AEF discussion paper on aircraft noise

July 2018

Part of a series of three discussion papers on the key environmental policy challenges to be addressed in the Aviation Strategy Green Paper.

Summary and recommendations

Aircraft noise is a significant public concern, affecting both health and wellbeing, and the Government acknowledges that people are impacted by aviation noise at lower average levels than was the case in the past. The number of organisations and official or semi-official bodies that regulate, advise on, or discuss noise has proliferated in recent years. Yet there is little sense of a common direction or objective among these bodies, and the Government's noise policy – to limit and, where possible, reduce significant noise impacts – is open to a very wide scope of interpretation.

The Aviation Strategy plan commits to consider whether new policy is needed to manage aviation's noise impacts but prioritises growth and consumer interests. With the Government having indicated openness to considering stakeholder input on its noise policy, this paper proposes nine ways in which the Strategy could deliver a more coherent and effective approach, namely to:

1. Commit to developing meaningful, measurable targets to protect the public from the impacts of aircraft noise on health and quality of life
2. Give ICCAN an explicit role in identifying appropriate noise objectives and monitoring progress in delivering them
3. Close the regulatory gaps and increase accountability for delivering noise commitments
4. Commit to providing guidance for local authorities
5. Guarantee public access to agreed standard noise data
6. Commit to funding further research to increase understanding
7. Maintain up-to-date evidence about noise costs and associated assessment tools
8. Introduce measures to protect tranquil areas
9. Improve compensation for communities impacted by noise

Background and context

Many recent indicators suggest that despite decades of discussion, the creation of a myriad of bodies with regulatory or advisory functions, and some undoubted technology improvements, aircraft noise is still a growing problem. A government public attitudes survey in 2012 found, for example, that almost 1 in 3 people mentioned aircraft noise as something they disliked about their local area. And the Civil Aviation Authority's *Survey of Noise Attitudes 2014: Aircraft* found that the same percentage of respondents that were highly annoyed at 57 dB Leq in the Government's 1982 study were affected at the lower level of 54 dB Leq in 2014. The fact that the public continue to be widely impacted by noise despite the introduction of less noisy aircraft reinforces the community view that the frequency of noise events experienced is as significant in determining annoyance as their individual loudness. Technological improvements in the relative noise made by each plane appears to have been offset by the growth in air traffic or the concentration of flightpaths.

At the same time, there has been growing evidence linking exposure to aircraft noise to various health effects. AEF's review of the latest scientific literature in our 2016 report *Aviation Noise and Health: the evidence is loud and clear* identified evidence that aircraft noise can lead to short-term responses such as sleep disturbance, annoyance, and impairment of learning in children, while long-term exposure is associated with increased risk of high blood pressure, heart disease, heart attack, stroke, dementia, and may contribute to long-term mental health issues. Our own analysis of official data showed that, in the UK alone, over one million people are exposed to aircraft noise above levels recommended for the protection of health, estimated in the report to cost £540 million each year. The link between aircraft noise and public health continues to attract attention, and this year's publication of the World Health Organisation's revised community noise guidelines is widely anticipated.

The Government's (recently revised) objective for aviation noise is to "*limit and, where possible, reduce the number of people in the UK significantly affected by adverse impacts from aircraft noise*"[1]. But despite many years of research and numerous consultations, the Government has yet to define what it means by "significantly affected", or "where possible". In particular, it hasn't prescribed the level at which noise should be deemed to be too high, and at which it should therefore be treated as a limiting factor in airport development, in the number of flights permitted over any given community, or in planning decisions about housing or other noise-sensitive developments. It remains the case that the emphasis for both the Government and the aviation regulator, the CAA, seems to be on supporting growth in the aviation sector and that noise will be addressed only to the extent that growth is not compromised.

The aircraft noise debate has many facets. In 2016, AEF surveyed its members to get a better understanding of the issues that most concern communities. The results were

[1] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/653978/air-navigation-guidance-2017.pdf

largely mirrored by the CAA's 2017 survey on aircraft noise. The impacts and issues raised most frequently in the AEF's survey were as follows.

Noise from air transport:

- While newer aircraft may sound less noisy, any benefit has been eroded by the noticeable increase in noise events, either in total or as a result of narrower, concentrated flight paths.
- Intensification of use can be as big a problem as an airspace change or airport development in terms of noise.
- There is a perceived lack of effective controls on noise.
- Night noise (including ground noise) remains a big concern.
- Concentration, and flights paths over areas that previously experienced no or little noise, both create their own problems relating to the distribution of noise.

Noise from general aviation:

- Helicopters were mentioned by almost 20% of respondents to the survey, with problems relating to increases in numbers and narrow corridors.
- A lack of enforcement of noise controls was highlighted: flights over 'designated no fly noise zones', and aircraft perceived as too low, or operating outside permitted hours.

Impacts in areas with low background noise levels:

- Impacts of aircraft noise in areas or at times of day when background noise levels are low was a concern.
- AONBs and national parks were regarded as important to protect from noise, and policies were felt to be needed to prevent the erosion of tranquil areas.
- A lack of research was identified in relation to metrics showing the degree of intrusion.

Issues related to airspace change:

- The impact of intense concentration facilitated by new navigation technology is a problem for many, and a lack of research into its effects was cited.
- Respite should be protected and extended, some argued.

Who regulates noise?

Aircraft noise is not regarded as a statutory nuisance. To protect a fledging industry in the 1920s, the Civil Aviation Act introduced a provision that prevented overflown individuals and communities from bringing an action in respect of nuisance providing the aircraft was flown in accordance with the Rules of the Air. This provision has never been repealed or amended, and consequently aircraft noise is excluded from the nuisance provisions

contained in environmental legislation such as the Environmental Protection Act. While human rights legislation includes an individual's right to the quiet enjoyment of their home, this can be set aside if doing so is in the national interest. This argument has so far prevented successful legal actions in the European Court of Justice.

By removing the rights of individuals to protect themselves against unreasonable levels of noise, Government takes on the responsibility to provide effective mitigation and safeguards. But, as shown in the following map, the resultant myriad of regulatory, statutory and voluntary bodies and responsibilities is complex and many of those impacted regard it as ineffective. The result is a regulatory vacuum where no one is, in fact, responsible for setting noise limits or accountable for achieving them.

Both the **Department for Transport (DfT)** and the **Department for Environment, Food and Rural Affairs (Defra)** have some involvement in aircraft noise. As well as setting policy, the Secretary of State for Transport has discretionary powers to limit noise at an airport by 'designating' it to provide a noise insulation scheme or to impose operational measures. Heathrow, Gatwick and Stansted have long been designated in this way, and the Government imposes a night noise quota system and departure noise limits at these airports. Applications to designate other airports under these powers have consistently

been declined in favour of encouraging resolution at a local level, and the DfT recently indicated that it would prefer to see the controls at the designated London airports transferred to the local level.

In terms of policy, Government has encouraged better information for public consultation, highlighting the need to assess noise against a wide range of metrics, to consider health costs, and to assess noise impacts on populations exposed to the lowest levels of significant exposure rather than just the level at which 'significant annoyance' occurs. But it has refrained from setting a threshold of acceptability in terms of noise exposure or any long-term goals that can be easily quantified and measured. Defra's role meanwhile is largely confined to promoting the Noise Policy Statement for England[2], and ensuring that the requirements for airports of the Environmental Noise Directive are met. This includes providing guidance to airports on how to undertake noise mapping and what to include in Noise Action Plans, as well as giving final approval to the plans once submitted.

In 2017, the Government set up the **Airspace and Noise Engagement Group (ANEG)** to create a formal channel of communication between the Department for Transport, local communities, AEF, industry and local government representatives on strategic policy issues. ANEG "*acts as a sounding board to identify, discuss and, where possible, resolve airspace and airport noise issues that impact on the work of the department*". Communities have welcomed the opportunity to engage at this level, although it's too early to comment on whether the group can succeed in its objective.

The **Civil Aviation Authority (CAA)** has duties regarding the publication of environmental information and the handling of aircraft noise complaints. Its **Community Discussion Forum** has been created to encourage airport community representatives to meet periodically with the CAA to discuss emerging noise issues and policies. However, while the CAA can take environmental factors into account when issuing an aerodrome licence, this is a discretionary power granted by the Secretary of State and has never been exercised. Its other primary noise function relates to its regulatory role in the airspace change process. It has recently overhauled this process with a view to making it more transparent and rigorous in terms of environmental assessment, and ensuring that there are clear opportunities for communities to express their views. While these measures are largely welcomed by communities, the new process is nevertheless designed only to identify the least bad option in terms of noise rather than imposing limits or controls based on any maximum acceptable noise threshold. In fact, the CAA has no powers to impose conditions of use on a given airspace arrangement in order to limit its impact, or to control how – and how much – a given flightpath is used.

Air Navigation Service Providers (ANSPs), such as NATS, are responsible for local and en route air traffic management, and effectively determine where aircraft fly in controlled airspace.

[2] https://www.gov.uk/government/publications/noise-policy-statement-for-england

There are several international bodies with an interest in noise. The **International Civil Aviation Organisation (ICAO)** agrees recommended manufacturing standards for aircraft noise, although it is sometimes criticised for following technological developments rather than driving them. Analysis of the last increase in stringency showed that over 90% of the existing in-production fleet met the standard already. ICAO has also developed the 'balanced approach' to noise management, arguing that operational restrictions should be a last resort after the benefits of reduction at source, operational improvements and land-use planning have been fully explored.

The **European Commission**, as well as having developed the Environmental Noise Directive that requires noise mapping and action plans at airports with more than 50,000 civil movements, is also responsible for Regulation 598/2014 that permits airports to phase out aircraft that are marginally-compliant with the Chapter 3 noise standard. In practice, however, airports have been made the 'competent authority' for implementing the Regulation, raising doubts about the extent to which restrictions will be imposed. Furthermore, unless a state or airport can demonstrate that an operational restriction of any kind is the most cost-effective form of mitigation, airlines and other states can request the Commission to call in the proposal for review, potentially delaying it or having it shelved.

The **European Aviation Safety Agency (EASA)** ensures that environmental standards agreed at the International Civil Aviation Organisation are delivered in European law. Aircraft entering into service, from light aircraft and helicopters through to commercial subsonic jets, are required to comply with the relevant noise standards in force. These are periodically tightened but the revised standards do not apply retrospectively to aircraft already in service.

Local Planning Authorities (LPAs) have limited day-to-day powers to control noise. Environmental Health Officers have no regulatory power (unless an aircraft engine creates noise while dismounted from the aircraft!), and planning departments are confined largely to the consideration and assessment of planning applications, or the monitoring and enforcing of existing planning conditions such as limits on the number of permitted movements or operating hours. While this remains one of the most common forms of environmental regulation at airports, aircraft noise is not an everyday planning issue, and in the past, officers and the Planning Inspectorate have relied heavily on government guidance to make an assessment, and interpret appropriate thresholds to limit or control incompatible development. The scrapping of PPG24 Planning and Noise, which highlighted areas where local authorities could exercise flexibility and suggested suitable conditions to limit airport noise, has left a gap in this area.

Airports themselves are regarded by Government as having an important role in noise management. But although many airports acknowledge the need to be a good neighbour, it is bound to be difficult to balance shareholder and community expectations when it comes to taking voluntary action to limit noise impacts using operational restrictions. Historically, airports have had powers to phase out noisier aircraft that are only marginally compliant with noise standards, but this power has rarely been used. In

the UK, airports have been designated as the 'competent authority' to oversee phase-out measures and Noise Action Plans (see below) but there is little commercial logic in introducing a self-imposed restriction given the risk of losing revenue, and of competitors taking the business.

As a result, airport-imposed measures are typically limited to operational procedures that do not limit traffic volumes but encourage better environmental performance. Coupled with the use of noise-related landing charges at some airports, these measures are packaged together in the Noise Action Plans (NAPs) that large airports (with over 50,000 ATMs) are required to provide and refresh every five years. However, there is no regulatory oversight of how the NAP commitments are being implemented, or enforcement of the commitments made by airports, and many communities claim they have failed to deliver.

The Civil Aviation Act designates around 50 aerodromes in the UK to provide facilities for consultation, and several others do so on a voluntary basis. Following DfT guidance, most choose to consult via a **consultative committee** comprising representatives from airport users, local authorities, and the wider community. Many committees consider noise and complaint statistics on a regular basis. They generally lack enforcement powers for noise breaches, however, and can only make recommendations to the airport operator. Community perceptions regarding the effectiveness of consultative committees is variable, but common concerns include exclusion from membership, lack of transparency, and the inclusion of many interested parties who are unsympathetic to noise concerns.

To allow more affected groups to have a say, some airports have established dedicated **noise management boards**. These have had some success in consulting with a much wider set of noise-impacted communities and have helped to identify specific areas where problems have arisen. However, as with consultative committees, they can only make recommendations to the airport, and cannot compel the introduction of new operational procedures or other noise-related measures.

The **Independent Commission on Civil Aviation Noise (ICCAN)** is a new body, due to commence work in mid-2018, and created in the context of changes to the airspace change process, and noise concerns about the plan to expand Heathrow airport. The Commission's remit focuses on identifying best practice, promoting research and advising Government and other regulators. It will not, at least initially, have any regulatory powers (so will be unable to set standards or limits), and is not designed to act as an ombudsman to resolve disputes between industry and communities.

Missing ingredients

1. Lack of measurable noise objectives

The previous section presents a series of actors all with some potential to limit noise through a variety of voluntary, discretionary, or binding controls or to make recommendations in an advisory capacity. There is little evidence, however, that these bodies pursue a joined-up approach by talking to each on a regular basis, or have a common work programme or objective. The guiding principle set out by the Government – that significant noise impacts should be limited and, where possible, reduced – can be interpreted to mean different things. Should noise be reduced on a per-plane basis, or overall, and against what baseline or long-term policy objective? A set of measurable policy objectives that would ensure all these bodies worked to achieve the same end point seems important for delivering effective action.

2. Regulatory gaps and barriers

Two key regulatory gaps are evident. First, if an airport increases its traffic significantly, with an associated increase in noise, but does not require any changes to flightpaths, operational procedures or infrastructure, communities have no opportunity to seek mandatory controls on noise. Secondly, while some regulators have the opportunity to assess applications based on forecast impacts, there is little opportunity to review and revisit the impacts after a decision has been taken, let alone to impose controls on those activities retrospectively. This suggests a need for greater oversight and scrutiny. In the case of airspace change, for example, there doesn't appear to be any way to ensure that the projected noise impacts modelled as part of an airspace change application will be the same as those experienced in the real world once operational, or any means to limit the use of new flightpaths to the volume of flights modelled at the consultation stage.

Meanwhile, AEF has concerns about recent developments with regard to the requirements of EU Regulation 598, which has the potential to hamper effective noise controls. The Regulation requires competent authorities (either the Secretary of State or Local Authorities) to demonstrate that a proposed operating restriction is the most cost-effective solution for tackling a given noise problem. If measures such as night flight bans or movement caps are implemented without sufficient evidence of cost effectiveness, airlines or other states can ask the European Commission to intervene. Cost-effectiveness may be hard to demonstrate, however, without clearly defined noise goals. Given the history of countries outside the EU objecting to noise regulations on the basis of concerns that access to airports for their airlines could be restricted, it seems likely that these provisions could delay or impede future noise restrictions at airports.

What could the Aviation Strategy do to address noise more effectively?

The Green Paper on the aviation strategy, expected this autumn, is an opportunity for the Government to develop proposals that seek to address some of the issues above through better regulation of noise.

The Government has already published two documents in relation to the strategy: its initial 2017 'call for evidence' and the outcome document published on 7th April 2018. The latter commits to a consideration of "whether the right regulations, controls and incentives" are in place in terms of noise, and whether "additional noise policies, including noise targets" may be necessary. It acknowledges public concerns about increases in flight numbers, concentrated flight paths, and low-flying aircraft, and says the Government will explore whether current compensation arrangements for people impacted by noise as a result of the airspace change process are adequate.

Yet the overriding message from both of the Government's publications on the strategy is that consumer interests (as opposed to those of the public at large including the half who, in any given year, don't fly) are paramount and that while the Government aspires for the UK to be a world leader in aviation when it comes to facilities and services, the same cannot be said for environmental protection. In particular, the Government specifies that environmental impacts will *only* be considered in the context of growth. Out of six overarching objectives, the only one that relates to environment is the aim to "support growth while tackling environmental impacts". There is no acknowledgement of the weight of evidence that unlimited growth is incompatible with achieving environmental commitments, whether in relation to noise, air pollution or climate change, and that these objectives cannot properly be dealt with together.

Nevertheless, the fact that the strategy will now be developed by way of a single Green Paper, rather than as a series of separate topics with environment at the very end (as previously planned), should provide for environmental impacts to be considered throughout the process. Below, we present eight ideas for further consideration in the development of the aviation strategy, which, we suggest, should form part of the environmental framework for the sector's future development.

#1 Commit to developing meaningful, measurable targets to protect the public from the impacts of aircraft noise on health and quality of life

It remains unclear what noise targets regulators and the industry should be working towards. With so many different actors responsible for controlling aircraft noise, a common goal, or set of goals, would introduce a framework for action that would encourage greater interaction between industry, regulators and advisory bodies, as well as setting a benchmark for assessing the sustainability of airport and airspace expansion proposals. It is also likely to build trust amongst communities.

The goal should be a reduction in noise aiming to protect the health and quality of life of communities, and should be informed by the forthcoming revisions to the World Health Organisation's guidelines on community noise exposure. Interim measures (such as ruling against any increase in noise at airports where the target is being breached) may also be necessary.

#2 Give ICCAN an explicit role in identifying appropriate noise objectives and monitoring progress in delivering them

The terms of reference for ICCAN have yet to be finalised but if the Commission is to develop a reputation as the UK's expert body on aviation noise issues, it would seem ideally placed to consider as one of its first tasks what noise objectives the Government should set, taking into account the latest evidence on health and other impacts. Holding both the Government and industry to account against these objectives could then be a valuable ongoing role.

#3 Close the regulatory gaps and increase accountability for delivering noise commitments

As noted above, gaps exist in terms of opportunities for local authorities to intervene to regulate noise, and for the CAA to ensure that the impacts modelled in an airspace change proposal are not out of step with those that result. New policy approaches should be explored to close these gaps. In the case of airspace change, for example, the CAA could be given an explicit duty, and enforcement powers, to set operational limits for new flightpaths, much in the same way as local authorities can set conditions for planning consents. Communities have also highlighted that airports have sometimes disregarded or fallen short of achieving the noise objectives underpinning airport Noise Action Plans. Mechanisms need to be considered for ensuring that these commitments are honoured.

#4 Commit to providing guidance for local authorities

The need for government guidance to replace PPG 24 has been well noted by local government bodies and the industry. PPG24 provided valuable information on suitable conditions to limit airport noise, how to treat general aviation and helicopter noise, as well as thresholds to assess the suitability of new applications for noise sensitive developments. New guidance should reflect the LOAEL and SOAEL levels that are now incorporated in the airspace change process.

#5 Guarantee public access to agreed standard noise data

Revisions to the airspace change process have provided for better environmental information, recognising that any dialogue between industry, regulators and communities needs to have a common, accepted evidence base. But information is harder to obtain at other times. Some airports do not publish annual noise contours each year, or make it possible for residents, or prospective residents, to find out the noise experienced at a

particular location. Without regular information, it is difficult for communities to understand when a change has taken place or whether noise commitments are on track.

Airports are usually responsible for the cost of noise monitoring meaning that the frequency and scale of monitoring is dependent on the resources set aside for this purpose. This has led some community groups to call for more standardised, independent noise monitoring funded by the airport or through a noise levy. This is an issue that ICCAN could address.

In the meantime, airports should be required to make the data from noise monitoring publicly available and the CAA, in delivering its environmental information duties, should make it easy for members of the public to access. Ensuring good public access to accurate data would provide a better platform for engagement and exploring solutions, helping communities to engage with airports on the basis of a shared understanding, and providing a helpful resource for researchers considering aviation noise issues.

#6 Commit to funding further research to increase understanding

Either by commissioning research directly, or through ICCAN, the Government should support research efforts to better understand how noise can impact on communities. In addition to supporting on-going work on noise and health, several new issues have emerged. These include improving our understanding of the relevance of low background noise levels (developing metrics that measure the degree of intrusion of a noise event – in effect the difference between peak noise levels and background levels – and how this relates to annoyance); whether different annoyance levels and health impacts are associated with living directly under a concentrated flightpath; and the extent to which being newly exposed to noise results in a different impact from long-term exposure.

#7 Maintain up-to-date evidence about noise costs and associated assessment tools

AEF cautions against judging the acceptability of noise impacts solely in terms of health costs identified by way of a cost-benefit analysis. Nevertheless, some improvements to the current WebTAG methodology could help to better inform decision-making, and comparison of airspace options. Reliance on the Leq metric for example, doesn't necessarily differentiate between options that provide respite. Work is needed to include additional metrics and to link this new data with relevant health costs.

#8 Introduce measures to protect tranquil areas

Maintaining tranquil areas has clear public health benefits, and EU noise policy already recognises the need for protection measures. Designated landscapes such as national parks or Areas of Outstanding Natural Beauty, as well as many non-designated rural areas, are often appreciated for their tranquil qualities and policies should seek to preserve these characteristics. At the same time, these areas are often less densely populated (although the number of visitors they attract should not be overlooked) so may come

under increasing pressures for the siting of new flightpaths in order to avoid overflying urban areas.

Government guidance already highlights the need to avoid such areas wherever possible, but this could, for example, be strengthened by setting a minimum altitude for overflights that would help to minimise any disturbance from private and pleasure flights. In the US, aircraft overflying national parks are not permitted to fly lower than 2,000 feet asl.

#9 Better compensation

Many impacted communities feel strongly that the current approach to compensation leaves them significantly disadvantaged compared to aviation consumers (who are often generously compensated for delays), and the aviation industry, which can benefit from operational changes without having to pay for the 'externalities' they may have in terms of noise increases. Better compensation is needed to reflect the 'polluter pays' principle.

Annex: AEF discussion paper on noise – additional comments from members and workshop attendees

Introduction

In April 2018, AEF circulated a draft of the noise discussion paper to its members, inviting comment on the recommendations via email or through attendance at a workshop held in London on 1st May. This annex presents a summary of the comments received, many of which have been reflected in the final version of the discussion paper.

General comments

"The strategy documents read as if they were written by the industry; there are no incentives or teeth for private operators to be held to account."

The strategy reads as if it was written by the aviation industry, and the community voice feels absent, one of our members commented. This tone needs to change, it was argued, since the Government's overriding "growth is good" attitude currently helps airports to silence community concerns. A more balanced framework could perhaps help airports to regain community trust. Meanwhile the inadequacy of the Government's current noise objective was noted, in particular that the "where possible" framing made it meaningless, and that a firmer commitment was needed in order to frame Government's engagement with the aviation industry.

In terms of AEF's noise discussion paper, the current regulatory vacuum should be emphasised, it was argued: no one is, in fact, responsible for setting noise limits or accountable for achieving them.

One key missing player on our 'regulators' map, it was suggested is NATS/ANSPs. NERL should be given an environmental remit and be accountable, it was argued, since at present it is not possible for members of the public to engage with NERL on issues such as low-flying aircraft. Community representation on bodies such as ANEG and on local Noise Management Boards was considered by some to be limited.

The issue of compensation was raised by many of our members, who felt that the current approach leaves communities significantly disadvantaged compared to aviation consumers (who are often generously compensated for delays), and the aviation industry, which can benefit from operational changes without having to pay for the 'externalities' they may have in

"Fundamental changes to current compensation arrangements, consistent with the globally accepted polluter pays principle, are an essential component in rebalancing the relationship between impacted communities and the aviation industry."

terms of noise increases. Better compensation would reflect the 'polluter pays' principle, it was argued. The basis for appropriate compensation was not discussed at the workshop, though one member group argued in writing that it should be based on making up for any loss of value to homeowners as a result of aircraft noise. The view was also expressed that impacted communities are blighted.

Comments on our 'asks'

1. Commit to developing meaningful, measurable, long-term targets to protect the public from the impacts of aircraft noise on health and quality of life

There was concern that by setting 'long-term' targets the need to tackle noise in the short term would be lost. It was proposed that we drop mention of 'long-term' in this ask.

There was support for the setting of more than one noise target, including some at national level to provide the overall framework, with more specific targets (such as limits on the number of overflights for any particular community) perhaps agreed on an airport by airport basis. Some members were concerned, however, that any 'local agreement' would be ineffective. Airports will only ever act to protect their own interests in a competitive market, it was argued, and local authorities are not always impartial. Sometimes they have a direct financial stake in their local airport, and sometimes are keen to gain indirect benefits from the airport through S106 agreements or project funding.

The concepts of fairness and balance would be helpful to introduce to our paper, it was suggested. Airports that are growing could, in this framework, be expected to do more to mitigate noise to offset the increase in traffic. Others suggested that there shouldn't, however, be an assumption that the current noise level is an acceptable baseline for future noise reduction measures, since in some cases the current level was unacceptable.

AEF should develop proposals for possible noise targets, it was felt, for this ask to be meaningful. These should include frequency targets, and, where appropriate, specific targets acknowledging the direction of operation of the airport, not just annual averages, since some areas are overflown only 30% of the time but can experience intensive noise during that time. We should be mindful that ICAO's technology targets have only ever been set at a level that manufacturers can achieve without significantly compromising current in-production aircraft.

> "If DfT and the aviation strategy want to support the overnight freight industry, then they need to come forward with innovative policies to bring new technology to the night freighters."

A ban or reduction in night flights should be set as a specific objective, some argued. The particular issue of noisy freighter aircraft operating at night was also raised. While new aircraft are typically less noisy than those they replace, it was noted, the older passenger aircraft – with their ten or twenty year old technology – are often then converted into freighters.

The Government's emphasis in the strategy documents on supporting aviation growth was noted, and some members argued that effective noise mitigation could not be achieved without changing this objective. It was argued that the Government's current approach on aviation noise represented a watering down of the framing given to it in the Noise Directive, and that without targets it's impossible to see how Government can hold industry to account in terms of whether it's doing enough.

Targets should be legally binding, it was suggested, akin to air pollution. They should be designed in a way that avoids penalising some communities to the benefit of others.

> "The absence of effective and enforceable legislation around aircraft noise should be relentlessly and assertively challenged."

2. Consider giving ICCAN an explicit role in identifying appropriate noise objectives and monitoring progress in delivering them

This point should be strengthened, it was proposed, by changing the wording from "Consider giving…." to "Give…"

ICCAN's role should also include identifying appropriate sanctions for noise breaches it was argued.

The absence of a single 'noise regulator' with the remit and authority to achieve a sustained long-term reduction in noise and its impacts was noted. Our proposal for ICCAN to identify and monitor noise objectives could be a stepping stone towards ICCAN taking on this regulatory function in future.

3. Close the regulatory gaps and increase accountability for delivering noise commitments

Many felt strongly that the current approach to noise regulation was deeply inadequate, and that no self-regulation or self-assessment should be considered acceptable, even if some airports are doing it better than others.

The need for enforcement of planning conditions was highlighted, with a recent example discussed of an airport breaching its noise footprint condition, and with the local planning authority's initial response being only to invite the airport to apply for amended conditions. Action to help bring the airport into compliance with the current limit was achieved only after agitation from a subgroup of the consultative committee, it was reported.

> "Operators, all with unambiguous vested interests in minimal regulation, are expected to toe some ill-defined line which they might do notionally from time to time. It's profit before people and planet again. Everyone should know from past experience that self-regulation works only for self-regulators."

Many felt that this and other examples served to create uncertainty and led to a loss of trust.

> "It wouldn't take much for the Dept for Housing Communities and Local Govt to write to all Planning Authorities reminding them that they do have the power, and the responsibility, to protect their residents when they have the chance."

Enforcement of environmental commitments or conditions more generally was widely reported as a problem. Concerns were expressed about the process and criteria for granting dispensations for flights to be permitted night slots. It was noted that while the new Airspace Change Process requires more detailed forecasting of noise impacts, there are few measures to ensure that actual impacts are in line with those modelled. On accountability, one member also mentioned that no one is monitoring whether Noise Action Plan measures are on target, or assessing the progress made in limiting both the number of people exposed to aircraft noise and the level of noise to which they are exposed.

A view was expressed that there should be a straightforward rule that if aircraft are likely to land outside of permitted hours as a result of late-running, they should not be permitted to take off.

> "Safeguards should be written into law that ensure those in receipt of the financial benefits from aviation are not the ones charged with the setting and enforcing of noise controls, otherwise there is clear conflict."

Environmental Health Officers were felt to "get" noise issues, in a way that those involved in regulating aviation noise sometimes don't, so considering ways of bringing their experience and expertise to bear for aviation might be helpful, it was suggested.

Regular noise audits should be performed to see how operational noise levels differ from modelled levels using certification data. If actual noise levels are than anticipated in planning or airspace change applications, some felt there should be an opportunity to revisit conditions to ensure they still offered adequate protection.

4. Commit to providing guidance for local authorities

The Government should give more explicit direction to local authorities on their role and responsibilities in terms of airport noise management, it was argued.

5. Guarantee public access to noise data

It was felt that there was a lack of consistency around how transparent or otherwise airports are about noise data. Some of the larger airports now produce and share extensive, accurate data, but this is not the case at every airport. While some commented that data on its own is not sufficient to generate noise improvements it was felt overall that it was nevertheless helpful in facilitating dialogue between airports and impacted communities. PBN technology could be put to good effect in helping to generate accurate data, it was suggested.

One proposal was for the DfT, CAA, or ICCAN to set out what basic noise data – for example six key noise indicators – all airports should produce on an annual basis. With this in mind, one member suggested amending the title of this section to 'Guarantee public access to agreed standard noise data'.

There was discussion about what degree of granularity is required. Some argued that data should be published in a 'raw', event-level form, and should be measured not modelled, to allow interested parties to make their own analysis of it. It was important, some argued, for noise monitors to be sited correctly in order to capture the information of most value to local communities. The siting of noise monitors generated some discussion: while it may be logical to place monitors at the locations used for aircraft certification in order to assess how operational noise may differ, one member argued that the airport fence potentially provided a better "standard" location for understanding the impact on people.

> "[Airport noise data] should include noise level, time of day, airport, event location, height, aircraft ID (and, derived from this: aircraft type, operator) etc. so that data can be sliced up and analysed in all sorts of ways."

Others felt that providing data in its raw form would mean that analysis would be possible only if the information was plugged into a noise model, and that models could be hard to operate, even for those with some specialist knowledge. Thought would need to be given, therefore, to how best to make the information truly accessible. Some concern was also expressed about how seriously or otherwise airports were likely to treat any noise analysis produced by local communities with some recounting having had their work dismissed on the basis that it had not been written by a noise expert.

Finally, in order to ensure that information was also available on people's perception and experience of aircraft noise, noise data should be supplemented with regular noise attitudes surveys, it was argued.

> "Community groups / community members of the consultative committee, who are not professionals and indeed have other commitments, are faced with possibly hundreds of pages of technical data and analysis that is waived through by the council or whomever."

6. Commit to funding further research to increase understanding, and 7. Maintain up-to-date evidence about noise costs and associated assessment tools

These points did not generate any additional feedback.

8. Introduce measures to protect tranquil areas

Some members feared that any special protection of this kind would be applied only to designated tranquil sites such as National Parks and AONBs, with the effect of pushing more air traffic over rural communities without any recognised designation but with equally low background noise levels. The text in our final paper specifies that this recommendation applies specifically to general aviation.