



## INTRODUCTION

Noise Action Plans are a legal requirement under European Union Directive 2002/49/EC relating to the Assessment & Management of Environmental Noise.

This Directive is commonly referred to as the Environmental Noise Directive or END. The requirements of the END are transposed by the UK Government in the Environmental Noise (England) Regulations 2006 as amended ("the Regulations").

From 2009, Stansted Airport originally developed, consulted the public and produced a five-year Draft Noise Strategy and Action Plan, which was adopted by the Secretary of State for Environment, Food and Rural Affairs.

In 2013, DEFRA advised the airport that they had issued further "Guidance for Airport Operators to produce noise action plans under the terms of the Environmental Noise (England) Regulations 2006 (as amended)" -update July 2013. This required the Airports Noise Action plan to be updated and republished to include the period 2013-2018.

This Plan has been developed further using the latest 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. The third round of Noise Mapping was completed in 2017, based on 2016 mapping data.

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.



### STANSTED AIRPORT

London Stansted Airport is the fourth largest airport in UK serving London, the East of England and the wider South East. In 2017, it handled 25.9 million passengers and currently serves over 190 destinations across Europe, the Middle East and North America. Since 2013, it has been owned and managed by Manchester Airports Group (MAG).

As well as playing a key role in connecting the East of England region to the world, the airport is a catalyst for economic growth and productivity, employing over 12,000 people across 200 companies and contributing over £1 billion Gross Value Added to the UK economy.

Over two-thirds of the employees live in North Essex and East Hertfordshire with the airport being a major source of employment in the nearby towns of Bishop's Stortford, Great Dunmow, Harlow and Braintree.

The airport has one operational runway and a single 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 3,048m in length and is equipped with a Category 3b instrument landing system. Over 90 different aircraft types served the airport, including passenger and cargo, with the overwhelming types being twin engine, medium sized, narrow bodied passenger aircraft such as the Boeing 737-800 and the Airbus A319.

Over recent years, the airport has welcomed the introduction of a new generation of quieter and more efficient aircraft such as the Airbus Neo series and the expected introduction of the Boeing Max from 2019. These new aircraft are up to 50% quieter than the aircraft they replace bringing all the technological enhancements of recent engine and airframe design. As part of our new Noise Action Plan we will continue to closely monitor their operation and work with our airlines to fully realise the benefits of these new quieter aircraft.

MAG has an ambitious long-term plan for Stansted that will create more choice and competition for passengers, new terminal facilities and more opportunities for local people. In February 2018, we submitted a planning application to Uttlesford District Council to raise the annual passenger limits to 43mppa. At the time of the consultation on the noise action plan, the planning application is still being determined.

Under the Environmental Noise (England) Regulations 2006 the competent authority for major airports is the airport operator. Consequently, Stansted Airport Limited is the competent authority for this Noise Action Plan.



## REGULATION OF AIRCRAFT NOISE

The four main tiers of regulation which govern aircraft noise in the UK: International, European, National and Local.

Many policies to address the effect of aircraft noise have been developed at an International level including the International Civil Aviation Organisation (ICAO) Aircraft Noise Policy which developed and published its 'Balanced Approach'

The European Union, has issued various directives relating to the management and control of aircraft noise standards. Member States apply the requirements of the directives by incorporating them into national legislation.

The relevant directive and regulations for aircraft noise management are:

- Environmental Noise Directive (2002/49/EC)
- EU Regulation No. 598/2014
- Single European Sky Regulation
- Pilot Common Project
  - 1. Reduction of noise at source
- Develop and introduce quieter aircraft sets lower noise limits on new aircraft, currently known as 'Chapters".
   Chapter 14 is the most recent
- Modify current aircraft to make them quieter
- 2. Land use planning and management
- Controlling how land can be used and managed to discourage or prevent building of new housing and noise sensitive facilities (for example schools and hospitals) in noisy areas near the airport
- 3. Noise abatement operational procedures
- Quieter descents
- Quieter climb outs
- Alternative routes to and from the airport
- 4. Operating restrictions
- Set restrictions on aircraft operations if the earlier measures can not meet agreed noise limits (for example, night restrictions or gradually withdrawing the noisier types of aircraft)

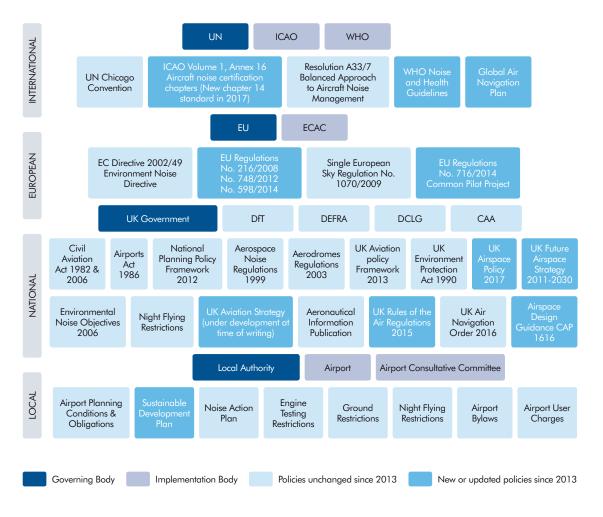
At a **National** level, the UK Government published its current Aviation Policy Framework (APF) in March 2013 This sets the Government's overall noise objective to: '...limit and where possible reduce the number of people in the UK significantly affected by aircraft noise.' This policy is also backed by a number of other Acts, Regulations and Policies.

- The Environment Protection Act 1990
- The Civil Aviation Acts 1982 and 2006
- DfT Designation
- Airports Act 1986
- The Environmental Noise (England) Regulations 2006 (as amended)
- The Air Navigation Order 2016
- The Aerodromes (Noise Restrictions) (Rules and Procedures) Regulations 2003
- Aeroplane Noise Regulations 1999
- Aircraft Night Flights Restrictions
- Airspace Policy

At Stansted Airport, we work closely with our Local planning authority and since MAG ownership has published our Sustainable development plan 2015. There are many local operating conditions and agreements in place that complement those published in the UKAIP for London Stansted.

Our long-term aim is to limit and reduce where possible, the number of people affected by noise as a result of the airport's operation and development."

### NOISE ACTION PLAN 2019-2023



# NOISE MAPPING RESULTS: 2006, 2011 AND 2016

The Noise Action Plan operates in five-year cycles. The aim is for each subsequent Noise Action Plan to build and improve on existing progress to manage the effects of aircraft noise on people. This is the third time that a Noise Action Plan has been produced for Stansted Airport and it is based upon Noise Maps prepared by the Department for Environment, Food and Rural Affairs (DEFRA) showing the situation at the airport in 2016.

The chart below sets out the changes to the estimated number of people affected by noise in the  $L_{\rm den}$  Contour, from the DEFRA noise mapping results, compared to previous DEFRA Noise Action Plan mapping years of 2006 and 2011.

The population estimates show that over the course of the last ten years, there has been a reduction in the number of people exposed to aircraft noise in all contours models.

By way of illustration, the number of people within the  $55 dB L_{den}$  contour has fallen by 700 (8%) to 8,700, and this level of reduction is consistent across all the contour models. Over the same period the passenger numbers grew by 3% from 23.6 mppa to 24.4 mppa. Like the population count, the contour area has shown similar reductions in size in all areas over the last 10 years. The contour area defines the area of the associated population count. The  $55 dB L_{den}$  contour has reduced from  $73.3 km^2$  in 2006 to  $64.4 km^2$  in 2016, a reduction of  $8.9 km^2$  (12%).



### WEIGHTED 24-HOUR CONTOUR (L<sub>so</sub>)

NOISE LEVEL (DB)	2006 DATA			2011 DATA						
24-hour L <sub>den</sub>										
	Area of Contour (km²)	Number of Homes	Number of People	Area of Contour (km²)	Number of Homes	Number of People				
55 or more	73.3	3850	9400	57.5	2950	7400				
60 or more	28.4	850	2100	21.3	500	1400				
65 or more	10.1	150	400	7.4	100	300				
70 or more	3.5	<50	<100	2.5	<50	<100				
75 or more	1.2	0	0	1.0	0	0				

NOISE LEVEL (DB)	2	2016 DATA	24-hour L <sub>den</sub>	CHANGES FROM PREVIOUS YEARS		
	Area of Contour (km²)	Number of Homes	Number of People	Number of people in 2016 vs 2011	Number of people in 2016 vs 2006	
55 or more	64.4	3650	8700	1300	-700	
60 or more	23.1	650	1600	200	-500	
65 or more	7.9	100	300	0	-100	
70 or more	2.6	<50	<100	0	0	
75 or more	1.0	0	0	0	0	

# STANSTED AIRPORT'S NOISE STRATEGY

As a designated airport, the Government sets some of the policy framework which influences how STAL responds to aircraft noise issues. At London Stansted we have a good track record of developing policies and taking action to reduce our effect on the environment.

The Government has also introduced a new policy aim that seeks to ensure that local communities benefit from the introduction of more modern and quieter aircraft 'as part of a policy of sharing benefits of noise reduction with industry in support of sustainable development'.

Managing, and where possible reducing, noise is a long-standing commitment within STAL's corporate social responsibility agenda. Stansted Airport reports progress annually using performance information against key noise indicators. Our approach is further supported by accreditation in 2005 to the international environmental management standard ISO14001, which includes the management of air noise and we have consistently maintained accreditation to this standard.

To deliver our Noise Strategy and Action Plan we will continue to work collaboratively with airlines, air traffic controllers and our consultative committee so that we can effectively influence behaviour and keep our environmental impacts to a minimum. Our Noise Strategy and Action Plan is very much about building on the sound foundations we already have in place.

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

- Providing a public web-based flight tracking tool, WebTrak
- Fining airlines for flying persistently outside the noise preferential departure routes
- Maintaining our dedicated Noise and Track Keeping system
- Fining aircraft that exceed the departure noise limits
- Reducing and simplifying departure noise limits
- Differential charging regime which promotes guieter aircraft
- Providing a mobile community noise monitoring program
- Departure track keeping compliance above 95% for each route and 99% overall
- Achieving 94% of all aircraft using Continuous Descent Approach to Runway 22
- Reporting Continuous Climb Operations
- Reporting against Performance Based Navigation targets
- Residential noise insulation scheme.
- Restricting the noisiest aircraft at night

# CONSULTATION AND RESPONSES

London Stansted Airport undertook a full public consultation to seek, consider and incorporate views on the development of this latest revision of its Noise Action Plan ahead of this public consultation, at the request of the Airport Consultative Committee and its sub-group, the Environmental Issues Group (EIG), a short period of consultation was undertaken between 25th July & 15th August 2018.

The full public consultation was undertaken from 15th August 2018 to 17th October 2018 and was preceded by the issue of a press statement to inform members of the public.

Section 2 of the Noise Action Plan details the list of formal consultees, with over 70 councils, 6 MPs and a variety of industry bodies who all received a covering letter with a link to the draft Noise Action Plan. Formal consultation on the draft NAP, follows extensive consultation with local communities to inform the Airport's proposal to grow beyond its current capacity limit of 35 million passengers per annum. This separate consultation also helped to inform the development and content of the draft NAP.

The public consultation process included:

- Feedback from recent community consultation associated with developments at the Airport
- Engagement and discussions with key stakeholders including airlines, regulators and the airport Consultative Committee during the drafting of the Noise Action Plan
- Communication with stakeholders when the draft Noise Action Plan is published for consultation
- Online public consultation to enable stakeholder comments to be made
- An offer of meetings and briefings with key local stakeholders including County Councils, District Councils, Town Councils, Parish Councils and Members of Parliament
- Use of existing communication channels to promote the consultation on the draft Noise Action Plan
- Encouraging comments from a wide range of stakeholders across the areas around London Stansted Airport
- Considering comments and including a response to consultation within the final version of the Noise Action Plan
- Notifying stakeholders and consultees when the final Noise Action Plan is adopted and published

#### SUMMARY OF RESPONSES

In reviewing the individual responses to the consultation, we found similar comments or areas of overlap in comments on specific topics. The comments received on these topics have been grouped and summarised, including comments received from the EIG.

#### NAP/General

- Actions in the plan should have clear measurable targets and improved community reporting and timings where necessary. Airport monitors its own plan
- Develop a set of noise reporting standards
- NAP is a waste of time as the airport does what it wants
- Document is rather technical and not particularly easy for residents to understand
- Compared to the 2011 NAP, the number of people within the noise contours has increased and this proves the 2011 NAP has failed to achieve its END objective
- Time-scaled quantified outcomes that reduce noise impacts and evidence where noise reduction measures need the support and active participation of other parties must be provided in the 2019-2023 NAP as required by Defra.
- Number of people within noise contours compared with historic figures is skewed by economic downturn. No evidence provided that reduction in contours is due to quieter aircraft. Too much reliance on technological developments. Suggests compensation for local communities.
- Reporting takes too long and unhappy with responses to complaints.
- No mitigation schemes
- Vary runway more often
- Frequency based metrics should be developed in consultation with the local community
- Off track fines are derisory and should be 10 times higher
- 1,000ft rule is meaningless and should be revisited
- Ensure all flights are flown in the most noise efficient way
- The NAP has superseded national targets and sets high goals

#### Helicopters

- Helicopters do not have to follow air corridor regulations and Councillors would like this to alter so that they do have to follow regulations, as they are also noisy.
- Further action should be taken to ensure Helicopter operators observe the rules

#### Night Flights

- The Airport should consider night flight ban, a serious issue for local communities.
- Issues with volume of flights particularly cargo and night flights.
- Keen to ban night flights.



- Night noise, restrictions on aircraft permitted at night, easier reporting
- Night flights have increased and desire to reduce night flights
- Proposal to reduce night noise limit is welcomed
- Ban reverse thrust
- Ban larger noisier planes, especially at night

#### **Daytime**

- Concerns about increased daytime flights noise and pollution
- Proposal to reduce departure noise limit is welcomed.
- Members of the public have noticed there appear to be more flights over Ware, which is
  increasing traffic noise and they are also concerned about very low flying over Ware, which could
  result in an accident.
- The new types of quieter aircraft appear to occupy the middle of the day slots, with older and noisier planes using the earlier and later slots. Stansted Airport should maximise their business opportunity to have flights operating throughout the day, with consideration given to cargo planes for morning and evening slots.
- Councillors were in agreement that if the increasing noise is not challenged there will be no improvement and urged Stansted Airport to do all it can to minimise the noise for Bishop's Stortford residents.
- There are concerns about circling over Ware at busy times.

#### **Airspace**

- Impact of LAMP Phase 1A changes. Would like to see a reversal of this. Flight path changes should be communicated to all residents directly
- Reduction of the noise impact on people who now live under concentrated flight paths as a
  consequence of PBN routes must be introduced. This might be resolved by introducing alternative
  or multiple routes in consultation with local communities
- Support for PBN implemented so far.

#### **WHO Report**

- WHO Report NAP should be amended in line with new WHO thresholds and until it is, council
  don't feel they can comment on whether it is acceptable or not.
- The new lower WHO thresholds announced on 10th October 2018 of 45dB for 24-hour ( $L_{den}$ ) and 40dB for night ( $L_{night}$ ) effectively nullify the noise mapping results.
- The information on areas and numbers of people affected by the new WHO thresholds on which
  to base NAPs to manage and reduce the adverse impacts is not available.
- The mapping must be recalculated using the new WHO thresholds.

# RESPONSE TO THE COMMENTS RAISED

Many of the detailed comments provided by the EIG had already been included ahead of the public consultation. Notably, this included the provision of a separate executive summary and revised timescales against some of the proposed actions. We have written to the EIG and provided a detailed response to their comments, outlining where they have been included in the Noise Action Plan.

The EIG was keen to promote transparency through the Noise Action Planning process and the ongoing reporting during the lifetime of the plan. We welcome its commitment to shape our public reporting along with the NTKWG to provide clear and meaningful data, enabling our local communities to be better informed.

This process is already underway with the NTKWG, with early discussions to provide a more effective and transparent monitoring and reporting against this Noise Action Plan.

Stansted Airport has provided all previous contour data to show how the contour area changes over time. We are committed to improving our response to enquiries and working with the NTKWG/EIG to provide assurance that our commitments are being met.

We will discuss the 1,000ft rule with our NTKWG and revisit this through the ANMAC forum. As part of our annual noise contour reporting, there has already been much discussion about Number Above contours. These revised set of metrics have been developed with the EIG as part of our previous Noise Action Plan. We are committed to continue producing a suite of noise metrics as part of this Noise Action Plan and we have added a number of additional target dates as suggested.

Since our ability to track helicopters more accurately, our monitoring shows that there is an improvement in their tracking close to the airport as a result of the inclusion of the Hazelend Wood reference point, reducing the overflight of local communities. We continue to monitor Helicopter traffic on a daily basis and raise any issues with those operators concerned.

We are pleased to see that the commitment to reduce the daytime and night time departure noise limit has been welcomed and we have added a target date for implementation. Following this, we will seek to revise our surcharge structure. Night operations are a very sensitive issue for some local communities and our proposed action to further restrict the noisier types of aircraft operating will be maintained during this Noise Action Plan. We are bound by the Government's Night Noise Restrictions regime and our QC2 ban prevents additional operations by QC2 rated aircraft, the noisiest permitted operations at night.

A number of responses reflected the recent growth of the airport since the economic downturn, the current planning application and concerns about low flying aircraft. The planning application seeks to increase

### NOISE ACTION PLAN 2019-2023

permitted passenger numbers without any increase in overall numbers of aircraft operating. The comments relating to the Ware community are well known and are a reflection of the present outdated airspace structure. We are likely to see plans develop for improvement in airspace and it remains fundamental to have a published Continuous Descent Approach for runway 04. As airspace develops, any changes will fall under the CAA's CAP1616 process which is designed to be far more transparent than the previous CAP725.

A number of comments were received towards the end of the consultation relating to the recently published WHO report. We will also be working with Government to support their consideration of these findings so that they may be incorporated into policy, specifically in the forthcoming Aviation Strategy.

## NAP MEASURES AND PERFORMANCE TO DATE

We closely monitor the effectiveness of our Noise Action Plan and the measures we have in place, which have also informed this latest revision. As part of this process we undertook and exercise to review what we had achieved so far against the commitments in the previous version of the Noise Action Plan.

#### DEPARTING AIRCRAFT

In 2017 the overall airport track keeping was 99.43%. Each SID was measured individually, with all above 95%. Though still more than 95%, the lowest performing route was the 04 Detling, but this was only used infrequently (under 450 times that year). Of the other 5 departure routes, one was over 97% and the other 4 in excess of 99% compliant. Data is shared monthly with our airline partners and we proactively pursue instances of poor performance with individual operators.

We continue to fine aircraft that fly persistently outside the Noise Preferential Routes. The daytime surcharge level was increased to  $\pounds750$  per infringement and we introduced a new tiered fining level starting at  $\pounds1,000$  per infringement, up to 3dB over the departure noise limit. For Infringements that exceed this 3dB threshold we add  $\pounds250$ .

Our NTK System has been setup to monitor all areas stated in the AIP that should be avoided for direct overflight and data is shared with the NTKWG and published on the airport website, along with aircraft that do not meet the 1,000ft monitoring criteria.

The ANMAC Technical Working Group (TWG) had been tasked on behalf of the DfT to investigate departure noise mitigation, including NADP. Stansted has been fully engaged in this process and the report will be published soon as a formal CAA CAP document.

We are committed to reviewing and lowering our departure noise limits during the lifetime of this plan and then further reviewing the noise limit penalty.

During our projects for introducing PBN and revised helicopter routing, NATS, the CAA, as well as Stansted Airport, adhered to defined timescales for implementation. The PBN project will now be expanded to our other departure routes and will follow the new CAA CAP1616 process. We now report PBN compliance to a much narrower departure swathe of  $\pm$ 00m instead of the conventional  $\pm$ 1,500m. These results are published in our quarterly NTKWG report on the airports website.

#### ARRIVING AIRCRAFT

In 2017 the overall airport Continuous Descent Approach for runway 22 was 94.06% and we continue to report our ILS joining point criteria to NATS on a monthly basis.

CDA to runway 04 has not been achieved as this can only be fully implemented through a redesign of airspace, removing the constraints that prevent CDA to runway 04. This has featured as the highest priority in our requirements of the LAMP team and this view has been reinforced by our NTKWG and EIG. However, CDA to runway 04 is monitored and reported to NATS monthly. The reporting is by arrival route and NATS have recently agreed to set a target of 65% for 04 CDAs during the core night period 23:30 – 06:00.

Where community concerns arise, we investigate the heights and noise of aircraft operations in that area using our NTK system. We work with NATS to highlight community concerns and affect change where we can and report our findings to NATS and our NTKWG.

We will also explore options for steeper approaches with technology such as GBAS becoming more developed.

#### **GROUND NOISE**

Our operational team proactively monitor APU usage. In 2015 we undertook a study into APU usage at the airport, which was shared with NTKWG, EIG and published on the airport website. Our operational team proactively monitor all aspects of ground noise through APU/GPU usage and engine testing of rotary and fixed wing aircraft.

Stand planning procedures are monitored on a 24/7 basis also by our operational team to provide the most efficient option(s) for our operators reducing ground taxi and holding for stands where appropriate, reducing noise and emissions.

A recent survey of our main operators revealed that reduced engine taxi is predominantly used for runway 22 arrivals. There are operational restrictions for some airframes, especially with departure. Runway 22 arrivals account for over 70% of all arrivals and our operators are achieving near 100% compliance when on this runway.

In 2015 the airport undertook a study with our operators who utilise minimum ground time during a 'turnaround'. This study reveals that the 90% target was met and is published on the airports website. We will undertake another survey in 2021 and share these results.



#### **NIGHT NOISE**

The surcharge level per infringement for off-track departures at night was increased to £1,000 per infringement in 2011. We will further review this surcharge in this version of the Noise Action Plan

The fine for all aircraft that exceed the night time departure noise limit of 87dB(A), and the night "shoulder period" limit of 89dB(A), was reviewed during the previous Noise Action Plan. We introduced a tiered fining level starting at £1,000 per infringement, up to 3dB over the night or shoulder limit. For infringements that exceed this 3dB threshold we add £1,000 per dB.

We report our night time Joining Point to NATS on a monthly basis and we publish our compliance with Governments Night flying regime to our NTKWG, STACC and on the airport website.

We are committed to reviewing and lowering our departure noise limits at night during the lifetime of this plan. We also aim to amend the regime into a simpler day and night limit and will further restrict the operations of QC2 aircraft at night.

#### MITIGATION SCHEMES

We will continue to implement our Residential Noise Insulation Scheme in line with our current planning obligations and our Wake Vortex Scheme has been reviewed and updated. All monies raised by noise and track infringements continue to be directed to the Stansted Airport Community Trust.

#### MONITORING AND REPORTING

All complaints are recorded and investigated our NTK system. We publish an annual complaints analysis report on the airport website after sharing it with our NTKWG.

We continue to monitor our complaint and enquiry response times. Recently, this has been negatively impacted due to the volume of enquiries received since the introduction of flight paths changes associated with LAMP Phase 1A.

The airport undertakes a community monitoring exercise annually and the location is determined by the NTKWG. In recent years this has extended to 2 locations per year. The NTKWG has developed a plan for future years to focus monitoring on those areas that are more likely to experience changes as a result of airspace development.

### POLICY AND PLANNING

The airport planning and safeguarding teams are fully engaged with the planning process, highlighting areas of new developments where we believe aircraft noise should be considered.

The annual noise contours are published on the airport website and reviewed with Uttlesford District Council through our regular planning liaison.

Forecast contours are commissioned, produced and submitted to Uttlesford District Council annually.

The CAA has legal duties to regard Areas of Outstanding Natural Beauty and is now clearly stated in the new CAP1616.

#### CONTINUOUS IMPROVEMENT

The A-CDM project commenced in 2017 and we expect it to become fully operational during 2019.

We have introduced PRNAV (specifically RNP1) to two of our departure routes so far. RNP1 exceeds the performance of RNAV and has proven very successful at London Stansted.

All operators were contacted by letter with a request to voluntarily phase out Chapter 3 High aircraft. A number of responses were received. Although not completely phased out, the number of Chapter 3 High operations continues to decline. To encourage the operation of quieter aircraft, we have maintained a 40% differential between Chapter 4 or equivalent aircraft and Chapter 3 high as shown in our conditions of use.

A noise abatement compliance report has been developed and this is published annually on the airport website as well as sharing it with our operators through the Flight Operations Committee and with our NTKWG. The report is based on published AIP noise abatement procedures.

Our Noise Management System is subject to an annual third party audit as part of our CSR reporting. Additionally, a periodic audit is undertaken as required as part of our certification to the environmental management standard ISO14001.

#### **EFFECTIVE COMMUNICATION**

Since the acquisition of London Stansted by MAG, London Stansted has now embraced the MAG Corporate Social Responsibility agenda. This now extends to holding a series of community outreach sessions each year which give local communities the opportunity to engage with the airport on environmental topics.

The NTKWG meets quarterly and the membership now includes Environmental Health Officers from our surrounding councils, NATS, DfT, STACC and community representation. Issues raised are discussed and addressed where feasible. Through our quarterly NTKWG meetings we seek feedback into our reporting and analysis. This continues to evolve, and quarterly reporting is adapted as required to facilitate greater transparency of the airport operation.

London Stansted is fully engaged with Sustainable Aviation and we see this as the most appropriate forum for sharing ideas and best practice. At the time of publication, MAG chairs Sustainable Aviation and its members include airports, engine and manufacturers, Air Traffic Control and academics with a special interest in aviation.

Our Director's Notices are reviewed periodically and amended as appropriate. Usually there are three or four DN's issued per year including night noise, engine testing, APU/FEGP usage, departure noise surcharges and track keeping surcharges, these will be maintained during this Noise Action Plan.

Feedback from the EIG suggested that the provision of improved metrics to better describe noise impacts. The EIG commissioned external specialists to report on what other metrics were available and has resulted in the publication of 'Number Above' contours to complement the existing  $L_{\tiny{Ann}}$  contours.

We will continue to provide public access to flight track tracking information via WebTrak and will reduce the current 24-hour delay to bring this closer to real time and we will explore opportunities to introduce additional online tools to benefit local residents understanding of our operation.

