

# ADSTAR Final Report



## Administrative Structures in Airport Regions ADSTAR

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**Administrative Structures  
in Air Traffic Regulations  
of EC member countries**

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# PRESENTATION

The Airport Regions Conference (ARC) is an association of cities and regions across Europe which have an international airport situated within or near its territory.

The ARC was set up in 1994. There are today more than 30 cities and regions in ARC, hosting "the big five" airports in Europe, along with other major and regional international airports in 18 European Countries.

The ARC brings together a wide range of expertise at the interface of air transport and local and regional policies. A common concern is to balance the economic benefits generated by the airports against their environmental impact, notably the effect on the quality of life of local residents. ARC works with all stakeholders in the aviation industry and the European Commissioner for Transport and his Cabinet and the EC Directorates for Transport, for the Environment, and for the Regions.

The ARC members co-operate at European level to pursue common interests. This means that the ARC members discuss and formulate positions and other statements that reflects the views of cities and regions in Europe on aviation and regional development and environment.

In order to enhance the role of regional and local governments as active partners in the development of European Air Transport Policies; the ARC works in partnership with other key players such as airport operators, airlines, air transport organisations etc.

The ARC also undertake common initiatives for the exchange of information and best practice among its members. Over the years the ARC Interest Groups have produced several major studies on topics of great importance for the cities and regions as well as the aviation community.

The ARC Environment Interest Group mainly deals with issues like mitigation of noise and pollution. After issuing an assessment of good practices on noise abatement the group concentrated on a project called ADSTAR.

The aim of ADSTAR (ADministrative STructures in Airport Regions) was to analyse the different organizational structures within the EU with regard to air traffic safety and noise reduction measures. Main aspects were to get an overview of national and regional competences and the legal basis regarding aircraft noise abatement and the way these regulations were realized. Another important issue was to receive information about experiences of the ARC members with governmental and non-governmental institutions which are involved in Air Traffic Management and aircraft noise abatement and opportunities for municipalities to influence decision making processes of those institutions.

## SUMMARY

This final report presents the results of the ADSTAR project, performed in 2006 and based on questionnaires filled out by the ARC members. Main aspect of this study has been to create an overview of the relevant administrative structures in topics of aircraft noise abatement and air safety, taking various airport regions and countries into account.

In addition, the results from the previous inquiry action MANIC, performed in 2005 and dealing with more general aspects regarding procedures and regulations in air traffic noise topics are presented here for the first time.

The report is supplemented by three other chapters, giving a comparison between regulations and authorities in United Kingdom and France in some more detail, exemplifying administrative structures and their special demands in case of the structural enlargement of existing airports and treating the issue of overlapping between administrative units and noise zones covered by them.

As a result, it was found that a deep understanding of the grown specific structures in the different countries and their solutions to questions in air traffic safety and noise abatement topics is crucial for the forthcoming process of creating an EC-wide solution.

Whilst the way in which airport regions and their concerned public take part in the decision process forms a central aspect of this study, it is shown, that in topics of regional concern specific committees in addition to already existing ones are necessary, in order to reflect the needs of concerned regions. In general, the competence of the representatives of the various airport regions is needed if a comprehensive solution in these topics is to be found in future.

# CONCLUSIONS AND RECOMMENDATIONS

- 1** Comparison between administrative structures in UK and France revealed that existing working solutions may differ in many points. It might be tempting to transform a centralized organization like ACNUSA into EC-wide structures, but it can well be doubted that such a solution, though quite appropriate for France, might be applicable on a broad international basis. History of the respective States in general and the state of privatisation in special characterize the finding of EC-wide solutions as a difficult adjustment process.
- 2** In the various EC countries, regulations regarding competences and influential power of the affected people near airports vs. the interests of air traffic industry differ a lot. Governmental administrative structures in airport regions do not match with the areas affected by air traffic. Air traffic industry gets confronted with the problem to find representatives responsible for the affected region, equipped with sufficient competencies.
- 3** In the case of massive enlarging and establishment of new airports, committees are needed – besides the formally established administrative structures – which conceive legally bound protection, provision and compensation measures for the people under concern. These committees must be positioned well balanced between the interests of air traffic industry and affected people. Usually, non-governmental organizations and working groups need to be consulted.
- 4** In general, a strong representation of local governmental and non-governmental institutions is crucial for the decision-making process in matters of aircraft noise. Therefore, the experiences of ARC representatives should be considered in the forthcoming process of finding EC-wide solutions.

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# 1 STARTING POINTS AND GOALS OF THE STUDY

The predicted increase in air traffic within the European Community (EC) countries enhances the necessity of a better co-operation between the EC member countries in European air traffic regulations. For example, EC-wide regulations concerning take-off and landing procedures have to be found within a common framework of air safety and noise abatement standards. A harmonization of the corresponding regulations of the EC member countries is claimed for in both the directives 2002/30/EC<sup>1</sup> (noise-related operating restrictions) and 2002/49/EC<sup>2</sup> (assessment and management of environmental noise).

Therefore, this study will try to give at the very first place an overview of the respective national authorities and regulations dealing with all aspects of air traffic safety and noise abatement procedures. The application of these regulations in practice is of particular interest here. To fulfill this, we interviewed the ARC representatives through a questionnaire, sent by e-mail to all members of ARC. Considering the aim of our project, main aspects of

this questionnaire were, besides the national and regional competences in the issues of air traffic safety and noise abatement, the experiences made by ARC representatives with the respective governmental and non-governmental authorities as well as with the representatives of air traffic industries in their respective region. We focused on examining the development of the recent years, bearing the above-mentioned EC directives and their forthcoming realization in mind.

Another main aspect of our questioning dealt with the possibilities of generalizing already established concepts in the different EC countries and seeking for generally valid solutions within the European Community. By this, we hope to contribute to an improving of already existing EC-wide structures concerning air traffic under the aspects of safety as well as noise abatement.

<sup>1</sup> 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

<sup>2</sup> DIRECTIVE 2002/49/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 25 June 2002 relating to the assessment and management of environmental noise

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## 2 ADSTAR AS A FOLLOW-UP ON MANIC

Air traffic within the European countries will further increase in the next years. Prognosis of the rise in air movements within Europe is about 4 % p.a. until 2020<sup>3</sup>. In consequence, together with the economic causes and consequences, contamination with air traffic noise in airport regions will further increase<sup>4</sup>. Moreover, the capacities for improving the technical equipment in order to reduce the noise emitted by aircrafts seem to be more or less exhausted<sup>5</sup>. An European-wide harmonization in the assessment of (aircraft) noise and abatement procedures is explicitly asked for in the corresponding EC directives 2002/30/EC and 2002/49/EC, but needs to be realized yet.

Stocktaking of the current procedures and regulations regarding aircraft noise in EC countries could be a first step for finding European-wide solutions.

Those considerations formed the starting point in 2004 for MANIC (**M**anaging **A**ircraft **N**oise **i**n **C**ommunities). The project was conceptualized in collaboration of the ARC members (the respective airports are given in brackets)

Frankfurt (Rhein-Main Airport; together with Regionales Dialogforum and Fluglärmmmission (Aircraft noise commission)), Vantaa (Helsinki Airport), El Prat (Barcelona Airport), Harryda (Gothenborg Airport), Spata (Athens Airport) and Ullensaker (Oslo Airport). ARC realized the project in 2005 as an inquiry, to be performed with questionnaires sent to all members of ARC.

Corresponding to the aims of this project, the following considerations were essential in conceiving the questionnaire:

- › A comparison of procedures in aircraft noise abatement in the ARC member regions
- › Developing new solutions for the ARC regions
- › Finding new challenges in the issue of aircraft noise to be treated in forthcoming projects.

By this, MANIC had been intended as a contribution for gaining a consensus regarding aircraft noise issues in European countries.

<sup>3</sup> Intraplan Consult GmbH 2006: Luftverkehrsprognose 2020 für den Flughafen München (Air traffic prediction for Munich airport)

A mean annual increase between 3.3 and 4.7 % in passenger traffic is predicted; world-wide oriented predictions of the aircraft industr are about 5 % p.a.; Consave Study (DLR et al.) predicts an annual increase of passenges of about 3.6 % and 3.4 % in passenger miles.

<sup>4</sup> cf. Study on Current and Future Aircraft Noise Exposure at and around Community Airports (DG TREN), 2003, making a prognosis of an increase in people highly annoyed by aircraft noise of 1-4 % until 2015.

<sup>5</sup> REICHMUTH, J. (DLR) 2006: Effizienz- und Kapazitätssteigerung der luftseitigen Verkehrsabläufe (Increasing air traffic management system capacity).- Hearing RDF Frankfurt 2006

In order to fulfill the guidelines of the project, the questionnaire covered the acquisition of statistical data of corresponding airports together with a wide range of matters in aircraft noise (measurement, sanctions in case of breaches of regulations, night noise, ground noise, passive noise protection, noise minimizing by flight procedures, noise mapping etc). Another important aspect had been the investigation of communicative structures in issues of aircraft noise to the public. Besides its use for the study, the collected statistical data was intended as a solid database for ARC's own purposes.


The questionnaire had been sent to the ARC representatives in summer 2005. At about the same time, the Working Group on Airport Noise (WG AN) decided to perform a similar inquiry, which used MANIC as a template. Because of the more detailed questionnaire compared to MANIC, and the larger amount of international airports taken into consideration (in total 44), the WG AN questioning has now to be regarded as more comprehensive.

Whilst both investigations, MANIC as well as the enlarged WG AN study, were intended for creating an comprehensive overview of the aircraft noise situation under the aspect of the concerned public, administrative structures in aircraft noise and safety matters were not considered in much detail within the scope of the projects. Because of the harmonization

between the EC member countries to be found in the next years, obviously, there is a need for an overview of the existing national and regional regulations, together with their advantages and disadvantages. A synopsis of the current regulations could help to fulfill the targets set in EC directive 2002/30/EG regarding harmonization in regulations in air traffic noise matters. E.g., point (7) of the mentioned directive reads:

*„A common framework of rules and procedures for the introduction of operating restrictions at Community airports, as part of a balanced approach on noise management, will help safeguard internal market requirements by introducing similar operating restrictions at airports with broadly comparable noise problems. This includes assessment of the noise impact at an airport and evaluation of the measures available to alleviate that impact, and selection of the appropriate mitigation measures with the goal of achieving the maximum environmental benefit most cost effectively.“*

Those were the leading considerations for the decision at the ARC annual meeting 2006 in Milano to create a new project, called ADSTAR (Administrative Structures in Airport Regions) under the leadership of the Environment Interest Group of ARC (represented by the Planungsverband Ballungsraum Frankfurt/



Rhein-Main). Like MANIC, ADSTAR has been conceived as a questionnaire-based inquiry. Corresponding to the guidelines of the inquiry, the questionnaire was to cover the following aspects:

- › Revealing national and regional competences and the legal basis regarding aircraft noise abatement
- › Finding out how these regulations are realized. For example, the way in which the public is considered in decision-making
- › Recent and forthcoming changes in aircraft regulations
- › Experiences of the ARC members with governmental and non-governmental institutions and their suggestions for improving relations.

In addition, the questionnaire should contribute to an actualization of the database (statistical data of the respective airports), established by the MANIC inquiry.

To realize ADSTAR, the company GPM (located in Kronberg, Germany) has been employed. In cooperation with the Planungsverband Ballungsraum Frankfurt/Rhein-Main, we conceived a questionnaire dealing with the aspects mentioned above. It was sent to the ARC representatives in the summer of 2006. This report presents the results, which were achieved by means of the questionnaire.

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*Illustration 1: ARC members who sent back the MANIC questionnaire.*

## 3 MANIC – RESULTS

The results of MANIC had not been published so far. Since ADSTAR was intended as a close-up to MANIC, it seems appropriate here to give a short summary of the results achieved by the MANIC inquiry.

The following thirteen ARC representatives sent back filled-out questionnaires:

- › City of Haarlemmermeer  
(Amsterdam Schiphol)
- › El Prat de Llobregat  
(Barcelona)
- › Planungsverband Frankfurt/Rhein-Main  
(Frankfurt)
- › Gothenborg Region  
(Gothenborg Landvetter)
- › City of Vantaa  
(Helsinki Vantaa International)
- › West Sussex County Council  
(London Gatwick)
- › London Borough of Hounslow  
(London Heathrow)
- › Regione Lombardia Malpensa  
(Milano-Linate und Milano-Malpensa)
- › Municipality of Ullensaker  
(Oslo)
- › A.V.A.R.  
(Prag Ruzyne)
- › IAURIF-Île de France  
(Paris Charles-de-Gaulle und Paris Orly)
- › Stockholm Malar Region  
(Stockholm Arlanda)
- › City of Tallinn  
(Tallinn)

That is, the following analysis contains information corresponding to a total number of 15 airports.

The summary presentation of the results is given in accordance to the order of the questionnaire. The questionnaire and its result are reproduced in Appendix 1 of this report. Because of the very differing quality of assessed flight statistics data and its minor role for the problems considered here, the statistical information has been dropped. The reader interested in statistical data regarding all aspects of operational flight service will find reliable data as well as noise regulative details on the relevant websites in the Internet.

<sup>6</sup> e.g. [http://www.eurocontrol.int/statfor/public/standard\\_page/statistics\\_reports.html](http://www.eurocontrol.int/statfor/public/standard_page/statistics_reports.html) (statistical data) and [http://www.boeing.com/commercial/noise/airport\\_info.html](http://www.boeing.com/commercial/noise/airport_info.html) (regulations)

### 3.1 MANIC – summary of the questionnaires

#### Noise Measurement

- › Currently, there are about twelve different noise indices in use, within the two main categories of a) averaged noise indices (e.g. Leq) and b) single noise values. Though the latter are preferred in most cases by the concerned public, averaged values, differing in details of computation, are most usual in common praxis
- › At all fifteen airports, different restrictions apply for night and day hours. Moreover, on four airports, there is a transitional period between night and daytime (Helsinki, Gothenborg, Paris-Orly and Paris-Charles de Gaulle)
- › Maximum noise measurement level is taken in slow-mode at seven airports, in fast mode at four airports (no information: four airports)
- › The number of permanently established noise measuring equipment sites ranges from 0 (no permanent site, at two airports, Gothenborg Landvetter and Stockholm Arlanda) to 26 (Frankfurt Rhein-Main)
- › The number of moveable noise measurement units ranges between 0 and 5.

#### Penalties and charges

- › Noise penalty systems exist at six airports, none at seven airports (no info: two). They are based on money charges, depending on the kind and degree of violation of the existing regulations
- › At three airports, revenues have to be used exclusively for noise protection purposes and corresponding projects of the concerned communes and municipalities (Prague; at the London airports, this regulation is currently (2007) under review)
- › Landing charges depend on the noise category of the respective aircraft at six airports
- › A track keeping system for monitoring purposes is in use at nine airports (no info: two)
- › A penalty system in the case of track leaving is in use at four airports (no info: three).

#### Night noise

- › At all airports, special flight procedures at night hours are applied. The following procedures are in use: limiting of flights, exclusive use of certain runways, curfews and banning of certain aircraft types (ICAO, chapter 3).

### Noise insulation

- › Noise insulation programs exist in the surroundings of eleven airports (no info: two). The respective areas and inhabitants benefiting from these programs differ in both the kind of buildings and their distance to the airport, and the noise limits to be applied
- › In seven cases, noise insulation programs are financially supported by the respective airport provider, in two cases by the airline companies.

### Take-off and landing procedures

- › In order to minimize noise nuisance, special flight procedures are in use at eight airports. In most cases, CDA (Continuous Descent Approach) is used or certain runways are prescribed
- › Rotation of the runway system for other than meteorological reasons is applied at two airports
- › Restrictions on reverse thrust exist at nine airports.

### Noise mapping

- › Noise mapping according to directive 2002/49/EC has already begun at 4 airports
- › Noise nuisance is documented at thirteen airports through noise contours. All noise contours are calculated (not measured)
- › At all 15 airports, there exist urbanization restrictions near to the airport
- › At one airport, noise zoning led to restrictions affecting airport capacity (Amsterdam – Schiphol).

### Public information

- › At all 15 airports, environmental reports are available in printed form or for downloading, published at least annually. Few airports offer reports especially focused on aircraft noise matters
- › All airports provide information in the Internet regarding noise or environmental issues in general or intend to offer this information in next time.

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*Illustration 2: ARC members who sent back the ADSTAR questionnaire.*

## 4 ADSTAR – RESULTS

To receive the relevant information to be revealed in ADSTAR, the ARC representatives were asked to fill out and send back the questionnaire (reproduced in Appendix 2 of this report) by e-mail. At closing date, in November 3rd 2006, we had received nine filled-out questionnaires, covering some the biggest European passenger airports as well as smaller ones. The representatives of the following regions (corresponding airport included in brackets) sent back their filled-out questionnaires and therefore are included in the representation of results:

- › El Prat de Llobregat  
(Barcelona Airport)
- › Planungsverband Frankfurt/Rhein-Main  
(Frankfurt Airport)
- › City of Vantaa  
(Helsinki Vantaa International Airport)
- › West Sussex County Council  
(London Gatwick)
- › London Borough of Hounslow  
(London Heathrow)
- › Malta Environment & Planning Authority  
(Malta International Airport)
- › Romerike  
(Oslo Airport)
- › Municipality of Ullensaker  
(Oslo Airport)
- › IAURIF-Île de France  
(Paris Charles-de-Gaulle)

Therefore, nine ARC regions could be taken into consideration, representing 8 different airports. At this place, we like to express our thanks to the participants of the ADSTAR inquiry for their help not only by providing the relevant information but also sticking to the schedule of this project.

In order to treat some relevant topics in more detail, we decided to include three chapters, 4.2 - 4.4, dealing with additional specific issues of interest regarding the administrative organization of air traffic safety and noise abatement in ADSTAR member countries. These chapters form the main part of this report and are mostly based on additional information, whose sources are given in the corresponding chapters.

Chapter 4.1 gives a detailed overview of the results acquired by ADSTAR, as retrieved from the nine sent-back questionnaires. The reader will find a tabular overview of the answers we received from the ADSTAR representatives in Appendix 3 at the end of this report.

Content of chapter 4.2 gives a more detailed presentation of administrative structures regarding aircraft safety and noise abatement procedures, on the example of two EC countries, United Kingdom and France. We were led by two principal reasons in choosing these two countries as examples. First, they are the European countries (together with Germany) comprising the largest amount of air traffic. Second, the administrative structures in both countries – UK mainly through the regulations set up by the 1982 Civil Aviation Act and

France through the independent authority ACNUSA, founded in 1999 – are well developed. They, however, differ in many important aspects of interest, considering a common European administrative framework.

Chapter 4.3 reveals the administrative structure and mediation procedure applied in cases of the re-structuring of existing airports. The creation of new buildings and re-structuring of airports usually leads to a clash of conflicts that seeks for appropriate solutions and corresponding structures. The differing interests of the affected public as well as economic interests, represented by airport providers and air traffic industries have to be taken into consideration. In the given examples, we examined the successful Vienna airport mediation procedure and the forthcoming negotiations at Frankfurt/Rhein-Main airport in some detail.

Finally, chapter 4.4 deals with the conflict between regional and communal interests in air traffic noise zoning near to the airports. The example of Frankfurt/Rhein-Main airport and the overlapping administrative structures within the region affected by air traffic noise reveals the kind of general structural problem that exists.

A lot of information has been taken into account in addition to the results of the questionnaire. Large parts of the material come from websites of the respective organizations in the Internet. By considering this additional information in the three mentioned chapters, we finally hope to make this an interesting report to the reader.

## 4.1 ADSTAR – information from the returned questionnaires

As above for MANIC, we have dropped the statistical data in the following summary of results. Only answers to such questions that were not already treated in the MANIC inquiry are summarized here.

At all airports except one (Barcelona), a legal basis exists for issues in air traffic safety and noise protection. In all cases, several regulations are indicated dealing with issues of air traffic. All these seven airports apply special night flight regulations, by banning noisy types of aircraft, limiting of movements or use of certain runways only. A total ban of aircraft is only applied at Paris-Orly, where a night curfew for arrival (departures) exists between 11.30 (11.15) p.m. and 6.15 (6.00) a.m. Changes concerning night flight restrictions are planned at the airports of Frankfurt, Helsinki and Oslo.

Among the systems in use for minimizing noise nuisance, Continuous Descent Approach (CDA) is most widespread, followed by runway alternation (applied at London-Heathrow and Malta) and restrictions in engine reversing (Oslo).

The procedure of noise mapping has started only at one airport, namely Helsinki, and is performed by the responsible airport provider (FINAVIA).

Air traffic safety is realized in most cases by a governmental institution. In two cases, namely the two London airports, air traffic control is realized by the corresponding air traffic service provider NATS, organized as a public-private partnership. At Barcelona, the airport provider (AENA) is responsible for matters of air traffic safety. Air traffic controllers, however, are employed by the corresponding State, with exception of the London airports and Malta.

In all cases, local authorities form part of the decision-taking process regarding changes in flight procedures and regulations through consultations. Their actual influence, however, seems to vary between a decisive and mere consultative role. The same applies to the participation of the concerned public.

Where flight regulations have been published to the interested public, print-media are the preferred way, followed by the Internet.

Temporary changes in flight procedures are communicated to the public within a short period of time at the three airports Helsinki, Oslo and Frankfurt.

At all airports except Malta, current flight procedures have given recent reason for public complaints. Most common problems are deviations from flight paths and problems with take-off and landing procedures in general, followed by problems resulting from applied night flight regulations and noise nuisance caused by temporary changes (e.g. during renovation work).

In most cases, concerned public is organized in action groups. At the two airports of Barcelona and Oslo, recent changes were preceded by a controversial discussion.

## **4.2 Administrative structures in European countries: two examples**

### **4.2.1 United Kingdom**

The Civil Aviation Authority (CAA) has been the independent regulation authority in issues of air traffic since 1972. Responsibilities of CAA are fixed by the Aviation Act (1982), Airports Act (1986) and Transport Act (2000). Important issues are flight-safety and noise-minimizing procedures, economic guidelines and passenger protection.

The Safety Regulation Group (SRG) forms part of CAA and evaluates air safety procedures developed by the airport's responsible Air Traffic Service Provider (ATSP). The biggest ATSP in United Kingdom responsible for air traffic control at the 15 biggest airports is national Air Traffic Services Ltd. (NATS). ATSPs are organized in public-private partnerships, that is, Government holds parts of the companies. Air traffic guides are employed by the respective airport's ATSP. As provided by the legal basis, NATS and SRG together are responsible for issues and regulations regarding air traffic procedures.

In addition, Government runs a so-called Aircraft Noise Monitoring Advisory Committee (ANMAC), being the committee for technical questions of air traffic noise and flight tracking, which is responsible for the three London airports Heathrow, Gatwick and Stansted.

ANMAC is part of the Department of Transport (DfT). The technical experts are members of governmental institutions like the Department of the Environment, Transport and the Regions (DETR) as well as representatives of air traffic service providers and airport operators.

Biggest airport operator in UK is British Airport Authority (BAA), running amongst else the three London airports. Founded in 1966, it became a public limited company as a result of Airports Act (1986). Since summer 2006, the Spanish construction giant Ferrovial holds the majority in BAA.

Participation and consultation of the public are supported by UK Government through airport consultative committees<sup>7</sup>. The airport consultative committee of the respective airport serves as an interface between the airport operator and the airport's neighboring communities and has advising functions concerning matters of development or operation of the airport, taking all the impacts on the affected public into consideration. The committee consists of representatives of local authorities and residents groups as well as of independent members.

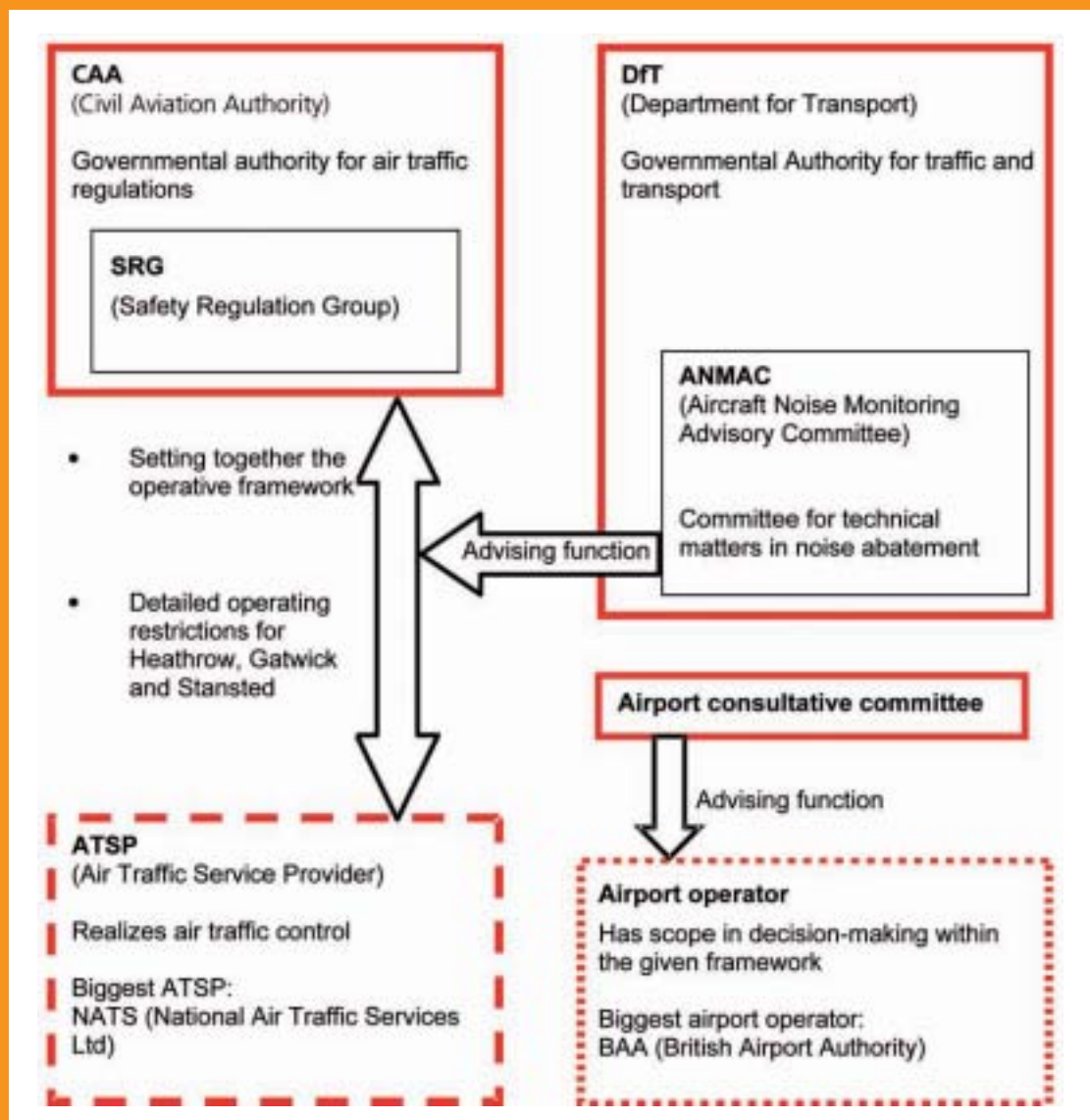


Illustration 3 may be helpful for a better understanding of the administrative structures valid in UK.

<sup>7</sup> section 35, Civil Aviation Act (1982)

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*Illustration 3: Administrative Structures (UK) in air traffic safety and noise abatement. Governmentally organized institutions are indicated with full lines, public-private partnerships broken and private companies dotted.*

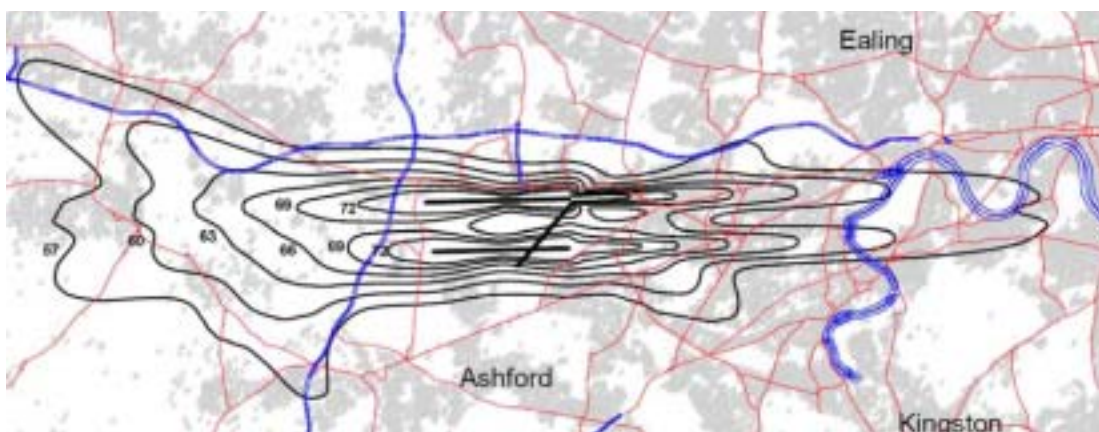
As regulated by both the Civil Aviation Act (1982) and Airports Act (1986), Government has the legal basis for requesting aircraft noise monitoring and flight tracking from the respective airport operator. In reality, a voluntary solution is preferred for this. Government, however, is directly involved in aircraft noise monitoring at the three biggest UK airports mentioned above. These airports are explicitly quoted in section 80, Civil Aviation Act (1982). At these airports, annual noise mapping is being performed since several years, showing the nuisance situation in the time-span of the preceding year. An Aircraft Noise Index, computed in connection with the annually updated noise contours, is used for a comparison of air traffic noise nuisance over the years.

Leq indicators form an essential part for the control of urbanization restrictions. Illustration 4 shows the noise exposure contours of 2004 for London Heathrow airport. There are different zones of urbanization restrictions, corre-

sponding to the respective aircraft noise levels measured. Therefore, any airport planning an enlargement of its capacities by (structural) alterations has to make a prognosis of the relevant noise contours.

Noise monitoring near the airports is performed with stationary as well as mobile measuring equipment. Amount and locations of the stationary equipment at the three London airports are prescribed by the Government. In addition, a system for radar flight tracking is in use at these airports. The gathered data will be used e.g. for handling noise complaints in case of deviations from the flight path.

At the other UK airports, extent and methods of noise measuring through the operator depend on the specific features of the airport. In any case, a cost-benefit analysis precedes any decision. For example, in a sparsely populated region, no radar equipment for flight track observation reasons will be considered necessary



**Illustration 4: Noise Exposure Contours for Heathrow Airport 2004<sup>8</sup>**

<sup>8</sup> D.J. Monkman, D.P. Rhodes & J. Deeley 2005: ERCD Report 0501 – Noise Exposure Contours for Heathrow Airport 2004 – CAA on behalf of DfT London

There are strict regulations regarding noise minimizing procedures for start and landing (CDA), tolerable flight heights and flight paths that have to be used. Noise limits at London airports are given in a distance of 6.5 km from the runway's take-off point. They read

- > 94 dBA Lmax between 7 a.m. and 11 p.m.
- > 89 dBA Lmax between 11 and 11.30 p.m. and between 6 and 7 a.m.
- > 87 dBA Lmax between 11.30 p.m. and 6 a.m.

Similar regulations, on a voluntary basis, are in use at the other UK airports.

The following sanctions are possible in case existing flight regulations have been broken:

- > (Published) cautions
- > Fines
- > Temporary withdrawal of landing and start permissions at certain airports
- > Shutdown of aircraft in case of not-paying the fines by the carrier.

In general, because of the variability in conditions, the government prefers the noise abatement procedures be regulated best locally.

Most airports under EC directives 2002/30/EC and 2002/49/EC, have restrictions in use regarding air traffic noise. Those restrictions have been introduced either on a purely voluntary basis, or in arrangement with local planning authorities, through the airport consultative committees. For the current renewal in night flight restrictions<sup>9</sup> at the London airports, the guidelines of EC directive 2002/30/EC are taken into consideration.

All UK airports are authorized to raise fines from airline companies in case of breaches of flight regulations. These fines shall be used for the well being of the communities concerned<sup>10</sup>.

Expropriation may be forced in case of territorial enlargements of airports. The current market value has to be reimbursed by the airport operator. Government has announced (in a White Paper) that airport operators will have to make offers for the acquisition of properties suffering from a noise level of 69 dBA on 16 hours of the day at least. The same regulation applies for regions with an increase in air traffic noise of more than 3 dBA over the last years.

<sup>9</sup> See [http://www.dft.gov.uk/stellent/groups/dft\\_aviation/documents/divisionhomepage/029650.hcsp](http://www.dft.gov.uk/stellent/groups/dft_aviation/documents/divisionhomepage/029650.hcsp). This and the following can be found in Chapter 3 of the White Paper 'The Future of Air Transport' published in December 2003

<sup>10</sup> This regulation is under review at present (spring, 2007).

## 4.2.2 France

The Direction générale de l'aviation civile (DGAC) is responsible for air traffic control issues in French airspace. It is the competent authority that decides on permissions and restrictions regarding air traffic caused by airline companies as well as by other private or public organizations.

Main activity of the second-biggest airport group in Europe, ADP (Aéroports de Paris) is the operating business of the three Paris airports Roissy-Charles de Gaulle, Orly and Le Bourget. In addition, ADP carries some smaller airports and is involved in conceiving and managing airports in other countries. The state-owned company went public in June 2006 and is now organized as a public limited company with the State of France still being an important shareholder<sup>11</sup>.

Environmental aspects in air traffic are represented by ACNUSA (**A**utorité de **co**ntrôle des **n**uisances **so**nores **a**éroportuaires)<sup>12</sup>. ACNUSA is an independent governmental department, established by the law from 12.7.1999<sup>13</sup>.

The main functions of ACNUSA are

- › Help to improve communication between residents, government and airport operators and mutual confidence
- › To ensure that development of air traffic does not burden residents.

ACNUSA consists of an eight-person committee (including the president) and another eight persons committee led by a general secretary. Mandate of its members is confined to six years, irrevocable and not renewable. It is neither compatible with a political function nor with a function at an airport as well as with shareholding of shares of airspace companies. The department prepares an annual report, which is presented to the government and parliament.

ACNUSA is competent to advise in issues regarding civil airports. This includes 1) the responsibility to give recommendations in issues of noise abatement, 2) giving alert in case of breaches of existing regulations and 3) quantifying the noise situation, depending on the different flight procedures.

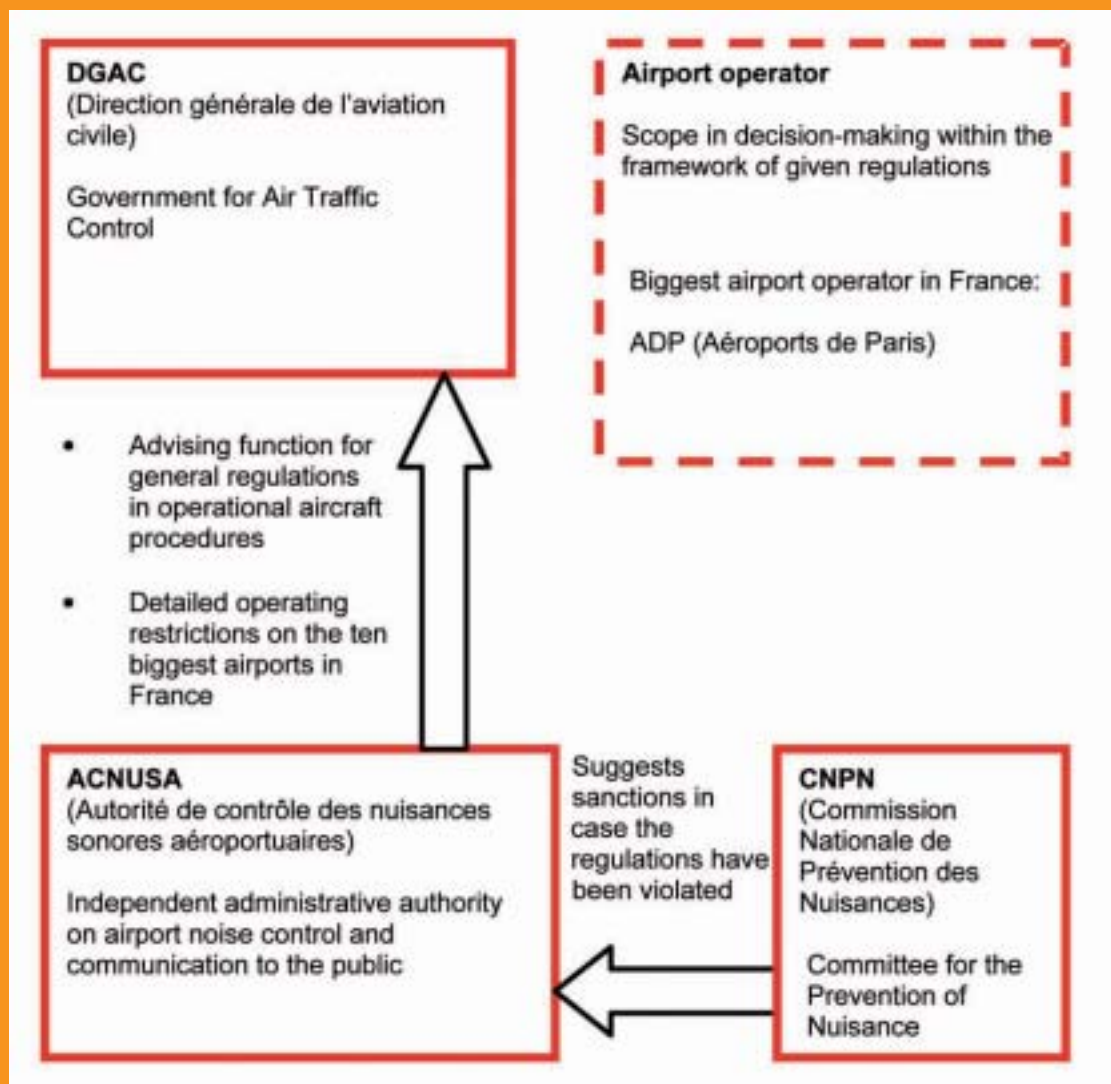
<sup>11</sup> This (and a lot more of) information can be found in internet on <http://www.aeroportsdeparis.fr/Adp/en-GB/Groupe/>

<sup>12</sup> The detailed information about ACNUSA contained in this chapter is taken from <http://www.acnusa.fr/juridiques/aeroports.asp> and the documents linked there.

<sup>13</sup> LOI no 99-588 du 12 juillet 1999 portant création de l'Autorité de contrôle des nuisances sonores aéroportuaires

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*Illustration 5: Administrative Structures (France) in air traffic safety and noise abatement. Governmental organizations are indicated with full lines, public-private partnerships broken.*

In addition, ACNUSA has specific competences at the ten largest airports in France. ACNUSA<sup>14</sup>

- › Comments intended changes in flight, start and landing procedures as well as
- › Issues of noise mapping and noise contouring
- › Sets instructions for the technical procedure of noise measuring
- › Communicates noise abatement regulations to the public
- › Has mediating functions.

In France, administrative fines may be imposed in case of violations of the noise-minimizing procedures. The following violations will become sanctioned through ACNUSA (specific airports given in brackets, if necessary):

- › Violation of the night curfew (Orly)
- › Exceeding the limit of time-slots (Roissy-Charles de Gaulle)
- › Violations of general or temporary restrictions for special aircraft types, according to noise category, loading/ passenger capacity or allowed weight (Roissy-Charles-de-Gaulle)
- › Not-observance of prescribed noise minimizing flight procedures
- › Violation of prescribed flight paths
- › Violation of minimum noise levels.

Sanctions of those breaches will be imposed by ACNUSA at the following biggest ten airports in France: Basle-Mulhouse, Bordeaux, Lyon, Marseille, Nantes, Nice, Paris-Charles-de Gaulle, Paris-Orly, Strasbourg and Toulouse.

Civil observers register violations and send their reports to ACNUSA and the respective airline company (or private person). The involved company (private person) has one month of time (from the date of breach) to answer ACNUSA and reply its point of view in that matter. After one month, ACNUSA sends a note to the Commission Nationale de Prévention des Nuisances (CNPN), which gives its recommendation for possible sanctions. In addition to the facts reported, CNPN considers further available information (e.g. radio recordings, radar and weather data) and discusses the case following a common hearing. The recommended sanctions will finally be discussed through ACNUSA, which either follows the sanctions or modifies them. For example, in the case of slight deviations from the flight path or exceptional circumstances, sanctions may be dropped. If a fine is imposed, ACNUSA gives the case to the Trésorerie générale des créances spéciales (treasury for exceptional demands), which is responsible for collecting the fine. Fines are ranging between 1500 € (private persons) and 20000 € (airline companies). Statutory period of limitation for violations in airspace amounts to two years. The fines become supplied to the state treasury, and their use is not restricted for noise abating issues.

<sup>14</sup> see [http://www.acnusa.fr/english\\_2/sanctions\\_issued\\_eng.pdf](http://www.acnusa.fr/english_2/sanctions_issued_eng.pdf)

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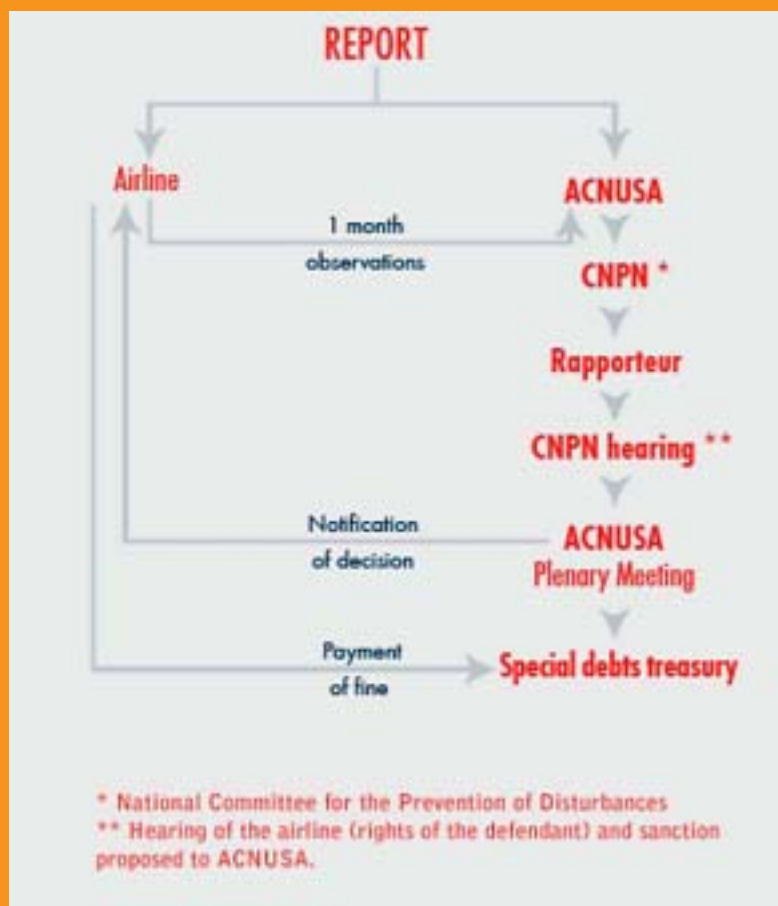


Illustration 6: Procedure in case of observed breaches of air traffic regulations.<sup>15</sup>

<sup>15</sup> see [http://www.acnusa.fr/english\\_2/english\\_sanctions.asp](http://www.acnusa.fr/english_2/english_sanctions.asp)




Illustration 6 shows the usual procedure in sanctioning observed breaches of air traffic regulations.

Sanctions can be emphasized by a shutdown of aircrafts or the total exclusion of airline companies from operating their aircraft in case of not paying their fines. These procedures have been established by the Civil Aviation Code (2004), following a recommendation of ACNUSA. Obviously, the willingness of airline companies and private persons to pay their fines has increased since then.

The foundation of ACNUSA in 1999 brought some momentum into the aircraft noise discussion. It must not be forgotten, however, that government has still the ultimate responsibility in issues of air traffic. The government is reported to hesitate often in realizing recommendations given by ACNUSA and the dialogue seems to become more and more difficult. Besides the increasing economical competition, the State of France's majority on ADP, even after its going-public in 2006, might be an explanation. After a quite positive phase regarding environmental issues in the 90's, ADP's willingness for discussions decreased over the last years. Although it is planned to create 'airport-related associations' in next time, they will not have much competence and actually be dominated by the interests of air traffic companies.

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	UK	Frankreich
Air traffic control	<p>Framework regulated by the government (CAA)</p> <p>The participation of public-private ATSPs in decision-making is explicitly demanded for</p> <p>Implementation of air traffic control through ATSPs</p>	<p>Framework regulated by the government (DGAC)</p> <p>Implementation of air traffic control through the government (DGAC)</p>
Airport operating	<p>Airport operators privatised since 1986 (Airports Act)</p> <p>Strictly prescribed regulations at the three London airports</p>	<p>Biggest airport operator (ADP) partly privatised since 2006</p> <p>Strictly prescribed regulations at the ten largest airports</p>
Sanctions for breaches of regulations	<p>Fines, restrictions, shut-down of aircraft</p>	<p>Fines, restrictions, shut-down of aircraft (since 2004)</p>

**Table 1: Comparison of administrative structures in UK and France**

### 4.2.3 Comparison of existing structures in UK and France

Chapters 4.2.1 and 4.2.2 above gave a detailed description of the administrative structures and framework of regulations regarding air traffic noise and safety in UK and France. In this chapter, we will compare the structures of both countries. This will be done in view of the goal of this study, that is, finding recommendations for EC-wide structures and regulations. Table 6 below may be helpful for a comparison of the different standards.

Both countries have in common the primary responsibility of governmental institutions for issues of air traffic control, CAA in UK and DGAC in France. However, whilst Government realizes air traffic control in France, in UK, public-private partnerships are responsible in this matter. Therefore, the air traffic service personnel is employed by the Government in France and by the respective ATSP in UK. Consequently, in UK collaboration of the ATSPs with Government is intended in order to create regulations for air traffic safety and noise abatement procedures.

Airport operators have a certain scope in decision-making in their operative business both in UK and in France. In UK, airports have been privatised since 1986, following the Airports Act (1986). In France, the biggest airport operator ADP was state-owned until summer

2006, when it has been in part privatised by its going public. It has to be kept in mind that the competences in making decisions of the airport operator depend on the size of the respective airport. Strict governmental decrees have to be followed at the three London airports in UK and at the ten biggest airports in France. There is much less governmental influence on regulations and terms of use at the smaller airports.

As an independent governmental, country-wide institution concerned with issues of aircraft noise, ACNUSA seems to be unique in Europe. By the inclusion of aircraft shutdown in France since 2004, the penalty catalogue in both countries is comparable.

A direct comparison shows, in general, a more decentralised governmental structure in UK, regarding competences of the different authorities. Tradition and extent of privatisation may play a central role here.

Regarding the conditions in France, however, it has been observed, that ADP secludes itself more and more from the public, not only since its going public in 2006. It has to be observed if the State of France, being still an important owner of ADP manages to help ACNUSA to accomplish its regulations and sanctions.

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**Illustration 7: Landing runway ‚Northwest‘ (planned) at Frankfurt/ Rhein-Main airport<sup>16</sup>.**

<sup>16</sup> reproduced from [http://www.fraport.de/cms/kapazitaetsausbau/rubrik/2/2404.neue\\_landebahn.htm](http://www.fraport.de/cms/kapazitaetsausbau/rubrik/2/2404.neue_landebahn.htm)

## 4.3 Administrative structures and structural enlargements: two examples

The examples of administrative structures in UK and France given above should have made clear how affected public can take position in an effective way – political intentions provided – in order to influence existing regulations and change them. The next two subchapters shall reveal how the affected public might influence decisions in case already existing airports become structurally enlarged. Similar procedures might apply in case of new airport buildings.

### 4.3.1 Frankfurt/Rhein-Main

In July 1998, Hessian Government started a mediation procedure regarding the planned enlargement of Frankfurt/Rhein-Main airport. As a result, it was found in 2000 that enlarging the runway system could be possible, provided that several restrictions had to be introduced (e.g. a night flight curfew between 11 p.m and 5 a.m.). The following regional planning procedure resulted in 2002 in a new landing runway, situated northwest of the existing airport, being the most preferable solution for increasing flight capacities.

Inevitably, the planned runway for landings will cause a fundamental reform of take-off and landing procedures at Frankfurt/Rhein-Main airport. It will result in a completely new distribution of noise and other pollution effects caused by air traffic in the nearby affected regions.

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*Illustration 8: RDF members. orange: representatives of the air traffic industry, brown: towns, administered as independent districts, rural districts and communes, green: environmental protection associations and initiatives, blue: other representatives of non-governmental associations and involved communities (churches, trade unions, etc)*



As on all German airports, there exists an air-traffic noise commission (Fluglärmkommission) at Frankfurt/Rhein-Main airport within its legal functions. The air-traffic noise

commission takes an active part in realization and assessment of proposals for reducing the load of the concerned regions through noise caused by air traffic<sup>17</sup>. The commission consists of representatives of air traffic companies as well as municipalities and rural districts affected by the implications of air traffic. Unlike ACNUSA, the noise commission neither has its own budget nor is authorized to assign sanctions. Represented in the air-traffic noise commission at German airports are (at best) communes suffering on air traffic noise in present whilst people becoming affected in future, e. g. by enlargement of an already existing airport., find themselves usually not represented.



Because of such shortcomings and reductions of the commission, it had been claimed already during the mediation procedure, that another instance, dealing with problems resulting from the airport's enlargement, had to be established – the Regional Dialogue Forum (RDF, Regionales Dialogforum). By accompanying the forthcoming enlargement planning, taking the recom-

mendations of the mediation group as starting point, the RDF treats the following points:

- › The planned curfew during night hours,
- › Potimisation of flight procedures, according to the mediator's recommendations,
- › The anti-noise pact,
- › Long-term perspectives of Rhein-Main airport and
- › The management of complaints and communication.

The RDF, however, has no competences in decision-making. Results of its consultations and negotiations shall intrude the positions, expectations and demands of the negotiation partners as well as the concerned public into the decision-making process<sup>18</sup>. Compared to the air-traffic noise commission, the RDF is in the advantageous position of having a considerable budget at its disposal. Therefore, it has the means to engage experts to give their recommendations in order to objectivize questions raised by the concerned public.

On the other hand, the well-balanced committee's composition (c. illustration 8) and the external leading as well as the companionship of scientific experts guarantee constructive working-methods and decisions without predetermined results. It has to be borne in mind, however, that the representatives of air traffic companies are not bound to follow RDF's

<sup>17</sup> Luftverkehrsgesetz § 32b, Absatz 3: „Die Kommission ist berechtigt, der Genehmigungsbehörde sowie der für die Flugsicherung zuständigen Stelle Maßnahmen zum Schutz der Bevölkerung gegen Fluglärm (...) in der Umgebung des Flugplatzes vorzuschlagen“

<sup>18</sup> c.f. [http://www.dialogforum-flughafen.de/fileadmin/PDF/Ueber\\_uns/RDF\\_Geschaeftsordnung.pdf](http://www.dialogforum-flughafen.de/fileadmin/PDF/Ueber_uns/RDF_Geschaeftsordnung.pdf) (german text)

recommendations. As said above, the committee by itself has no legal rights, being established on a voluntary base, and their members may withdraw at any time depending on their own decision.

RDF and aircraft noise commission already try to co-operate in these days, in order to achieve synergetic effects in important issues (e.g. noise insulation programs). Because of the over-lapping in interests, a modification of the corresponding administrative structures in order to simplify procedures seems worth to be considered.



### 4.3.2 Vienna

A procedure similar to that in Frankfurt described above had been already successfully performed at Vienna airport. More than 50 negotiating parties (cf. Illustration 10) managed within the years 2000-2005 to achieve in intense discussions a mediation contract. The contract had been useful for defining a generally accepted framework for the enlargement of Vienna airport, thereby creating new communication structures as well. Issues regulated by the mediation contract are:

- › Regulations concerning a third runway, night flight, noise abatement practices, limiting values, environment-friendly procedures and process agreements.
- › Limiting values, noise zones and borders of colonies are regulated by legally binding contracts between communes and the airport.
- › Environmental fund: an environmental fund is managed by a committee, consisting of communal representatives, an union of action groups and settler's associations around Vienna airport together with representatives of the airport.
- › Dialogue forum airport Vienna: legally organized as an association. Cares for continuation of the communication in matters of airport enlargement and air traffic noise.
- › Arbitration contract: in case of controversies in the future, not to be regulated by the dialogue forum, an arbitration board regulates the forthcoming procedure<sup>19</sup>.



**Illustration 9: Planned runway (sketch) at Vienna airport** <sup>20</sup>

According to a first assessment, the procedure owed its success to the comprehensive and equal-righted involvement of many social groups as well as the elected politicians under concern. T. Prader, mediator of the Vienna procedure, comments: „The biggest success has been the proof that even in the case of most controversial infrastructural projects – by considering all communities of interest, together with action groups – a participating, transparent and fair procedure had been achieved, resulting in binding agreements between the parties.”<sup>21</sup>.

In the given context of this study, the Vienna proceeding makes clear that existing administrative structures and regulations in airport regions – though legitimated – are not sufficient by itself to conceive appropriate steps for protection, provision and compensation for the affected people.

<sup>19</sup> viemediation.at newsletter – issue of July 10th, 2005

<sup>20</sup> Ingenieurbüro Neukirchen Ziviltechnikergesellschaft m.b.H., 1010 Vienna, as of July 5th, 2005, in: viemediation.at newsletter – issue of July 10th, 2005

<sup>21</sup> „Der größte Erfolg besteht jedoch darin, dass bewiesen wurde, dass es auch bei heftig umstrittenen Infrastrukturprojekten möglich ist, unter Einbindung aller unmittelbaren Interessensträger – insbesondere der nicht institutionellen VertreterInnen der Bevölkerung (Bürgerinitiativen) – ein partizipatives, transparentes und faires Verfahren durchzuführen, an dessen Ende verbindliche Vereinbarungen stehen.“ ,see above

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Verfahrensparteien		vie mediation.at
Aviation Group	Flughafen Wien AG, Austrian Airlines, Austro Control	
Nachbarschaftsbeirat	Enzersdorf an der Fischa, Fischamend, Großenzersdorf, Kleinneusiedl, Rauchenwarth, Schwadorf, Schwechat, Zwölfaxing, Wien	
Bezirksvorstellungen	Favoriten, Simmering, Hietzing, Rudolfshaus-Fünfhaus, Penzing, Donaustadt	
Bürgerinitiativen	AL Schwechat, Enzersdorf / Margarethen, Bürgerlärm gegen Fluglärm, Bürgerliste Fischamend, Bürgerforum Maria Ellend, BI Götzendorf, Österreich-Plattform Fluglärm, Plattform gegen 3. Piste, Pro Margarethen, Schwadorf gegen 3. Piste	
Siedlervereine	Löbau, Eßling (Österreichischer Siedlerverband), Zentralverband der Kleingärtner Österreichs	
Bundesländer	Land Wien, Land Niederösterreich	
Umweltanwaltschaften	Umweltanwaltschaft Wien, Umweltanwaltschaft Niederösterreich	
Nationalpark Donau Auen		
Politische Parteien	ÖVP NÖ, SPÖ NÖ, FPÖ NÖ, Grüne NÖ, ÖVP Wien, SPÖ Wien, FPÖ Wien, Grüne Wien	
Kammern, Verbände und Interessensvertretungen	Wirtschaftskammer Österreich, Bundesarbeiterkammer Österreich, Präsidentenkonferenz der Landwirtschaftskammern Österreichs, Tourismusverband Wien, Niederösterreich-Werbung, Standortunternehmervertreter, StandortarbeitnehmerInnenvertreter	

*Illustration 10: Members of the Vienna airport mediation forum: representatives of air traffic industries, district presidencies, settler's associations, environment protect associations, action groups, political parties, non-governmental organizations and interest groups.*

#### **4.4 Administrative units vs. noise zoning: Frankfurt/Rhein-Main**

Considering the regions under influence of a certain airport, it is obvious that the zones affected by specific flight regulations and procedures are not identical with the legitimated administrative units – neither now nor in future. Especially, this is the case with the biggest international airports. Illustration 11 and 12 show the situation of Frankfurt/Rhein-Main airport as an example: the Leq 60 dB(A)-isophone touches 18 regions administrated by their municipal representatives elected by their inhabitants. These regions by itself are part of 4 rural districts as well as of 5 towns administered as an independent district. Again, these administrative units are integrated within two different governmental regions belonging to the federal states of Hesse and Rhineland-Palatinate, respectively. In addition, a lot of communes and municipalities being affected are represented by the Planungsverband (planning association) Ballungsraum Frankfurt/Rhein-Main, which, on the other hand, does not cover the complete region influenced by the airport.

Those segmented structures, dominated by a complex administrative hierarchy, result in a problem for the air traffic industry and service providers: usually, competent contact persons to be addressed in case of necessary decisions are missing. Regarding this, a distinction must be taken between changes in flight procedures and regulations of already existing airports (e.g. when changing prescribed flight paths) on the one hand and changes that become necessary in the case of enlargements or the establishment of new airports on the other. These heterogeneous, in many cases unsolved, issues of competence often result in discontent amongst the municipalities under concern, especially the smaller ones, situated close to the respective airport. Moreover, a considerable delay in making necessary decisions regarding flight regulations can be expected if competences are not clear.

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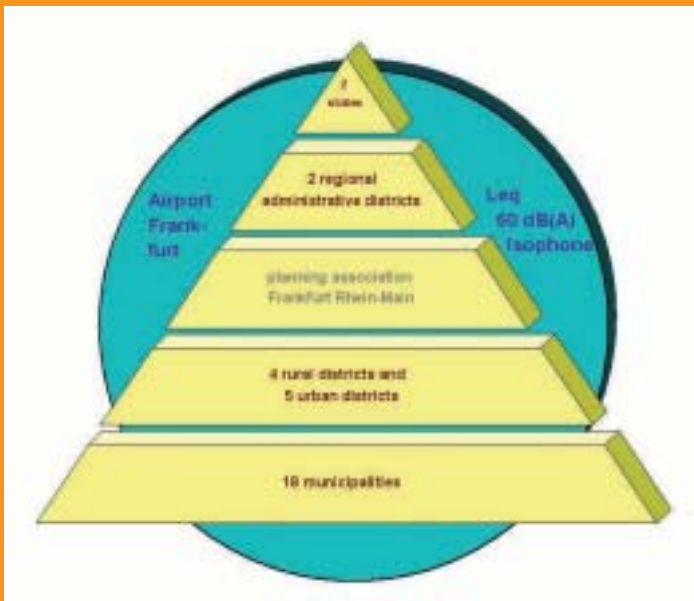
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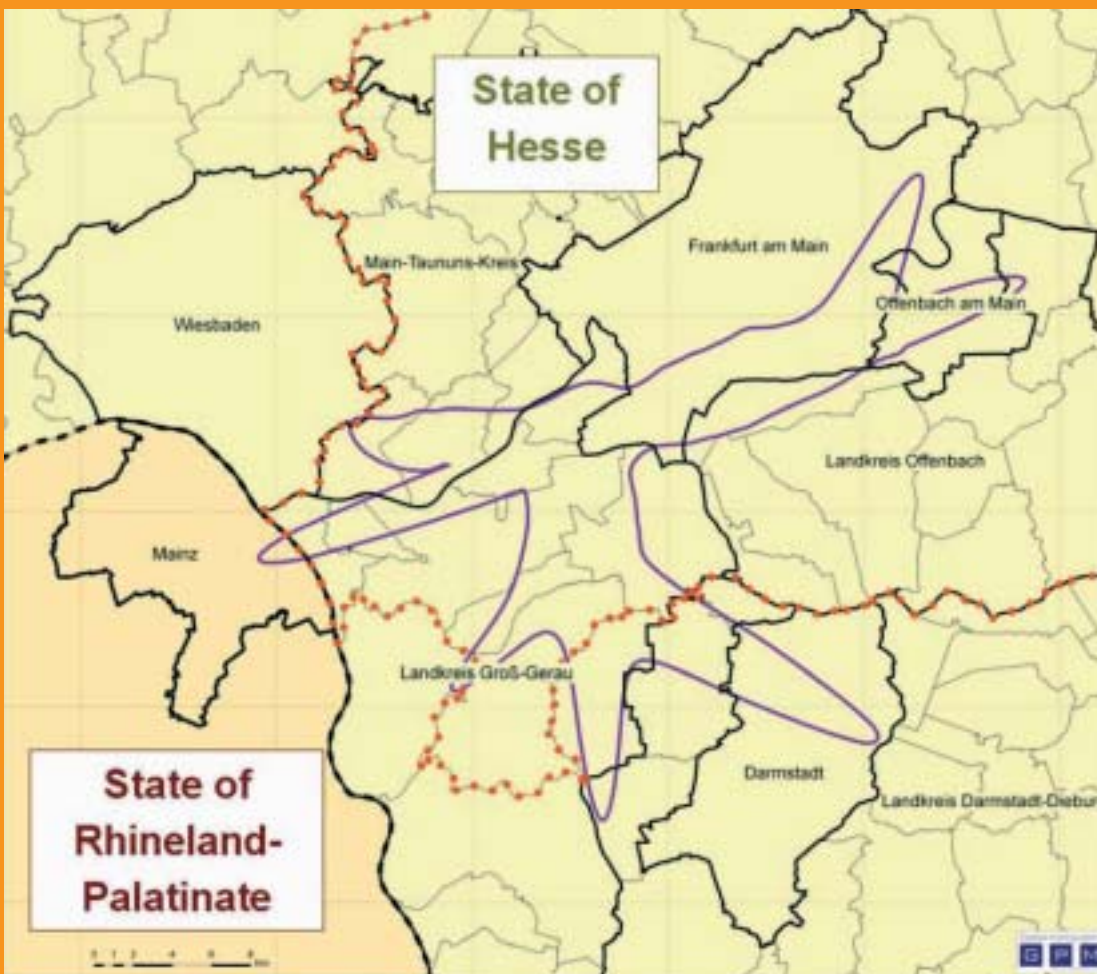
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*Illustration 11:  
Hierarchical administrative structures, corresponding to the regions touched by the Leq 60 dB(A)-isophone caused by air traffic noise at the airport Frankfurt / Rhein-Main.*



*Illustration 12: Administrative structures in the airport region Frankfurt/Rhein-Main (pink: Leq 60dB(A)-noise contour resulting from air traffic at Rhein-Main airport, orange: Planungsverband Ballungsraum Frankfurt/Rhein-Main, black (bold): borders of cities and rural districts, black (thin): municipality borders).*

## 5 GLOSSARY OF TERMS

### **ACNUSA**

(Autorité de contrôle des nuisances sonores aéroportuaires)

Independent administrative authority, dealing with matters of air traffic noise

### **ADP**

(Aéroports de Paris)

Biggest airport operator in France, operates the three Paris airports, since 2006 partially privatized

### **ADSTAR**

(Administrative Structures in Airport Regions) (This study) ARC inquiry in 2006, dealing with administrative structures regarding air traffic safety and noise abatement procedures in the ARC

### **ANMAC**

(Aircraft Noise Monitoring Advisory Committee)

Adviser committee in technical matters dealing with air traffic noise, belongs to the DfT

### **ATSP**

(Air Traffic Service Provider)

Responsible for realization of air traffic control

### **BAA** (British Airport Authority)

Biggest airport operator in UK, operates the three London airports, privatized since 1986

### **CAA**

(Civil Aviation Authority)

Governmental authority for air traffic regulations in UK

### **CNPN**

(Commission Nationale de Prévention des Nuisances)

French governmental commission in environmental issues

### **CDA** (Continuous Descent Approach)

Noise reduced landing procedure by minimizing changes in thrust

### **DfT**

(Department for Transport)

UK governmental authority, responsible for traffic and transport

**DGAC**

(Direction générale de l'aviation civile)  
Governmental authority for air traffic control in France

**DLR**

(Deutsches Zentrum für Luft- und Raumfahrt)  
German state-owned research institution in matters of airspace, performs basic research and technical developments

**GPM**

(Büro für Geoinformatik, Umweltplanung, Neue Medien)  
Employed for performing this study, located in Kronberg/Mainz (Deutschland)

**MANIC**

(Managing Aircraft Noise in Communities)  
ARC inquiry in 2005, dealing with facts and affairs concerning air traffic noise and abatement in the ARC regions

**NATS**

(National Air Traffic Services Ltd)  
Biggest ATSP in UK, organized in a private-public partnership

**PVFRM**

(Planungsverband Ballungsraum Frankfurt/Rhein-Main)  
Planning authority in the region of Frankfurt/Main, Germany, ARC member

**RDF (**

Regionales Dialogforum)  
Mediation committee in matters of the development of Rhein-Main Airport

**SRG**

(Safety Regulation Group)  
Belongs to CAA. Independent public body responsible for upholding national civil aviation safety standards

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**APPENDIX 1 – 3**

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ABC number	FA	FG	SL	OD	U#	AE	COF	CRF	COG
<b>2.2 Annual flight</b>									
2002 31	1 514 845	10 585	4 202	10 238	1 110 815	86 187 flight + mail	10 000	113 300 + post	1 198 900 + mail
2003 31	1 548 034	46 209	5 026	15 029	1 300 413	86 187 flight + mail	10 000	82 000 + post	1 490 000 + mail
2004 31	1 752 998	62 486	5 237	16 521	1 492 281	132 217 flight + mail	64 000	102 600 + 13 000 2 month post	1 830 000 + 2 month post
Cancel in the month of passenger arrival (2004 - 31)	46 9	-	62	7	-	0 51	-	0 0	0 0
Cancel on flight rights (2004 - 31)	51 1	-	11 % of scheduled course	7	-	0 49	-	0 0	0 0
SL			11 % of 2003					0 0	0 0
<b>2.3 Annual air traffic measurements</b>									
2002	163 881	163 904	16 228	163 842	163 600	157 647	68 200	203 450	1 017 847
2003	171 437	171 256	15 294	157 029	163 700	161 471	80 000	203 854	1 024 451
2004	187 830	184 862	16 489	167 342	178 000	172 513	87 000	218 388	1 164 651
Comments	0 008	0 008	18 000	26 654	81 900	83 313	22 000	0 0	0 0
European	186 421 (2004)	184 863	179 408 (international airports)	181 901	204 307	192 288	42 000	200 + COG 180 000	1 000 000
International	101 209 (2004)	-	None (no scheduled services)	No figure available	141 542	4 874	1 000	0 0	0 0
Domestic flight	642 019	-	11 808	No figure available	-	57 028	-	218 780	1 070 654
Foreign flight	117 049	14 006	0 0	No figure available	-	6 317	-	18	31 496
Main flight	0 190	-	2 008	No figure available	-	0	-	0	0 200
Other flight	0 326	3 871	6 286	7 485	-	8 527 (general, military)	-	3 742	9 235
Start by last anniversary (2004 - 31 August 2004) 14:07 rate of boarding	1 302	34 000 2004	1 0	342	10 <sup>th</sup> July	0 5 204 (507 operations)	3 00	60 7 388 (107)	1 051 843 (116)
Average number of aircraft (2002-2004) per day	46 535	306	18	342	-	172 582 / 306 = 471	275 218	600	1 400
Annual flight measurement	47 424	7 403	-	No figure available	-	22 27, 21 26	-	0 0	0 0
2003	47 424	8 503	-	No figure available	-5 519	25 502, 11 346	-	0 0	0 0
2004	50 539	12 484	-	No figure available	-5 519	24 800, 11 231	-	0	0
				No figure available	-5 519	26 141, 11 634	-	0	0
									11 0 in average per day between 2003 and 2004
(total in the current period) capacity of the airport (movement per annum)	227 500	227 500	-	228 000 (theoretical)	2400	There are no limitations	None, 99 levels (FAA has proposed a restriction of 80 000)	202 000 000	23 000 000 between 0 0 and 2 0
(When a capacity constraint that this capacity will be reached)		Year 2010	-	2035	-	-	-	Already reached	-











ABC number	ISA	ISG	SL	COL	IAH	AE	GGT	GRF	CDG
3.5.1 Impact of COVID-19 on building facade insulation Does a system of financial contribution towards facade insulation in specific areas exist? (If which area does it relate?)	Yes	Yes	No	Yes	Yes	No	Yes	Yes	
What types of buildings are covered?	Commercial buildings, hospitals, nursing homes, schools, working homes for the elderly and day-care centres.	Commercial buildings, school buildings, medical buildings, hotels	None protected zones around LAZ	Residential areas with noise levels above 60 dB (Dn)	The Noise Insulation Scheme is open to all homeowners living within the 1995 LAZ, a statement published by DTI (Department for Transport). The contract encompassed an area of about 19 sq km, and 11,500 people in 2003, and coincides with the government's interpretation of the point of high noise disturbance.	Within 100m of LAZ or LAZ 80		Yes	High zones (Part de l'avis, Section 3.10)
At what noise level?	noise level is 75 dB(A) LA, 65 dB(A) LA at night (L <sub>night</sub> )	Living houses, school buildings, medical buildings, hotels	noise protected zones around LAZ	Residential buildings	Public works		Permanent living houses		
What form does the contribution take?	financial aid in 75 dB(A) LA, 65 dB(A) LA at night (L <sub>night</sub> )	noise abatement - noise damping - windows exchange	noise protected zones around LAZ	The airport company pays all expenses and noise abatement.	80 dB (Dn)	80 dB (Dn)	80 dB (Dn)	80 dB (Dn)	80 dB (Dn)
Who provides the financial support?	airport AS	noise abatement - noise damping - windows exchange	noise protected zones around LAZ	The airport company pays all expenses and noise abatement.	80 dB (Dn)	80 dB (Dn)	80 dB (Dn)	80 dB (Dn)	80 dB (Dn)
Are there any forms of compensation?	noise abatement - noise damping - windows exchange	noise abatement - noise damping - windows exchange	noise protected zones around LAZ	The airport company pays all expenses and noise abatement.	80 dB (Dn)	80 dB (Dn)	80 dB (Dn)	80 dB (Dn)	80 dB (Dn)
Which other buildings are covered (e.g. outdoor work like gardens, playgrounds, parks etc.)?	noise abatement - noise damping - windows exchange	noise abatement - noise damping - windows exchange	noise protected zones around LAZ	The airport company pays all expenses and noise abatement.	80 dB (Dn)	80 dB (Dn)	80 dB (Dn)	80 dB (Dn)	80 dB (Dn)

ABC member: ISA QAG GDT M4E L14E Q16 TEL Q18 Q19 Q20 Q21 Q22 Q23 Q24 Q25 Q26 Q27 Q28 Q29 Q30 Q31 Q32 Q33 Q34 Q35 Q36 Q37 Q38 Q39 Q40 Q41 Q42 Q43 Q44 Q45 Q46 Q47 Q48 Q49 Q50 Q51 Q52 Q53 Q54 Q55 Q56 Q57 Q58 Q59 Q60 Q61 Q62 Q63 Q64 Q65 Q66 Q67 Q68 Q69 Q70 Q71 Q72 Q73 Q74 Q75 Q76 Q77 Q78 Q79 Q80 Q81 Q82 Q83 Q84 Q85 Q86 Q87 Q88 Q89 Q90 Q91 Q92 Q93 Q94 Q95 Q96 Q97 Q98 Q99 Q100

3.8 Take-off and landing procedures

<p>Performance criteria in relation to runway systems in operation for existing runways from existing aircraft under design approval of noise generating aircraft equipped as to landing noise levels. (e.g. CATCOP, High Approach Landing System - Dual Threshold Operations, Dual-Cutback-Cutaway-Target)</p>	<p>CAA from 13.05 to 13.08</p>	<p>Yes, noise abatement procedures are outlined in AD-DS L018, part AD-2.2.1.3 and part AD-2.2.1.4</p>	<p>Procedural context - refer to AD-DS L018, AD-2.2.1.3 and AD-2.2.1.4</p>	<p>No</p>	<p>Continental Concept Approach (CCA) whenever possible before departure for the 13 instrument landing system. This procedure is thought to reduce noise heard on the ground since aircraft can use the ground power that it they fly continuously at the same height and, in areas where they are higher as a result, less noise reaches the ground. Also low power low drag approach</p>	<p>No</p>	<p>No</p>	<p>To be provided (AD-DS)</p>
<p>How quantify the noise mitigation effects?</p>				<p>Concentration within preferential routes.</p>	<p>There are no stated mitigation effects but studies conducted by Boff-Boyd, the Massachusetts Institute of Technology, the University of Cambridge, British Airways and the UK Civil Aviation Authority have advanced a reduction of between 3.9 and 6.5 decibels over conventional approaches.</p>	<p>AD-DS L018 and AD-DS L019 (the CAPM) can measure noise levels between 1997 and 2002</p>	<p>AD-DS L018 and AD-DS L019 (the CAPM) can measure noise levels between 1997 and 2002</p>	<p>AD-DS L018 and AD-DS L019 (the CAPM) can measure noise levels between 1997 and 2002</p>
<p>The purpose of noise contours, noise measures are in place about airports, airports are defined by noise contours (e.g. General Aviation, General Aviation, Noise Abatement Commission advice on this task, in addition to ensuring flight safety, the goal of high noise planning is to minimize aircraft noise exposure of residential areas in the airport vicinity for the airport vicinity residents. Therefore, departure routes in particular have been designed to avoid densely populated areas.</p>		<p>Each noise of noise contours from noise maps for Airport Program Noise - Special noise map of preferential routes does not need this apply runway system preferences as detailed in AD-DS L018, part AD-2.2.1.2</p>	<p>AD-DS L018, part AD-2.2.1.2 and AD-DS L019, part AD-2.2.1.2</p>	<p>Concentration within preferential routes.</p>	<p>Existing aircraft have to follow noise preferred routes (NPR) for both take-off and landing operations, although some routes are contained at the beginning. Each NPR has a noise barrier-line on a map but they have each route line, known as a route. Also Department for Transport (DfT) requires departing aircraft to be operated so that they reach at least 1,000ft above minimum, BAA requires noise abatement to this.</p>	<p>AD-DS L018 and AD-DS L019 (the CAPM) can measure noise levels between 1997 and 2002</p>	<p>AD-DS L018 and AD-DS L019 (the CAPM) can measure noise levels between 1997 and 2002</p>	<p>AD-DS L018 and AD-DS L019 (the CAPM) can measure noise levels between 1997 and 2002</p>
<p>Are there limitations on hours on the use of specific runways during certain days or times of the day for noise control purposes?</p>	<p>No</p>	<p>Yes, runway system preferences outlined in AD-DS L018, part AD-2.2.1.2</p>	<p>AD-DS L018 is not used for departures of aircraft with MTCW exceeding 130 tons. Exceptions are subject to the CAA permission and will be accepted for justified reasons only.</p>	<p>No</p>	<p>Yes, for example the Continental Concept Approach by which departing aircraft normally do not use the northern runway on a daily basis. This agreement was designed to protect the residents of Cardiff, which is very close to the runway, from the high noise levels experienced on the ground from departing aircraft which are at low altitudes over Cardiff.</p>	<p>AD-DS L018 and AD-DS L019 (the CAPM) can measure noise levels between 1997 and 2002</p>	<p>AD-DS L018 and AD-DS L019 (the CAPM) can measure noise levels between 1997 and 2002</p>	<p>AD-DS L018 and AD-DS L019 (the CAPM) can measure noise levels between 1997 and 2002</p>

ABC number	FEA	REG	TLL	OSL	LIM	HEL	DOT	ORF	COG
<p><b>3.7 Ground noise</b></p> <p>Please describe conditions and physical barrier's engineering noise from Ground Power Units, engine testing and aircraft generators (ANUG)</p>	<p>Engine ground tests other than idle run-up are not permitted from 22:00 to 06:00 LT. Deviation for ICAO LON, part 40.21.6 the use of the "noise off" positions while ground testing</p>	<p>Maintenance run-ups of aircraft engines shall be avoided between 20:00 and 04:00 and at any time on Sundays.</p>	<p>Barriers surround the engine testing site.</p>	<p>During testing, low level noise power ratings in testing time is generally much lower than take-off or landing noise. Special seating is provided around the engine ground testing to ensure that part of noise levels is reduced to meet the noise limits. Additional ground testing may be required from time to time to maintain standards to certain locations. After noise subsidence procedures, maximum has specially built engine ground test pads which contain noise absorbers to further reduce the noise level. Noise absorbers, which is required following repair and engine testing, engine air flow tests and other noise tests. Noise absorbers are required to be installed around engine testing sites. Noise absorbers are made of various types of materials, including ground testing sites. Noise absorbers are made of various types of materials, including ground testing sites. Noise absorbers are made of various types of materials, including ground testing sites.</p>	<p>There is a 5 meter high ground wall (AGU) usage restricted to maximum 3 minutes prior to start. For engine testing, AGU can be used only in case of the ground power is not available.</p>				
<p>Does the airport provide feed electrical ground power at all times stated in table 3.7.1?</p>	Yes	Yes	Yes	Yes	Yes in some areas as identified above	Yes	Yes		

ABC number	FA	PG	TL	COL	IAH	GOT	HC	OFF	CDG
3.8 Motor capacity limit Is there a motor capacity limit for the airport? (The bearing number is the bearing number to a certain level. Structure number of each light, including and please describe the limit.)	No	Yes	No	No	No	No	No		Yes, for CDG.
Is there a capacity limit for the airport? (The bearing number is the bearing number to a certain level. Structure number of each light, including and please describe the limit.)	-	maximum number of night lights	-	-	N/A	-	-	-	The ICAO procedure (CDG) is that the bearing number must not exceed the average annual volume of the year 2000, 2000, 2001, 2002, 2003.
Is there a capacity limit for the airport? (The bearing number is the bearing number to a certain level. Structure number of each light, including and please describe the limit.)	-	Already reached	-	-	N/A	-	-	-	The ICAO is calculated in 2.4m with + 5 db between 18023h and + 10 db between 1000h.
Is there a capacity limit for the airport? (The bearing number is the bearing number to a certain level. Structure number of each light, including and please describe the limit.)	-	Yes	-	No	N/A	-	-	-	Incidentally mean quota for aviation -12 (see below) (ADP)
Is there a capacity limit for the airport? (The bearing number is the bearing number to a certain level. Structure number of each light, including and please describe the limit.)	-	-	-	No	Please see 3.2	-	-	-	-

The airport is subject to the noise...  
 (The bearing number is the bearing number to a certain level. Structure number of each light, including and please describe the limit.)







ABC number: TNA, RRG, COG, NL, QG, I48, HEL, GOF, ORY, CDG

ABC number	TNA	RRG	COG	NL	QG	I48	HEL	GOF	ORY	CDG
<b>4.2 Community Relations</b> Focus on access and safety	<p>“Airport Town” at Frankfurt Airport Opening hours from 08:00 to 18:00 hrs daily, information on access safety and Frankfurt Airport, an airport distribution and air traffic network from Frankfurt, air cargo integration of air, rail and road transportation (TMA), environmental protection and noise abatement, airport security, capacity enhancement and expansion options “Noise reduction effort”, opening hours twice a week.</p>	<p>Frankfurt CMA, Report 8, 08.09-17.09, Data of noise measurements, On report</p>	<p>No</p>	<p>Frankfurt CMA, Report 8, 08.09-17.09, Data of noise measurements, On report</p>	<p>Frankfurt CMA, Report 8, 08.09-17.09, Data of noise measurements, On report</p>	<p>Frankfurt CMA, Report 8, 08.09-17.09, Data of noise measurements, On report</p>	<p>Frankfurt CMA, Report 8, 08.09-17.09, Data of noise measurements, On report</p>	<p>Frankfurt CMA, Report 8, 08.09-17.09, Data of noise measurements, On report</p>	<p>Frankfurt CMA, Report 8, 08.09-17.09, Data of noise measurements, On report</p>	<p>Frankfurt CMA, Report 8, 08.09-17.09, Data of noise measurements, On report</p>
<p>“Social and cultural activities project for construction/transportation planning”</p>	<p>note statement commission, Regional Transport Forum (RDF)</p>	<p>Yes</p>	<p>There are several projects of cultural activities who deal with visitors concerning airport noise</p>	<p>Frankfurt Airport (FAA) and Frankfurt CMA</p>	<p>There are several projects of cultural activities who deal with visitors concerning airport noise</p>	<p>Area Committees and Residents’ Meetings</p>	<p>For working groups, meetings are arranged when necessary</p>	<p>Cooperation committee with the local authority and affected municipalities within 70 km radius</p>	<p>C11 Commission, Consultative De-Commission for City and for ADF</p>	<p>At the airport (80-1), normal only for passengers and visitors</p>
<p>“Complaint mechanisms for environmental issues”</p>	<p>social noise complaint management at the airport</p>	<p>Yes</p>	<p>The airport has a telephone service</p>	<p>Directly Frankfurt Airport Ltd or to environmental authorities</p>	<p>Through FAA’s complaint website and also through the Council’s complaint forms, for air pollution issues, can email to <a href="mailto:airportnoise@comline.gov.uk">airportnoise@comline.gov.uk</a></p>	<p>When environmental permit will be issued in 2020, the process also opens to citizens before permit will be issued. After the permit has been issued the case complaint to Administrative Court and after that seen to the Supreme Administrative Court.</p>	<p>Quotations and complaints are mainly handled by airport staff</p>	<p>A petition (ADP)</p>	<p>At the airport (80-1), normal only for passengers and visitors</p>	

**5 General information about the data**

<p>“Are other training, educational or professional activities undertaken with the local community?”</p>	<p>No</p>	<p>Yes</p>	<p>None</p>	<p>Public meetings, public consultations on environmental permits which incorporate measures to the support for example the preliminary action plan and air quality action plan</p>	<p>ADP was airport’s main &amp; good article on <a href="http://www.airportnoise.com">www.airportnoise.com</a> + ADF/ADA Garantie de l’Aviation Civile <a href="http://www.aviation-civile.gouv.fr">www.aviation-civile.gouv.fr</a> and <a href="http://www.adgac.fr">www.adgac.fr</a></p>
<p>“Where is the data coming from?”</p>	<p>Frankfurt, Germany, from 2008, Report 8, 08.09-17.09, Data of noise measurements, On report</p>	<p>Frankfurt, Germany, from 2008, Report 8, 08.09-17.09, Data of noise measurements, On report</p>	<p>The Municipality of Ulmweiler, Odenkuppe AG and Avenir</p>	<p>Publicly available websites such as <a href="http://www.baa.de">www.baa.de</a></p>	<p>ADP was airport’s main &amp; good article on <a href="http://www.airportnoise.com">www.airportnoise.com</a> + ADF/ADA Garantie de l’Aviation Civile <a href="http://www.aviation-civile.gouv.fr">www.aviation-civile.gouv.fr</a> and <a href="http://www.adgac.fr">www.adgac.fr</a></p>
<p>“How old is the data?”</p>	<p>From 2008</p>	<p>From 2008</p>	<p>From 2008</p>	<p>From 2008 to 2020</p>	<p>From 2008 to 2020</p>



ARC number	IN	MOF	LGW	RCN	AME
<b>2.2 Annual flight</b>					
2002-10	15,624	200 416	107,913	1,239	
2002-11	16,738	508 625	122,964 (24,280) tonnes	7,356	
2004-10	16,358	547 085	118,107 (27,067) tonnes	84,960	7,421
* based on 944 loads of passenger aircraft (2004, N1) based on freight flights (2004, N1)					
<b>2.3 Annual air traffic movements</b>					
2002	85,288	713,250	542.4	271,021	417,800
2003	81,824	711,524	542.7	252,079	458,000
2004	84,512	714,157	551.1	291,349	479,200
Domestic	2004 45,617	2004 42,707	47,381	134,929	
European	2004 28,770	2004 130,440	144,263	150,948	
International	2004 117	2004 84,910	49,225	66,295	
Private flights	2004 117	2004 279,546	241,409	243.76	
Flight per night	2004 560	2004 4,838	17 flight data by large firms, not used	61,902	
Other flights			1. Mail data by mail firms, not used	8,388,920	
Other flights			2. Air + General aviation + 11		
Peak day (see Appendix 2.1.1)	10 <sup>th</sup> December 2002 - 6 <sup>th</sup> December 2003 - 8 <sup>th</sup> December 2004 - 6 <sup>th</sup>	67,400 movements	29 Aug 04, 402 arrs		
Average number of aircraft movements per day (2002-2004)	12,000-13,125 - 218	6,680-7,250	588	1,700	
Annual flight movements			Winter 02-03 1,248		12,700
2002			Summer 03 9,581; Winter 03-04 5,235		15,827
2004			Summer 04 11,248; Winter 04-05 5,080		16,346
What is the current permitted capacity of the airport (movements per annum)?					
	Runway capacity: 18 movements per hour	Runway capacity: 75 movements per hour	Total not specified but constrained flight rights are the subject of a government consultation but proposals are to limit arrivals; Summer: 2004-05 3000, reducing to 2,800 in 2006-07 with annual reductions to 2000 by 2011-12; Winter: 2004-05 4276, reducing to 3000 in 2006-07 with 2011-12, total that total would likely also apply	15th June	15th June
When is it capacity constrained (and for how long)?					
			16th - see per movements (A1)	22nd	

ARC number	LA	MOF	LCR	BCN	AMS
<b>2.4 Airlines operating at the site</b>					
Scheduled passenger flight			None: 30 airlines operating at Gatwick		
Charterflight			15%	15	107 4812, 2161
Flight height			10%	8	15, 057, 13, 364
Low cost carrier (%)			2	1	
			Classified as scheduled, not separately	17	
<b>2.5 Runway System (please state)</b>					
Number of runways used at site	0	0	0	1 runways	
Number of runways used at night	0	0	0	0	
Notes					
Please describe the existing Runway System:	Two parallel, independent RWYs. Dimension: 2443x60 and 651x22	Two parallel RWYs. Dimension: 3003x60 m. Distance between the two RWYs: 852 m	One active runway. One emergency runway. Legal agreement specifies not to be used at the same time	3 parallel runways, 1 closed	Airport Grounds 2005. Airport area 2,387 hectares. Runways: Runway Location Length Width, Polder Runway 188-266, 3,800 metres 60 metres, Standstill Runway 18C-18C 3,320 metres 45 metres, King Runway 26-24 3,320 metres 45 metres, Alouair Runway 18-18B 3,420 metres 45 metres, Subdivided Runway 29-27 1,450 metres 45 metres, Slopstar Runway 24-22 2,014 metres 45 metres.
<b>2.6 Further airport expansion</b>					
What are your plans for an airport expansion concerning the surroundings, terminals, airport city, ...?	Yes	Yes	Yes plans, i.e. There is a government strategy plan that, in the event that construction of the second runway cannot be built at Gatwick owing to environmental constraints then a second runway might be built at Luton after 2015.	The second terminal is under construction. The Airport City has been planned nearby. There are no plans concerning to runway extensions.	Yes, but depending on new developments on national level
What is the priority of your responsibility as airport expansion beyond the passenger terminal?			Accept expansion of passenger terminal on the basis of the existing one-runway, two-terminal airport. Agree further terminal and/or another runway.	Not to expand the airport any more. Budget for the cargo and logistic area.	More port development is required for the region as well as the negative effects of an airport. The region is not a passenger terminal. But there is a series of options to meet in the vicinity of the surrounding area as well. We are researching the development of a feasibility study to finance these investments (see also next description)
Please describe any forthcoming environmental management schemes for your activity not described above			The expansion of commitments from the Gatwick Airport Sustainable Development Strategy and associated legal agreements.		At this moment the environment is stable, in compliance with the policies of North-Holland and the Airport Authority. Negotiations are far into the possibility of a feasibility study, to compensate nature and region effects of airport and to co-finance investments in the environment.

ABC number	ISA	MOF	LOF#	ECN	AMS
3. Noise					
3.1 Measurement (What noise is used for airport noise? (for example 101))	101	101	101, 102	101, 102, 103, 104, 105	101, 102, 103, 104, 105
(How noise is used for long term use? (for example 102))	102	102	102	102, 103, 104, 105	102, 103, 104, 105
3.2. Aircraft Noise					
3.2.1. What is the day and night period?	Day 6-23, Night 0-6 and 23-24	Day 6-23, Night 0-6 and 23-24	Day 6-23, Night 0-6 and 23-24	Day 6-23, Night 0-6 and 23-24	Day 6-23, Night 0-6 and 23-24
3.2.2. What is the maximum level of a noise event is measured, which indicator is adopted? (awk, lev, etc, etc)	Leq	Leq	Leq	Leq	Leq
3.2.3. Where are noise measurement measurement located? (for example what the airport periphery, outside the airport)	Inside	Outside	Outside	Inside and outside the airport	Stephens Noise Monitoring System (SNMMS) can be accessed online. Both daytime and nighttime noise data from the 27 noise measurement points in the environs of Aberdeen Airport Stepfold as well as current runway use can be viewed online (see table 6.1)
3.2.4. How is the airport noise measurement? (for example, how is the airport, how is the airport?)	101	101	101, 102	101, 102, 103, 104, 105	101, 102, 103, 104, 105
3.2.5. How is the airport noise measurement? (for example, how is the airport, how is the airport?)	101	101	101, 102	101, 102, 103, 104, 105	101, 102, 103, 104, 105

AMC member	UN	MAF	LDW	BCN	AMS
<p><b>3.2 Nocturnal charges</b>                      Does a noise penalty system exist?                      If not, why not?                      Please describe the noise penalty system.</p>	*	-	Yes	NO	Yes, see also 3.1. (see 3.1)
<p>* Does it differentiate between day and night (yes or no)?</p>	*	-	Night aircraft exceeding the departure noise levels are fined either 1000 or €1000 depending on the severity of the breach.		
<p>* At what noise levels do the penalties apply? Please identify any differences between day and night time periods.</p>	*	-	Day Aircraft are required, after take-off, to be operated in such a way that it will not cause noise that exceeds the day (0700-2100) Night Aircraft are required, after take-off, to be operated in a such way that it will not cause more than 80dB(A <sub>90</sub> ) by night (2300-0700) and that it will not cause more than 80dB(A <sub>90</sub> ) during the night quiet period (2300-0600).		
<p>* What form do the penalties take?</p>	*	-	Financial		
<p>* Do the penalties change with increased noise or with different categories of aircraft?</p>	*	-	Yes		
<p>* Where is revenue from the penalties used?</p>	*	-	Donated to local community projects		

ARC member	IRI	NOOP	LGW	BCN	AUG
Is a leading change or executive officer of public housing the last of quarter activity?	-	-	Yes	No	
<b>3.3 Track penalties</b>					
Does a track-keeping system exist for monitoring penalties? (see 3.1.1)	-	-	Yes	No	Yes
Does a penalty system operate for breaches of track-keeping? (see 3.1.1)	-	-	No	No	Yes
How often does the penalty system (including details of the system penalties) have data the system operators?	-	-		It is only allowed in case of necessity	

Within the Transport and Water Inspectorate, the enforcement tasks are one of the responsibilities of the Civil Aviation Authority. The authority supports the Inspector General in the enforcement tasks assigned to him. In this end, the Enforcement Unit carries out the following activities: Checks compliance with limits by the aviation sector; Checks compliance with rules by the aviation sector; Assesses the position of data by the aviation sector; Provides the enforcement orders to be taken by the Inspector General in cases where limits are exceeded and rules are violated. In cases of the enforcement, in its enforcement, the Inspector General must that the sector actually operates within the specified limits and defined rules. If that is not the case, the Inspectorate will intervene, using the available legal instruments. In this context, the limits, that are legally set values are followed without margin.

The Inspectorate's enforcement methods are recorded in the Enforcement Policy, Aviation Act, Schiphol Airport. The Inspectorate has the possibility to take measures if rules are violated or limits exceeded. These can differ considerably in nature, content and severity and also depend on the circumstances. The Enforcement Policy provides insight into when which sanction is imposed and on when (see Chapter 4). To this end, the Inspectorate can use the following instruments if a limit is exceeded: impose a measure; if a rule is violated, administrative fine; in the case of repetition (at violation of a rule): impose a penalty; Non-compliance with a measure, administrative fine and/or administrative order. In the case of repetition (after a fine has been imposed) for non-compliance with a measure, impose a penalty and/or administrative order. An important change with respect to the old situation is the manner of intervention in the operational use of the airport: once a violation has been observed.

In these situations, the new system concentrates mainly on preventing a recurrence of the violation in the future. Any interventions or airport capacity are usually aimed at the next operational year. The Inspectorate will monitor the use of the airport during the operational year. In the context of preventive enforcement, this may lead to actions (for example a warning) by the Inspectorate. Rules will be enforced by carrying out inspections (in a continuous process). The sector will report the operational aspects periodically to the Inspectorate. The Inspectorate then checks the quality of the information with the Environmental Information Regulation (EIR). Based on the information provided, an assessment is made of whether limits have been exceeded or rules violated. Every six months, the Inspectorate will report its findings and activities with respect to the enforcement of Schiphol Airport.

ABC number	US	MSP	LTWB	ECH	AMS
<p><b>3.4 Night noise</b> Please list any national and local noise restrictions which are operative during the night period</p>	-	Night-time Runway Usage, N.A.P. Provision of Italian, CAA, AP - MAC 1-43, from 23:00 to 05:00 (L) RWY 03L must be used for landing, from 23:00 to 05:00 (L) RWY 03R must be used for take-off.	<p>Night flying restrictions imposed by Government on Heathrow, Gatwick &amp; Stansted Airports.</p>	<p>They are on the article 2.6 of the Environmental Impact Declaration. For example is not allowed to use the crossed runway to land.</p>	<p>Since the M4 runway has become operational a new set of night time restrictions for the period 23:00-05:00 hour was introduced, legal night time restrictions are still in effect between 23:00-05:00 hour. All flights between 0:00 and 01:00 hour, operations are corresponding to the left peak mode (1 runway for departures and 1 for arrival and no night time restrictions). The night time noise exposure limits at Heathrow are now based on the period 23:00 -05:00 including the nighttime regime until 06:00. The period of the night regime is currently under review. Legal extension of the night regime period until 02:00 is being considered in order to reflect the community acceptance due to aircraft noise at night, but this would cause significant economic damage.</p>
<p>If restrictions are applied, is the use of certain types of aircraft banned or limited during the night period? -- How is the use limited?</p>	-		Yes.	Yes	<p>Most aircraft night time restrictions at airport. Single air traffic noise limit, limited availability to runways, limited capacity due to operational procedures (special SES, CSRs) or restriction Chapter 3 "High aircraft and no reverse thrust"</p>
<p>Are aircraft totally banned for any period during the night (Yes or No)</p>	-	Yes	<p>It is proposed that QCR aircraft will be banned from being scheduled but not banned from operating during the night quota period 03:00-05:00. QCR and QCR aircraft may not be scheduled to land or take-off.</p>	<p>It's limited to Aircraft in Chapter 4</p>	
<p>Please specify the period</p>	-	-	<p>Night quota period</p>	<p>03:00 - 05:00</p>	

ABC member	UN	MAP	LDW	ECN	AMT
<b>3.5 Thermal contribution tests</b> Does a system of thermal contribution sound noise insulation in specific areas test? (Effects area data provided)	-	-	Yes	Yes (land coverage)	yes
Which types of buildings are covered?	-	-	Most rural site schemes, some rural site areas. Schemes are listed for exceeding separate noise limits: 60A (aircraft) 20 (domestic) - recently - published schemes to assist certain property types in specified areas around the airport.	Areas excluded in the noise footprint higher than 65 (along with 20 domestic)	
At what noise level?	-	-	Community, community buildings for insulation. Also, a scheme for residential property (should be brought forward soon). Other schemes offer assistance to noise away from homes affected by noise.	Rural houses	houses
What form does the contribution take?	-	-	Insulation or financial assistance (contribution to move away from noise affected properties)	45 dB (day) + 55 dB (night)	
Who provides the financial support?	-	-	BLA	ADVA	
Are there any types of contributions?	-	-	Yes	No	
Which other buildings are covered (e.g. school-areas, bus gardens, playgrounds, etc.)?	-	-	No	Green areas, beach, secondary industrial areas.	



ARC number	LN	MWP	LCBE	BCN	AMS
<p><b>3.7 Ground noise</b></p> <p>Phase 2020s: compressors and physical barriers requiring noise from Ground Power Units, engine testing and aircraft generators.</p> <p>APNS:</p>	<p>Engine reserves is allowed only within maximum limit except for safety reasons. Engine test at high power is not permitted between 22:30 and 05:00 (21:00-00:00) inclusively. APU is allowed except for aircraft to be used only 30' before departure and 15' after arrival.</p>	<p>Engine test at high power is not permitted between 22:30 and 05:00 (21:00-00:00) except for aircraft to be used immediately. APU is allowed only 30' before departure and 15' after arrival. APU parking does the use of APU is allowed only for a maximum time of 15'</p>	<p>Search of noise-sensitive locations in the airport perimeter - 841 on using (PM) except in exceptional circumstances. Restrictions on the use of APU's, EISG</p>	<p>None present</p>	<p>Taskmaster and English airport initiate a research of the phenomena described as "ground noise" of departing aircraft from the Norderbahn. In these observations, vibrations and noise was measured at the receiving area (houses in Hochalpen). To reduce the noise and/or vibrations at the receiver, further research will take place to understand more about the source and the propagation of them. Because there is little information on the described phenomena in relation to aircraft worldwide or in the Netherlands for this specific ground situation, some research on the validation of assumed sources and propagation to must be done first. After this one has to be able to evaluate and advise on cost-effective mitigation measures. Ground noise issue is mostly noise and vibrations departing planes.</p>
<p>Does the airport provide best practice ground power as an alternative to APU's?</p>	Yes	No	Yes	Yes	Yes

ABC number	LN	MAP	GDW	BCN	AMS
<p><b>Is there a limit on recognized capacity for the airport? For example, maximum number of buildings proposed in a certain zone area, maximum number of land parcels, etc. (Yes/No)?</b> Please describe the limit.</p>	-	-	Yes	No	Yes
<p><b>In what year is the capacity expected to be reached?</b></p>	-	-	Not calculated.	2025	-
<p><b>Is there a difference between day and night in the capacity level?</b></p>	-	-	Yes	No	-
<p><b>Does such a system</b></p>	-	-	-	-	-



ABC number	L34	L34P	L34B	L34C	L34D	L34E	L34F	L34G	L34H	L34I
Please describe the zoning system including restrictions on noise and level use.	Zone A: (G-05) LVA - no limitations. Zone B: (G-75) LVA - agriculture and livestock activities, industrial activities, commercial activities. Zone C: (G-75) LVA - only activities directly connected with the use of airport infrastructures.	Zone A: (G-05) LVA - no limitations. Zone B: (G-75) LVA - agriculture and livestock activities, industrial activities, commercial activities. Zone C: (G-75) LVA - only activities directly connected with the use of airport infrastructures.	Yes							The national government maintains that Leipzig should be able to provide further of its current location until 2030. Business and office may be located in the immediate vicinity of Leipzig provided they are airport-related, determined on the basis of the importance of accessibility, safety and the future demands that Leipzig will play on the available space. The government does not consider it desirable for new urban areas to be built under frequently used flight paths. In concrete terms, this means that new urban areas can be developed within and beside the noise protection associated with the five runway system, with the exception of the existing locations reserved for developments designated in the context of the fourth national spatial planning policy Document.
Have plans to reduce noise affecting airport capacity? (Yes or No)	No	No								Yes
Plan development adjacent to the airport?	No	NA	Yes							Yes
Do the zoning plans combine boundaries in growth of use of the airport? (Yes or No)	No	NA								
Industrial Areas/Commercial Offices, Hotels: What is the policy on industrial development in the airport area in relation to noise levels and safety zones?	NA	NA	Yes							The plots are higher than in residential areas.
In employment terms, do planning policies ultimately development potential to the operation of the airport from other developments attached to it? (Yes or No)	Yes	Yes	No follow							Yes

ABC member	LN	MAP	LGW	BCN	AMF
Does list any other national or local planning context addressing the environmental impact of airports on the surrounding area, including land use/zoning plans and no-build areas which affect the airport.	N/A	N/A	Yes	The area closer to the airport are no build areas.	
Are there any influences of the land price and rents?	N/A	N/A	To follow	No	
How many people are living in the noise zones?	N/A	N/A	Yes	43,000	
<b>4.1.1 Publicity</b> Does describe the type, level, frequency and format of information/publication provided to the community by the airport, local government authority or other body on environmental issues such as noise, environmental impact, public safety	Environmental report	Environmental report	Annual sustainability report (report), sustainable development strategy program (report + tool & strategy planning, substance, press release etc), Consultation: Government/Civil Aviation Authority/ICL, info/campaigns/local environmental groups, Website (all), Local authority plans - Strategy documents, Campaign groups	Yes (all) 1x night, weekly Computer and paper support	
Does a website with information or more another other environmental issues exist?	Yes	YES	Yes	It is being prepared	Yes, Noise Monitoring



## APPENDIX 2: ADSTAR QUESTIONNAIRE



**ADSTAR**  
ADMINISTRATIVE STRUCTURES IN AIRPORT REGIONS

GPM 2006

If you already returned the completed MANIC-questionnaire, it will not be necessary to answer all questions below. In that case, please feel free to omit all queries set in italics.

### 1. CONTACTS

#### 1.1 ARC MEMBER AUTHORITY

Name of the local authority	
Contact person	
Address	
Tel.	
Fax	
Email	

#### 1.2 AIRPORT

Name of the airport	
Manager of the airport	
Contact person	
Address	
Tel.	
Fax	
Email	

### 2. GENERAL AIRPORT STATISTICS (PLEASE STATE YEAR), CURRENT USE AND FURTHER AIRPORT EXPANSIONS

#### 2.1 ANNUAL AIR TRAFFIC MOVEMENTS

<i>2003</i>	
<i>2004</i>	
<b>2005</b>	
<i>Domestic</i>	
<i>European</i>	
<i>Intercontinental</i>	



<i>Passenger flights</i>	
<i>Freighter flights</i>	
<i>Mail flights</i>	
<i>Other flights</i>	
<b>Peak day take offs/landings [2005]</b>	
<b>Average number of aircraft movements per day [2005]</b>	
Annual night flight movements	
2003	
2004	
<b>2005</b>	
<i>What is the current permitted capacity of the airport [movements per annum]?</i>	
<i>When is it currently anticipated that this capacity will be reached?</i>	

## 2.2 RUNWAY SYSTEM

<i>Number of runways used at daytime</i>	
<i>Number of runways used at night time</i>	
<i>Please describe the existing runway system [e.g. orientation, distance between runways].</i>	
<b>Please sketch the approximate percentual use of the different runways for starting/landing procedures over the last years.</b>	

## 2.3 FURTHER AIRPORT EXPANSION

<i>Are there any plans for an airport expansion concerning the runwaysystem, terminals, airport city,...?</i>	
<i>What is the policy of your region/authority on airport expansion beyond the presently permitted level?</i>	
<i>Please describe any forthcoming environmental management schemes for your authority not described above:</i>	

### 3. FLIGHT PROCEDURES AND RESTRICTIONS

#### 3.1 BASIS OF REGULATIONS

Is there a legal basis for issues in air traffic safety and noise protection?	Yes <input type="checkbox"/> No <input type="checkbox"/>
- If yes, please give the name of the corresponding law and its date of passing.	

#### 3.2 NIGHT NOISE

<i>Please list any national and local noise restrictions which are operative during the night period.</i>	
<b>- In case there are restrictions applied, when have they been introduced?</b>	
<b>- For what reasons have these restrictions been considered necessary?</b>	
<i>Is the use of certain types of aircraft banned or limited during the night period?</i>	Yes <input type="checkbox"/> No <input type="checkbox"/>
<i>- If yes: How is the use limited?</i>	
<i>Are aircraft totally banned for any period during the night?</i>	Yes <input type="checkbox"/> No <input type="checkbox"/>
<i>- If yes: Please specify the period</i>	
<b>Are there plans to change night noise policy in the next future?</b>	

#### 3.3 TAKE-OFF AND LANDING PROCEDURES

<i>Are there systems in operation for minimising noise nuisance from landing aircraft and/or delayed deployment of noise generating aircraft equipment prior to landing? Please describe [e.g. Continuous Descent Approaches,</i>	
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<i>HALS-DTOP (High Approach Landing System – Dual Threshold Operations), Climb-Cutback-Cleanup-Takeoff)</i>	
<b>- If there are such landing procedures in operation, when have they been introduced?</b>	
<b>- If introduced in the last years, why have they been considered necessary?</b>	
<i>Please quantify the noise mitigation effect:</i>	
<i>For the purpose of noise control, what measures are in place direct departing aircraft eg a pattern of dispersal or concentration within noise preferential routes? Please describe and supply the map of noise preferential routes if available.</i>	
<i>Are there limitations in force on the use of specific runways during certain days or times of the day for noise control purposes? If yes, please indicate the related regulations.</i>	
<i>Does a rotation of the runwaysystem exist?</i>	Yes <input type="checkbox"/> No <input type="checkbox"/>
<i>Are there restrictions on reverse thrust?</i>	

### 3.4 ENVIRONMENTAL NOISE DIRECTIVE

<i>Which authority will be responsible for drawing up strategic noise maps (using <math>L_{den}</math> and <math>L_{night}</math>) and implementing action plans in the framework of Directive 2002/49/EC*?</i>	
<i>Has this authority already started with the noise mapping?</i>	Yes <input type="checkbox"/> No <input type="checkbox"/>
<i>Has this authority already started with the action plans?</i>	Yes <input type="checkbox"/> No <input type="checkbox"/>
<i>- If yes, which measures does the action plan include in relation to aircraft noise?</i>	

\*2002/49/EC = DIRECTIVE 2002/49/EC of the European Parliament and of the council of 25 June 2002 relating to the assessment and management of environmental noise

#### 4. ADMINISTRATIVE STRUCTURES

Please specify the governmental institutional structure regarding air traffic issues.	
Which authority is responsible for regulations regarding air traffic safety? [Including the flight restrictions mentioned under 3.3]	
Is the responsible authority state-owned or in private hands?	YES <input type="checkbox"/> No <input type="checkbox"/>
Is the responsible authority independent of the airport's operator?	YES <input type="checkbox"/> No <input type="checkbox"/>
Are the air traffic controllers employees of the organization mentioned above or of the airport?	YES <input type="checkbox"/> No <input type="checkbox"/>
Does the above given authority decide on its own regarding air traffic regulations, or is agreement from local/national government needed?	YES <input type="checkbox"/> No <input type="checkbox"/>
Please sketch the official way for establishing changes in flight procedures.	
Which role has been taken by local authorities in recent decisions?	
How has the affected public, that is, citizens, action groups etc. been involved in recent decisions?	
Has there been a change in administrative structures regarding air traffic safety in last time?	YES <input type="checkbox"/> No <input type="checkbox"/>
Will the administrative structures most probably change within the next years [e.g. due to EC directives]?	



## 5. COMMUNICATION

Have the current flight regulations been made transparent to the interested public?	YES <input type="checkbox"/> No <input type="checkbox"/>
- If yes, which ways of communication are used?	INTERNET <input type="checkbox"/> PRINT MEDIA <input type="checkbox"/> RADIO <input type="checkbox"/> NEWSLETTER <input type="checkbox"/> OTHER <input type="checkbox"/>
Are temporary changes in flight procedures [e.g. runway restrictions caused by maintenance work] communicated to the public within a short period [by internet, radio, etc]?	YES <input type="checkbox"/> No <input type="checkbox"/>
- If yes, who is the responsible operator of the corresponding web presence?	
Are current flight procedures a reason for public complaints?	YES <input type="checkbox"/> No <input type="checkbox"/>
- If yes: which procedures gives rise to the complaints and for which reasons?	
- If yes: are there action groups, etc. claiming for changes in flight procedures and regulations?	
Were recent changes in flight procedures [if any] preceded by a controverse public discussion?	YES <input type="checkbox"/> No <input type="checkbox"/>
- If yes: please sketch details of that discussion.	
How would you describe qualitatively your experiences as the ARC-representative with the authorities responsible for air traffic regulations?	EXCELLENT <input type="checkbox"/> GOOD <input type="checkbox"/> INDIFFERENT <input type="checkbox"/> MEDIOCRE <input type="checkbox"/> BAD <input type="checkbox"/>
Please make suggestions for an improvement of the dialogue with the responsible authorities [if needed].	

### APPENDIX 3: RESULTS FROM ADSTAR QUESTIONNAIRES

	Barcelona	Frankfurt Rhein-Main	Helsinki	London-Gatwick	London-Heathrow	Malta	Orio	Paris CDG and Orly
Name and year of passing of legal basis in issues of air traffic	N/A	Luftverkehrsgesetz (1999) Luftverkehrsordnung Fluglärmsgesetz (1971)	Civil Aviation Act (29.12.2005) Environmental Protection Act (4.2.2000) Ban on the use of RWY15 (depts) and RWY33 (arrs) (23-06 LMT). Preferential RWY for depts 22R and for arrs 15 (23-06 LMT). 2.6.1995, to be renewed in 2008	Civil Aviation Act (1982) European Directive 2002/30 SI 2003 NO. 1742	Same as LGW	Legal Notice LN79 (2004) Civil Aviation Act Air Navigation (Air Traffic Management) Order (2004) L.N. Order 2001 (Air Navigation Order)	The air transport act with provisions	Several regulations
National and local noise restrictions for night flight (date of passing)				Reviewed every five or six years. Regulations until 23 Oct 2006, new regulations agreed until 2012	Quota count system with movement limit		Provision for take of and landing 8.10.1999	Only: curfew 23.30 - 6h (since 1994) CDG: limitation of movement (2003)
Is the use of certain types of aircraft banned or limited during the night period?	No	No	No		Yes	Yes	Yes	
Are aircraft totally banned for any period during the night?	No	No	No		No	No	No	Yes (Orly)
Are there plans to change night noise policy in the next future?	No	night-flight ban from 23.00 to 05.00 hrs, if a new landing runway has been built	New policy might be considered next time when a new environmental permit will be issued in 2008	No	No	No	New provisions will probably be implemented sometime in the near future	No



	Barcelona	Frankfurt Rhein-Main	Helsinki	London-Gatwick and London-Heathrow	Malta	Oslo	Paris CDG and Orly
Governmental institutional structure	AENA	Luftfahrtbundesamt (LBA) Deutsche Flugsicherung (DFS) Fluglärmkommission, Fluglärmbeauftragter and HMMWL	1. The Ministry of Transport and Communications 2. Finnish Civil Aviation Authority (The regulator, CAA) 3. Finnavia (the airport and air navigation service provider)	UK Government Department for Transport (national aviation policy and night noise restrictions for designated airports) Civil Aviation Authority is the independent regulator for aviation	Malta Air Traffic Services Ltd (100% Government owned Company), regulated by the Department of Civil Aviation (Ministry of Transport and Communications).	Safety, laws and regulations The Department of Transport and The Civil Aviation Authority. Planning, commercial and environmental issues: Avinor AS	Direction Générale de l'Aviation Civile (DGAC), appartient au Ministère de l'Équipement, des transports et de l'Aménagement
Authority responsible for air traffic safety	AENA	LBA, DFS	Finnish Civil Aviation Authority	SRG and ATSP	Department of Civil Aviation	The Department of Transport and The Civil Aviation Authority.	DGAC
Owner status	Private	State	State	Public-private partnership	State	State	State
Independency of airport operator	No	Yes	Yes	Yes	Yes	Yes (in safety matters)	Yes
Employer of air traffic controllers	State	State	State	Public-private partnership	Private	State	State

	Barcelona	Frankfurt Rhein-Main	Helsinki	London-Gatwick and London-Heathrow	Malta	Oslo	Paris CDG and Orly
Official way for establishing flight changes	Environmental commission of the Airport	recommendation ->Fluglärmkommission > DFS > LBA	Finavia has presented its' plans before it makes decisions	Airspace change procedure (currently under review) after consultation. Changes strictly managed under a formal safety management system involving hazard analysis and the production of safety cases which must meet SRG's approval	MIA plc and MATS Ltd have a liaison committee that discusses such issues. Any change is proposed needs DCA approval for implementation.	Provisions issued by the government regulate new procedures.	
Role taken by local authorities in recent decisions	To be member of the environmental commission	some local authorities are member of the "Fluglärmkommission", which has the opportunity to make recommendations	Local authority only makes statements, if asked, or opinions in other cases. No official role anymore in final decision-making at local level.	None re the immediate above but through consultations from the Government regarding changes to night noise restrictions.	Regulatory	Local authorities are considered an interested party in such matters, participate in a hearing process	Very limited role
Participation of the affected public	N/A	some local authorities and "Bundesvereinigung gegen Fluglärm" (NGO) are member of Fluglärmkommission	Finavia has presented its' plans before it makes decisions.	They have been part of the consultation process above.		Various interest groups have had their say in recent decisions.	Commissions Consultatives dell'Environnement (CEE) mais r�elimit�e + r�le de l'ACNUSA (voir plus haut)
Recent or forthcoming structural changes	Forthcoming	No	Recent (January 2006)	No		No	

	Barcelona	Frankfurt Rhein-Main	Helsinki	London-Gatwick	London-Heathrow	Malta	Oslo	Paris CDG and Orly
Regulations made transparent	Yes	Yes	Yes	Yes	No		Yes	Yes
Used media		Internet, Print	Internet, Print, Radio, Newsletter	Internet, Print Consultations			Internet, Print Radio, Newsletter	Print, Newsletter
Temporary changes communicated	No	Yes	Yes	No	No		Yes	
Public complaints about procedures	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
Reasons for complaints	Take off / landing procedures	Start / landing, flight paths	Night flight, route changes, changes during renovation, unusual runway usage	Awareness of people in narrower and more precise corridors			Low flying and deviations from normal operation pattern	
Action groups claiming for changes	Yes	Yes	Yes, local housing association	No	Yes, HACAN clear skys		Yes	Yes, claiming a curfew at CDG
Recent changes preceded by controversies	Yes		No	No		No	Yes	



AIRPORT REGIONS CONFERENCE