Aircraft Noise – A Regulatory Overview

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According to the European Commission, the European commercial aviation industry is one of the most dynamic and best performing parts of the EU economy. Whilst the importance of the aviation sector is recognised, there is concern to regulate aircraft noise. Although commercial aircraft have become 75% less noisy over the last 30 years, the growing amount of air traffic means that many people living around some of Europe’s busiest airports are still exposed to high noise levels. This paper explores the existing international, European as well as national (UK) regulatory regime which govern aircraft noise.

The International Regulatory Framework

At a global level the International Civil Aviation Organisation (ICAO) is responsible for developing standards for noise emissions from civil aircraft. ICAO is an intergovernmental organization which aims to develop the principles and techniques of international civil air navigation and foster the planning and development of international air transport. The Standards, once adopted, are put into effect by each ICAO member state in its own country.

Aircraft operating in member states must conform to these standards, which are known as Chapters. The Chapters set maximum acceptable noise levels for different aircraft during landing and take-off. Aircraft falling within Chapter 2 have been banned from operating within the EU since 1 April 2002, unless they are granted specific exemptions. The vast majority of civil aircraft now operating therefore fall within Chapters 3 and 4, i.e. they are quieter than the previous Chapter 2 aircraft. All new aircraft manufactured from 2006 onwards must meet the requirements of Chapter 4.

ICAO also requires Member States to adopt a “balanced approach” to noise management. The balanced approach goes beyond individual aircraft to consider:

- Reducing aircraft noise at source
- Land planning use
- Changes to operational procedures
- Restrictions on the use of the noisiest aircraft.

The EU Regulatory Regime

The Existing Legal Framework

The EU has issued various directives relating to environmental issues and is increasingly assuming responsibility for the regulation of aircraft noise standards. EU Member States are obliged to comply with the requirements of the directives and incorporate them into national legislation.

The current European regime on aircraft noise derives from EC Directive 2002/30\(^1\) which applies to EEA airports. The directive aims to promote the sustainable development of air transport through the reduction of noise pollution from aircraft at airports. It lays down common rules for prohibiting the noisiest aircraft from European airports and repeals Regulation (EC) No 925/1999\(^2\), the ‘Hushkit’ Regulation, which was intended to prohibit the registration in Europe of aircraft fitted with noise-reducing devices.

Directive 2002/30 obliges Member States to take a ‘balanced approach’ to aviation noise management. This is an approach which attempts to limit noise through:

- Reduction of aircraft noise at source;
- Land-use planning and management measures;
- Noise abatement operational procedures;
- Local operating restrictions relating to noise problems.

This above is based on the balanced approach suggested in resolution A35-5 of the International Civil Aviation Organisation.

\(^1\) Directive 2002/30/EC of the European Parliament and of the Council of 26 March 2002 on the establishment of rules and procedures with regard to the introduction of noise-related operating restrictions at Community airports

\(^2\) Council Regulation (EC) No 925/1999 of 29 April 1999 on the registration and operation within the Community of certain types of civil subsonic jet aeroplanes which have been modified and re-certificated as meeting the standards of volume I, Part II, Chapter 3 of Annex 16 to the Convention on International Civil Aviation.
The key objectives of the directive are to:

- Lay down rules for the EU to facilitate the introduction of operating restrictions in a consistent manner at airport level so as to limit or reduce the number of people significantly affected by the harmful effects of noise;
- Provide a framework which safeguards internal market requirements;
- Promote development of airport capacity in harmony with the environment;
- Facilitate the achievement of specific noise abatement objectives at individual airport level;
- Achieve maximum environmental benefit in the most cost-effective manner.

The method by which the Directive seeks to manage aviation noise is by the withdrawal of ‘marginally compliant’ aircraft. These are aircraft for which the difference between the certified noise level and the maximum permitted noise level, as described in the Convention on International Civil Aviation, is not more than 5EPNdB (Effective Perceived Noise in Decibels). The Directive allows for the introduction of operating restrictions which aim to facilitate the withdrawal of marginally compliant aircraft, first by prohibiting increases in their movements as compared to the previous year, and then by requiring operators to reduce their movements by 20% per year.

The other key piece of European legislation in this area is EC Directive 2002/493 (“Environment Noise Directive”). This directive required Member States to create noise maps from all transport sources in urban areas by 2007 and to adopt action plans to manage noise by 2008. The directive also aimed to harmonise methods for measuring noise across the EU.

**The Proposed New Framework**

In December 2011 the European Commission launched its ‘Better Airports Package’ of suggested measures to address capacity shortages at European airports and improve the quality of services offered to passengers. The package contained legislative proposals on slot allocation, ground handling and aviation noise. It was proposed to replace the Directive with a new EU regulation which would be directly applicable in each Member State without the need for Member States to implement the rules under local law. Aviation noise regulation will therefore be harmonised across Europe.

The Regulation will apply the balanced approach to aviation noise management consistently across the EEA. Disparities between Member States will be removed and this will ensure that certain processes are adhered to where measures are taken to mitigate aviation noise.

The Regulation proposes regular assessments of the noise situation at airports and that, where the assessment reveals that new measures are necessary, a forum for cooperation is established between airport operators, aircraft operators and air navigation service providers. This forum will consult regularly with local residents or their representatives, giving them at least three months to provide responses on proposed measures.

**National (UK) Regulation of Aircraft Noise**

The UK government has an important role in setting and developing the policy for aircraft noise control at UK airports. It does this by publishing white papers, aeronautical information packages as well as planning policy guidance.

The UK government also enacts Acts of Parliament and regulations which deal with aircraft noise. The relevant legislation is outlined below:

*The Civil Aviation Acts 1982*4 and *2006*5

The Civil Aviation Acts 1982 and 2006 grant the government powers to introduce noise control measures to limit or mitigate the effect of noise and vibration connected with taking off or landing aircraft. These powers are widened by the Civil Aviation Act 2006 as the Act also permits an airport authority to charge aircraft operators for use of the airport based on noise and emissions. Airport operators can thereby introduce differential charges to incentivise the use of quieter and cleaner aircraft. The Act also permits airport operators to levy financial penalties on aircraft operators who breach noise abatement requirements imposed by the Secretary of State. A

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sum equal to the penalties received must then be paid for the benefit of people who live in the vicinity of the airport.

The Aerodromes (Noise Restrictions) (Rules and Procedures) Regulations 2003\(^6\)

The Secretary of State and airport operators are subject to these regulations. These regulations transposed the EC Directive 2002/30/EC into UK law. They apply to major airport operators and reflect the adoption of the ICAO balanced approach to achieving noise objectives. The regulations also set out the procedures which airports should follow when considering noise related operating restrictions. These include:

- Taking into account costs and benefits of new measures
- Being non-discriminatory on grounds of nationality or identity of air carrier or aircraft manufacturer and
- Being no more restrictive than necessary in order to achieve the environmental objectives for a specific airport
- Ensuring any performance-based operating restrictions are based on the noise performance of the aircraft as determined by ICAO certification procedures.

The Environmental Noise (England) Regulations 2006\(^7\)

These regulations transposed the requirements of EC Directive 2002/49/EC (Environment Noise Directive) into UK law. Under these regulations the Secretary of State must produce strategic noise maps and airport operators must produce noise action plans based on the strategic noise maps. The adopted noise action plans must be reviewed and, if necessary, revised, at least every five years and whenever a major development occurs affecting the noise situation.

Airports Act 1986\(^8\)

The Airports Act gives power to the Secretary of State to make orders if it appears to him that the existing runway capacity of the airport is not fully utilised for a substantial proportion of the time during which it is available. It includes powers to limit the number of occasions on which aircraft may land or take off at an airport and schemes to allocate airport capacity.

Aeroplane Noise Regulations 1999\(^9\)

These regulations set out the noise certificate requirements for both propeller and jet aeroplanes registered in the UK. It provides that no aircraft can land or take off in the UK without a noise certificate issued by its competent authority which meets at least equal requirements to those for UK registered aircraft. The regulations refer to noise certification standards and limits issued by ICAO. The regulations also give a list of aircraft that are exempt from the ICAO noise certification.


