

Departure maps – Questions and answers



What are departure maps?

These maps show the flight paths for aircraft taking off from London Heathrow Airport. These flight paths are called Noise Preferential Routes (NPRs). Both maps show flight tracks for the average day in summer 2008.

Why have these maps been produced?

We want to provide easy to understand illustrations to show where aircraft taking off from Heathrow fly. The maps are designed to help you see what our day to day operations look like. We can also give an indication through these maps of what heights you can expect to see aircraft at in any given area.

Who have the maps been produced for?

Our neighbours and local community. They also form part of our specific information available for people moving within the local area or who wish to find out more about operations at Heathrow. They are available through the Flight Evaluation Unit (FEU) on 0800 344 844 and are on our website www.heathrow.com/noise.

Who has produced this information?

The Environmental Research & Consultancy Department (ERCD) of the Civil Aviation Authority (CAA) was commissioned by BAA Heathrow to produce this piece of work. Their website is www.caa.co.uk.

Why do the maps show 2008 data?

The footnote on the maps show the time period for which data is used to produce the maps. It is a 92 day summer period running from 16th June to 15th September. This is the accepted period from which noise contours are produced. It is for this reason that ERCD use that period.

The maps were produced during the summer of 2009 in readiness for the launch of our new website later in 2009. Therefore, at the time they were produced, they referred to the latest possible data set.

As the areas over-flown do not tend to change every year (for example you will see from our stacks factsheet, the position of the stacks has not changed since the 1960s), it is proposed that maps will be updated every couple of years. We plan to produce new maps in the Autumn using 2011 data.

Why are there two maps for departures?

There are two maps which represent departures from either end of the runways and reflect aircraft heights and routes. Which end of the runway used depends on whether the wind is coming from an easterly or westerly direction at the airfield. For an explanation of easterly and westerly operations and wind direction please see our fact sheet on departures, which is available on our website.

Why are there two runway directions?

Heathrow has two runways and the direction of the wind determines which end is used for aircraft taking off and landing. Heathrow's predominant wind direction is from the west, so aircraft generally depart to the west. This happens around 70% of the time. For an explanation of easterly and westerly operations and wind direction please see our fact sheet on departures, which is available on our website.

What about arrivals?

We have produced separate maps to show flight tracks of aircraft arriving to Heathrow. These are labelled 'patterns of aircraft arriving to London Heathrow Airport'.

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What is the information in the small boxes?

This information gives details of:

- the average number of departures a day
- the average percentage of all departures a day
- the range of how many departures you could expect to see during a 24 hour period
- the average number of days with no departures
- the average number of days with more than ten departures.

This information is based on data over a 92 day period (three busy summer months) in 2008.

What is the information in the oval boxes showing?

This information gives the runway from which the departures have taken off and the abbreviated name of the NPR:

09L means runway 09 Left

09R means runway 09 Right

These are departures to the east, 'easterly operations'

27L means runway 27 Left

27R means runway 27 Right

These are departures to the west, 'westerly operations'

Why are the average daily figures based on 92 days?

The 92 day summer reporting period from mid-June to mid-September has been in use for many years now as the established timescale over which to describe the noise exposure arising from aircraft. This is because it is one of the busiest periods of the year and so demonstrates the 'worst case scenario'.

What are the small black aeroplanes showing?

The aeroplanes show the direction aircraft are moving in along the route.

Why are the tracks coloured differently?

Each aircraft track is shown in two different colours along its route. The green band shows aircraft below 4,000 feet (ft) and the yellow band shows aircraft above 4,000ft.

Have any routes changed?

No they haven't. NPRs were set by the Department for Transport (DfT) in the 1960s and were designed to avoid overflight of built-up areas where possible. The routes have not been altered since they were established in order to give people the predictability of knowing where noise from departing planes will be heard. Their location remains the responsibility of the Government. As an airport operator, BAA has no authority to change them. Any significant changes to the NPRs would be subject to public consultation by the Government.

How high should aircraft be when they can leave the NPR?

Once an aircraft reaches either 4,000ft, it can then be 'vectored' off the route by Air Traffic Control (ATC) onto a more direct heading to its destination. Therefore, not all aircraft stay on the NPR for the whole distance. Additionally, ATC can direct planes off the NPR at an altitude below 4,000ft if this is required for safe separation from other aircraft or for other safety issues such as weather avoidance. Therefore, if a plane is not following the NPR, it does not necessarily mean it is doing anything wrong.

What happens if aircraft fly off the designated NPR?

Any flight leaving an NPR below 4,000ft (a track deviation) is automatically tagged by the Noise and Track Keeping System in the Flight Evaluation Unit at Heathrow. Performance related to track keeping is closely monitored by the FEU and any reduction in compliance is corrected by working with NATS and the airlines. Details are supplied to our Flight Operations Performance Committee and discussed at their monthly meetings. There are no financial sanctions against airlines that fly off track because there are many factors, such as speed, wind, weight and temperature that can affect the performance of an aircraft.

Why does it look like there are so many aircraft flying off the NPR on the easterly Compton (CPT) route?

In order to maintain safe separation from arriving aircraft, the departing aircraft using the CPT route may be given a heading to fly by ATC. This may take the aircraft outside of the NPR below an altitude of 4000ft. This is however, required in the interests of safety.

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Do these two departure maps represent the flights that occur at night?

No. The data used relates to movements in the 16 hour (07.00 – 23.00 hours local) average summer day in 2008. Although there is no ban on night flights at Heathrow, there are strict restrictions relating to night movements and generally there are approximately 16 flights each night. The majority of these movements are arrivals. For more information regarding night flights, please see our fact sheet on night flights, which is available on our website.

What does 'daily range of departures' mean?

This provides an indication of the minimum and maximum number of departing flights recorded over the summer period at each location.

What does 'average daily departures' mean?

This is the average number of departing flights at each location over the 92 day summer period. This figure allows you to gauge how many departures you can expect on an average summer day.

Do you think we have answered all of your questions?

If we haven't and you think we could add to these questions and answers, please let us know and we will endeavour to incorporate your suggestions.

Our other factsheets

Please see our other fact sheets which provide information on:

- Arrivals
- Departures
- Go arounds
- Aircraft stacks
- Night flights
- Aircraft noise on the Ground
- Heathrow and helicopters
- The legal overview.

Further information

If you would like further information, please contact the Flight Evaluation Unit:

By telephone: 0800 344 844

By e-mail: noise_complaints@baa.com

By post: Flight Evaluation Unit
Second Floor Meridian
The Compass Centre
Nelson Road
London Heathrow Airport
Hounslow
TW6 2GW

Website: Make an enquiry on our website:
www.heathrow.com/noise

Please note that the freephone telephone number is an answerphone between 4.30pm and 8.30am. Please leave your name, contact details and brief details of your enquiry. A member of the FEU will contact you as soon as possible. Between 8.30am and 4.30pm, your call will be answered whenever possible.