



# BUILDING ON A SOUND FOUNDATION

Stansted Noise Strategy and Action Plan Revised for 2013-2018 – Executive Summary

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

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



PART OF M.A.G



## INTRODUCTION

During 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 "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 to include the period 2013-2018.

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. The second round of Noise Mapping was completed in 2012, based on 2011 mapping data.

## 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 2012, it handled over 17.5 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. Over recent years we have welcomed the introduction of modern, quieter and more efficient aircraft such as the Boeing 777 and 747-8F.

### Airport Authority

Stansted Airport is now owned by the Manchester Airport Group (M.A.G) 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 and has now produced this updated 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 as shown in Table 1 below.

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. These plans were prepared, adopted and published in 2011. This updated plan has been revised to include the results of the 2011 mapping data and has been consulted upon through the Airports Consultative Committee and is now fully aligned within the END 5 year cycle. Stansted Airport operates under regulations and guidelines imposed from many International, European, National and Local Authorities (shown below).

### Local Regulation

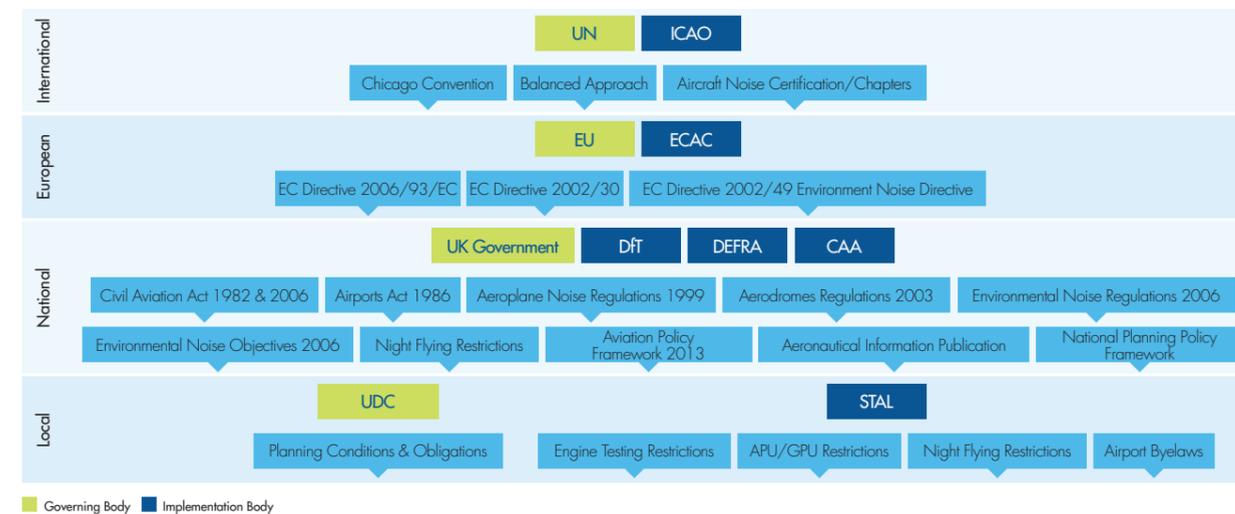
Our planning permission for the Generation 1 development includes conditions which limit the airport to 35 mppa. It also limits the number of passenger air transport movements, cargo air transport movements and non air transport movements to 243,500, 20,500 and 10,000 respectively.

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.

### Stansted Airport Aircraft Noise Regulations



## RESULTS OF 2006 AND 2011 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 ≥55Lden contour there are an estimated 9,400 people residing within it in 2006, reducing to 7,400 people in 2011.

Comparison of the more recent 2011 noise maps with the earlier 2006 maps, clearly shows that there has been a significant improvement in all areas. The progressive introduction of more modern and quieter aircraft types has made an important contribution to this improvement and Stansted now benefits from one of the most modern aircraft fleets in the world. A reduction in aircraft movement numbers, associated with the global economic recession, will also have been a contributory factor.

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

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. This regime has been consulted upon during 2013/14 and has been renewed to cover the period to Summer 2018.

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.

Noise level (dB)	2006			2011		
	Area (km <sup>2</sup> )	Number of dwellings	Number of people	Area (km <sup>2</sup> )	Number of dwellings	Number of people
≥ 55	73.3	3,850	9,400	57.5	2,950	7,400
≥ 60	28.4	850	2,100	21.3	500	1,400
≥ 65	10.1	150	400	7.4	100	300
≥ 70	3.5	<50	<100	2.5	<50	<100
≥ 75	1.2	0	0	1.0	0	0

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

## 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 £600,000 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 original Noise Action Plan, STAL carried out extensive public consultation on a Draft Noise Action Plan.

Stansted Airport launched its formal public consultation on its Draft Noise Action Plan on Friday 12th June 2009. 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.

### 2013 Update

In 2013, STAL received updated 2011 contour data from DEFRA in accordance with the requirements of the END. Recognising that our existing Noise Action Plan was only formally adopted in 2011, DEFRA required STAL to update the plan including a summary of the 2011 mapping. STAL was also required to consult on the revised and updated plan through a limited consultation with the Airport Consultative Committee. STAL undertook a 3 week consultation through the Consultative Committee's sub group, the Environmental Issues Group (EIG) in November 2013 and their comments and suggestions have been considered and included in the updated document where appropriate.

*'The EIG felt that the airport needed to demonstrate effective engagement with local communities affected by the airport's operations'.* Consultation of the updated plan was limited to the Consultative Committee as this is an update to an existing plan that was only two years old. There have also been no significant infrastructure changes since this plan was first adopted in 2011. The approach taken by STAL was consistent with the contemporary guidance (Guidance for Airport Operators to produce noise action plans under the terms of the Environmental Noise (England) Regulations 2006 (as amended) July 2013) which suggests that 'it is envisaged that once the plan has been revised, it will be presented to the Airport's Consultative Committee for comment, and any other appropriate bodies depending on the extent and nature of the update.'

*'The EIG said 'Monitoring the airport's performance in meeting plan commitments is a key issue. EIG considers that there should be an effective monitoring process'.* Stansted Airport has a transparent monitoring process in place as the commitments in the plan are independently audited and reported in the annual Corporate Sustainability Report. The EIG has been engaged in this process for a number of years and the auditors also present their findings annually to this group. STAL will continue to work closely with the EIG to ensure that the annual report meets their reporting needs.

*'The EIG felt the plan should clearly reflect progress made so far with a clear indication of commitments met and those that haven't and the reasons why.'* This has been incorporated as part of this review, see sections 6 and 7.

The EIG general comments are listed below with STAL's response, *'Looking forward, there should be more information about future strategy especially in terms of how the noise impacts of growth will be managed. EIG has previously registered its potential concern that new medium and long haul services might be operated by the noisier aircraft than the existing 'quiet' fleet operated by Ryanair and EasyJet'.* Whilst we recognise that Stansted already has one of the youngest and quietest fleets of aircraft there is considerable scope for expansion in our present operation to our permitted planning consent. The Airport has Air Traffic Movement, contour size and Night Movement restrictions already in existence, and this is also backed up by charging that incentivises operating quieter aircraft through our conditions of use.

*'EIG would welcome the inclusion of a reference for consideration to be given to establishing an independent body to oversee noise impacts'.* Whilst we see some merit in an independent body to oversee noise impacts, fundamentally we believe that noise is predominantly a local issue which is best addressed locally. To ensure that best practice is established and shared there are a number of important industry bodies such as Sustainable Aviation and the ANMAC Technical Working Group which bring together partners including Regulators, Government, Airports, NATS, Airlines, Airframe and Engine Manufacturers.

*'The plan does not refer to helicopter noise. Although noise from overflying helicopters is not the direct responsibility of the airport, the operation of helicopters using the airport clearly falls within the airports remit. Accordingly the plan should set out how the noise from helicopters will be mitigated'.* There are relatively few helicopter operations at London Stansted and they attract a small number of complaints each year. Helicopters operating at Stansted are the responsibility of the Airport and Operators alike. We maintain a watching brief and work with our helicopter operators should any issues arise. There are a set of restrictions in place such as the times of operation of the Helicopter Aiming Point (H), a set of Visual Reporting Points to keep traffic away from the most built up areas and restrictions on testing Helicopters.

*'As the airport will be aware, the need to establish alternative metrics which properly reflect local noise impacts has been a particular source of concern. The draft does refer to alternative metrics but if this issue is to be progressed, the plan needs to set out clear objectives and timescales. Given that recent Government statements indicate that the development of alternative metrics is seen as a local issue involving the airport and the local authority, the plan should set out how the airport proposes to engage with the relevant local authority and the local community'.* This has been recognised in sections 5 and section 6 of the main Noise Action Plan document.

*'The night noise section should be updated to reflect the current Stage 2 consultation'.* At the time of writing this update, the second stage of the Night Noise consultation has been launched which has been referenced in the document on pages 22 and 23 of the main Noise Action Plan document.

*'Given that Stansted is a noise designated airport, EIG believes that there should be some comment from Government as to the effectiveness of the plan'.* As a designated airport the UK Government sets a number of noise controls, including noise abatement and night noise objectives. We believe the ANMAC work streams are the best forum to address the effectiveness of these noise controls.

*'There is no reference to the Ware Joining Point trial'.* This has now been included in section 5.8 of the main Noise Action Plan document.

### Noise Action Plan Measures and Performance to date

When developing this revision of the Noise Action Plan we have reviewed the effectiveness of the actions and following feedback from the EIG consultation, we undertook an exercise to indicate in the plan what we have achieved so far, and most importantly to provide reason where we have not.

#### Departing Aircraft

We continue to work with airlines to achieve greater track keeping compliance. Our most recent 2012 data shows that the 4,000ft NPR's achieved compliance of 98.30% and the two 3,000ft NPR's were at 99.83%. We continue to fine airlines that fly persistently or flagrantly off-track and we have also raised these fine levels and we intend to review these levels again in 2016.

We have also raised our fining levels for aircraft that exceed the departure noise limits, now starting at £1000 per infringement and introduced a tiered fining mechanism that is weighted so the highest exceedances pay the most.

In 2011 we configured our dedicated Noise and Track Keeping System to monitor all the AIP detailed No Fly Zones. This data is reported to the NTKWG representatives at their quarterly meetings and any suggestions acted upon. This has highlighted on a number of occasions that these over flights can be from arriving aircraft. The data and feedback is welcomed by NATS.

ANMAC has since reformed and London Stansted is represented at this forum including representation from STACC. We believe this provides the airport and local communities a platform for influencing guidance in respect of noise verses emissions trade-offs.

We agreed a timeline (SLA) with the CAA ahead of the commencement of the RNP1 trial. This resulted in a commitment from the CAA to look into the feasibility of developing an RNP1 departure trial on two of our departure routes within 2 months. The CAA achieved this which has since led to the development of the RNP1 trial which commenced in May 2013.

The 1000ft rule as detailed in the UKAIP is now the subject of an ANMAC technical working group to ascertain future noise abatement procedures.

We have now added a new action to review the departure noise limits through the ANMAC technical working group.

#### Arriving Aircraft

We now report against an annual target for CDA compliance. Our most recent data shows this is steadily improving with a 94.63% compliance rate in 2012.

We have not achieved implementation of CDA's to runway 04 as they are still not possible due to current airspace constraints. We anticipate the LAMP project as being the enabler for CDA's to Runway 04 and monitor and report to NATS night time CDA performance to runway 04. We recognise that this still remains a key priority for our local communities affected by runway 04 arriving aircraft and will continue to work towards achieving this implementation.

However, we agreed to report the night time CDA compliance on Runway 04 to NATS on a monthly basis as airspace is generally quieter at night with more opportunity to fly a CDA. This is often showing a compliance rate in excess of 70%.

We continue to produce detailed monthly Joining Point statistics for NATS for night and daytime arrivals and work with them to achieve greater compliance.

#### Ground Noise

Our Directors Notices have been republished reinforcing the control of ground noise along with the Directors Notices relating to engine testing for fixed and rotary wing aircraft. These DN's limit the time, duration and location that any testing can occur.

Our stand planning system has been replaced with a new system, CHROMA. This provided an opportunity to review our stand planning which is prioritised for the most efficient operation. We will continue to review our policies to ensure the most efficient operation.

Many of our operators are currently adopting reduced engine taxiing procedures. This can be largely dependent on airframe and the close proximity from runway exit to parking stand can often limit this practice due to the requirements of engine cooling.



## Night Noise

We have increased the surcharge level for night operations that persistently fly outside the Noise Preferential Routes and will review this level again in 2016.

As previously mentioned STAL has introduced a tiered fining system and increased the base level of fines for aircraft which exceed the departure Noise Limits. This is also weighted for night operations so as the noisiest departures are fined the most. Currently the largest fine levied has been £5000.00. This has influenced operators to review the engine fit on the same airframe type flying late night operations where there are multiple options available and to look into replacing the operation with a quieter, more modern aircraft.

As stated earlier, we will review the departure noise limits through the ANMAC technical working group. We continue to report weekly our compliance to the Governments Night Noise regime.

## Mitigation Schemes

Our Noise Insulation Scheme has been maintained and has continued to receive applications and this has now increased to a 62% take up from qualifying properties.

We have reviewed our wake vortex policy which is now published on the Stansted Airport website.

All monies surcharged to airlines in respect of noise and track keeping infringements are directed to the Stansted Airport Community Trust on an annual basis.

## Monitoring and Reporting

We continue to investigate all complaints and in 2011 agreed target response times with the NTKWG. Our response time performance is presented quarterly at these meetings along with our complaints statistics. We also present an annual complaints analysis report to the NTKWG representatives.

Our long standing community noise monitoring program continues with most recent studies undertaken at Wareside and Saffron Walden. The results and analysis in these reports are published on the Stansted Airport website. We report on our Noise Action Plan targets in the annual Corporate Sustainability Report. This report is independently audited and presented to the EIG.

## Policy and Planning

Our quarterly meetings with local planning authorities remain a valuable mechanism for awareness of airport related activities.

This also provides the airport with the opportunity to discuss the forecast and actual 57dB(A) contours as produced by the ERCD and an update on aerodrome safe guarding as appropriate. As previously stated, ANMAC has commenced its workstreams and we welcome guidance in respect of the protection of any AONB and tranquil areas.

We have removed a separate action we feel is not related to noise mitigation. This was to offer an annual course on aerodrome safeguarding for Local Planning Officers. We meet with our Local Planning Authority on a quarterly basis and feel this is best placed to raise awareness of Aerodrome Safeguarding.

## Continuous Improvement

London Stansted is delighted to be hosting the first UK based RNP1 departure trial. After agreeing a timeline for the CAA(DAP) to establish if the trial was technically feasible on two of our existing departure routes, 04 DOVER and 22 CLACTON, the trial commenced in May 2013. The initial results are extremely encouraging and are reported to the NTKWG. Required Navigational Performance with RF (RNP1) exceeds the requirements of PRNAV. The results we have seen so far on the two trial routes has been exceptional and shows significant improvement in accurate track keeping with a variety of aircraft types included in the trial. It is our intention to implement RNP1 departure routes on a permanent basis following.

Our charging mechanism continues to set a minimum differential in excess of 40% for Chapter 4 aircraft compared to similar Chapter 3 high aircraft. This is reviewed As a signatory to the Sustainable Aviation Departures Code of Practice we will continue to promote this industry best practice.

In 2012 we have established a league table for Noise Abatement compliance in respect of noise abatement procedures in the UKAIP, Noise, 1000ft, CDA and track keeping. This annual report is published on the Stansted Airport website.

Since the development of the original noise action plan, we have undertaken an annual audit of our Noise Management System. We have invited the EIG to liaise with the auditors to establish a clear set of audit objectives. The results of the audits have been reviewed and acted upon where appropriate.

## Effective Communication

Our website has undergone significant changes and enhancements. Our Webtrak service has also undergone similar improvements, including the display of noise monitor readings, general speed and responsiveness of the service and options for replay speeds.

We have developed and published a suite of factsheets covering a wide range of aviation topics and publish our mobile noise community noise monitoring reports. Detailed arrival and departure maps are also produced and published every two years and we regularly review and update our Directors Notices relating to noise management.

As previously mentioned, Stansted airport and our now parent company M.A.G are both signatories to Sustainable Aviation. This has proved an ideal forum to facilitate sharing of best practices and noise management techniques between other airports and aircraft operators.

We meet with our NTKWG representatives on a quarterly basis to address community concerns and work together to improve the overall noise impacts of airport operations.

We have continued to invite local resident and interested parties to the airport to see first-hand the work of the FEU and how noise controls are implemented and enforced. We are disappointed that not all those we have invited have taken to opportunity to visit us.

We have added two new actions to this section, "To work with our Consultative Committee to establish ideas for revised metrics to better describe noise impacts" and "To engage our Local Communities and Consultative Committee as the London Airspace Management Project evolves". We will report on our progress against these new actions in the future.

We use a set of performance indicators to monitor our progress against each action point, to ensure that the work we are undertaking is resulting in the maximum benefit in terms of managing noise impacts. We have included figures for 2006 (where available) against our key performance indicators, in order to set a baseline for the future and included our performance in 2011.

Our performance against these indicators will be regularly reviewed internally through our environmental governance structure. 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 will publish our performance against the key performance indicators in our annual Corporate Responsibility Report.

Since the formal adoption of our Noise Action plan in 2011 London Stansted has made significant progress in delivering the actions within the Plan. It is acknowledged that the plan is still in its infancy, being only two years since adoption, but many of the objectives and commitments within it have already been achieved.

A copy of the Adopted Stansted Noise Strategy and Action Plan Revised for 2013-2018 can be found on the airports website [www.stanstedairport.com/noise](http://www.stanstedairport.com/noise)

Reference number	Key performance indicator	2006 baseline	2011 baseline
KP1	Percentage of Chapter 4 (or equivalent) Aircraft	75%	94%
KP2	Population inside the 55dBA Lden contour (km <sup>2</sup> )	9400	7400
KP3	Population inside the 48dB Night contour	6800	5900
KP4	Area inside the 57dB Leq16 hour daytime summer contour to not exceed 33.9 (km <sup>2</sup> )	28.2	21.2
KP5	Number of infringements of the Daytime departure noise limit	9	2
KP6	Number of infringements of the Night time departure noise limit	24	22
KP7	Percentage of aircraft achieving a CDA (24 hour period) on Runway 22	82.82%	94.42%
KP8	Percentage of aircraft on track (all routes)	98.10	99.07%
KP9	Number of individuals making noise related complaints	2294	368
KP10	Percent of noise related enquiries responded to within 8 working days	N/A	86.85

Table 3: Key Performance Indicators