for a new night flying restrictions regime will be included in the Stage 2 consultation document. Paragraphs 3.1, 3.2 and 3.4 of Annex II of Directive 2002/30/EC require Member States to consider a range of options for noise management and to indicate the reasons for selecting the preferred options. HACAN considers that the Department should consider and consult on the following options before reaching a final decision on the new night restrictions regime:

- Ban on all movements between 23.00-07.00 hours.
- Ban on all movements between 23.00-07.00 hours that would involve a breach of WHO guideline values (L_{max} and L_{eq}).
- Ban on all movements by QC/2 aircraft.
- Charge airlines air passenger duty on transit and transfer passengers.

4.38 **Effects on other airports:** Paragraph 3.3 of Annex II of Directive 2002/30/EC requires Member States to assess the environmental and competitive effects of operational restrictions at one airport on other airports. HACAN considers that it would not be sufficient to comply with the Directive to include in the Stage 2 consultation document an assessment limited to the effects between Heathrow, Gatwick and Stansted. There should be an assessment of the environmental and competitive effects on other UK airports.

4.39 **Noise exposure data for 23.00-23.30 hours and 06.00-07.00 hours:** During the so-called “shoulder periods” (23.00-23.30 hours and 06.00-07.00 hours) there is a ban on movements by aircraft exceeding noise quota count 4 and a voluntary ban on movements by noise quota count 4 aircraft, but there is no restriction on the number of movements or the overall noise level.

4.40 The Inspector who conducted the T5 public inquiries predicted that T5 would increase the number of movements between 06.00-07.00 hours and recommended that number and noise quotas should be introduced for that period. When the Government authorised the development of Terminal 5, it gave a commitment to consider the Inspector’s recommendation.

4.41 Figures 1, 4 and 7 in Annex C set out noise exposure data at Heathrow over the 24-hour period, the night period between 23.00-07.00 hours and the noise quota period between 23.30-06.00 hours. Annex C does not include noise exposure data over the shoulder periods, despite the T5 commitment, the requirements of Directive 2002/30/EC, and recognition by the former DETR that the noise climate between 06.00-07.00 hours had deteriorated between 1993 and 1998 (see paragraph 4.20 above).

4.42 HACAN considers that the Stage 2 consultation document should, in order to comply with the T5 commitment and Directive 2002/30/EC, include noise exposure data for the shoulder periods.

4.43 **Noise exposure data for 04.30-06.00 hours:** There are sixteen scheduled movements at Heathrow - all arrivals and all scheduled to arrive between 05.00-06.00 hours - in the 6.5-hour period (23.30-06.00 hours) during which number and noise quotas apply. In practice, some of the sixteen arrivals sometimes take place between 04.30-05.00 hours; and some arrivals scheduled for after 06.00 hours sometimes take place before 06.00 hours. But the clear pattern at Heathrow is for movements to take place in the 1.5-hour period between 04.30-06.00 hours. There is no pattern of movements across the 6.5-hour period between 23.30-06.00 hours.

4.44 The 6.5-hour L_{night} in Figure 7 in Annex C averages the noise that occurs between 04.30-06.00 hours as though it occurs across the period 23.30-06.00 hours. The 6.5-hour L_{night}

therefore understates significantly the noise exposure for those living under the flight paths used for the arrivals at Heathrow between 04.30-06.00 hours.

4.45 The former DETR recognised that noise-averaging across the night period could produce a misleading assessment of noise exposure if air traffic movements do not occur throughout the period:

*A particular difficulty would arise where night flights were very low in number or largely concentrated at any particular time of night, thereby making the use of averaging techniques questionable.*¹¹

4.46 The questionable effect of determining average noise exposure by including periods in the night when there are no air traffic movements can be illustrated by comparing the data in Annex C for 8-hour *Lnight* (23.00-07.00 hours) and 6.5-hour *Lnight* (23.30-06.00 hours). The table below - derived from Figure 4 and Figure 7 in Annex C - shows the size of the area and number of people and households exposed to >60 dB¹² between 23.00-07.00 hours (8-hour *Lnight*) and 23.30-06.00 hours (6.5-hour *Lnight*).

Period	Area (km sq)	Population	Households
23.00-07.00 hours	13.1	19,200	7,300
23.30-06.00 hours	4.0	3,600	1,200

4.47 The table shows that more than three times the size of area (13.1 km² to 4 km²), more than five times the number of people (19,200 to 3,600) and more than six times the number of households (7,300 to 1,200) are exposed to >60 dB between 23.00-07.00 hours than between 23.30-06.00 hours. One interpretation of the data is that noise levels are worse between 23.00-23.30 hours and 06.00-07.00 hours than between 23.30-06.00 hours, making a more compelling case for restrictions between 23.00-23.30 hours and 06.00-07.00 than between 23.30-06.00 hours.

4.48 An alternative interpretation - which reflects the DETR concerns referred to in paragraph 4.35 above - is that the data is unreliable because the average noise exposure calculations include periods during which there are no aircraft movements. In the case of the 8-hour *Lnight*, movements occur during 3 hours (between 23.00-23.30 hours and between 04.30-07.00 hours) and do not occur during 5 hours (between 23.30-04.30 hours). In the case of the 6.5-hour *Lnight*, movements occur during 1.5 hours (between 04.30-06.00 hours); and do not occur during 5 hours (between 23.30-04.30 hours).

4.49 HACAN considers that the Stage 2 consultation document should include noise exposure data for the period 4.30-06.00 in order to make a more informed assessment of noise exposure from night flights before 06.00 hours at Heathrow.

Q2. Do you have any comments on the assessments described in Annex B of the consultation document?

See comments in paragraphs 4.5-4.10 above requesting clarification of the information in Annex B and information that is missing from Annex B.

Q3. Do you have any comments on the presentation of the noise contours and other information in Annex C of the consultation document?

See comments in paragraphs 4.11-4.49 above requesting clarification of the information in Annex C and information that is missing from Annex C.

¹¹ *Night Restrictions at Heathrow, Gatwick and Stansted: Preliminary Consultation*, (February 1998), paragraph 18.

¹² Direct comparison is possible only for exposure >60 dB because Annex C reports the values below 60 dB in different bands (see paragraph 4.14 above).

5. LENGTH OF THE NIGHT FLYING RESTRICTIONS REGIME

5.1 HACAN ClearSkies notes that the Department has decided that the next night flying restrictions regime would apply to the end of 2011. The Stage 1 consultation document does not explain why the Department considers that it is necessary to fix the length of the next regime before consultation on the content of the next regime has been completed.

5.2 HACAN considers that the content of the next regime is material to considering the length of the next regime. Thus, a long life-span may be appropriate if the new regime sets ambitious noise-reduction targets. Conversely, if there would be no significant improvement to the noise climates around Heathrow, Gatwick and Stansted over the life of the new regime, then a much shorter life-span would be appropriate.

5.3 HACAN considers that the Department should defer a decision on the length of the next flying restrictions regime until it has decided, in the light of public consultation, on the content of the next regime.

6. AIMS AND OBJECTIVES

6.1 HACAN ClearSkies considers that the definitive aims and objectives for next night flying restrictions regime at Heathrow cannot be finalised until further information is published about the future demand for night flights, the economic benefits of night flights and the environmental effects of night flights. HACAN does not consider that it is necessary to adopt a separate environmental objective for air traffic noise at night or a list of environmental objectives.

6.2 HACAN considers that the environmental objective must embrace all noise sources (airborne and ground) at Heathrow at all times (day, evening and night; winter and summer) in order to complement the noise management assessments and action plans for major airports required by Directive 2002/49/EC (see paragraphs 3.12-3.15 above).

6.3 HACAN considers that the environmental objective must be expressed with greater transparency than in the past. In particular, the objective must be traceable to the World Health Organisation guideline values (see paragraphs 3.1-3.4 above). The subjective phrase “excessive noise” should not be used.

6.4 Directive 2002/49/EC requires Member States to publish by no later than 18 July 2008 action plans for major airports, with a view to **preventing and reducing** environmental noise where necessary - particularly where exposure levels can induce harmful effects on human health - and to preserving environmental noise quality where it is good. HACAN considers that the noise abatement objective for the next night flying restrictions at Heathrow must - in order to comply with Directive 2002/49/EC - be more demanding than merely preventing any further deterioration in the noise climate at night.

6.5 HACAN considers that the noise abatement objective for night flying restrictions must focus on deliverables over the period of the restrictions to a far greater extent than did the objectives for the earlier restriction. For example, one of the objectives for 1999-2005 was to bring about “**further improvements**” in the Heathrow night noise climate, whereas the night noise climate at Heathrow has deteriorated in recent years compared with the mid-1990s (see paragraph 4.23 above).

Q4a. Do you have any comments or suggestions for environmental objectives and specific noise abatement objectives for each airport?

HACAN would like to suggest the following environmental objective and noise abatement objective for Heathrow:

- The environmental objective is to ensure that no household located adjacent to Heathrow or under Heathrow’s flight paths is exposed to a level of noise from operations at Heathrow that exceeds the WHO guideline values.

Q4b. If so, please state for each objective the base case indicator against which it should be assessed.

The base case indicators for the noise abatement objective are L_{max} 60 dB(A) between 23.00-07.00 hours and L_{eq} 45 dB(A) for each hour between 23.00-07.00 hours.

7. CLASSIFICATION OF AIRCRAFT

7.1 Paragraph 7.23 of the Stage 1 consultation document states that, in the light of the responses to the questions in Section 7 (Questions 5, 6a, 6b and 6c), the Department intends in Stage 2 of the consultation process: (a) to propose a reduction in the departure noise limit; (b) to propose new noise insulation criteria to take account of the actual operational noise of the noisiest aircraft operating at night; and (c) to consider whether QC/4 aircraft should continue to be permitted to operate at the three airports between 23.00-23.30 hours and between 06.00-07.00 hours.

7.2 HACAN ClearSkies considers that the Stage 2 consultation document should include an assessment of:

- The effect of the proposed lower departure limit on the noise exposure data required by Directive 2002/49/EC.
- The cost of the proposed new noise insulation criteria.
- The cost of noise insulation criteria based on aircraft exceeding 60 dB(A) L_{max} (the value set down in the WHO *Guidelines for Community Noise* for individual noise events at night).

7.3 HACAN considers that the proposed ban on QC/4 between 23.30 - 06.00 hours would undermine the economic attractions of QC/4 movements between 23.00-23.30 hours and 06.00 - 07.00 hours. Any cost to the airlines of a ban on QC/4 movements between 23.00-07.00 hours would be compatible with the polluter pays principle. A protracted phase-out for QC/4 movements - in order to minimise the costs to the airlines - would not be justified.

Q5. Are you content that we should retain the QC system for classifying aircraft?

HACAN notes that the Boeing 747-400 powered by Rolls Royce engines is the main aircraft used for movements at Heathrow between 23.00 - 06.00 hours and is noisier in operation than its noise quota classification. We presume that as a consequence the noise climate around Heathrow is worse than is indicated by the noise quota data. We consider that the noise data to be compiled in compliance with Directive 2002/49/EC should be compiled from the actual noise rather than the certified noise.

Q6a. Do you have any comments on the proposal to remove the weight limit for jet aircraft able to qualify as exempt but, at the same time, extend the QC system downwards by a further band to QC/0.25 (84-86.9 EPNdB)?

HACAN considers that noise from aircraft below QC/0.5 should be included in the noise exposure data and noise maps required by Directive 2002/49/EEC. We reserve our judgement on the proposal to introduce an additional band pending an explanation in the Stage 2 consultation document of the effect an additional band would have on the present permitted number of movements and on the noise quota for the permitted number of movements.

Q6b. Do you have any comments on the proposal to retain the minus 9 EPNdB adjustment for arrivals?

On the basis of the information set out in paragraphs 7.18-7.21 of the Stage 1 consultation document, there seems little to be gained from dispensing with the existing 9 EPNdB adjustment. But it is difficult to see the issue in the wider context of air traffic noise at night because the document gives no indication of the scale of the benefit obtained from the adjustment compared with the scale of the disbenefits if the adjustment were not retained.

Q6c. Do you have any comments on the proposal to prohibit QC/4 aircraft from operating between 23.30 hours and 06.00 hours?

It is not clear on what basis the Stage 1 consultation document can describe the voluntary ban on QC/4 aircraft as a success, because the unnumbered table on page 64 of the document shows that in 2003 the number of QC/4 movements was 225 at Heathrow and 274 at Gatwick. HACAN would welcome an indication in the Stage 2 consultation document of the effect of replacing those numbers of movements with QC/2 aircraft on the noise exposure data required by Directive 2002/49/EC. We would also expect to see a reduction in the present noise quotas if QC/4 aircraft are banned (e.g. in the case of Heathrow, a reduction by 450 points).

8. NIGHT RESTRICTIONS FROM OCTOBER 2005: FURTHER PRELIMINARIES

8.1 HACAN ClearSkies considers that there should be common arrangements at all UK airports for night flying restrictions between 23.00-07.00 hours, based on the World Health Organisation's *Guidelines for Community Noise*. The restrictions should apply regardless of the density of population around a particular airport or under a particular flight path.

Question 7a. Do you have any comments on the value of there being common arrangements at the three airports?

Directive 2002/30/EC and Directive 2002/49/EC require a common approach at all UK airports, not only at Heathrow, Gatwick and Stansted. HACAN also considers that a common approach would avoid the transfer of noise burden from airports with "tight" noise controls to airports with "lax" noise controls.

Question 7b. Do you have any comments on retaining the same night quota period at the three airports?

For the reasons set out in the previous answer, HACAN favours the introduction of an 8-hour night quota period at all UK airports.

Question 8a. Points relating to density of population and ambient noise seem more germane to issues concerning the size of the night quotas and the number of movements permitted, rather than to the length of the night quota period: do you disagree?

HACAN considers that differences in density of population or in ambient noise do not justify different levels of protection from exposure to air traffic noise at night, which would be a form of discrimination and which could be in breach of the European Convention on Human Rights.

Question 8b. Are you aware of any reason why we should not take account of the comment in the WHO Guidelines that responses to aircraft noise are less likely to be influenced by ambient noise than are some other types of noise?

HACAN considers that the comments in the WHO *Guidelines for Community Noise* on ambient noise and air traffic noise says more about the pattern of disturbance from air traffic noise than about the relative significance of ambient noise and air traffic noise (assuming that the ambient noise level is less than the air traffic noise level).

Specifically, the *Guidelines* recognise that the level of air traffic noise is not constant over a measurement period. Variations occur at two levels: the selection of a flight path for use on a given day (not all flight paths are in use all the time); and the pattern of noise exposure in the area under a flight path in use (intensifying, peaking and diminishing above the measurement point, to be repeated after a "silent" interval throughout the period during which the flight path is in use).

HACAN considers that the *Guidelines* call into question the use of *Leq* as the sole method for assessing the impact of air traffic noise. In particular, the *Guidelines* recommend that *L_{max}* should be used in addition to *Leq*. HACAN considers also that the reliability of the limit values under *Leq* and *L_{max}* for identifying noise disturbance should be validated regularly by social surveys.

Question 9. Do you have any suggestions for further controls on movements during the night quota period if it is extended?

The Stage 1 consultation paper poses this question only for addressing the possible adverse effects of movement "bunching" if the present night quota period is extended. Bunching already occurs at Heathrow in the night period (23.00-07.00 hours). Movements are scheduled only between 05.00-07.00 hours, with some movements ahead of schedule between 04.30-5.00 hours.

Bunching also occurs between 23.00-24.00 hours when movements that are due before 23.00 hours fall behind schedule.

The disturbance caused by night flights at Heathrow is due to the noise level of each movement rather than to the bunching at each end of the night period. Moreover, the bunching at least means that the disturbance is concentrated between 23.00-24.00 hours and 04.30-07.00 hours, rather than at more widely-spaced intervals between 23.00-07.00 hours. HACAN would be grateful if the Stage 2 consultation document would acknowledge this pattern of disturbance at Heathrow.