

# Building on a sound foundation

Stansted Noise Strategy and Action Plan 2010-2015



Arrivals

## Introduction

During 2009, Stansted Airport developed, consulted the public and produced a five year Draft Noise Strategy and Action Plan, subject to formal adoption and approval by the Secretary of State for Environment, Food and Rural Affairs.

This Executive Summary of our Noise Action Plan is designed to demonstrate that Stansted Airport has fully met the requirements detailed in Annex V of Environmental Noise Directive 2002/49/EC.

This Plan has been developed using the data pack provided by DEFRA. The information contained within the Environmental Noise (England) Regulations 2006 (as amended) Airport Noise Action Planning Data Pack is subject to Crown Copyright 2009. It has been reproduced and acknowledged under the terms of this copyright.

## Stansted Airport

Stansted Airport is the third largest international airport in the UK primarily serving London, the East of England and the South East. In 2009, it handled over 19 mppa.

The Airport covers an area of 957 hectares and is located approximately 65 kilometres north-east of London, and 50 kilometres south-east of Cambridge. Land surrounding the airport is predominantly arable agricultural land, interspersed with dwellings and farmhouses.

Towns in the vicinity of the Airport include Bishop's Stortford, located 3.5 kilometres to the west, Great Dunmow approximately 8 kilometres to the east. Nearby villages include Stansted Mountfitchet, Molehill Green, Bamber's Green, Takeley, Takeley Street, Birchanger, Burton End, Tye Green and Gaunt's End.

The airport has one operational runway and a single main terminal building located to the south of the runway. To the north of the runway a number of general aviation companies operate from their own facilities.

The main runway is known as '04/22' (based upon compass bearings). It is 3,048m in length and is equipped with a Category 3b instrument landing system. In 2009, over 90 different aircraft types served the airport with the overwhelming types being twin engine, medium sized, narrow bodied aircraft such as the Boeing 737-800 and the Airbus A319.

### Airport Authority

Stansted Airport is owned by BAA and has a licence to operate the aerodrome at Stansted Airport.

As the responsible authority Stansted Airport developed a five year Draft Noise Action Plan. This was subject to formal adoption and approval by the Secretary of State for Environment, Food and Rural Affairs, in line with Environmental Noise (England) Regulations 2006 (as amended).

The Noise Action Plan is the responsibility of the aerodrome operator regardless of any changes in ownership.

Noise comes from a variety of sources (Table 1):

Noise source	Noise source owner	Influence role	Noise source	Noise source owner	Influence role
Airside Vehicles	Drivers of vehicles	STAL	Aircraft Engine Testing	Airlines	STAL
Landside Vehicles	Passengers, Passenger Transport Companies, Freight and Logistic transport companies.	STAL	Construction Activities	Construction Company	STAL
Building Infrastructure	STAL and other airport building owners.	STAL	Approach	Aircraft and engine Manufacturers	Airlines, CAA, NATS, STAL
Aircraft Engines	Engine Manufacturers	Airlines, CAA, STAL	Landing	Aircraft and engine Manufacturers	Airlines, CAA, STAL
Aircraft Airframe	Aircraft Manufacturers	Airlines, CAA, STAL	Taxi	Engine Manufacturers	NATS, STAL
APU's	APU Manufacturers	Airlines, STAL	Take Off	Aircraft and engine Manufacturers	Airlines, CAA, NATS, STAL
GPU's	GPU Manufacturers	Ground Handling Companies, STAL	Climb Out	Aircraft and engine Manufacturers	Airlines, CAA, NATS, STAL

Table 1: Noise sources at Stansted Airport

# The regulation of aircraft noise in the UK

**The Environmental Noise (England) Regulations 2006 (as amended)** – These regulations transpose the requirements of EC directive 2002/49/EC (Environment Noise Directive) into UK law. They place a duty on the Secretary of State to produce strategic noise maps and under regulation 18 airport operators are obliged to produce Noise Action Plans based on the strategic noise maps. Once prepared and adopted, the noise action plans must be reviewed and, if necessary, revised, at least every five years and whenever a major development occurs affecting the noise situation. The regulations have been amended by 2008 regulations and there are proposals to amend again by 2009 regulations.

Stansted Airport operates under regulations and guidelines imposed from many International, European, National and Local Authorities (shown below).

## Local Regulation

Our planning permission for the Generation 1 development includes conditions which limit the airport to 35 mppa. It also limits the number of passenger air transport movements, cargo air transport movements and non air transport movements to 243,500, 20,500 and 10,000 respectively. This planning permission also limits the area enclosed by the 57dB(A) Leq16hr (07:00-23:00) noise contour to 33.9 sq km.

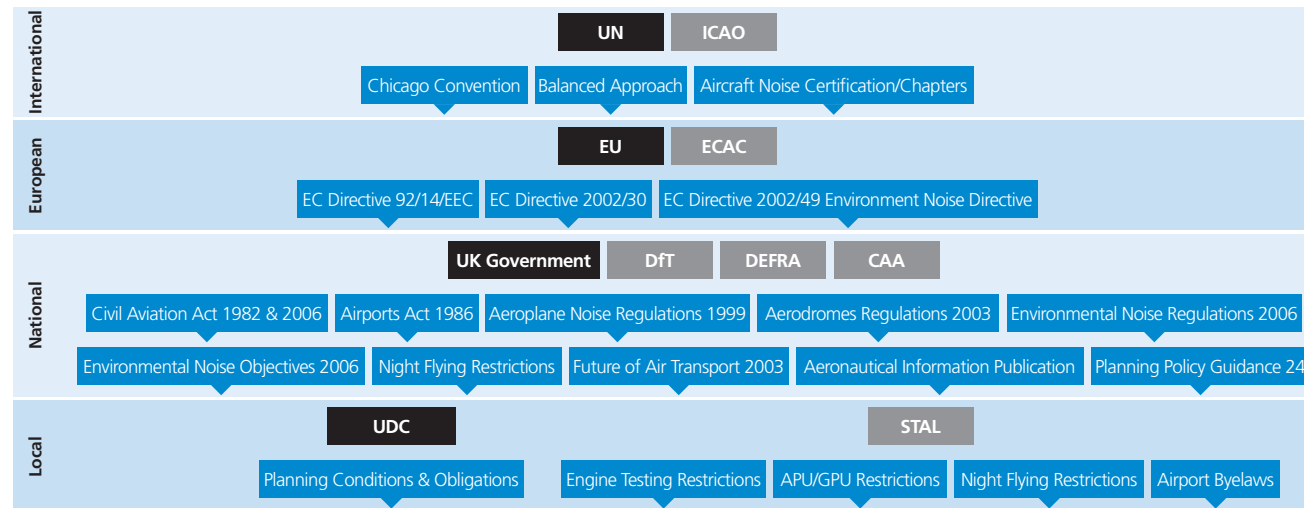
There are specific noise-related controls within this planning permission and subsequent Section 106 agreement. These include restrictions in the use of:

- Auxiliary Power Units (APU's)
- Ground Power Unit's (GPU's)
- Ground running of aircraft engines

As a designated airport London Stansted is bound by the Governments night flying restrictions regime. This limits the number of aircraft movements that can occur during the night period 23:30-06:00 (local time) in any season and the cumulative noise that these operations can generate. Aircraft are categorised by the noise they generate. This is known as the Quota Count (QC) system. There are further scheduling restrictions of aircraft which are categorised in the noisiest QC groups eg. QC4, QC8 and QC16 rated aircraft.

Stansted Airport has strict departure noise limits in place which are set by the Government. These noise limits are set as 94dBA Lmax for any departure between 07:00-23:00, 89dBA Lmax for any departure between 23:00-23:30 and 06:00-07:00 and 87dBA Lmax for any departure between 23:30-06:00 (all local time). This is measured in Stansted Airport's dedicated noise track keeping system and the eight fixed community noise monitors.

## Stansted Airport Aircraft Noise Regulations



■ Governing Body ■ Implementation Body

## Results of 2006 noise mapping

The Noise Action Plan and this subsequent Executive Summary have used and referred to the data provided by DEFRA.

An example of information from the data pack is shown in Table 2. This shows that within the  $\geq 55$ Lden contour there are an estimated 9,400 people residing within it.

**Table 2: Estimated total number of people and dwellings above various noise levels, Lden**

Noise level (dB)	Area (km <sup>2</sup> )	Number of dwellings	Number of people
$\geq 55$	73.3	3,850	9,400
$\geq 60$	28.4	850	2,100
$\geq 65$	10.1	150	400
$\geq 70$	3.5	<50	<100
$\geq 75$	1.2	0	0

Whilst we have focussed the main Action Plan activities on  $\geq 55$ Lden contour, we have also looked beyond this area to mitigate aircraft noise where possible.

## Stansted Airport's noise strategy

For over a decade Stansted Airport Limited has been at the forefront of proactively monitoring and tackling community noise issues.

Managing and where possible, reducing this noise is a long standing commitment within Stansted Airport Limited's (STAL) corporate responsibility agenda. Our commitment and approach is further endorsed by the achievement in 2005 of the ISO14001 environmental accreditation, which includes the management of air and ground noise. We have maintained this accreditation to date.

The current noise reduction and mitigation at Stansted cover a wide range of activities including:

- Maintaining our dedicated Noise and Track Keeping system
- Providing a public web based flight tracking tool, WebTrak
- Fining airlines for flying persistently outside the noise preferential departure routes
- Fining aircraft that exceed the departure noise limits
- Differential charging regime which promotes quieter aircraft
- Providing a mobile community noise monitoring program
- Departure track keeping compliance above 95% for all routes
- Achieving above our target of 90% of all aircraft using Continuous Descent Approach to Runway 22
- Residential noise insulation scheme

STAL currently spends over £700,000 per annum on these activities mitigating noise.

Our Noise Strategy and Action Plan is very much about building on the sound foundations we already have in place.



# The Noise Action Plan

We believe that the actions in the Action Plan are appropriate, considering the challenge the airport has to operate a safe, successful and realistic operation within the parameters set by Government and regulatory bodies.

In developing our Noise Action Plan, STAL carried out extensive consultation on a Draft Noise Action Plan.

Prior to consulting on the Draft Noise Action Plan, STAL carried out a pre consultation involving stakeholders, NATS and local airport working groups. STAL reviewed the feedback and incorporated suggestions where appropriate and then proceeded with a formal consultation of the Draft Noise Action Plan.

Stansted Airport launched its formal public consultation on its Draft Noise Action Plan on Friday 12th June. It lasted for 16 weeks ending on Friday 2nd October 2009. The consultation period was subsequently extended by a few days to allow some Parish Councils to submit their responses following Parish Council meetings.

The consultation process was managed by GfK NOP, an independent research organisation. The public were able to respond to the consultation via an online survey accessed via the airport's website, via hard copy questionnaire or via "white mail" sent direct to GfK NOP.

The Consultation was publicised as follows:

- Postcards were sent to around 4,500 local residents who live within the 55dBA Lden noise contour around the airport
- Letters were sent to 31 noise sensitive buildings within the 55dBA Lden noise contour. This included chapels, churches, clinics, day-care centres, dental surgeries, higher education buildings, hospitals, pre-school education, primary schools, schools and surgeries
- Letters were sent to approximately 700 members of the local community who have had cause to complain about aircraft noise at Stansted since January 2008

- Regional TV and local radio interviews were conducted to cover the launch and importance of the consultation
- Three waves of press advertisements were run in local and regional newspapers before, during and towards the end of the consultation period
- Home page links to the consultation were shown on the Stansted Airport main web site ([www.stanstedairport.com](http://www.stanstedairport.com)) and Stansted's dedicated Noise web site ([www.stanstedairport.com/noise](http://www.stanstedairport.com/noise)) along with a non-technical summary of the proposed actions
- A dedicated hotline was provided to allow members of the public to request hard copies of the consultation material or to ask questions about the draft noise action plan.

Stansted Airport Limited hosted eight public road shows in local towns during the consultation period. The events provided an opportunity for local residents to discuss the Draft Noise Action Plan and learn more about how Stansted Airport manages aircraft noise (Table 3):

When	Where	Attendees (approx.)
5 Aug 09	The Priory, Ware, Herts	60
13 Aug 09	Charis Centre, Bishop's Stortford, Herts	10
20 Aug 09	Foakes Hall, Great Dunmow, Essex	30
26 Aug 09	Town Hall, Sudbury, Suffolk	40
3 Sept 09	Latton Bush Centre, Harlow, Essex	10
8 Sept 09	Town Hall, Saffron Walden, Essex	50
17 Sept 09	Arts Centre, Haverhill, Suffolk	10
23 Sept 09	Town Hall, Braintree, Essex	20

Table 3: Location of consultation events

These road shows were also advertised in local and regional newspapers. Press releases were also issued in the week prior to each session and as a follow-up to each of the road shows.

Before and during the consultation, the airport also proactively engaged with:

- Stansted's Noise & Track-keeping Working Group
- The Stansted Airport Consultative Committee
- Stansted's Flight Operations Committee
- Environmental Health Officers for Uttlesford, Braintree, East Hertfordshire, Hertfordshire County and Essex County councils
- Over 9,000 subscribers to Stansted's "Meaning Business" e-newsletter
- The main contacts at known anti airport lobby groups
- Letters were also written to MPs, MEPs, CEOs and Clerks of Town Councils.

The number of responses received is shown in Table 4 on page 6.

# The Noise Action Plan continued

Respondent type	Total	Online survey	Postal survey	White mail*
Local resident/individual	352	221	130	1
A private sector organisation	7	3	3	1
Interest or Pressure Group	9	3	4	2
Local Government	33	16	14	3
Other public sector organisation	2	1	1	0
Voluntary sector or Charity	3	2	1	0
Other	4	1	3	0
<b>TOTAL</b>	<b>410</b>	<b>247</b>	<b>156</b>	<b>7</b>

Table 4: Stansted Airport – summary of responses

The top key responses to the Draft Noise Action Plan were:

- Draft plan does not go far enough/fails to address the problem
- Performance indicators proposed are not sufficient/too vague
- Draft plan offers nothing new
- Draft plan does not do enough to address night time noise
- Draft plan does not fulfil the Environmental Noise Directive (END) requirements
- Fines/penalties are inadequate
- Proposed actions need to be quicker/immediate/time frame is too long.

Following public consultation of our Draft Noise Action Plan we reviewed and assessed our actions. This resulted in over 20 new actions that London Stansted is committed to introduce over the lifetime of this five-year plan – both within, and beyond, our published noise contours. An example of this is addressing the concerns of the residents of Hertfordshire, in particularly Ware, by recognising the need to introduce Continuous Descent Approaches (CDA's) to runway 04.



## Noise Action Plan Measures

When developing this Action Plan and following feedback from the consultation, we undertook an exercise to quantify the potential costs and benefits to ensure we focus our efforts on those areas which will have the maximum benefit for noise.

We carried out the following:

- Estimated the effectiveness of each measure in the action plan
- Ranked the actions in high, medium and low bands in terms of their effectiveness
- Quantified the benefits likely to arise as a result of key projects eg. developing an aircraft departures code of practice and CDA's to runway 04.

STAL will provide further financial information along with cost benefit assessments as and when the actions are developed in more detail.

By prioritising noise management activities on the most effective actions, we believe we can ensure maximum benefits for noise affected communities.

Stansted Airport has set nine key themes for the future to manage the impacts of aircraft noise. Within each of these nine themes there are new as well as existing actions which enhance our current noise mitigation.

The new actions are summarised below:

### 1. Control of noise generated by departing aircraft

- We will introduce a tiered fining level starting at £1,000 per noise infringement, up to 3dB over the 94dB daytime limit by the end of 2010. For Infringements that exceed this 3dB threshold we will add £250 per dB
- We will increase the fining level for departures that fly persistently outside the Noise Preferential routes to £750
- We will set up our NTK system to monitor the areas as documented in section 2.21 - Noise Abatement Procedures of the UK AIP.
- We will set up our NTK system to monitor over flights of St Elizabeth's Home
- We will work with the Government through ANMAC to clarify guidance for operators regarding use of Noise Abatement Departure Procedures (NADP)
- We will work with NATS and the CAA to establish Service Level Agreement's (SLA's) to respond to suggestions for improved flight procedures.

### 2. Control of noise generated by arriving aircraft

- We will work with local communities and NATS to introduce CDA's to runway 04
- We will work with airlines and NATS to encourage CDA's to runway 04 where operationally feasible, especially at night.

### 3. Ground Noise

- We will review our stand planning procedures and identify any opportunities to prioritise stand allocation to minimise ground noise impacts
- We will work with airlines to promote and enable reduced engine taxiing
- To achieve a target of 90% of all aircraft turnarounds using fixed electrical ground power (FEGP).

### 4. Night Noise

- Increase the fining level for persistent off track departures during the night period
- Increase the noise infringement fines for night period departures.

# Performance measures

## 5. Mitigation Schemes

- We will review and update our wake vortex policy.

## 6. Monitoring and Reporting

- Set service level response targets for complaint and enquiry handling.

## 7. Policy and Planning

- Offer an annual course on aerodrome safeguarding to Local Authority planning officers
- We will work with the Government through ANMAC to clarify guidance on the definition of quiet areas in rural areas as related to Stansted Airport.

## 8. Continuous Improvement

- Consult with our airline partners on the voluntary phase out of chapter 3 high aircraft by 2015
- Establish a Stansted airline league table for noise and emissions abatement techniques

## 9. Effective Communication

- Establish a “best practice” forum to facilitate the sharing of aircraft noise management techniques between airports.

## Long Term Strategy

STAL will continue to develop and review its Noise Strategy and Action Plan through its corporate responsibility agenda. We are proud to be the first UK airport to achieve the ISO14001 environmental accreditation in 2005 and have maintained it since.

The basis of this accreditation is about continuous improvement and commitment from ourselves to mitigate the environmental effects of the airport operation.

We will continue to review what we do, research and adopt new technologies and actively work with others such as airlines, air traffic control and airline manufacturers to reduce noise impacts.

STAL will evaluate its performance against a range of indicators. This will be carried out regularly through our environmental governance structure. We will publish our performance against the key performance indicators in our annual Corporate Responsibility Report. The indicators are shown in Table 5.

During the five-year period of this Action Plan, we may add to or amend the range of performance indicators to respond to improvements which enable us to better manage the airport noise impacts.

We believe that the actions in the Action Plan are appropriate, meet the requirements of operating a safe and successful business and meet the requirements set by Government and the Environmental Noise Regulations.

Reference number	Key performance indicator	2006 baseline
KP1	Percentage of Chapter 4 (or equivalent) Aircraft	75%
KP2	Population inside the 55dBA Lden contour (km <sup>2</sup> )	9400
KP3	Population inside the 48dB Lnight contour	6800
KP4	Area inside the 57dB Leq16 hour daytime summer contour to not exceed 33.9 (km <sup>2</sup> )	28.2
KP5	Number of infringements of the Daytime departure noise limit	9
KP6	Number of infringements of the Night time departure noise limit	24
KP7	Percentage of aircraft achieving a CDA (24 hour period) on Runway 22	82.82%
KP8	Percentage of aircraft on track (all routes)	98.10%
KP9	Number of individuals making noise related complaints (April 2006 – March 2007)	2294
KP10	Percent of noise related enquiries responded to within 5 working days	N/A

Table 5: Key Performance Indicators



London Stansted Airport  
Enterprise House  
Stansted Airport  
Essex CM24 1QW  
United Kingdom

[www.stanstedairport.com](http://www.stanstedairport.com)