



Response Guide to DfT Night Flights Consultation Part 2

[Part 2](#) looks at national night flights policy and restrictions beyond 2024, including dispensations and airport designation arrangements.

You can send your responses by email to night.flights@dft.gov.uk or complete the online form here: <https://www.smartsurvey.co.uk/s/4AJWXY/>

Deadline for submissions is **11: 59pm on 3rd September 2021.**

Note for Members: This guide constitutes our response to Part 2 of the consultation.

Please do consider submitting a response and use this guide to inform your own submission.

You do not have to answer all of the questions. You can simply write a short email setting out your key concerns and objections.

Introduction

HACAN (Heathrow Association for the Control of Aircraft Noise)¹ is a campaigning organisation formed in the 1970s to give a voice to residents under the Heathrow flight paths. We are a regional body covering London and part of the Home Counties.

This document contains our response to Part 2 of the DfT's Night Flights Consultation.

For the avoidance of doubt, HACAN members oppose night flights at Heathrow and want to see the numbers reduced leading to a complete 8-hour ban between 11pm and 7am.

Night flight dispensation review

Following the 2017 Night Flights Consultation, Government committed to a review of the dispensations granted at the designated airports (Heathrow, Gatwick and Stansted).

This review found that adverse weather was the main factor resulting in unscheduled night flights. Strikes by Air Traffic Control (ATC), IT problems and medical emergencies were the next leading causes.

Heathrow apply pre-emptive dispensations to help reduce the risk of delays during the early morning hours. The dispensation guidance does not explicitly permit or prohibit this, and there is not currently sufficient evidence to conclude whether the benefits of this approach outweigh its negative effects.

¹ www.hacan.org.uk



The review found that some movement dispensations may not strictly meet the criteria and proposed that the government refines the guidance to provide better clarity.

7. What are your views on the:

- ***findings of the night flight dispensation review?***
- ***proposals for the night flight dispensation review?***

The experience of many communities around Heathrow is that late flights are permitted for reasons that have nothing to do with the listed dispensations. All too often the congestion at the airport caused by the desire to squeeze in as many planes as possible, with the result that later running becomes inevitable.

The proposals do not go far enough. The definitions of flights qualifying for dispensations should be strengthened to avoid events that should be included within normal planning being claimed as dispensations, to the cost of local communities. It is disappointing that the proposals do not contain any penalties on the designated airports for granting dispensations that do not meet the agreed criteria.

It remains inappropriate that Heathrow get to approve their own dispensations. The lack of independent oversight results in a system open to abuse and one that is not fit for purpose. The review suggests there is insufficient evidence to assess Heathrow's practice of pre-emptive dispensations. HACAN would be keen to work with the DfT to investigate whether this evidence can be found.

We welcome the proposal to make the dispensation process more transparent but question why the publication of this information is not already available to scrutiny by overflown communities.

Revising our night flight dispensation guidance

This section looks at the areas where guidance could be refined on the granting of dispensations.

Weather - disruptions caused by strong winds, snow and ice, and fog resulting in low visibility procedures. What is not specifically covered in the guidance is whether weather events abroad that have prolonged impact at a foreign airport, or en-route weather disruption, should qualify for dispensations

8. Should disruption due to local weather qualify for dispensations? Provide evidence to support your view.

No. The local weather at Heathrow is well known, is not exceptional and should be included in routine operational planning.



9. Should disruption due to en-route weather qualify for dispensations? Provide evidence to support your view.

No, this should be accommodated in routine planning. An exception should only be made in the case of limited and specific safety issues.

It is widely accepted that the effects of climate change include the increasing incidence of unstable weather patterns. These events must be accommodated within the regime or the numbers within the schedule should be reduced.

Dispensations should not be seen as a reasonable strategy for climate change adaptation.

10. Should disruption due to foreign airport weather qualify for dispensations? Provide evidence to support your view.

No.

Industrial Action - There is evidence to suggest industrial action in the aviation industry can be expected to occur at least on an annual basis. Therefore, there is an argument that this should be taken into consideration by airport operators during operational planning. We

11. Should disruption caused by ATC industrial action qualify for dispensations? Provide evidence to support your view.

No. Disruption caused by an industrial dispute is a consequence of a breakdown in worker relations that should not be borne by local communities in the United Kingdom.

12. Should disruption caused by industrial action by airport staff qualify for dispensations? Provide evidence to support your view.

No. As above for Q11.

13. Should disruption caused by industrial action by airline staff qualify for dispensations? Provide evidence to support your view.

No. As above for Q11.

Network Capacity Delays - DfT are currently of the view that delays resulting from network capacity issues do not qualify for dispensations.



14. Should network capacity delays qualify for dispensations? Provide evidence to support your view.

No. This is an issue for the industry and the capacity constraints are well known. The failure to adequately plan should not result in unacceptable impacts on local communities.

Criminal Activity - Such as the drone incident that occurred at Gatwick in December 2018, can cause widespread and prolonged disruption.

15. Should delays caused by serious criminal or terrorist activity that affect multiple flights qualify for dispensations? Provide evidence to support your view.

Decisions of this nature should be taken on a case by case basis depending on the nature of criteria used to determine the severity of the incident. This consultation proposal raises several questions:

- How many such incidents have occurred over the past decade?
- Is this enough to warrant qualification for dispensation?
- Why does the proposal remove the need for the airport operator to consult with central Government?

Cumulative Delays - Delays caused during the first or subsequent flights of an aircraft during the day for reasons that would meet the dispensation criteria (for example fog), or for multiple delay reasons incurred throughout a day, can often cause knock-on effects that lead to the last flight rotation landing in the Night Quota Period (NQP).

16. Should cumulative delays qualify for dispensations? Provide evidence to support your view.

No. Rather than seeking to pack more flights than their capacity can support, airports should plan robust levels of resilience to cope with delays.

Emergencies - The emergencies criterion states “flights involving emergencies where there is an immediate danger to life or health, whether human or animal”.

17. Should, in your opinion, dispensations be permitted for flights delayed to the NQP due to a medical emergency that has passed? Provide evidence to support your view.

No. Airports like Heathrow should be able to accommodate such delays within their overall night flight allowances. The consultation documents state that there is evidence of medical emergencies or disruptive passengers on the ground resulting in delays but does not provide



links to that evidence or further details about the number of instances that would potentially require dispensation.

18. Should, in your opinion, dispensations be permitted for flights delayed to the NQP due to a police emergency (for example a disruptive passenger) that has passed? Provide evidence to support your view.

No. If sufficient operational resilience is built into airports standard procedures than this would be able to accommodate such occasional delays. How many such delays have occurred at Heathrow in the past decade?

19. Should, in your opinion, dispensations be permitted for the repositioning of emergency service (including medical transplant) aircraft? Provide evidence to support your view.

No. The number of these flights is likely to be very small compared to the total number of night flights and should be accommodated within existing allowances.

Reducing Carbon Emissions - If an aircraft arrives in UK airspace earlier than expected, the aircraft is held in a stack until it can land after the NQP. This causes unnecessary fuel-burn and increased carbon emissions. However, allowing these aircraft to land early, would lead to noise for those living underneath the airport's final approach routes.

20. Should dispensations on the basis of reducing carbon emission be permitted? Provide evidence to support your view.

No. There appears to be no evidence that additional dispensations for night flights would help to reduce emissions. Conversely, a report by ACI Europe entitled "A Route to Net Zero European Aviation"² highlighted that, "improved ATM and other operations" would only generate a nominal improvement in decarbonisation, a 6% maximum in 2030 and 2050 across the aviation system.

Airline pilot / Air Traffic Control should ensure an aircraft arrive on time by adjusting their airspeed and reducing thrust.

Communities have been given assurances within the airspace planning guidance that noise reduction must be given priority below 7,500 feet.ⁱ

Pre-Emptive Dispensations – Heathrow adopts this practice to reduce the risk of delays during the airport's early morning busy hours, which could then have knock-on effects throughout the day, and possibly into the night period.

² https://www.destination2050.eu/wp-content/uploads/2021/02/Destination2050_Report.pdf



21. Should pre-emptive dispensations be permitted? Provide evidence to support your view.

No. See response to Q7 above.

Other Airport Operator granted dispensations - Whilst it is not possible for guidance to cover every eventuality, DfT seek views and evidence on what other issues, if any, should be grounds for airport operators to grant dispensations.

22. Should dispensations be granted for information technology failures? Provide evidence to support your view.

No. The failure to manage its IT properly should be borne by the industry not by communities near airports.

23. If you have further views or evidence on the guidance allowing airport operators to grant dispensations, provide it here?

Airports appear to have sought ever more creative reasons for granting dispensations as they have made fuller use of their night flight movement limits. The effect of this has been to expose local communities to more flights and greater night noise.

There should be process established where each dispensation can be reviewed thoroughly and independently which should also provide an opportunity for stakeholders to dispute dispensations, and consequences for airports granting dispensations incorrectly.

Government Dispensations - On the rare occasion the government does grant night flight dispensations, they are usually granted in advance for flights of V.I.P.s travelling on official government business

24. What are your views on government dispensations overall? Provide evidence to support your view.

They should continue to be granted rarely, in truly exceptional circumstances.

The structure of the night flight restrictions at the designated airports beyond 2024

Historically, night flight regimes have been for periods of 5 years or shorter. DfT are aware that some stakeholders have indicated that this does not allow for long-term planning.



25. What length should the night flight regime beyond 2024 be? Provide evidence to support your position.

Night flights, other than emergencies and humanitarian flights, should be banned at all UK airports as soon as possible. There is ample evidence to show that depriving people of sleep can cause very serious health deterioration. The night flight regime should be reviewed every five years.

26. How do you think the length of regime will affect you? Provide evidence to support your view.

Many residents are affected by night flights at Heathrow, which have a very serious impact upon their lives. It is essential that airports ensure that airlines are using the recommended ICAO procedure for departures.

A length of around five years ensures that the regime can be amended to reflect changes in academic evidence and operational best practice.

The QC system - Has been in place since 1993, and the principles of the system are used at other UK airports to restrict night noise. DfT are of the view that it continues to be the best system for limiting noise at the designated airports. However, we welcome views and evidence on how it works in practice,

27. Do you think that QC is the best system for limiting noise at the designated airports?

The best way to limit noise at Heathrow would be to introduce a night flight ban of 8 hours.

The data (CAA, ERCD 1901) shows that between 2006 and 2018 there has been a significant rise in the number of disturbing night-time noise events at Heathrow. In 2006, the N60 figure of 10 or more affected 837,000 people, but by 2018 this had risen to 974,000 (a 16% increase).³

This suggests that the QC system alone is insufficient to reduce the impact of noise on local communities. Consequently, the QC system should include targets for reductions in noise quotas over the next regulatory period. It is also important that airlines are incentivised to operate the quietest aircraft with significant fines imposed on those who fail to comply.

HACAN is of the view that if night flights continue then airports should utilise a combination of movement limits, quota limits and reductions in flying in the in specific night periods that cause the greatest noise disturbance must be maintained. The number of movements in any

³ https://www.heathrow.com/content/dam/heathrow/web/common/documents/company/local-community/noise/reports-and-statistics/reports/noise-action-plan-contours/Heathrow_Airport_2018_Summer_Noise_Contours_and_Noise_Action_Plan_Contours.pdf



time period remains a concern to our members regardless of the level of noise emitted. There is no such thing as a silent aircraft.

28. What do you think are the:

- ***advantages of changing to a new system?***
- ***disadvantages of changing to a new system?***

A new system that utilised monitors to ensure that airlines are incentivised to reduce the noise on the ground could help to deliver improvements for local communities. Any new system must include a movement limit as it is the number of the movements that is most intrusive.

29. Do you have evidence of other noise management regimes being used elsewhere and how they compare with the current system? Provide evidence to support your view.

Despite the eventual publication of the SoNA Sleep there remains significant gaps in the available evidence that limits the responses that community groups can provide.

For example, the Peer Review of SoNA sleep highlights a number of issues relating to the sample size, the absence of specific questions dealing with sleep disturbance, the timing of questionnaire, the conclusions drawn on N60 analysis and in particular the importance of single mode analysis.

These issues seem fundamental in terms of formulating policy options. Consequently, a full and robust study of the impacts of aircraft noise at night must be undertaken to inform the regime from 2025.

30. Should we introduce an additional QC category for quieter aircraft in the longer-term. Provide evidence to support your view.

No. The QC categories can result in aircraft being awarded a lower rating without a subsequent reduction in noise emission in real life. This can often be due to how an aircraft is flown – even if it is notionally less noisy in test conditions. For example, the way that the A380 was introduced at Heathrow.

What is required to reduce noise for local communities is appropriate operational regulations, combined with incentives and fines to ensure that aircraft are flown in a manner that causes the least disturbance.



31. Should the government reintroduce an exempt category?

No. An exempt category would undermine the purpose of operational restrictions at night. This would increase the harmful impacts of noise on local communities.

32. Provide evidence to support your position.

WHO (2018) Environmental Noise Guidelines for the European Region
https://www.euro.who.int/_data/assets/pdf_file/0008/383921/noise-guidelines-eng.pdf

33. Do you think we should re-baseline the night quota system in the longer-term? Provide evidence to support your view.

We have no strong view as long as any re-baselining does not increase the number of aircraft permitted to operate at night.

34. What factors should we consider when anticipating how to best future proof a re-baselined QC system?

As above to Q33.

35. What costs, if any, would you anticipate in re-baselining the QC system?

As Q33.

Night Quota Period - Currently, the government's movement and QC limits cover the period 23:30 to 06:00, with this being referred to as the Night Quota Period (NQP). However, as the night period is 23:00 to 07:00, DfT are open to broadening NQP to cover this period. Movement and QC type limits would need to reflect movements that already exist in the shoulder periods (23:00 to 23:30, 06:00 to 07:00).

36. Would you be impacted if the NQP was extended to 23:00 to 07:00?

Potentially. Many of our members would benefit from an extension to the NQP if this included a ban on aircraft operations at Heathrow for the entire 8-hour period.

However, it is possible that an extension to the NQP could have negative impacts if it resulted in an increase in movements between 11-11.30pm and 6-7am.



We are not able to comment comprehensively on the range of impacts without some indication from either Heathrow or the DfT on what operational changes they would envision resulting from an extension to the NQP.

37. Provide evidence to support your position.

CAA ERCD report 1901 (2018) shows that between 2006 and 2017 the total number of people experiencing >10 or >20 noise events above 60dB during the average 8-hour night period increased by 11 and 61% respectively. The size of area experiencing >20 noise events above 60dB also increased by 17% in the same period.⁴

It appears that despite the best efforts of the industry more people across a larger area are being disturbed and annoyed by aircraft noise at night. It should be a key policy priority to reduce this impact and to understand what is causing this increase in annoyance.

38. Do you think night flights in certain hours of the NQP have a greater impact on local communities than other times of the NQP?

Yes. The impact on local communities around Heathrow is great at the start and end of the NQP. Many of our members struggle to get to sleep when they are disturbed by later arrivals and departures.

Similarly, there is significant disturbance caused to members by flights in the 0430 – 0600am period. Once you have been woken up by aircraft noise it is very difficult for many to get back to sleep.

There has also been an issue at Heathrow of noise pollution during the middle of the night caused by the testing of engines.

39. Provide evidence to support your view.

The increase in the number of people impacted by noise at night as evidenced in CAA, *ERCD Report 1901 – Heathrow Airport 2018 Summer Noise Contours and Noise Action Plan Contours*.⁵

⁴ [https://www.heathrow.com/content/dam/heathrow/web/common/documents/company/local-community/noise/reports-and-statistics/reports/noise-action-plan-contours/Heathrow Airport 2018 Summer Noise Contours and Noise Action Plan Contours.pdf](https://www.heathrow.com/content/dam/heathrow/web/common/documents/company/local-community/noise/reports-and-statistics/reports/noise-action-plan-contours/Heathrow_Airport_2018_Summer_Noise_Contours_and_Noise_Action_Plan_Contours.pdf)

⁵ Ibid.,



40. Would a mechanism that disincentivises aircraft movements in periods of the night that are more sensitive for communities impact you?

Our members would benefit from an 8-hour night flight ban. Flights should be particularly disincentivised in periods of greatest community sensitivity.

41. Provide evidence to support your view.

Many of our members find the early morning flights the most disturbing as it can be very difficult to return to sleep when you are awaiting the next flight overhead.

Banning the noisiest aircraft - Currently, the government imposes a strict operational ban on the loudest aircraft movements (QC8 and QC16 rated) between 23:00 and 07:00, although these aircraft are no longer in regular service.

DfT are proposing to place an operational ban on QC4 rated aircraft movements between 23:30 and 06:00 (see above section). They are open to extending this proposed operational ban, if taken forward, to 23:00 and 07:00 beyond 2024.

There are relatively few QC2 rated aircraft currently operating at night at the designated airports. DfT are also interested in exploring whether there is potential to introduce a scheduling ban on QC2 rated aircraft movements between 23:30 and 06:00 and eventually 23:00 to 07:00.

42. What would be the impact on you if QC4 rated aircraft movements were banned between 23:00 and 07:00 after October 2024?

The impact would be minimal for communities around Heathrow given the small number of QC4 flights that take place between 23:00 and 07:00. They only constitute 20 of the 5,800 permitted movements at Heathrow or 0.34% of night movements.

The night flight regime should be making a far more generous offer to overflown communities by exploring a reduction in the total number of flights during this period.

43. What would be the impact on you if a scheduling ban was placed on QC2 rated aircraft movements between 23:30 and 06:00 after October 2024?

Government regulation and action should lead the industry and incentivise it to improve its performance. Consequently, there should be a ban on operating QC2 rated aircraft for a full eight-hour period each night from 2022, especially as approximately only 3% of night quota period flights in summer 2019 were operated by QC2 rated aircraft.



44. What would be the impact on you if a scheduling ban was placed on QC2 rated aircraft movements between 23:00 and 07:00 after October 2024?

See Q43.

45. If bans are introduced, in your opinion, should the implementation be staged?

No, the ban should be brought in immediately.

46. Provide evidence to support your position.

There remains a significant gap in the available evidence that limits the responses that community groups can provide.

It is vital that DfT commission a comprehensive and robust study that examines the impact of aircraft noise at night. We would welcome the opportunity to be involved in helping to scope out the precise parameters of such a study.

Future Movement and Noise Quotas - Future regimes could include an increase or decrease in an airport's movement limit and QC limit or alternatively maintain the existing limits.

47. In a future regime how should we manage the number of aircraft movements (detailing the airport or airports relevant to your view)?

All night flights, other than emergencies and humanitarian flights, should be banned at all UK airports from 2022. If night flights continue to be permitted they should be limited to those that are genuinely essential and their impacts should be tightly regulated. Targets should be set to drive down the number of aircraft movements and the noise emission per movement.

At Heathrow there is regular late running of aircraft with insufficient evidence provided as to why this was necessary – if indeed it can be justified. Greater transparency on the reasons for late running should be provided with significant financial penalties for regular breaches of the night time peace. Those services that persistently offend should be rescheduled to reduce the risk of encroachment into the night. Ultimately, slots should be removed from offending operators who fail to improve.

48. In a future regime, how should we manage an airports' noise allowances (detailing the airport or airports relevant to your view)?

Noise allowances should be based on the genuine noise level at the ground to ensure it reflects the experience of local communities.



Heathrow should provide funding for noise monitors across several communities including those 10, 20 and 30 miles from the airport to ensure that all communities impacted by night operations are able to evidence the disturbance they endure.

49. Should we remove the movement limit and manage night flights through a QC limit only?

No. This would undermine the community confidence entirely and has the potential to increase the level and incidence of noise exposure at night. Communities need the certainty of an overall movement limit.

The consultation contains no information on what the potential impact of removing the movement limit would be. What impact would a QC limit only have in a) the short-term and b) the long-term in terms of noise pollution?

50. Provide evidence to support your view.

See Q43.

51. Should we introduce a ring-fencing mechanism to ensure night slots are available for:

- *commercial passengers*
- *dedicated freight*
- *business general aviation*

It appears that there is insufficient evidence on which to make a judgement on this issue.

52. Provide evidence to support your view.

As Q45.

53. Should an airline be able to use unused allowances later in the season?

No.

54. If the government decided that unused allowances should be returned to the airport's pool, what would be the impacts on:

- *communities*
- *airports*
- *airport users*
- *airlines*



- ***business in and around airports***

Communities may have become accustomed to lower levels of traffic thus to allow an airport to increase traffic from unused allowances will cause unnecessary negative noise impacts, affecting health and mental health.

55. Do you agree or disagree that the current carry-over process benefits you?

Disagree as the carry over process disadvantages local communities around airports, particularly those who shift their winter quota to the increase their summer limit.

56. Provide evidence to support your view.

See Q49.

57. What changes, if any, would you like to see to the carry-over process and how would this impact you?

All night flights, other than emergencies and humanitarian flights, should be banned at all UK airports from 2022.

The carry-over process should be abolished as they currently leave the quota limits in winter irrelevant.

Our national night flight policy

Government's approach to managing aircraft noise is based on the principles of [International Civil Aviation Organisation's \(ICAO\) Balanced Approach to aircraft noise management](#). The Balanced Approach ensures that decisions in relation to an airport's operations consider both health and economic factors. It also means that where there is a noise problem at an airport, it should be addressed in accordance with the Balanced Approach and be managed in a cost-efficient manner. Operating restrictions should only be introduced at airports if there are no other ways of achieving the desired benefits.

The government recognises that noise from aircraft at night is often regarded by communities as the most disturbing form of airport operations and that there is evidence of adverse health impacts from these operations.

58. How fair a balance between health and economic objectives do you think our current night flight approach is? Provide evidence to support your view.



The current approach to night flights does not provide an appropriate balance between the health on overflowed communities and wider national economic objectives.

There has been no meaningful attempt in the past 15 years to carry out a proper evaluation of the health costs and purported economic benefits of night flights. This is despite the growing evidence that exposure to aviation noise at night has adverse effects on health.

Indeed, the WHO European Noise Guidelines (2018) strongly recommended reducing noise levels below 40dB Lnight during the night time, compared to 45dB in the day. Yet, this consultation contains no proposals to deliver that reduction.

The government should urgently carry out such an assessment. The failure to do so before this consultation demonstrates the lack of balance between health and economy.

SoNA Sleep seems to show that night time measures of LAeq and N>60dB have a very similar correlation with annoyance. Indeed, N>60dB appears to demonstrate that respondents were more sensitive at lower levels of noise. Consequently, policy should ensure that both metrics carry equal weight in order to properly manage night noise

Further, the delay in publication of SoNA Sleep reflects a recurring issue with the length of time it takes for evidence and research to translate into meaningful policy.

There remains a lack of clarity in existing policy as to how best to reduce the harmful effects of aircraft noise at night. This is exacerbated by existing gaps in research that need to be addresses in a systematic and robust matter. It is not clear what the DfT consider to be a successful outcome in terms of its noise objective or how progress might be measured against it.

The DfT need to set out a research programme that seeks to ensure existing knowledge gaps are filled. This could include protecting sensitive time periods, respite, noise insulation and the effectiveness of mitigation interventions.

59. What are your views on the health impacts of aviation noise at night (including potential impacts on different groups in society)? Provide evidence to support your view.

Numerous studies have found a link between night flight noise, annoyance, stress and ill-health. HACAN has previously summarised a number of studies on the impacts of night flights here: <https://hacan.org.uk/wp-content/uploads/2019/04/Night-Flights-Revisited.pdf>

Some more recent academic evidence can be found here:

- Baumert et al (2021) <https://academic.oup.com/eurheartj/advance-article/doi/10.1093/eurheartj/ehab151/6239256>
- Munzel et al (2020) <https://academic.oup.com/eurheartj/article/42/8/844/6046141>
- Saucy et al (2020) <https://www.mdpi.com/1660-4601/17/9/3011>



- Jongseok et al (2017) <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6301087/>
- Brown and Van Kamp (2017) <https://www.mdpi.com/1660-4601/14/8/873>

60. What are your views on the economic value of night flights (including the potential value on different businesses and aviation sectors)? Provide evidence to support your view

The economic value of night flights at Heathrow are minimal, benefitting the airlines and the airport but delivering little or no economic value to local communities or the wider economy.

If the loss of productivity caused by sleep disturbance and the climate costs of the flights was factored into the cost benefit analysis then it seems likely that night flights would actually have a negative economic value to the country.

It is clear that insufficient data exists to support claims of the economic benefits of night flights. Government should commit to undertaking a comprehensive review of the economic, social, environmental and health impacts of night flights.

61. What are your views on changes to aircraft noise at night as result of the COVID-19 pandemic? Provide evidence to support your view

Our members have enjoyed the reduction in air traffic at night during the pandemic and many are anxious about return to pre-pandemic levels.

The COVID-19 pandemic further weakens the case for any night flights as traffic volumes will remain below pre-pandemic levels for many years, thus increasing the operational resilience of airports to accommodate all flights during the day.

Future technology - DfT are keen to explore how future technology will benefit communities, consumers and the industry.

62. In your opinion, what are the advantages or disadvantages that the emergence of new technology will have in relation to night noise from aircraft within the next 10 years? Provide evidence to support your view.

2019 analysis on noise forecasts from the CAA (CAP 1731) anticipates that by 2050 the geographical area exposed to noise around all UK airports may shrink but that the total number of people exposed to aircraft noise will increase.⁶

Flights at Heathrow have also tended to become more concentrated over the last decade or so both on landing and departure. These days it tends to be the sheer volume of aircraft

⁶ https://publicapps.caa.co.uk/docs/33/CAP1731AviationStrategyNoiseForecastandAnalyses_v2.pdf



passing overhead which most disturbs people – not something that can be solved by a slightly quieter aircraft.

The Sustainable Aviation Noise roadmap reveals that any further improvement delivered by UK aerospace manufacturing will be incremental. The report estimates (based on historical trends) that the rate of noise reduction will be around 0.1 decibels per annum.⁷

Thus, technological improvements will only produce a 1dB decrease in noise over the next 10 years, which is insufficient to reduce the harm imposed upon local communities. This means that operational restrictions or improved procedures, such as better departure and arrivals and dispersal of flights, will be needed to actually deliver any reduction in noise.

Further, the focus of both Government and industry is on emissions reductions with noise appearing to be less of a priority. There is also an engineering balance to be obtained between emissions and noise reduction; it is not possible to significantly reduce both without a radical alteration in the body design of aircraft. This is something that is not yet being fully explored and certainly won't be delivered in the next 10 years, if ever.

Night Noise Reference in Noise Objective - Night noise is a significant element of aviation noise and DfT welcome views and evidence on whether there should be specific reference to the balance between the impacts of night noise and the economic benefits of both passenger and freight operations.

63. Should we include a reference to night noise when we publish a revised aviation noise objective?

Any revised aviation noise objective should absolutely include a reference to night noise. The objective should include a clear and robust mandate for night noise to be reduced.

The current objective and proposal in the consultation for 'balance' would benefit from greater clarity and specificity. Noise abatement objectives need clear targets and enforcement rules to ensure that best practice is followed in reality.

64. What factors relating to night noise should we include if we do introduce a noise reference in our revised aviation noise objective?

A reduction in night noise, using a range of noise metrics for assessments including the number of noise events and perhaps the number of awakenings if it is possible to measure this. It is also crucial that the health impact of night noise is included.

⁷ <https://www.sustainableaviation.co.uk/wp-content/uploads/2018/06/SA-Noise-Road-Map-Report.pdf>



Airport designation

Heathrow, Gatwick, and Stansted airports have been designated for the purpose of avoiding, limiting or mitigating the effect of noise from aircraft since 1971. The Secretary of State has powers to designate airports in England and Wales and to set noise controls, which include the current night flight restrictions, are contained with the Civil Aviation Act 1982

DfT are not proposing to designate or de-designate any airports as part of this two-stage consultation process. However, it is open to considering criteria for designation, that could in future be used as the framework for the designation of an airport in England and Wales

65. Should the government set criteria for airport designation?

Yes, however we believe that the regulation should be strengthened to include robust operational mechanisms that ensure aircraft are flown in a manner that minimises their noise impact.

66. What do you think are the:

- ***advantages to the government setting criteria for airport designation?***
- ***disadvantages to the government setting criteria for airport designation?***

Current regulation of aircraft noise is ineffective with multiple bodies involved but little accountability. Designation offers a solution, if it is accompanied by the development of robust, effective arrangements for the regulation of aircraft noise. It is vital that Government commit to a sustained reduction in aircraft noise and its associated health impacts.

67. What factors, if any, do you think we should consider when setting criteria for designation?

Factors should include:

- the size of the airport in ATM and passenger number terms,
- the population affected, and
- the level of greenhouse gas emissions produced by of aircraft using the airport.

68. How should any criteria for designation be agreed?

The Department should develop a draft set of criteria for designation and discuss them informally with stakeholders through its normal engagement channels, before consulting formally on them.

69. What impact, if any, do you think the designation of an airport would have on:

- ***communities***



- **airports**
- **airport users**
- **airlines**
- **business in and around airports**

Designation offers a solution, if it is accompanied by the development of robust, effective arrangements for the regulation of aircraft noise.

70. What impact, if any, do you think the de-designation of an already designated airport (Heathrow, Gatwick, Stansted) would have on:

- **communities**
- **airports**
- **airport users**
- **airlines**
- **business in and around airports**

The impact on local communities of the de-designation of Heathrow would potentially be very negative as no arrangements for the regulation of aircraft noise currently exist. De-designation would allow the airport to increase night flights as it saw fit, with little regard for the community impact.

Government should produce clear guidelines on best operational practice, sound insulation, night flights, general noise reduction and community engagement.

71. Any other comments?

The noise contours in **Appendix G** of the consultation do not adequately represent the numbers of people affected by night flights. Thousands of people outside the 48dB LAeq contour are impacted by these flights. It should measure night noise down to WHO guideline levels and take account of these impacts in a full cost benefit analysis. If technical difficulties are behind the failure to produce accurate contours at levels lower than 48dB LAeq they must be resolved now.

The peer review of **SoNA Sleep report** states that

“The data analysis regarding the impact on sleep disturbance could be no more than exploratory and great care is needed when drawing any conclusions from that analysis.”⁸

Given that there must have been an awareness of the limitations of the data, why did the Department commission this analysis? Instead it should have sought to commission a bespoke

⁸[http://publicapps.caa.co.uk/docs/33/SoNA%202014%20Aircraft%20Noise%20and%20Sleep%20Disturbance%20-%20Peer%20Review%20\(CAP%202161a\).pdf](http://publicapps.caa.co.uk/docs/33/SoNA%202014%20Aircraft%20Noise%20and%20Sleep%20Disturbance%20-%20Peer%20Review%20(CAP%202161a).pdf)



night survey that would have produced more relevant and robust results that could be used to inform policy.

Despite the conclusion of SoNA Sleep that LAeq remains the best metric to use, metrics themselves only capture part of the problem when seeking to measure noise annoyance.

Indeed, Bartels et al., (2015) found that consideration of noise metrics related to the number of fly-overs and individual adjustment of noise metrics through the inclusion of non-acoustic factors can improve the prediction of short-term annoyance compared to models using equivalent outdoor levels only.⁹

It is vital that non-acoustic factors are properly understood when making policy choices that inform the night flight regime from 2025.

The peer review of the **updated SoNA (2014)** recommends that the DfT and CAA,

“Investigate the uncertainty associated with the logarithmic average of SEL(A) and LAmax metrics to define vertical profiles for each aircraft model type, monitor and runway combination.”¹⁰

The review appears to suggest that small uncertainties exist in the calculations produced by the ANCON model when assessing the noise dose of aircraft. They also recommend that noise monitors are placed at a wider range of distances from the start of roll on departures and thresholds on arrivals.

This raises a couple of key questions:

- 1) Do we have accurate contours as a starting point for an analysis?
- 2) Is the CAA conclusion that LAeq should be the primary basis for assessment statistically sound?

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https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/587669/air-navigation-guidance-on-air-space-and-noise-management-and-environmental-objectives.pdf Paragraph 3.3 page 20

⁹ Bartels, S., Marki, F. & Muller, U. (2015) The influence of acoustical and non-acoustical factors on short-term annoyance due to aircraft noise in the field – The COSMA study. Science of The Total Environment Volume 538, Pages 834-843. <https://doi.org/10.1016/j.scitotenv.2015.08.064>

¹⁰ <https://publicapps.caa.co.uk/docs/33/CAP1506d%20SoNA%202014%20technical%20peer%20review.pdf>