

# Future of Aviation Noise Management – Case for Change

## Land use and planning

### Summary

There are several challenges associated with aviation noise and planning. For the majority of airports and airfields in the UK, the local planning authority is the body that makes decisions on activity levels and expansion. The way in which land around airports is utilised is also of concern. Issues include balancing the demand for new housing, whether residential or commercial, or through change of use such as buildings repurposed as schools, the risk of exposing more households to excessive aviation noise, reductions in property values from changes in noise exposure and the environmental effects of noise pollution. These issues are also important to health service utilisation due to impacts associated with aviation noise such as sleep disturbance, annoyance and cardiovascular outcomes (see the Health and Quality of Life Case for Change for further details).

Devolved nations of the UK have their own planning regulations and policies. There are many different forms of policy and regulation related to planning and noise, some of which mention noise but do not specify aviation.

### Key issues

#### Housing supply and demand

##### Concerns

Government's priority to provide new homes in an already densely populated country will make it difficult to avoid developing in areas that experience aviation noise. Despite planning guidance related to noise, the concern is that homes are being built in noise sensitive areas close to airports ([Crosswind Developments, 2020](#); [Airportwatch, 2014](#)).

##### Improvement opportunities

There is a need to strike a balance between the impact of aviation noise and the pressure for housing development. Implementing long-term policy and development control regimes can minimise the effects of noise around airports. More tailored policy can be developed to supplement the National Planning Policy Framework (NPPF), which is not aviation specific, and better noise insulation could be provided where new homes are built within in specific noise contours.

#### Aviation noise in the home

##### Concerns

Annoyance as a result of aviation noise experienced inside homes has multiple negative impacts on an individual's health and wellbeing but developers of new homes are often reluctant to install appropriate levels of noise insulation due to the additional costs. Indeed, the soundproofing of external walls is not required by the Building Regulations ([UK Government, 2015](#)).

##### Improvement opportunities

Insulation schemes have been developed to mitigate noise in existing properties (not new developments), within specific noise contours (eligibility differs between airports, see the Mitigation and Compensation Case for Change for more details). Planning policy could include

requirements for new developments that are being planned within given noise contours to include a suite of acoustic insulation products.

## **Airspace change**

### **Concerns**

Airspace change may result in householders experiencing increases in noise exposure due to more overflights and at lower altitudes. This may result in an increase in annoyance and other health issues therefore, some areas of land affected by airspace change could be unsuitable for new housing developments.

### **Improvement opportunities**

This area is not sufficiently addressed by the government in its existing housing and transport policies.

## **Strain on local authority planning of health services**

### **Concerns**

Local authorities are responsible for the public health of their local population. There is limited evidence that aviation noise is associated with additional burdens on health services (see the Health and Quality of Life Case for Change). Assessing the effect of new developments in areas experiencing excessive aviation noise on health services would place additional demands on local authority planners as they would be required to assess new developments regarding aviation noise.

### **Improvement opportunities**

Evidence that examines the impact of noise on health services in existing developments could be strengthened and extended to understand what extent new developments in areas affected by aviation noise place additional burdens on health services. Guidelines to assess new developments with regard to the impacts of aviation noise could aid local authority planners.

# Supplementary information

## Airspace change and housing demand

### Concerns

The way in which land around airports – particularly those areas that are overflowed and/or subjected to excessive aviation noise – is allocated and used for development, whether residential or commercial, or through change of use such as buildings repurposed as schools. Government's priority to provide new homes in an already densely populated country will make it increasingly difficult, in some parts of the country to avoid developing in areas that experience aviation noise. Despite planning guidance related to noise, the concern is that homes are being built in noise sensitive areas close to airports ([Airportwatch, 2014](#); [Crosswind Developments, 2020](#)).

Airspace change occurs to increase airport capacity, introduce new technology and allow aircraft to fly on more direct routes whilst maintaining safety. As a result, householders may experience an increase in noise exposure due to an increase in overflights and/or overflights occurring at lower altitude. These may increase annoyance and other health issues for those affected. Therefore, airspace change could result in some areas of land becoming unsuitable for new housing developments due to the increase in aviation noise, placing further pressures on local authorities to meet government housing targets.

Permitted development rights are a national grant of planning permission which allows certain building works and changes of use to be carried out without having to make a planning application. Commercial buildings are being converted into residential use and can help with housing demand. However, the prior approval process is limited and does not require the local authority to secure basic housing standards. New housing through permitted development rights has created damaging outcomes and poor-quality housing in locations not appropriate for residential housing. For example, on land close to aircraft operations without sufficient noise insulation ([CIH, 2021](#)).

Aviation noise impacts can be controlled through the application of planning conditions or planning obligations (known as 'section 106 agreements'). s106 agreement and planning conditions allow the local authority to obtain mitigations from airports (s106) and developers (planning conditions). However, it is unclear how effective local authority enforcement against breaches of s106 agreements and whether local authorities are taking the opportunity to secure mitigation against noise through planning conditions.

### Current approach and limitations

#### International Civil Aviation Organisation (ICAO)

In 2001, the General Assembly of ICAO endorsed the concept of a balanced approach to aviation noise management ([ICAO, 2008](#)). This consists of four principal elements, namely:

- Reduction of noise at source – developing and introducing quieter aircraft and modifying existing aircraft to them make them quieter
- Land-use planning and management – discouraging or preventing the construction of residential properties and other noise sensitive buildings, such as schools and hospitals, in noisy areas near airports
- Noise abatement operational procedures – optimising how aircraft are flown and the routes followed to deliver noise reduction
- Operating restrictions – any action that reduces or limits the number or type or timing of air traffic movements at an airport, such as the number of take-offs and landings.

## UK Aviation specific policy

The Government stated in the 2003 Air Transport White Paper that "aim is to limit and, where possible, reduce the number of people in the UK significantly affected by aircraft noise" ([DfT, 2003](#)).

The Aviation Policy Framework (2013) sets out "the Government's objectives and principles to guide plans and decisions at the local and regional level, to the extent that it is relevant to that area" ([UK Government, 2013](#)).

The Aviation Strategy 2050 (2018) sets out the government's requirement for airports to make the best use of existing runways within the planning system to maximise capacity ([UK Government, 2018b](#)). The Aviation Strategy White Paper has been delayed because of the Covid-19 pandemic.

The CAA (2018 Airspace Modernisation Strategy) said aviation growth, its noise and other environmental impacts, should be managed through the planning system, not the airspace change process. As a result, regional and local government policy and decision-makers can limit the number of new runways at an airport, or place restrictions on their use. However, the limited ability of the planning system to set effective controls in every situation leaves a void which needs to be filled ([CAA, 2018](#)).

## Planning Policy

Local planning policies and decisions are a matter for the local authority. Planning decisions can be called in by the Minister on decisions of national importance. Local plans and neighbourhood plans set out the local authority view on new developments for the area and any relevant policies on managing noise, air quality and other issues.

Planning in the UK is plan-led, and the overall approach is set in the National Planning Policy Town and Country Planning Act (TCPA) 1990 and the National Planning Policy Framework (NPPF) 2019 ([MHCLG, 2019](#)). Local planning authorities are responsible for the preparation of local plans, that are the statutory starting point for decision-making on development. Applications for planning permission must be determined in accordance with the development plan unless there are material considerations that indicate otherwise.

The NPPF provides a statement of national planning policy. However, it can be viewed that the streamlining of planning policy and the deletion of a large quantity of planning guidance resulted in some useful elements of planning guidance being lost.

The Government's National Planning Policy Framework (NPPF) says that planning policies and decisions should aim to avoid a situation where noise gives rise to significant adverse impacts on health and quality of life, as a result of new development (including around airports) and to mitigate and reduce to a minimum other adverse impact on health and quality of life arising from noise from new developments, including through the use of conditions. Previous detailed planning guidance on minimising the adverse impact of noise set out in Planning Policy Guidance 24 has been withdrawn and replaced with broader based web guidance.

Annex 1 of PPG24 included a series of Noise Exposure Categories (and associated noise levels) against which proposed noise-sensitive development could be judged ([Department for Communities and Local Government, 1994](#)). This was to ensure that the noise-sensitive development was compatible with existing transport noise (including airports). It also provided a consistent approach for land use allocation and development control around airports, particularly for the control of residential development in areas subject to high levels of aviation noise.

## Permitted Development Rights (PDR)

PDRs are granted through the Town and Country Planning (General Permitted Development) (England) Order 2015. There is no need to apply for planning permission locally, but they are often subject to conditions and limitations (height, size, or location) to control development impacts. Exclusion for protected areas include conservation areas, areas of outstanding natural beauty, national parks, and world heritage sites.

Planning conditions and agreements can be attached to mitigate some of the potential adverse impacts of a development or activity.

## Planning conditions

These enable planning permission that would otherwise be refused or delayed be granted subject to specific details being agreed by the decision-maker before work, or change of use, is undertaken. Planning conditions can be a useful tool for reducing noise impacts around airports since they can impose night quotas and night flying policies and restrict the numbers of ATMs from airports.

## Section 106 Agreements

Section 106 of the TCPA (also known as s106 agreements or 'developer contributions') are similar to planning conditions, they differ in that the developer enters into a legally-binding covenant with the local planning authority and this amounts to obligations to mitigate development impacts.

s106 agreements can:

- restrict the development or use of the land in a specified way;
- require specified operations or activities to be carried out in, on, under or over the land;
- require the land to be used in a specified way; or
- require a sum or sums to be paid to the authority on a specified date, or dates, or periodically.

Planning conditions can't be imposed on flightpaths, there are examples of s106 agreements that reference adherence to an agreed flightpath protocol. The s106 agreement between Southend Airport and its local authorities prescribe a quota on night flights and the type of aircraft that can operate at certain times of the day ([Southend-on-Sea Borough Council, 2010](#)). Some non-designated airports have entered into s106 agreements over noise preferential routes. In 2016, Birmingham Airport's s106 agreement with Solihull local authority specified the NPR ceiling for southbound departures from Runway 15 be raised to 4000 feet from 1st July 2016 ([Solihull Council, 2018](#)).

## The 2008 Planning Act for larger developments

The Planning Act 2008 introduced a new development consent process for Nationally Significant Infrastructure Projects (NSIPs). NSIPs are usually large-scale developments (relating to energy, transport, water, wastewater or waste), see Annex: Legislation

## Opportunities for improvement and challenges

There is a need to strike a balance between the impact of aviation noise and the pressure for housing development. Implementing long-term policy and development control regimes can minimise the effects of noise around airports.

Airports seek to engage and work with a wide range of stakeholders in their local area, particularly with local planning authorities. This is an important and valuable relationship in balancing aviation growth, environmental and community impact and other developments at the local and national level. Clearer and more joined up cross boundary guidance would reduce the uncertainty left by gaps between policies and enable consistency in local plans and new development in areas affected by aviation noise.

The Scottish, Welsh and English governments, are conducting reviews of their planning regimes.

In Scotland the Planning (Scotland) Act 2019 was passed by the Scottish Parliament in June 2019. The detail of how the Act's provisions will work in practice will be contained within secondary legislation and guidance ([UK Government, 2021a](#)).

The Welsh Government's Air quality and soundscape: review of TAN 11 closed in May 2020 and the responses are currently being reviewed ([Welsh Government, 2020](#)).

In England the Planning for the future consultation closed in October 2020 and the responses are currently being reviewed. These reviews could include amendments that more accurately consider aviation noise in the planning process ([UK Government, 2021b](#)).

Example 1: International Airports

[Who, What and How?](#)

### **Germany – Frankfurt Airport**

Federal law defines noise protection zones around land surrounding the airport where houses and other buildings such as schools and hospitals cannot be built. Airport operators have to pay for noise insulation programmes within these zones.

Future development of noise sensitive land use is restricted as follows:

No new residential building areas allowed within the following noise contours:

- 60 dB(A) outside  $L_{Aeq}$  day (06-22h) (day zone 1)
- 50 dB(A) outside  $L_{Aeq}$  night (22-06h) and/or 6x53 dB(A) inside  $L_{max}$  at night (night zone)

No new noise sensitive buildings like hospitals, homes for elderly people, recreation homes and similar within the following noise contours:

- 55 dB(A) outside  $L_{Aeq}$  day (06-22h) (day zone 2)
- 50 dB(A) outside  $L_{Aeq}$  night (22-06h) and/or 6x53 dB(A) inside  $L_{max}$  at night (night zone)

No new schools, nursery schools and similar within these following noise contours 55 dB(A) outside  $L_{Aeq}$  day (06-22h) (day zone 2)

### **Amsterdam - Schiphol Airport**

Five constraint zones based on  $L_{den}$  contours of up to 48 dB(A)  $L_{den}$

1. Demolish residences because of safety.
2. Demolish residences because of noise.
3. No new buildings allowed.

4. No new residences allowed, small exceptions are possible.
5. New residence in urban areas possible, after balanced consideration by the local government.

Future plans until 2050:

The western part of the Netherlands has a huge demand for housing. The market supply is short of demand, prices are high, and the government is pushing for new housing development.

Local authorities around Schiphol ask for:

- Clear, stable noise contours and constrained zones;
- Space for new housing development;
- Revitalising constrained areas;
- Close to Schiphol: compensation, moving fees, purchasing;
- Clear information towards new citizens;
- Perpetual clause possible in the purchase agreement for new residences since 2018.

#### How could best practice be applied to UK aviation?

UK governments could utilise zoning to designate land as not appropriate for certain developments and updating the current noise contour levels to reflect the WHO's most recent guidance. Clearer information to potential new residents in affected areas would enable people to make informed decisions when relocating.

### Aviation noise in the home

#### Concerns

Annoyance as a result of aviation noise experienced inside homes has multiple negative impacts on an individual's health and wellbeing. There is a lack of clear guidance and collaborative working which means that inhabitants of new homes are not protected from aviation by appropriate levels of noise insulation.

#### Current approach and limitations

In 2018, the World Health Organization issued "Environmental Noise Guidelines for the European Region" recommended new and more stringent noise limitations, including aviation noise ([WHO, 2018](#)). The guidelines suggest avoiding adverse health effects, averaged aircraft noise levels should be no more than 45 dB(A) Lden at daytime or 40 dB(A) Lnight at night-time. The WHO also published Guidelines for Community Noise which provide indoor noise levels where noise can become an issue such as at 35 dB LAeq, 16 hr, where moderate annoyance and speech intelligibility occur ([Berghlund, et al., 1999](#)).

The NPPF has a noise-specific aim, informed by the NPSE, to avoid significant adverse impacts on health and quality of life, and indicates that the health impacts of noise should be considerations in development decisions.

The NPPF and the Noise Policy Statement for England do not set out clear metrics that provide guidance on acceptable / unacceptable levels of noise. This is a shift away from the Noise Exposure Categories in PPG24. This can then be open to interpretation considering particular applications for planning permission.

The Aviation Policy Framework provides noise metrics and requirements relating to noise mitigation, but it is not specific and it also does not fully identify the important role of local authorities in plan-making and in development management decisions ([UK Government, 2013](#)). There is an absence of guidance and a potential lack of consistency in policy.

### Opportunities for improvement and challenges

More tailored policy can be developed to supplement the NPPF which is not aviation specific, and better noise insulation could be provided where new homes are built within in specific noise contours.

Insulation schemes have been developed to mitigate noise in existing properties (not new developments), within specific noise contours (eligibility differs between airports, see the Mitigation and Compensation Case for Change for more details). More specific guidance in planning policies could include requirements for new developments that are being planned within given noise contours to include a suite of acoustic insulation products such as acoustic glazing, acoustic trickle ventilators, loft and cavity wall insulation.

### Impact on local authority planning of health services

#### Concerns

Local authorities are responsible for the public health of their local population. There is limited evidence that aviation noise is associated with additional burdens on health services (see the Health and Quality of Life Case for Change). Assessing the effect of aviation noise on demand for health services, while necessary, could increase the demands on local authority planner and environment health officers.

New developments in areas experiencing excessive aviation noise on health services would place additional demands on local authority planners as they would be required to assess new developments regarding aviation noise.

#### Current approach and limitations

Mitigation strategies ought to be a joint approach from both central and local governments. But decisions relating to the planning of airport development are now mostly in the hands of local authorities. Many are unlikely to have the necessary resources, expertise, and experience to handle this decision-making process and are experiencing financial constraints.

### Opportunities for improvement and challenges

There is an opportunity to assess the burden placed on health services in areas and housing developments affected by aviation noise. The evidence would aid decision-makers when assessing new development and change of use proposals.

### Air pollution – a tool to estimate healthcare costs

#### Who, What and How?

Public Health England (PHE) in collaboration with the UK Health Forum and Imperial College London developed a tool to calculate the health and social care costs of air pollution ([UK Government, 2018a](#)).

#### How could best practice be applied to UK aviation?

A similar tool could be developed in the future once health research is developed. See Health and Wellbeing document.

# Appendices

## Appendix I: Legislation

### National overview

The planning system introduced the requirement to obtain planning permission from local authorities for building works, and for a change of land use. The legislation, policy and guidance that applies to proposed developments will differ depending on the scale of the proposals put forward and their impacts. Scotland, Northern Ireland and Wales each have their town and country planning systems. The paper's summary below will focus on England, where there is the highest number of flight movements, and airport operations more frequently affect areas densely populated.

Government's preference is that local solutions should be devised for local problems wherever possible. However, this differs slightly for the designated airports, Heathrow, Gatwick and Stansted. This means that government restrictions run alongside those laid down by local planning authorities through the planning process.

England, Legislative Framework:

- Town and Country Planning Act 1990
- Planning Act 2008

Northern Ireland, Legislative Framework:

- Planning Act (Northern Ireland) 2011

Scotland, Legislative Framework:

- Town and Country Planning Act 1997
- Planning Act Scotland 2019

Wales Legislative Framework:

- Town and Country Planning Act 1990
- Planning Act 2008
- Planning (Wales) Act 2015

### The 2008 Planning Act for larger developments

The Planning Act 2008 introduced a new development consent process for Nationally Significant Infrastructure Projects (NSIPs). NSIPs are usually large-scale developments (relating to energy, transport, water, wastewater or waste), and the need for them is set out in a relevant national policy statement (NPS). The relevant NPS for a large-scale development project at an airport is the Airports National Policy Statement.

NSIPs require a Development Consent Order (DCO), which automatically removes the need to obtain several different consents, including local authority planning permission. Part 3 of the 2008 Act sets out the thresholds which these projects must meet to be considered as nationally significant and thus requiring development consent. Under section 104 of the 2008 Planning Act, the Secretary of State must decide any DCO application following any relevant NPS unless

it is raising certain specific concerns. Responsibility for decisions on DCO applications rests with the relevant Secretary of State. The Secretary of State's decision will be informed by recommendations made by planning inspectors (from the National Infrastructure Directorate of the Planning Inspectorate).

## **Appendix II: Policy**

### **An overview of Planning Policy in the devolved nations**

#### **England**

National:

- National Planning Policy Framework (NPPF)
- Planning Practice Guidance Noise

Noise Policy:

- Noise Policy Statement for England

Noise Planning Guidance:

- Planning Practice Guidance: Noise

#### **Northern Ireland**

National:

- Regional Development Strategy 2035
- Strategic Planning Policy Statement

Noise Policy:

- Noise Policy Statement for Northern Ireland

#### **Scotland**

National:

- National Planning Framework for Scotland
- Planning Advice Notes, Planning Circulars, Guides and Letters from the Chief Planner

Regional:

- Strategic Development Plans in four regions

Noise Policy:

- Transportation Noise Action Plan

Noise Planning Guidance:

- Planning Advice Note (PAN) 1/2011

#### **Wales**

National:

- Planning Policy Wales
- Technical Advice Notes
- National Development Framework

Noise Policy:

- Noise and Soundscape Action Plan for Wales

Noise Planning Guidance:

- Technical advice note (TAN) 11: noise

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