



# FlyQuiet Programme

A quieter Heathrow

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*Making every journey better*

# Overview

The Fly Quiet Programme is one of the steps Heathrow is taking to reduce aircraft noise, set out in 'A quieter Heathrow', a report published earlier this year.

Heathrow has some of the world's toughest rules and regulations on noise which has played a major role in driving developments in quieter aircraft technology. Limits and restrictions in force at Heathrow, and in particular those that apply to flights at night, promote the use of 'best in class' aircraft. Heathrow also provides financial incentives for airlines to use the quietest aircraft through variable landing charges. Together these have contributed to more of the quietest planes being used at Heathrow - on average the aircraft that airlines use are 15 per cent quieter than the total global fleets of those airlines.

Since the 1970s these improvements in technology means there has been a tenfold decrease in the number of people within Heathrow's noise footprint, despite the doubling of aircraft numbers over the same period. This fall in population has continued in recent years even while flight numbers have remained steady thanks to the newest generation of aircraft like the A380 entering service.

Managing the impact of aircraft noise for local communities is not just about improving technology. How and where aircraft are flown are other important factors for reducing the impact of noise. Airlines, airports and air traffic controllers employ a number of procedures to limit noise in this way and Heathrow has been at the forefront of promoting the use of these.

The Fly Quiet programme is intended to further encourage airlines to use quieter aircraft and to fly them in the quietest possible way. The programme includes the UK's first ever league table which ranks airlines according to their noise performance.

## The league table

The Fly Quiet league table is published every quarter comparing each of the top 50 airlines (according to the number of flights to and from Heathrow per year) across six different noise metrics.

We will use the league table to provide airlines with regular feedback, to recognise good performance and to identify specific areas to be targeted for improvement. Each quarter we will provide a short overview of performance and the areas we are planning to focus on to improve performance.

The table shows data for noise performance of aircraft for the third quarter (July– September) 2013 (see back page for explanation on metrics). Where the table shows amber dots, the airlines have met Heathrow's minimum performance targets and green dots show they have exceeded them. If the airline has a red dot in a particular area, we work closely with them to improve performance.

## Highlights – Q3 2013

### Noise QC number/Seat

Since the start of the year the number of A380s has nearly doubled and we welcome the introduction of this aircraft into the BA fleet. We have also seen six airlines introduce the 787 aircraft. The use of these aircraft types has doubled over the past 12 months both in terms of the percentage of movements and the number of airlines operating them (from one to two per cent and from six to 12 airlines). The fact that six of the top ten airlines are long-haul operators highlights the improved performance of new long-haul aircraft like the A380 and B787.

### Chapter number

We are pleased to report that 97 per cent of the current movements at Heathrow are already operated by Chapter 4 equivalent aircraft - currently the quietest international standard for aircraft noise certification. There were no marginally compliant Chapter 3 aircraft operating in Q3 and, to continue this trend, Heathrow is working with airlines over the next few months to secure a voluntary agreement not to schedule aircraft which are only marginally compliant with the Chapter 3 limits.

### Continuous Descent Approach (CDA) violations

Whilst CDA achievement rates are high amongst the more frequent operators, the table reveals that more could be done to help improve adherence to CDA at Heathrow. We will work closely with those airlines that achieved a red status. This approach has already proved successful through our work with Delta Airlines over the past 12 months. This has seen the airline's CDA performance rise from 70 to 97 per cent – and makes them now one of the top performing airlines.

We look forward to reporting further progress on these and the other metrics next quarter.

Rank	Airline name	1 QC/seat	2 Chapter number	3 CDA violations	4 Track keeping violations	5 Pre-0430	6 Pre-0600
1	British Airways - short haul	●	●	●	●	●	●
2	Virgin Atlantic Little Red	●	●	●	●	●	●
3	Aer Lingus	●	●	●	●	●	●
4	American Airlines	●	●	●	●	●	●
5	Qantas Airways	●	●	●	●	●	●
6	Emirates	●	●	●	●	●	●
7	United Airlines	●	●	●	●	●	●
8	Delta Air Lines	●	●	●	●	●	●
9	KLM Royal Dutch Airlines	●	●	●	●	●	●
10	Deutsche Lufthansa	●	●	●	●	●	●
11	TAP Portugal	●	●	●	●	●	●
12	British Airways - long haul	●	●	●	●	●	●
13	Air Canada	●	●	●	●	●	●
14	Etihad Airways	●	●	●	●	●	●
15	Virgin Atlantic Airways	●	●	●	●	●	●
16	Air India - long haul	●	●	●	●	●	●
17	Singapore Airlines	●	●	●	●	●	●
18	Air Malta	●	●	●	●	●	●
19	Swiss International Airlines	●	●	●	●	●	●
20	Germanwings	●	●	●	●	●	●
21	Scandinavian Airlines System	●	●	●	●	●	●
22	Malaysia Airlines	●	●	●	●	●	●
23	Icelandair	●	●	●	●	●	●
24	Cathay Pacific Airways	●	●	●	●	●	●
25	Saudi Arabian Airlines	●	●	●	●	●	●
26	Gulf Air	●	●	●	●	●	●
27	Qatar Airways	●	●	●	●	●	●
28	Vueling Airlines	●	●	●	●	●	●
29	SN Brussels Airlines	●	●	●	●	●	●
30	SriLankan Airlines	●	●	●	●	●	●
31	Transaero Airlines	●	●	●	●	●	●
32	Austrian Airlines	●	●	●	●	●	●
33	Alitalia	●	●	●	●	●	●
34	Turkish Airlines - short haul	●	●	●	●	●	●
35	Air France	●	●	●	●	●	●
36	Iberia	●	●	●	●	●	●
37	Jet Airways	●	●	●	●	●	●
38	Cyprus Airways	●	●	●	●	●	●
39	US Airways	●	●	●	●	●	●
40	TAROM	●	●	●	●	●	●
41	Egyptair - long haul	●	●	●	●	●	●
42	Aegean Airlines	●	●	●	●	●	●
43	Aeroflot - short haul	●	●	●	●	●	●
44	Finnair	●	●	●	●	●	●
45	European Air Transport	●	●	●	●	●	●
46	South African Airways	●	●	●	●	●	●
47	Turkish Airlines - long haul	●	●	●	●	●	●
48	Thai Airways	●	●	●	●	●	●
49	El Al	●	●	●	●	●	●
50	LOT	●	●	●	●	●	●

# The six noise metrics

Each metric is assigned a “RAG” (Red, Amber, Green) status based on the performance bands set for that indicator. As a result operators towards the top of the table will typically have more ‘green scores’ than those towards the bottom. Individual metric scores will not be published. The metrics below make up the Fly Quiet League Table:

**1. Noise quota count/seat/movement:** This is a relative noise “efficiency” metric which scores the noise efficiency of an operator’s fleet, recognising that whilst larger aircraft tend to be noisier they also carry more passengers. It is calculated by dividing the sum of QC for arrivals and departures by the aggregate seat capacity and total movements by airline. This provides a balance between a QC/seat or QC/movement metric which will tend to overly bias long haul or short haul carriers respectively. *A ‘green score is awarded if the QC/seat/movement indicator exceeds the 75th percentile relative to 2012, amber is airlines in the 75-95th percentile and red is the lowest 5 percentile relative to 2012.*

**2. Noise Certification:** Each aircraft is required to have a noise certificate which can be used to determine its relative performance against ICAO noise standards (Chapter 3 and Chapter 4). This allows us to recognise “best in class” and compare performance across different types. An average ‘per movement’ Chapter number value is calculated for each airline, which favours the airlines operating best-in-class, modern, quieter aircraft more frequently. *The minimum performance target in this metric for the purpose of the Fly Quiet programme is Chapter 4. If the average score of an airline’s fleet operated to and from Heathrow is less than the Chapter 4 equivalent a ‘red score is awarded. A ‘green’ score is awarded if the average noise certification score of an airline is better than the equivalent of Heathrow’s Chapter 4 base charging category (see Heathrow’s Conditions of Use. Just visit [www.heathrow.com](http://www.heathrow.com) and search for “Conditions of Use).*

**3. Arrival Operations: Continuous Descent Approach (CDA violations):** CDA involves aircraft maintaining a steady angle of approach when landing at the airport, as opposed to stepped approaches which involve periods of prolonged level flight. This reduces noise because it requires less engine thrust and keeps the aircraft higher for longer. By following a CDA on arrival, the noise on the ground can be reduced by up to 5dBA in areas away from the final approach paths. The purpose of the indicator is to capture the non-CDA arrivals and so potentially reduce the disturbance caused. *The minimum performance target for the CDA compliance is set for 55% for the Fly Quiet programme. An airline achieving this target but not exceeding 75% gets an ‘amber’ score; CDA compliance of 75% and more means a ‘green’ score is awarded.*

**4. Departure Operations: Track deviations on departure (TK violations):** Aircraft are required to stay within ‘noise preferential routes’ (NPRs) – 3km wide tracks in the sky, designated by the Government to route aircraft away from more densely populated areas as far as possible - until they reach 4000ft. The track deviations indicator is expressed as the proportion of departures that flew outside the NPRs below 4000ft. The purpose of the indicator is to capture the aircraft which operate outside of these boundaries and so potentially cause unexpected noise disturbance. Instances where this occurs for reasons outside of the airline’s control are excluded for the calculation. *The minimum performance target for the track keeping compliance is set for 85% for the Fly Quiet programme. An airline achieving this target but not exceeding 90% gets an ‘amber’ score; CDA compliance of 90% and more means a ‘green’ score is awarded.*

**5. Night time Operations 1: arrivals prior to 0430:** There is a voluntary arrangement that aircraft scheduled to land between 0430 and 0600 will not land prior to 0430. This is a very sensitive time and issue for local community groups. The purpose of this indicator is to measure adherence to the operator schedules. It is measured as the number of flights arriving before 0430 as a proportion of the total number of arrivals for the airline. Instances where this occurs for reasons outside of the airline’s control are excluded for the calculation. *Green: no infringements, Red: one or more infringements.*

**6. Night time Operations 2: unscheduled arrivals prior to 0600:** Arrivals scheduled to land after 0600 should not land before then unless there are dispensing circumstances (e.g. Low visibility conditions). This is also a very sensitive time and issue for local community groups. The purpose of this indicator is to measure adherence to the operator schedules. It is measured as the number of unscheduled flights arriving between 0430 and 0600 as a proportion of the total number of arrivals for the airline. Instances where this occurs for reasons outside of the airline’s control are excluded for the calculation. *Green: no infringements, Red: one or more infringements.*

As metrics 5 & 6 are limited in terms of the airlines they could affect but are nonetheless important issues for community stakeholders these have been weighted lower than the remaining 4 so as to not result in dramatic fluctuations in an airline’s ranking. The set of indicators is designed to address the aims of the programme whilst giving the operators the opportunity to improve their ranking by short-term (i.e. operational/tactical) or long-term (e.g. fleet planning) measures.

[www.heathrowairport.com/noise](http://www.heathrowairport.com/noise)

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