

Stansted Airport Consultative Committee



Night Flying Restrictions at Heathrow, Gatwick and Stansted

Stage 1 Consultation

April 2013

STANSTED AIRPORT CONSULTATIVE COMMITTEE

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Introduction

As background, the Committee notes the consultation Executive Summary states the aviation sector is a major contributor to economic prosperity by providing the international connectivity needed to support economic growth. The Summary further states that Government supports the growth of the sector within a framework which maintains a balance between these economic benefits and its costs, which include the impact of noise on local communities around airports.

Residents living under or close to night flight paths at Stansted Airport need reassurance and evidence that their concerns about noise nuisance are indeed being reflected in the balance of assessment between economic benefits and adverse environmental impacts. The latter impacts seem to be recognised in paragraph 1.2 of the Executive Summary which states:

“Despite the significant improvements in aircraft technology and the associated noise reduction benefits, noise from aircraft operations at night remains widely regarded as the least acceptable aspect of aviation noise and the government has long recognised this”.

Night noise arising from both aircraft movements and airport ground noise continues to be a source of community annoyance around the airport and there is the fear that environmental considerations are, and will be, subordinate to notional economic benefits.

The Committee notes that whilst WebTAG (the Department’s transport appraisal guidance) provides methodology for monetary assessment of noise based on daytime road and rail noise, it does not provide any method for monetising night-time noise.

However the Department is currently considering this issue and it is understood that supplementary guidance may be issued later in the year. It is vital that any appraisal is sufficiently comprehensive and includes a robust and transparent method for monetising night noise.

The current night noise regime at Stansted Airport has considerable headroom both in terms of movements and quota usage. This may simply be a reflection of a downturn in the market, particularly from 2007 onwards, or that the levels were set in anticipation of a second runway at Stansted – a policy of the previous Government as set out in the 2003 Future of Air Transport White Paper.

The Committee is aware that The Davies Commission has been tasked with producing proposals on runway capacity in the UK and will be submitting a response later this year.

An initial view would suggest that Government traffic predictions do not support the development of a second runway at Stansted Airport.

Summary

Stansted Airport is located in a rural environment and as a result there are low levels of background noise compared with other airports such as Heathrow. This becomes a key issue when producing a valid impact assessment. Consequently there is clearly a need for supplementary noise metrics which measure and reflect the situation. Whilst a universal metric is valuable in assessing impacts, it needs to be supported by metrics appropriate for rural areas. The Committee is disappointed that despite regular requests for metrics that recognise event impacts rather than averaging, there appears to have been little progress.

While the Aviation Policy Framework (APF) dated March 2013 paragraph 3.19 recognises that *“people do not experience noise in an averaged manner...[and] encourages airport operators to use alternative measures which better reflect how aircraft noise is experienced in different localities”*, there are no limiting or guidance values provided by the Government for any alternative measures or the process of establishment. This appears to be in conflict with the earlier statement in paragraph 3.10 *“These airports [including Stansted] remain strategically important to the UK economy and we therefore consider that it is appropriate for the Government to take decisions on the right balance between noise controls and economic benefits, reconciling the local and national strategic interests”*.

The Committee wishes to know how this can be achieved without quantitative limiting values being provided for noise controls for alternative measures.

The lack of definitive values adds to the concerns felt by local residents around Stansted as to whether sufficient weight will be given to adverse noise impacts.

In addition to aviation night noise there are the associated road traffic movements in the early morning and late at night. Roads around Stansted Airport can be busy from 4.00am until midnight. Possible sleep disturbance experienced by residents living close to the airport should be a recognised factor. Any night noise regime should incorporate an allowance for the type of road traffic with the operation of the airport, the types of flight as well as the types of aircraft.

The Committee has noted recent ERCD reports on the health impacts of night noise which suggest that night noise not only results in sleep disturbance but can also be linked to cardiovascular disease. Whilst it is accepted that the methodology for estimating such impacts is developing, the Committee strongly recommends that such impacts are fully recognised in any new regime.

Stansted Airport has recently become under new ownership. It is not known at this stage whether this will result in any change to the current pattern of operations. Should this result in the development of long haul routes (which tend to operate in or around the night period), the new regime would need to reflect this direction.

The Committee considers that the extant method of limiting movements and quota points is a well-established and practical system, particularly since this closely reflects what people actually hear. However it is the number of events and sound energy of each event that causes annoyance, not an average Leq measurement. As stated above the effect of a single movement produces greater annoyance in a rural environment compared with an airport located in an area with a high density of population. Hence the development of an improved noise assessment methodology with supplementary metrics should be a key requirement.

Stansted departure NPRs consist of sharp turns resulting in additional noise from certain aircraft. The committee considers that any night noise regime should have in parallel an actual noise measurement budget based on readings at defined geographical locations, which could be set distances from the end of the runway common to all airports. The combination of Quota Counts and the 'Actual Noise Budget' could be a factor in determining the night flight regime limits.

Correspondingly there is scope to more closely relate resident noise mitigation and compensation to a more valid measure, metric or indeed 'budget' (as defined above).

Looking forward to the next regime, there should be a re-evaluation of the extent of need for night flights based on clear evidence to establish whether there is a real requirement and to move them into the day wherever possible. For example, it has regularly been stated that night flights are a key requisite for the air cargo industry. The Committee would be interested in research establishing how much cargo is time sensitive or whether night flights are merely part of the business model employed by air freight companies.

In terms of passenger flights, what scope is there for moving flights currently operating in the two shoulder periods either to later in the morning (i.e. after 7.00am) or to earlier in the evening (i.e before 11.00pm). The alternative would be to include the shoulder periods with a limited and graduated noise quota as part of the total allowance.

The Committee strongly recommends that the next Night Flying Restrictions regime should be tailored to suit each individual airport – Heathrow, Gatwick and Stansted. It is clear that each of these airports has a different operational model and local circumstances. Future noise abatement objectives for Stansted Airport should reflect the current operation of the airport and recognise the adverse impacts of noise upon the surrounding community.

The Noise Quota regime was designed to incentivise the aviation industry to introduce more noise efficient aircraft. While it is true that significant improvements have been made in aircraft technology such that the current generation of aircraft are less noisy than the turbo-jet engines of the early 1970s, there is very limited scope for further improvements in airframe and engine technology to reduce noise. It should also be recognised that aircraft now remain in service for up to 25 years.

Most fleets currently operating at Stansted utilise modern aircraft. Consequently, further medium term improvements will only be achieved by operational means, rather than by aircraft design. This should be the focus.

The new regime will therefore need to focus on the measures outlined in our response to the questions to reduce aircraft noise nuisance.

Answers to Questions

Policy and legal landscape

Q1: Are there any other matters that you think we should cover in the second stage consultation?

A1: The consultation does not address the key issue of the need for a review and improvement in the method of noise assessment which is still fundamentally based upon levels of average Leq values. The Committee considers that there is a need for supplementary metrics – in particular reflecting the impact of aircraft noise at night and noise in a rural environment. Evidence from the ANASE report suggested that people were becoming annoyed by aircraft noise at lower levels even though aircraft had become progressively quieter over time. An emerging issue was that people were being concerned by the frequency of aircraft rather than noise emitted. The Committee believes that the Department should commission research to inform the development of a new robust and comprehensive framework for the measurement and control of aircraft noise impacts. The new framework should also take full account of the recommendations set down in the ANASE report, World Health Organisation (WHO) *Guidelines for Community Noise* and its *Night Noise Guidelines for Europe*.

It is also considered an option to have a parallel budget of actual noise levels measured at specific distances from the runway. This would reflect actual operating conditions and serve as a brake where aircraft with a lower quota count than their operation produced could be accounted for. It would also go some way to incorporating an 'event' measurement regime. The combination of Quota Counts and the 'Actual Noise Budget' could be a factor in determining the night flight regime limits.

Factual Information

Q2: Do you have any comments on our assessment of the extent to which the current objectives have been met?

A2: As a proportion of overall movements, Stansted Airport has more departures at night than Heathrow and Gatwick, mainly comprising short-haul passenger services (42%) and cargo movements (45%). The passenger fleet is modern with newer noise efficient aircraft being operated. The cargo operators are gradually introducing newer quieter aircraft. It should be noted that Stansted - unlike Heathrow and Gatwick - has dedicated cargo services operating during the night period. In both summer and winter, approximately two thirds of scheduled movements take place between 11.00pm and 1.00am with a fairly even spread of movements between 1.00am and 6.00am. The largest user of night movements has been Ryanair (which

operates a modern fleet of Boeing 737-800s) with approximately one third of movements.

Cost benefit analysis carried out for Heathrow night flights by C E Delft in 2011 reached the overall conclusion "... *that a ban on night flights at Heathrow is likely to be beneficial to the economy as the economic costs of the ban will be outweighed by the savings made by the reduced health costs of the sleep disturbance and stress caused by the noise of the night flights*". The study applied WHO methodology to evaluate the costs of night noise effects at LHR. Although the operating conditions at Stansted differ from those at Heathrow, the Committee would welcome the Department's comments as to the effect of applying this methodology to Stansted operations. As stated previously, the Committee would welcome further information as to the justification for night flights and the scope for such flights to operate outside the night period.

The environmental and night objectives of the current regime at Stansted appear to have provided too much headroom and have been easily met with no concomitant benefits to the well-being of the local residents. It is not known whether this is a result of the downturn in traffic or other circumstances. Additionally the values given in the WHO *Guidelines for Community Noise* and its *Night Noise Guidelines for Europe* have not been realised in the current objectives.

Q3: Do you have any views on how these objectives should change in the next night noise regime?

A3: The Committee believes if the next regime is to be effective in mitigating night disturbance, tighter objectives should be set. Airlines and the airport operator should be set meaningful objectives and reduced allocations to reduce noise impacts. As mentioned above, the scope for reduction of limits is considerable due to the headroom currently afforded for the airlines.

Additionally changes should be introduced to provide supplementary metrics used to measure night noise. Whilst the existing Leq system remains of value, it is clear that it needs to be supplemented. The current system of restrictions is based upon the number of events (movements) and the noisiness of each aircraft (QC points) but the system is then compromised when Leqs are used. While it will be important at Stansted to measure noise impacts against background noise levels in the next regime, the sole reliance on 6½ hour or 8 hour Leqs should be reviewed and improved.

Since all aircraft are inherently noisy, the main focus should be on reducing the number of aircraft movements at night. The Committee would wish to see environmental objectives set for the next regime that:

- fully realise World Health Organisation guideline values in a specified timeframe.

- do not solely rely on sizes of Leq contours and population counts.
- provide flexibility for the timing of night flights to be adjusted to allow for a period of respite. There is also no reason why such flights could not take place during the day, although the cost may be a little higher.

Structure of the Current Night Noise Regime

Q4: Do you have any views on whether noise quotas and movement limits should apply only to the existing night quota period or to a different time period?

A4: The Committee considers the existing system of night quota and shoulder periods should be examined. The Committee further notes that the night period as defined in the WHO *Guidelines for Community Noise* relates to the 8 hour period between 11.00pm and 7.00am for the night quota period. In setting the parameters for a new regime, the Committee considers that the definition of the night period should be re-examined. However it is noted that simply extending the period and including existing operations in any new period would not provide any mitigation benefits for local residents does not provide the answer. Any solution should reduce the local environmental impact. It is also possible to introduce a graduated quota count according to the time or operation.

Q5: Do you have any new evidence to suggest we should amend or move away from the current QC classification system?

A5: The current QC classification is a well-established and robust system and should be retained. The 3dB bands are appropriate in that a 3dB change is one that is the minimum perceptible under normal conditions. However the Committee would wish to see regular validations to compare actual noise operating levels with certification levels.

The system of annual reductions in the quota limits should be retained and the limit reduced to more adequately reflect the fleet mix at Stansted.

Equally the limit on movements is a robust system and should be retained.

Q6: Do you have any views on the optimum length of the next regime and how this should align with the work of the Airports Commission?

A6: The Committee believes the optimum length of the next regime should be five years. This is the duration of airport Noise Action Plans and is sufficiently long for improvements in noise reduction to be realised. Any longer time period would set too long a timeframe and not provide sufficient incentive to realise Noise Action Plan objectives and targets.

Q7: Do you have any views on how dispensations have been used?

A7: It is understood that the Airport has not needed to utilise dispensations. Any additional flights have been accommodated within existing movements and quota limits

Q8: Do the dispensation guidelines still adequately reflect current operational issues?

A8: See above

Q9: Would you favour adding greater contingency to the seasonal movement limits (within any overall movement cap for the airport) in order to avoid large numbers of dispensations?

A9: This is not a current issue for Stansted.

Q10: Do you consider there is still a need to retain the principles of carry-over and overrun? If so, please give reasons why.

A10: The principle of carry over and overrun is a helpful facility. However it needs to be strictly monitored to ensure that it does not merely provide a convenient facility for airlines to increase night flights

Q11: If we retain the principles do you think we should change the percentage of movements and noise quota which can be carried over or overrun?

A11: No.

Exploration of Options for the Next Night Noise Regime

Q12: Do you have any comments on our analysis of fleet and operational trends?

A12: As stated previously, the greater part of the Stansted operating fleet is modern and noise efficient.

Q13: In the absence of any new restrictions, what changes in operations and fleet mix do you expect in the period between now and 2020 (and beyond 2020 if possible)?

A13: The main cargo operators are understood to be engaged on fleet replacement plans to introduce newer and quieter aircraft.

Q14: Please set out how you expect local land use planning policies to impact upon the numbers of people exposed to night noise in the next regime. Please give details

of any housing developments planned to take place within the current night noise contours (see Annex B).

A14: It is disappointing that, at the time of writing, no new guidance to replace PPG 24 has been published. Whilst the Committee agrees with the principle of localism, it is vital that local planning authorities have some form of central guidance in reaching planning decisions. Such guidance would help ensure consistency in policy decisions reached by planning authorities considering applications in areas affected by aircraft noise. It is understood that some authorities in the Stansted area have decided to continue to use the past PPG guidance pending the introduction of new central guidance.

Q15: Please provide any information on the feasibility of increasing the angle of descent into Heathrow, Gatwick or Stansted, particularly within the next seven years.

A15: The Committee would welcome the introduction of new operational procedures such as steeper descent angles and Continuous Descent Approach to runway 04 at Stansted Airport.

Q16: What are your views on the analysis and conclusions in annex H? Would you favour changing the current pattern of alternation in favour of an easterly preference during the night quota period?

A16: This is more applicable to Heathrow operations

Q17: Do you have any views on the costs and benefits of a night-time runway direction preference scheme at Gatwick or Stansted?

A17: A night-time runway direction preference scheme at Stansted is unlikely to have any significant noise benefits.

Q18: Please provide any information about the feasibility of using displaced landing thresholds in the next seven years for arrivals from the east at Heathrow and from the north east at Stansted.

A18: The shape of the noise exposure contours for Stansted Airport is not symmetrical about the axis perpendicular to the runway. The contours are shorter and fatter to the south-west and longer and thinner to the north-east. This has effect that when the area contained within the contours grows, more of the town of Thaxted enters the contours (a relatively large town to the north-east of Stansted Airport). This has the result that the increase in the total number of properties and population contained within these contours is disproportionately larger as more of Thaxted enters the contours.

It could therefore possibly be a benefit to residents to the north-east of Stansted Airport and Thaxted in particular if a displaced landing threshold was introduced for arrivals to runway 22.

Q19: Please provide any information about airspace changes or other operational procedures which could mitigate the impact of night noise in the next regime period

A19: The consultation document states that *“Operational procedures can make a significant difference to the way in which noise is distributed, particularly at night”*. This is particularly true around Stansted in view of the low levels of background noise within this largely rural environment. The Committee fully agrees that improved operational procedures can reduce noise nuisance around an airport. Since the scope for technical improvements to aircraft engines and airframes are now limited, improvements to the noise climate will be achieved through better flight paths and other operational improvements.

At Stansted, early introduction of the following improved procedures will bring benefits to local residents and users alike:

1. Airspace change

The most important airspace change needed for Stansted Airport is the implementation of Continuous Descent Approach (CDA) for runway 04. This will reduce noise exposure from arriving aircraft over Hertfordshire and particularly in the vicinity of Ware. Stansted is the only designated airport without the benefit of CDA on all runway directions.

The intention to retain Noise Preferential Routes (NPRs) and improve them where necessary is welcomed. This should include ensuring all NPRs are to 4,000ft minimum but preferably cleared for fast climb to above 5,000ft.

Reducing the swathe size of NPRs should also be considered. The accurate track keeping capability of modern aircraft means that the current 3km wide swathe could be reduced with aircraft keeping to the NPR centre line, or to a line profiled to avoid settlements. It is recognised that concentrating all traffic on one line rather than dispersing it across an NPR introduces the ‘concentration’ versus ‘dispersion’ debate. Informal trials at Stansted have already demonstrated this potential for accurate station keeping and formal CAA trials are due to start in May 2013 with centreline adherence as the design priority. This will facilitate the eventual commensurate reduction in swathe widths.

Alternatively, respite is valuable for communities close to an airport and the potential for more than one concentrated route within an NPR may, in the future, be considered on an individual basis.

2. Noise after take-off

Different noise limits could be set for different types of aircraft on take-off. It would be sensible not to have a proliferation of different limits, but perhaps two or maybe three depending on the traffic mix at each airport. At Stansted the vast majority of aircraft are B737/A319 for which the departure QC is 0.5 (87 – 89.9 EPNLdB) so it should be possible to introduce two sets of three limits, one for each of the day, night and night quota periods. That is to say a lower set for aircraft of QC 0.5 and below and a higher set for aircraft of QC 1 and above.

The new sets of limits could be scaled from the existing limits and/or related to the 'Actual Noise Budget' detailed in our earlier answer.

3. Gradient of Climb on Departure (jet aircraft)

Currently a minimum gradient of 4 degrees is required up to 3,000 or 4,000ft. It is considered that with the ability to perform Continuous Climb Departures (CCD) and the improved climb capability of more than 5 degrees of modern aircraft, this gradient angle should be increased.

4. Reverse Thrust

Paragraph 4 of the Notes to the Stansted UK AIP states *"To minimise disturbance in areas adjacent to the aerodrome, commanders of aircraft are requested to avoid the use of reverse thrust after landing, consistent with the safe operation of the aircraft, from 2330 hours to 0600 hours (local time)".* This is considered inadequate wording to discourage the use of reverse thrust except when safety dictates. At other European international airports, the guidance is more prohibitive, for example:

- Frankfurt: *"Reverse thrust may not be used on the entire runway system of Frankfurt/Main Airport except for safety reasons in unavoidable cases. This does not apply to idle reverse thrust."*
- Schiphol: *"During night-time 2200-0600 (2100-0500): After landing, reverse thrust above idle shall not be used on any runway, safety permitting."*
- Copenhagen: *"Use of more than idle reverse thrust is allowed only for safety reasons."*

To further encourage avoidance of unnecessary reverse thrust particularly at night, the UK AIP guidance notes could be strengthened to state that *"reverse thrust above idle shall not be used except for safety reasons"*.

5. Noise Abatement Departure Procedures (NADP)

There are two types of procedure, one that minimises noise close to an airport and the other which minimises noise further away. Depending upon which type of NADP is used, there is a small difference in fuel burn and a large change in the location of noise exposure on the ground. Close to the airport, noise reduction should take precedence over any fuel burn economies which are of marginal benefit in terms of fuel savings and emissions over the total duration of the flight.

6. Joining point

Under current rules, the joining point criteria for Stansted runway 04 vary between daytime and night-time. Daytime arrival rules reduce the likelihood that aircraft fly over the urban areas of Ware, Hertford and Hoddesdon. Trials are currently being conducted at Stansted whereby the night-time joining point is moved closer to the airport to investigate whether the resultant night noise exposure is reduced.

Q20: Do you have any comments to make on the figures relating to movement limits and usage?

A20: The current regime is based upon the Government's previous policy which supported and anticipated a second runway at Stansted around 2012 and had set night flying limits based upon the associated anticipated level of movements balanced against noise disturbance. The restrictions therefore currently in force at Stansted have considerable headroom in that last year only about two thirds of the permitted night flights actually took place (8,135 out of 12,000 limits).

For the next regime, the Committee would wish to see movement limits and usage more closely related to actual figures at Stansted and at the same time setting progressive annual reductions.

Q21. In the absence of any new restrictions, how do you expect demand for movements in the night quota period over the course of the next regime to change?

A21: There should be a re-evaluation of the need for night flights based on clear evidence to establish whether there is a real need and to move flights into the day wherever possible. At Stansted, there is ample capacity during the day for additional flights that are currently operated at night.

Q22: Do you have any comments to make on the figures relating to noise quota limits and usage?

A22: See response to Q20. Noise quota limits and usage should be more closely related to actual figures at Stansted and continuing the practice of the annual reduction of QC points.

Q23: Do you agree with our initial assessment of the scope for reducing the noise quota in the next regime without imposing additional costs?

A23: Paragraph 5.46 states “our initial assessment is that the greatest scope for reducing the noise quota at minimum cost to airlines is where the percentage of noise quota used is already much lower than the percentage of movements limits used and where this trend has been over the longer term, irrespective of temporary economic circumstances. Largely, there has been a consistent pattern in recent years of lower noise quota usage than movement limits. The exception is Stansted’s most recent winter seasons...”

This statement is not wholly borne out for Stansted. The data given in Tables 9 and 12 show the comparative percentage usage as given in the table below;

Stansted	% movements usage	% noise quota usage
Winter 2006/07	75.0	71.6
Summer 2007	104.4	89.8
Winter 2007/08	72.2	70.0
Summer 2008	92.8	81.1
Winter 2008/09	63.9	62.3
Summer 2009	85.4	73.7
Winter 2009/10	68.5	69.1
Summer 2010	86.9	72.7
Winter 2010/11	51.9	52.7
Summer 2011	85.8	75.6
Winter 2011/12	46.0	49.3
Summer 2012	83.4	77.5

The percentage of the noise quota used at Stansted is closely tied to the percentage of the movements used in the last six years (the reduction in noise quota usage follows the decline in the number of movements at Stansted since the peak of 191,488 in 2007 to 131,409 in 2012). This would suggest that there is scope for reducing the noise quota at Stansted in the next regime, particularly in winter, based upon the current actual level and using this as a starting point for future demand.

However, it is the frequency of aircraft movements that has the most effect on noise nuisance at night. There is also scope for a reduction of movement limits at night, particularly in winter, based upon the current actual level and using this as a starting point.

Q24: Do you have any views on the relative disturbance caused by the noise of an individual aircraft movement against the overall number of movements in the night quota period?

A24: A modern jet aircraft is intrinsically noisy and emits 140 decibels of noise which is at the threshold of pain and would cause permanent hearing damage to humans if exposed to this level for any period. It is eight times louder than a pneumatic drill and 250 times louder than normal conversation. Due to the rural character of the area around Stansted Airport, each flight can be clearly heard above the low background noise levels and it is the number of flights as well as the noise of each flight that causes annoyance and sleep disturbance.

Each noisy event such as an aircraft can be distinctly audible against the low background noise levels. In addition, flights within the night shoulder periods (11.00pm-11.30pm and 6.00am-7.00am) are of particular concern around Stansted, just over tenth of all complaints relate to this period, nearly double the percentage of the number of movements.

Due to an intensity of take-offs and landings designed around the low cost carriers' business model using aircraft for four round trips per day. This causes considerable intrusion to those local residents beginning or ending their sleep. The link between the number of aircraft noise events (ANE)s and sleep disturbance does not seem to be well documented. It is noted however that the World Health Organisation *Night Noise Guidelines for Europe 2009* used an assumption in its methodology of an average air traffic exposure of eight flights a night. Currently the actual average number of movements at Stansted for a 6½ hour night is 24.2 flights – three times as many. It only requires one ANE to cause sleep disturbance around Stansted Airport and the larger the number of ANEs, the larger the effect on sleep disturbance.

It seems clear from the CAA review of sleep disturbance that the louder the ANE, the greater the likelihood of an effect on sleep. What is less clear is how the frequency of ANEs affects sleep disturbance since it seems that only Leq values are discussed.

This would clearly suggest that the Government should introduce an improved measurement system for aircraft noise particularly at night.

Q25: What are your views on the feasibility of a QC/8 and QC/16 operational ban in the night period? Please set out the likely implications of such a ban and the associated costs and benefits.

A25: In 2012, there was only one movement of a QC/8 aircraft and no QC/16 aircraft movements during the night quota period at Stansted as older aircraft have been replaced. The Committee would wish to see the existing ban maintained and extended to the night period from 11.00pm to 7.00am.

Q26: How many QC/4 aircraft do you expect to be in operation over the next seven years during the night quota period? Is the downward trend at Heathrow expected to continue?

A26: There have been limited QC 4 operations at Stansted.

Q27: What are your views on the feasibility of a QC/4 operational ban in the night quota period at any or all of the three airports? Please set out the likely implications of such a ban and, where possible, the associated costs and benefits.

A27: There should be a complete ban on flights of QC/4 aircraft not only during the night quota period but also throughout the night period from 11.00pm to 7.00am. The costs to the airlines of transferring such a small number of night flights at Stansted are considered to be outweighed by the benefit of the true value of a proper night's sleep to individuals contributing to the wealth of the UK economy whose efficiency is impaired by interrupted sleep.

Q28: Are there more cost-effective alternative measures (such as penalties) to reduce the number of unscheduled QC/4 operations during the night quota period?

A28: As well as penalties for noisy aircraft operating at night, the Committee believes that airlines should be incentivised to fly less noisy aircraft by introducing differential and less expensive landing charges for daytime operation.

Q29: What are your views on the feasibility of an operational ban of QC/4 aircraft at any or all of the three airports during the shoulder periods? Please set out the likely implications of such a ban and the associated costs and benefits.

A29: As earlier stated in A27 above, the Committee would wish to see a complete ban on flights of QC/4 aircraft not only during the night quota period but also throughout the night period from 11.00pm to 7.00am.

Q30: What is the rationale for operating services at precise times during the night quota period (as they do now)?

A30: As stated in A24, the night shoulder periods (11.00pm – 11.30pm and 6.00am – 7.00am) are of particular concern around Stansted, resulting from an intensity of take-offs and landings designed around the low cost carriers' business model of using aircraft for four round trips per day. While movements between 2.00am and 6.00am are relatively few at Stansted, and the Committee would wish this to be reduced still further, the night shoulder periods are as much of a noise nuisance as the night quota period.

Q31: What is the scope for introducing a respite period at Gatwick or Stansted? Please set out the associated costs and benefits.

A31: As stated in A30 above, the Committee would wish to see a respite period introduced initially in the night shoulder periods at Stansted.

Q32: What is the feasibility of making Heathrow's voluntary curfew mandatory?

A32: No comment.

Q33: If you favour a guaranteed respite period, what would be the minimum period which you would consider to be worthwhile?

A33: The Committee considers that at Stansted, as earlier explained, the night shoulder periods are a source of concern due to the intensity of take-offs and landings in these periods. A guaranteed respite during these periods would be welcomed. In addition, guaranteed respite in the early hours of the night quota period (e.g. 11.00pm to 1.00am) would also be welcomed.

Q34: What are your views on the principle of trading off a complete restriction on movements in one part of the current night quota period against an increase in flights in another part of the night quota period?

A34: Trade-offs are a compromise in principle. However, it would be preferable to reduce movements in the night shoulder periods and the early hours of the night quota period as outlined in A33 above.

Q35: What are your views on the possibility of fewer unscheduled night flights arising from an increase in daytime arrivals 'out of alternation' or vice versa?

A35: Any reduction in night flights would obviously be welcomed

Q36: What value do you place on day time respite compared with relief from noise in the night quota period?

A36: Respite from aircraft noise would be welcomed especially if this results in a reduction in night flights

Q37: Do you have any views on the extent to which landing fees can be used to incentivise the use of quieter aircraft during the night period?

A37: A scheme of differential landing fees could be used to incentivise the use of quieter aircraft at night. If initial findings from the CAA study indicate that monetary incentives "are not strong" particularly at night, then this needs to be rectified in the next economic regulation regime to properly reflect the noise related element of landing charges. There is currently no differentiation between day and night landing charges at Stansted and this should not be allowed to continue. A differential

scheme could be easily structured by a sliding scale of the noise-related element of fees to the QC ratings

Q38: Please provide comments and evidence on the extent to which the noise insulation scheme criteria have been met. Where possible please include figures for numbers of properties insulated under the scheme and numbers which are still potentially eligible.

A38: The noise insulation scheme is solely based on LAeq contours and our comments concerning the adequacy of sole reliance on LAeq contours are given in A3 above. The noise insulation scheme should be brought up to date with more reliance placed upon the low background noise levels which exist around Stansted Airport. As disturbance is event-related, insulation and other mitigation measures should be linked to events and event intensity as well as the average measure.

Q39. Do you have any suggestions for changes to current compensation schemes or for new compensation schemes that might be introduced to help offset the impact of night noise on those exposed to it? For new schemes, please explain the parameters that you would suggest for the scheme and the rationale for choosing those parameters.

A39: As explained earlier, the Government should introduce an improved measurement system for aircraft noise and this should be used as the basis for compensation schemes. Our response has highlighted the impact of noise events rather than average noise and hence any compensation scheme should recognise this factor too. As an interim measure, however, the Leq.16-hour qualification threshold should be reduced from 66 dBA to 55 dBA, the threshold specified in the *WHO Guidelines for Community Noise*, as marking the onset of 'serious annoyance daytime and evening'.

Turning specifically to night noise, any household exposed to aircraft noise at night above threshold of 60 dB LAmax.fast set down in the *WHO Guidelines for Community Noise* should also qualify for acoustic insulation.

Q40: Do you have any proposals for new or improved economic incentives that could be deployed to incentivise the use of quieter aircraft during the night period?

A40: As a means of discouraging night flights, the scope for significantly higher rates of Air Passenger Duty (APD) should be examined for passengers whose flights depart during the night period and a new APD rate should be introduced for passengers whose flights arrive during the night period. This proposal would need to be referred to HM Treasury, but this is feasible before the new regime commences.

Night flights Evidence Review

Q41: Is there any other evidence we should consider in assessing the response of airlines and air transport users to changes in the night flights regime?

A41: Since the last Night Flying Restrictions regime was set in 2006, the three designated airports have experienced a 37% reduction in charter flights and a 19% reduction in cargo flights. This reflects what is happening in the market as a whole and so suggests that the industry's 'need' for night flights is significantly less than was the case in 2006.

Q42: Is there any reason why we should not seek to ensure consistency with the Aviation Appraisal Guidance approach to assessing air passenger impacts?

A42: No Comment

Q43: What are your views on how we should assess the impacts on air passengers associated with a change in night flights regime, if we are unable to use the Department's aviation models?

A43: No Comment

Q44: Do you think there is merit in applying the approach employed by CE Delft? If so, do you agree that it is reasonable to assume that business passengers and transfer passengers prefer to arrive on a night flight, if they would choose to do so if one were available? What are your views on what we should assume about terminating passengers' preferred arrival times and about passengers' preferred departure times?

A44: The CE Delft study related to Heathrow. The Committee would be interested to know the effect of applying such methodology to Stansted

Q45: Do you agree that the impacts on passengers who decide not to travel (or become able to travel) as a result of the change in night flights regime could be critical to the balance of costs and benefits?

A45: Passenger charter flights which operate during the night at Stansted are entirely focused on flying UK residents to and from their overseas holiday destinations. This is also, very largely, the case with scheduled passenger flights (almost entirely Ryanair and Easyjet) which operate during the night period.

A passenger survey should be undertaken to better inform the answer to this question and therefore calculate the likely impacts. There should be a sensible balance between the economic benefits of night flights and the economic dis-benefits from loss of sleep for local residents living near an airport. Outbound tourism may not be a net economic benefit at night for the UK.

Q46: Are you aware of any evidence that we could use to value the impacts on passengers who decide not to travel or (become able to travel) as a result of the change in night flights regime?

A46: See A45 above.

Q47: Do you think that the method used by Oxford Economics (2011) to assess the impacts on productivity of changes in business usage of aviation (the approach is described in paragraphs J22-23 of Annex J) would adequately take account of the impact on air freight service users of changes in the current night flights regime?

A47: No Comment

Q48: Do you think that, were we to employ the method used by Oxford Economics (2011) to assess the impacts of changes in business usage of aviation on UK productivity (the approach is described in paragraphs J22-23 of Annex J), we would need to isolate the impact on business air passengers in our assessment of air passenger impacts in order to avoid double-counting of business air passenger impacts?

A48: No Comment

Q49: Is there any other evidence or information that we should consider in assessing the impact on air freight service users of a change in the night flights regime?

A49: The Committee would wish to be advised about the justification of night cargo flights.

Q50: Is there any reason why we should not seek to ensure consistency with the Aviation Appraisal Guidance approach to assessing airline and airport impacts?

A50: No Comment

Q51: What are your views on how we should assess the impacts on profits, if we are unable to use the Department's aviation models?

A51: No Comment

Q52: Do you agree that there is merit in our applying a similar approach to that employed by Oxford Economics to estimate the economic value of night flights at Heathrow? If so, are you able to provide any evidence of how much freight is carried on night flights at the designated airports? What factors should we consider in assessing the applicability of the available profits data to night flights at the designated airports?

A52: No Comment

Q53: Is there any other evidence we should consider in assessing the impacts of a change in the night flights regime on airlines and airports?

A53: A reduction in the number of night flights could be expected to lead to a much improved relationship between the airport operator and the local community.

Q54: Do you agree that the approach proposed by the Civil Aviation Authority (CAA) for estimating the cost of sleep disturbance from aircraft noise reflects the available evidence? If not, how do you think it should be changed?

A54: The Committee welcomes the efforts of CAA in outlining a first approach to estimating the cost of sleep disturbance. The CAA report states that in terms of day time noise, additional research is needed in order to develop a workable methodology for monetising the effects of cognitive impairment in children and in the meantime, this effect is excluded. This is a significant exclusion because (as the report states) cognitive impairment in children results in a loss of long-term productivity.

Additionally, it is not clear whether the CAA report has considered the cost of reduced productivity caused by aircraft noise at night. If, for example, a disturbed night's sleep results in the loss of working efficiency the following day, this would clearly have an economic dis-benefit.

Q55: Is there any other evidence, not considered by the CAA in their literature review, which we should consider in assessing the noise impacts of a change in the night flights regime?

A55: As outlined in A1 above, there is no discussion or proposals in the Stage1 Consultation for review of and improvements to the method of noise assessment which is still fundamentally based upon levels of average Leq values. This is a seeming contradiction to the fundamental operation of the Night Flying Restrictions regime which is solely based on movements and QC ratings. In other words the regime operates as closely as possible to what people actually hear – the number of noise events and the noise level of each event – not to average levels of Leqs.

The Committee believes that the Government should introduce supplementary metrics to improve the measurement system for aircraft noise, particularly at night, such as that described in the ANASE report. Moreover the evidence gathered in the course of the ANASE study clearly showed that the DfT is relying upon an out-of-date system for assessing aircraft noise impacts, based as it is on dose/response surveys in the early 1980's and when the volume of air traffic movements was much less than today. A doubling of like-for-like aircraft movements will increase the Leq by only 3dB which is not reflected in those surveys. The DfT should take forward the work of ANASE and develop a new framework for the measurement and control of aircraft noise impacts. This should also take full account of the recommendations set down

in the WHO *Guidelines for Community Noise* and its *Night Noise Guidelines for Europe*.

This work should be taken forward when assessing the noise impacts of a change in the night flights regime.

Q56: Do you agree that we should ensure that the method used to assess air quality impacts should be proportionate to the proposals under consideration?

A56: No Comment

Q57: Is there any other evidence we should consider in assessing the air quality impacts of changes in the night flights regime?

A57: No Comment

Q58: Do you agree with our proposed approach? Is there any evidence on nonCO2 climate change impacts we should consider?

A58: No Comment

Q59: Is there any reason why we should not seek to ensure consistency with the Aviation Appraisal Guidance approach to assessing public accounts impacts?

A59: No Comment

Q60: What are your views on how we should assess the impacts on the public accounts, if we are unable to use the Department's aviation models?

A60: No Comment

Q61: Do you agree that there is merit in our applying a similar approach to that employed by Oxford Economics to estimate the impact on APD revenues?

A61: No Comment

Q62: Do you agree that the impact of any change in the night flights regime is unlikely to have a significant impact on employment, and therefore any impact on employment taxes will be minimal?

A62: No Comment

Q63: Is there any further evidence we should consider in attempting to assess the indirect impact of a change in the night flights regime on indirect taxation revenue across the rest of the economy?

A63: The reduction of night flights would result in less sleep disturbance which would mean higher productivity from those living near airports. This would, it is suggested, deliver economic benefits to the UK economy.

Q64: What are your views on our employing a similar approach to that employed by Oxford Economics and Optimal Economics in assessing the impact of a change in the regime on UK productivity? Do you agree that if we were to employ this approach there would need to make adjustments to avoid double counting the benefits to business passengers and freight service users?

A64: No Comment

Q65: Is there any further evidence we should consider in attempting to assess the impact of a change in the night flights regime on UK productivity?

A65: No Comment

Q66: Do you agree with our proposal to assess the impact on tourism of a change in the night flights regime qualitatively? If not, why not, and what would you suggest as an alternative?

A66: No Comment

Q67: Is there any further evidence we should consider in attempting to assess the impact of a change in the night flights regime on UK productivity?

A67: No Comment

Q68: Do you agree with our proposed approach to considering the potential impact of a change in the night flights regime on UK employment? If not, why not, and what would you suggest as an alternative?

A68: No Comment

Q69: Is there any further evidence we should consider in attempting to assess the impact of a change in the night flights regime on UK employment?

A69: No Comment

Q70: Are there any other impacts, not considered above, that we should consider in assessing the impacts of a change in the night flights regime (e.g. impacts related to

the way people travel to and from the airport)? If so, what evidence should we consider in assessing these impacts?

A70: At Stansted, the low cost airlines account for over 94% of all passengers handled (Ryanair alone for over 70%) and their operating timetable extends into the night shoulder periods. There is a knock-on effect in terms of sleep disturbance caused by road traffic related to early morning and late night flights. Roads around Stansted can be busy from about 4.00am until midnight. Looking forward to the next regime, there should be a re-evaluation of the need for night flights based on clear evidence to establish whether there is a real need and to move them into the day wherever possible.

**Stansted Airport Consultative Committee
April 2013**