



# HEATHROW AIRPORT Operations Handbook

**Heathrow**

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# 1. Key roles and responsibilities

## 1.1 Heathrow: the airport operator

Heathrow is the UK's busiest international airport. From here, some 80 airlines fly direct to over 180 destinations worldwide. Heathrow owns and maintains airport facilities including stands, terminals and runways.

Heathrow issues Conditions of Use that airlines must adhere to in order to operate in and out of the airport. Heathrow administers the night flight restrictions and other noise reduction measures (see below), and is responsible for monitoring and reporting on airport performance in relation to noise reduction.

Heathrow is responsible for the development of airspace change proposals for any changes to its arrival and departure routes in and out of the airport. Heathrow then submits these to the Civil Aviation Authority for approval.

## 1.2 Airlines

Airlines transport passengers and freight. At Heathrow they have to follow the Conditions of Use which are issued annually.

Airlines must file a flight plan for each flight which includes:

- origin and destination;
- proposed route, speeds and flight levels;
- type of aircraft and registration; and
- potential use of alternate airports.

It is the airlines that choose which departure route their aircraft will take when taking off from Heathrow.

## 1.3 NATS – Air Navigation Service Provider

NATS is an Air Navigation Service Provider. It provides the air traffic control function for Heathrow according to national and international regulations.

NATS is regulated by the Civil Aviation Authority and is responsible for the development of proposals for airspace changes to the higher level routes (those above 9,000ft) over the UK (which also require CAA approval).

## 1.4 Department for Transport (DfT)

The DfT is the UK Government department responsible for all transportation including airports and aviation.

The DfT has overall responsibility for UK aviation and airport policy, sets the noise controls at Heathrow (Under Section 78 of the Civil Aviation Act 1982) and with regard to night noise, includes a restriction on the number of movements. The DfT also issues the Air Navigation Guidance which provides guidance to the CAA on environmental objects and to the wider aviation industry on airspace and noise management.

## 1.5 Civil Aviation Authority (CAA)

The CAA is the UK's National supervisory authority responsible for overseeing and regulating all aspects of civil aviation in the UK.

The CAA is responsible for price regulation at Heathrow, and for safety regulation of airports, airlines, Air Traffic Control, pilots and aircraft engineers. It is the independent regulator and national supervisory authority responsible for the planning and regulation of national airspace.

The CAA controls and regulates the Airspace Change Process (ACP) which covers the use of airspace and changes to airspace design.

The CAA implements the International, European and domestic legislation that covers aviation such as:

- the minimum safety standards laid down by the International Civil Aviation Organisation (ICAO);
- European legislation protecting passengers' rights;
- European legislation on safety issues such as pilot licensing and the domestic regulation on the use of airspace; and
- UK legislation as detailed in the Civil Aviation Act and the Air Navigation Order.

The CAA makes sure that passengers are protected and treated fairly when they travel. It also makes sure that the interests of local communities are captured in the design process of any airspace change, through engagement and consultation.

## 1.6 Airport Co-ordination Limited (ACL)

ACL is the independent slot co-ordination company used by Heathrow. ACL is responsible for allocating all landing and take-off slots at Heathrow, from the slot capacity that the airport declares each season.

## 2. General operations

### 2.1 Controlled and uncontrolled airspace

Controlled airspace is the part of the sky where aircraft fly under the supervision of air traffic controllers. The airspace around Heathrow is controlled airspace. Outside controlled airspace pilots can fly without the supervision of air traffic controllers.

In controlled airspace, pilots follow precise instructions and file a flight plan for each journey which contains the details of their destination, the planned route, altitude and when they will take the flight.

Controlled airspace in the UK is made up of 'terminal control areas' which are normally above the UK's major airports, 'control zones' which are established around each airport, and a network of 'airways' which are the air corridors that connect terminal control areas.

For more information on the different classifications of airspace please go to the NATS website [www.nats.aero](http://www.nats.aero)

### 2.2 Air traffic control (ATC)

ATC instructs pilots and directs aircraft, both on the ground at airports and in controlled airspace.

ATC's primary purpose is the safe operation and management of the controlled airspace. ATC makes sure that aircraft are safely separated (to internationally agreed standards) and manages the flow of air traffic into, out of and over the UK, to minimise delays to passengers.

### 2.3 En-route network/airways

The routes into and out of Heathrow airport connect into a network of airways across the UK and beyond. The network of airways is referred to as the "en-route" network.

Each major airport has their own Standard Instrument Departures (SIDs) and Standard Terminal Arrival Routes (STARs) which link into this shared network. The en-route network allows aircraft to plan (and fly) an end to end route from one airport to the next.

In the UK the design and operation of the en-route network is the responsibility of NATS.

### 2.4 ATC intervention and 'vectoring'

'Vectoring' is the term used when air traffic controllers give a pilot a specific direction to fly towards.

### 2.5 Impact of wind direction on Heathrow operations

For safety and performance reasons aircraft typically take off and land into the wind. This is because in order to create lift, an aircraft's wing relies on the speed of the air moving over it (airspeed).

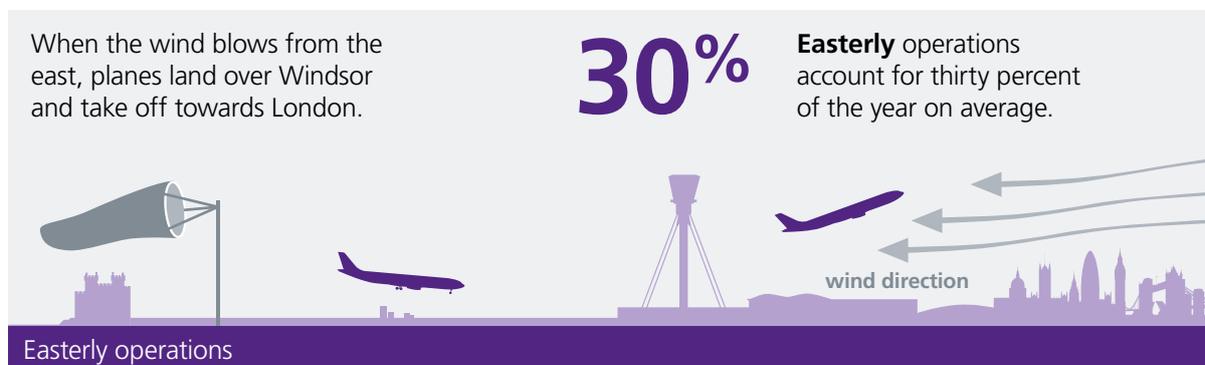
A headwind (wind blowing from directly in front of the aircraft) means that more air is flowing over the wing, providing greater lift. The point at which an aircraft leaves the ground therefore occurs earlier if taking off into a headwind, giving better performance and a greater safety margin.

A tailwind (wind blowing from behind the aircraft and pushing it along) reduces the amount of air flowing over the front of the wing. Aircraft therefore have to go faster and use more power to take off in a tailwind.

In the UK, the wind is mostly from the south west. That means the majority of aircraft (approximately 70% a year) make their final approach over London and take off towards the west. This is known as 'westerly operations'.



When the wind blows from the east (and is over five knots), the direction of operation is switched and aircraft land from the west over Berkshire and take off towards the east. This is known as 'easterly operations' and occurs approximately 30% of the time.



## 2.6 Westerly preference

During the day, a 'westerly preference' is operated at Heathrow. Westerly preference is Government policy and means that even during periods of light easterly winds (up to 5 knots) aircraft will continue to land in a westerly direction, making their final approach over London.

Westerly preference was introduced in the 1960s to reduce the number of aircraft taking off in an easterly direction over London, the most heavily populated side of the airport. This was when departures were considered to be more disruptive to local communities than arrivals.

In 2001, following consultation, the DfT decided that the westerly preference should be removed at night, to provide a more equitable distribution of aircraft noise.

## 2.7 Ending of westerly preference

Modern technology means planes have got quieter and climb more quickly, and therefore questions have been raised as to whether the westerly preference is still relevant today. In Heathrow's submission to the Airports Commission in May 2013 we proposed the ending of the westerly preference and the Airports Commission supported a 'no preference' policy in its Interim Report.

Because the westerly preference is current Government policy, the ending of it would have to be subject to Government approval and public consultation.

In the interests of fairness, our view is that the ending of the westerly preference should not be introduced until there is full runway alternation on easterly operations. We estimate that removing the westerly preference would increase the percentage of easterly operations (aircraft arriving from the west and departing to the east) by around 5 per cent.

## 2.8 Heathrow capacity and number of flights

Heathrow is one of the busiest two-runway airports in the world with approximately 650 arrivals and 650 departures every day.

Heathrow is legally capped at 480,000 Air Traffic Movements (ATMs) per year. The cap cannot increase without planning permission and Government approval.

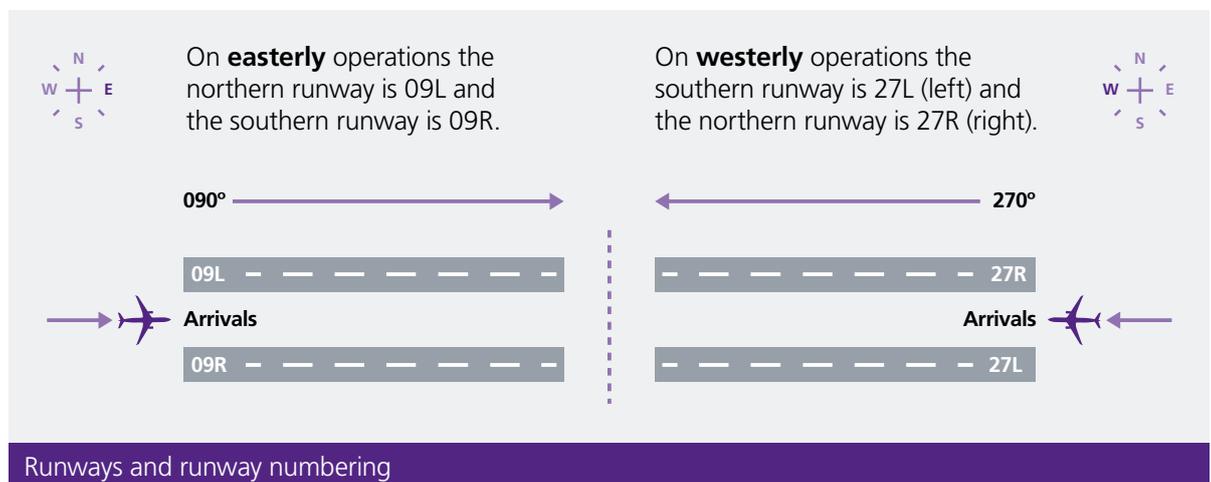
Some aircraft movements are not classified as ATMs and are therefore not capped. These include:

- helicopters;
- aircraft landing in an emergency situation;
- smaller aircraft with a passenger seating capacity of 10 or less;
- Royal/Government flights; and
- visiting Heads of State.

## 2.9 Runways and runway numbering

Heathrow has parallel runways commonly referred to as the Northern and Southern runways, lying west to east. They are numbered based on the compass bearing, 090 if you are arriving or departing towards the east, and 270 towards the west.

The diagram below indicates the names of Heathrow's runways, which are based on the perspective of an arriving aircraft.



## 2.10 Night flights

There is no ban on night flights at Heathrow but since the 1960s, the Government has placed restrictions on them. Heathrow has some of the strictest restrictions of any hub airport in Europe in terms of movements permitted between 23:30 and 06:00. Heathrow is restricted to 5,800 take-offs and landings a year during these times.

Around 80% of the night flights at Heathrow are between 04:30–06:00, with on average around 16 aircraft scheduled to arrive each day between these hours. Heathrow also has a voluntary ban in place that prevents flights from landing before 04:30. There is also a night quota limit, which caps the amount of noise the airport can make at night.

## **Why do we have night flights?**

Night flights are an important part of operations at airports around the world. The time differences in an inter-connected global transport system mean that it is difficult to avoid night flights.

The relationship between flight times and clock times means that early morning arrivals at Heathrow are particularly suited to serving flights from much of China, South East and South Asia. The early arrival permits a full day's business to be undertaken in the UK and maximises the timing opportunities for those making onward flight connections from London. By feeding other flights, these transfer passengers play an important role in maintaining the range and frequency of destinations served by Heathrow, and in maintaining connectivity with key destinations.

## **Night flight restrictions**

Restrictions on night flights have been in place at Heathrow since 1962 and the structure of the current night flying restrictions at Heathrow has been in place since October 2017. The Night Flight restrictions are part of the Government defined noise measures under the Civil Aviation Act 1982.

Overview of restrictions:

- There are two time periods: 23:00–07:00 and 23:30–06:00 both with restrictions on certain types of aircraft;
- The more restrictive period (23:30–06:00) is known as the Night Quota Period (NQP) and has limits on the number of movements which are set by the DfT. The limits are set on a seasonal basis: summer and winter;
- Heathrow is currently limited to 5,800 night flights a year: 3,250 in the summer season and 2,550 in the winter season;
- Heathrow is also permitted to carry over up to 10% of the 'left over' movements from summer to winter, which means the winter season limits vary more than the summer limits. The summer season is defined using British Summer Time. Heathrow is not permitted to accumulate the carry-over from one year to the next.

## **Government's approach to night flights**

The Government consults on their night flight regime for Heathrow every five years. One of the objectives is to limit or reduce the number of people significantly affected by aircraft noise at night, for example by encouraging the use of quieter aircraft, while maintaining the existing benefits of night flights.

## **Quota Count (QC)**

As well as limits set on the number of movements during the night period, aircraft are classified into nine bands according to the amount of noise they make when taking off and landing. The noisier the aircraft, the higher the band it is placed in. These bands are called quota counts (QC). Every aircraft is given a QC number between 0 and 16.

Under the QC system, each aircraft type, including different versions of the same model, is assigned a QC according to its noise performance, separately for arrival and departure, as determined by the ICAO noise certification process. For example, a Boeing 737-800 is classified as QC/0.5 on arrival and as QC/0.5 or QC/1 on departure (depending on its maximum certificated take-off weight), whereas a much larger and older Boeing 747-200 will vary between QC/2 and QC/8 on arrival, and between QC/4 and QC/16 on departure, depending on engine fit and maximum take-off weight (MTOW).

Quota count	Arrival examples	Departure examples	Allowed in shoulder periods (23:00–23:30 & 06:00-07:00)	Allowed in night quota period (23:30–06:00)
0	Embraer 195	Gulfstream 4	Yes	Yes
0.125	A320 NEO	A320 NEO	Yes	Yes
0.25	A320, A319, B789	A320	Yes	Yes
0.5	A320, B738, B777, A330, A380	A320, B738, B787, A359	Yes	Yes
1	B777, B767	A320, B738, B777, B788	Yes	Yes
2	B744	A330, A340, A380, B767	Yes	Yes
4	B743	B744, B777	Yes	Not permitted to be scheduled, late runners allowed
8	B741, B707	B743	Only in very exceptional cases	No
16	N/A	Concorde, B741, B743	Only in very exceptional cases	No

The number of points for each aircraft is added up and must be within the limit for that season.

In July 2017, following public consultation, the Government announced their new five year regime running from October 2017 to 2022. The new regime includes the reduction of the QC limit for Heathrow from 4,080 to 2,415 (winter) and from 5,100 to 2,735 (summer).

## 2.11 Late running flights

The majority of flights finish at Heathrow by 11:30pm, however sometimes late arrivals or departures are unavoidable for a number of reasons. We are working with the airlines and NATS to reduce the number of flights that operate later than scheduled as we know they are disruptive to local residents.

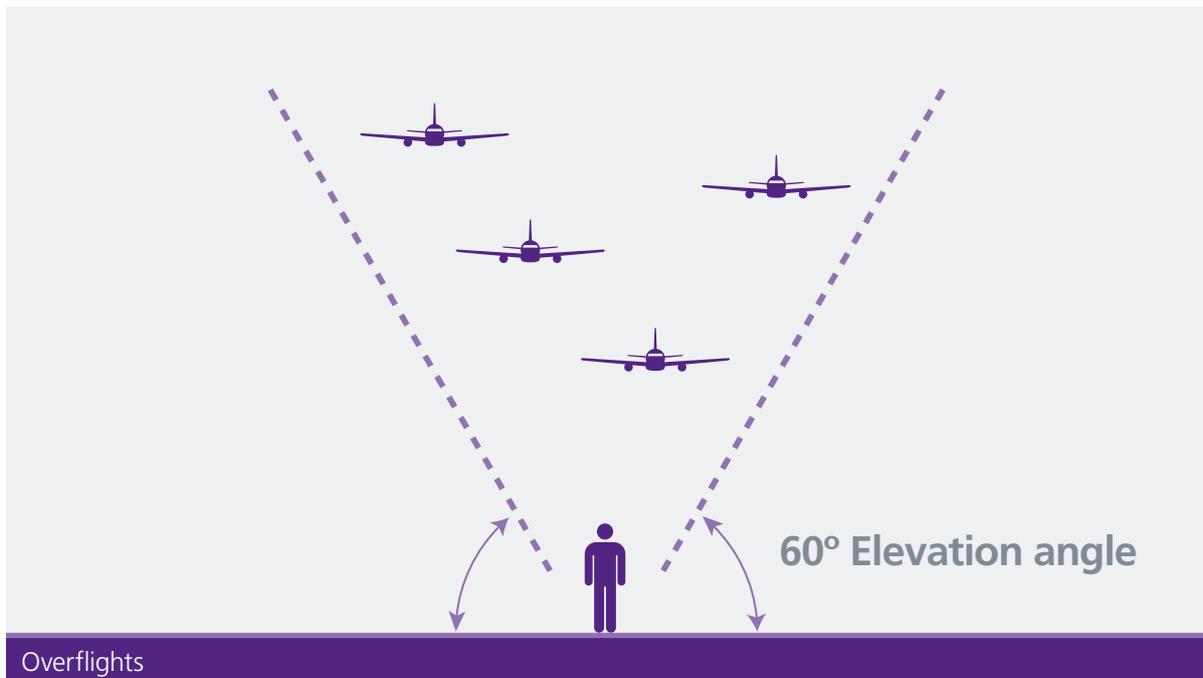
A departing flight from Heathrow could be delayed because of bad weather (such as strong winds, fog or thunderstorms), a technical problem on board the aircraft or an emergency. If a flight needs to leave after 11:30pm for these reasons the airline must request permission and explain the reason for the delay.

Whereas an arriving aircraft might land late into Heathrow because the flight has been delayed leaving the airport it is arriving from, or because of bad weather on route to Heathrow.

Weather conditions such as severe thunderstorms or heavy snowfall can cause widespread disruption to our flight schedule and cause significant delays. In specific circumstances where prolonged and widespread delays occur on the airfield and terminals become congested to unacceptable levels, government guidance allows flights during the night period to be 'dispensed'. These are in exceptional circumstances such as emergencies or situations where serious hardship or suffering to passengers would result.

## 2.12 Overflight

An aircraft does not have to be directly overhead to be seen or heard. An elevation angle of 60 degrees is used by the CAA to define overflight and is shown on the diagram below.



More information can be found in the CAA document **Definition of overflight, CAP 1498**. This can be found on the CAA website [www.caa.co.uk](http://www.caa.co.uk)

## 3. Arrivals

### 3.1 Standard Terminal Arrival Routes (STARs)

As arriving aircraft begin their descent to their destination airport, they will descend out of the upper level airway structure. At this point they join one of a series of Standard Terminal Arrival Routes (STARs) towards their destination airport. Each busy airport typically has multiple STARs for arrivals coming from different directions.

Heathrow's existing STARs can start from as far away as the English Channel and end at around 7,000ft at Heathrow's holding stacks.

### 3.2 Holding stacks and stacking

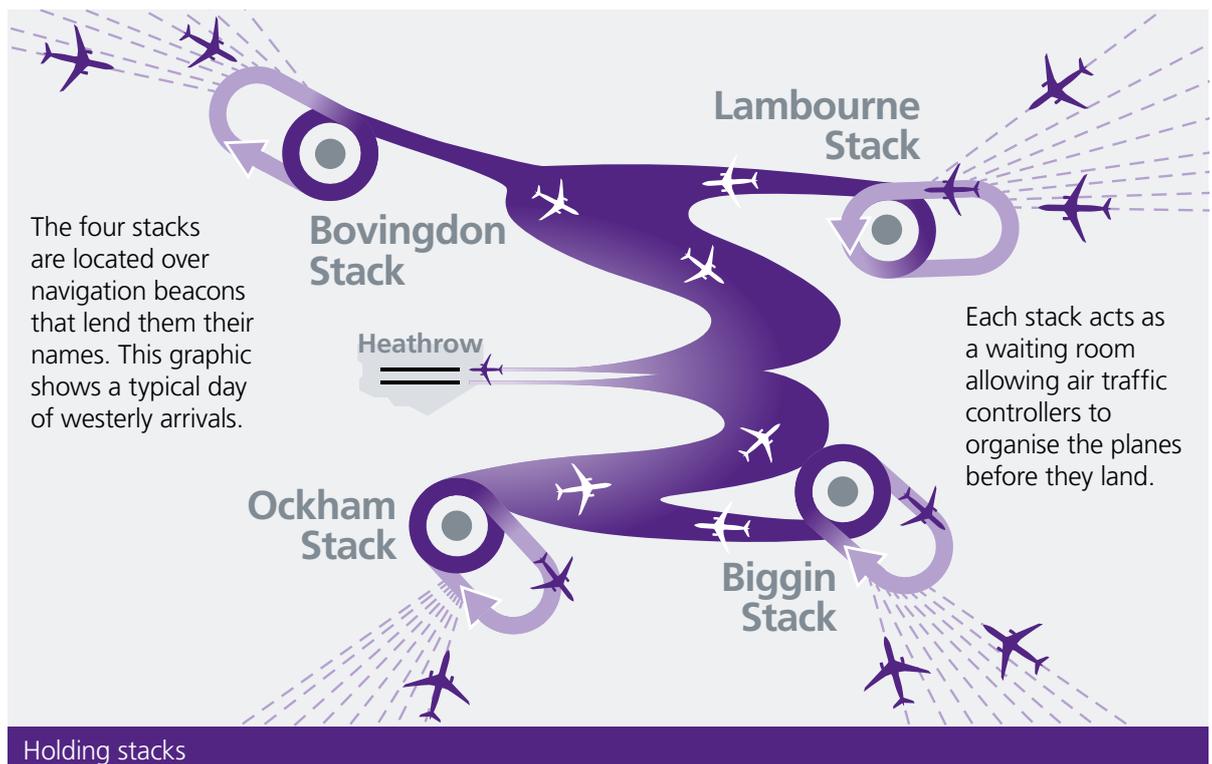
Because Heathrow is so busy, aircraft coming in to land at Heathrow are frequently held in holding stacks.

Aircraft usually come into a holding stack where they fly in an oval pattern to wait for a landing slot. From the holding stack they follow a set of instructions issued by ATC. These instructions direct the aircraft towards the final approach.

Aircraft circle at different levels within the stacks until there is space for them to land into Heathrow. The levels are separated by 1,000ft, and the lowest level (i.e. the bottom of the stack) is around 7,000ft.

There are four holding stacks at Heathrow, known as 'Bovingdon', 'Lambourne', 'Ockham' and 'Biggin'. The locations of the stacks have been the same since the 1960s.

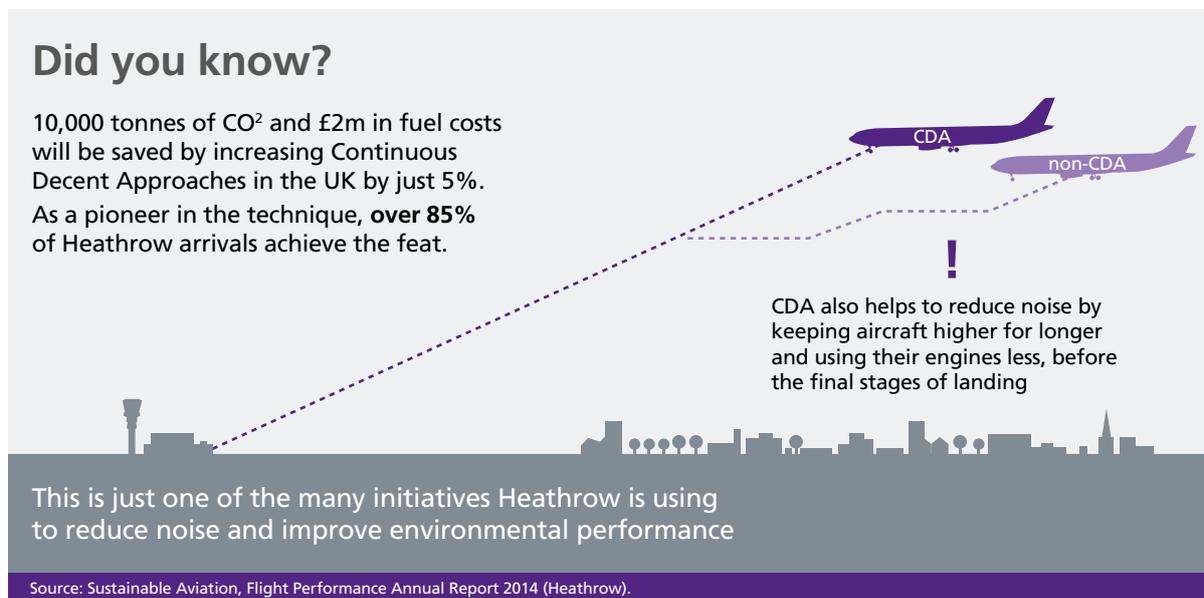
Aircraft enter the stack, circle and descend as shown in the diagram. When they leave the stack they are directed by ATC onto the final approach to land at Heathrow. The controllers manage the order of the aircraft from all four stacks and guide them safely onto one of Heathrow's two runways.



There are no set routes for planes moving from the holding stacks to the final approach. While the overall patterns have remained similar for many years, the position of aircraft in the skies varies from flight to flight and day to day.

### 3.3 Continuous descent approaches (CDA)

Continuous Descent Approaches have been used at Heathrow for many years. Once they have been directed out of the stack, CDA involves aircraft maintaining a steady angle of approach until they reach the final approach. The intention of CDA is to reduce arrival noise by keeping aircraft higher for longer. In addition, CDA reduces fuel burn and emissions, which leads to an overall environmental benefit.



The specific CDA profile for Heathrow, as defined in the Arrivals Code of Practice, is a 3 degree descent from 6,000ft.

### 3.4 Final approach and Instrument Landing System

An aircraft is on its final approach when it is lined up with the runway to land.

The final approaches into Heathrow's runways extend about 13 nautical miles (about 15 miles) from the end of each of the airports' two runways. The point at which aircraft join the final approach varies on a flight by flight basis depending on how aircraft need to be sequenced by the controllers.

Aircraft landing at Heathrow join the Instrument Landing System (ILS) to align directly with the runway. The ILS is a precision runway approach aid employing two radio beams to provide pilots with vertical and horizontal guidance during the final approach to landing. Pilots use it to guide them to the runway and the 3 degree approach angle.

Each runway has its own beam which is aligned with its centreline to ensure aircraft approach in a straight line as they come into land. These approach flight paths are fixed.

### 3.5 Joining point

The position where an aircraft intercepts the ILS is known as the joining point. Joining points are often referred to by the distance from this point to the runway. The joining point can vary on a flight by flight basis.

### 3.6 Altitude of arriving aircraft

The Airport’s Aeronautical Information Publication (AIP) states the minimum height at which aircraft can join the ILS (and therefore the final approach). During the day (between 06:00 and 23:00) this is 2,500ft which is approximately 7.5 nautical miles (around 8.5 miles) from Heathrow. At night (23:00 to 06:00) an aircraft must be no lower than 3,000ft which is approximately 10 nautical miles (around 11.5 miles) from Heathrow.

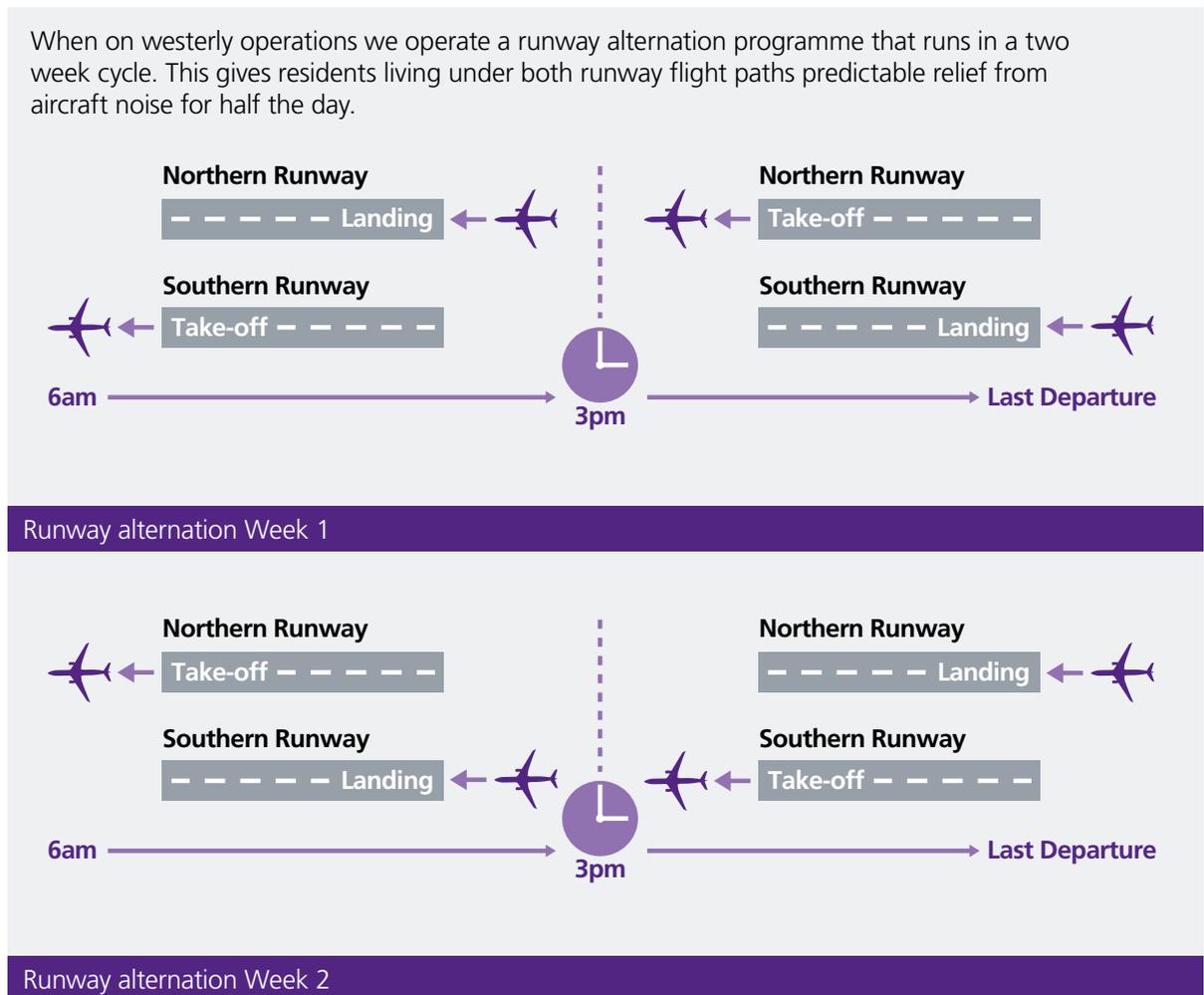
### 3.7 Runway alternation

During the day, and when we’re on westerly operations, we use a procedure known as ‘runway alternation’. This is to provide local communities living under the final approach into the airport with periods of relief from aircraft noise. Residents place great importance on the alternation system at Heathrow and every effort is made to adhere to it.

The alternation pattern means that for part of the day we use one runway for landings and the other for take-offs, then halfway through our day at 3pm, we switch over.

On easterly operations, Heathrow does not alternate the runways at 3pm because of the ‘Cranford Agreement’ (see section 4.7) which prevented us from using the northern runway for departures during the day. Although the Cranford Agreement has now ended, Heathrow needs to undertake works to the airport’s infrastructure before runway alternation on easterly operations will be possible.

#### Daytime runway alternation



Daytime runway alternation operates on a two week cycle.

In the morning we use one runway for take-offs and the other for landings. At 3pm (roughly halfway through Heathrow's working day), we swap over. We continue this morning and evening pattern of runway use for the rest of the week, and the following week we switch. What we did in the evening during the previous week, we now do in the morning. And vice versa.

### **Night-time runway alternation**

Since there are very few aircraft that take-off or land at night, there is more scope for runway alternation, whether we are on easterly or westerly operations. We can switch landings between the northern and southern runways and, if the weather allows it, we can bring in aircraft from the east or the west.

Those four options allow us to operate night-time runway alternation on a four-weekly cycle:

**Week 1:** Aircraft fly in from the west to land on the northern runway

**Week 2:** Aircraft fly in from the east to land on the northern runway

**Week 3:** Aircraft fly in from the west to land on the southern runway

**Week 4:** Aircraft fly in from the east to land on the southern runway

## 3.8 Landing on the departures runway and TEAM

We make every effort to adhere to the published runway alternation schedule. However, sometimes there may be a build-up of flights being held in the holding stacks. When this happens, the Government has set rules permitting NATS to land aircraft out of alternation, i.e. on the departures runway. In these circumstances, both runways will be used for arrivals for a temporary period.

This is called Tactically Enhanced Arrivals Mode (TEAM) and is allowed after 7am on westerly operations when severe inbound congestion occurs, or is anticipated to occur, involving delays to arriving flights of 20 minutes or more. Under these circumstances we can land up to six aircraft an hour on the runway designated for departures.

These rules have been in place since the alternation system was introduced in the 1970s.

Although not described as TEAM, we are also able to use both runways for arrivals between 6–7am without being limited to a set number because this hour is the busiest time of day for arrivals into Heathrow.

There are other occasions when unforeseen circumstances mean that arriving aircraft need to land on the departures runway. For example, this can occur if an aircraft landing on the designated arrivals runway develops a problem which prevents it vacating the runway in time for the next aircraft to land. Subsequent aircraft will then need to use the other runway until the aircraft on the designated arrivals runway is able to vacate safely.

### **De-alternation**

There are other times when it is not possible to stick to the published runway alternation schedule. We refer to this as 'de-alternation' or 'out of alternation'.

Routine maintenance of runways, taxiways or associated equipment is often scheduled to coincide with the pattern of runway alternation. However, there will be occasions when it is not possible to stick to the published runway alternation schedule. For example, this may be to facilitate maintenance or works of a longer duration (e.g. the 2014 runway re-surfacing) or work of an unforeseen, urgent nature.

Weather can also affect the use of alternation. For example, strong south-westerly winds can blow across the various buildings in Heathrow's maintenance area and affect the approach for aircraft landing on the northern runway on westerly operations. When this occurs, we switch to landing on the southern runway for safety reasons. ATC may also decide to switch the use of runways for other safety reasons, for example if visibility on one runway is temporarily impaired by patchy fog or a nearby off-airport fire.

### 3.9 Missed approaches (go-arounds)

Occasionally it is necessary for the pilot of an aircraft to abort a landing. There is an established procedure to follow when this occurs, known as a 'go-around'. This is where the pilot aborts the landing and then re-joins the landing pattern. A go-around is a well-practiced and safe procedure which pilots and air traffic controllers are trained and prepared for.

Although there are many reasons for a go-around, the most common is because the aircraft that has landed previously is slow to fully vacate the runway.

# 4. Departures

## 4.1 Standard Instrument Departures (SIDs)

Aircraft taking off from Heathrow follow pre-defined routes known as Standard Instrument Departures (SIDs). The choice of SID used is decided by the airline and is predominately dictated by the destination of the aircraft.

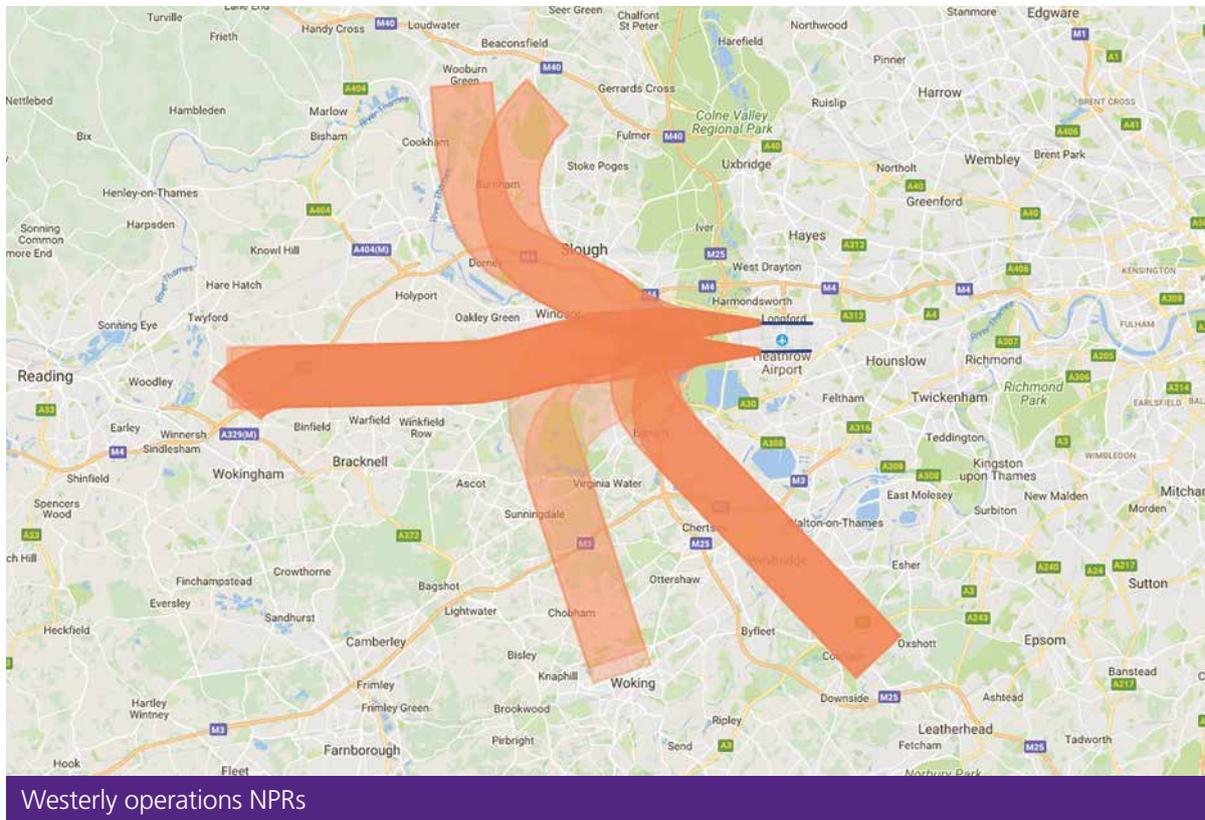
A SID includes a profile and a minimum rate of climb. It avoids obstacles (e.g. tall buildings, radio masts, high ground) and also avoid SIDs from other airports which means that they don't always follow the most direct route. The SIDs are also based upon the historic positioning of ground-based navigational aids.

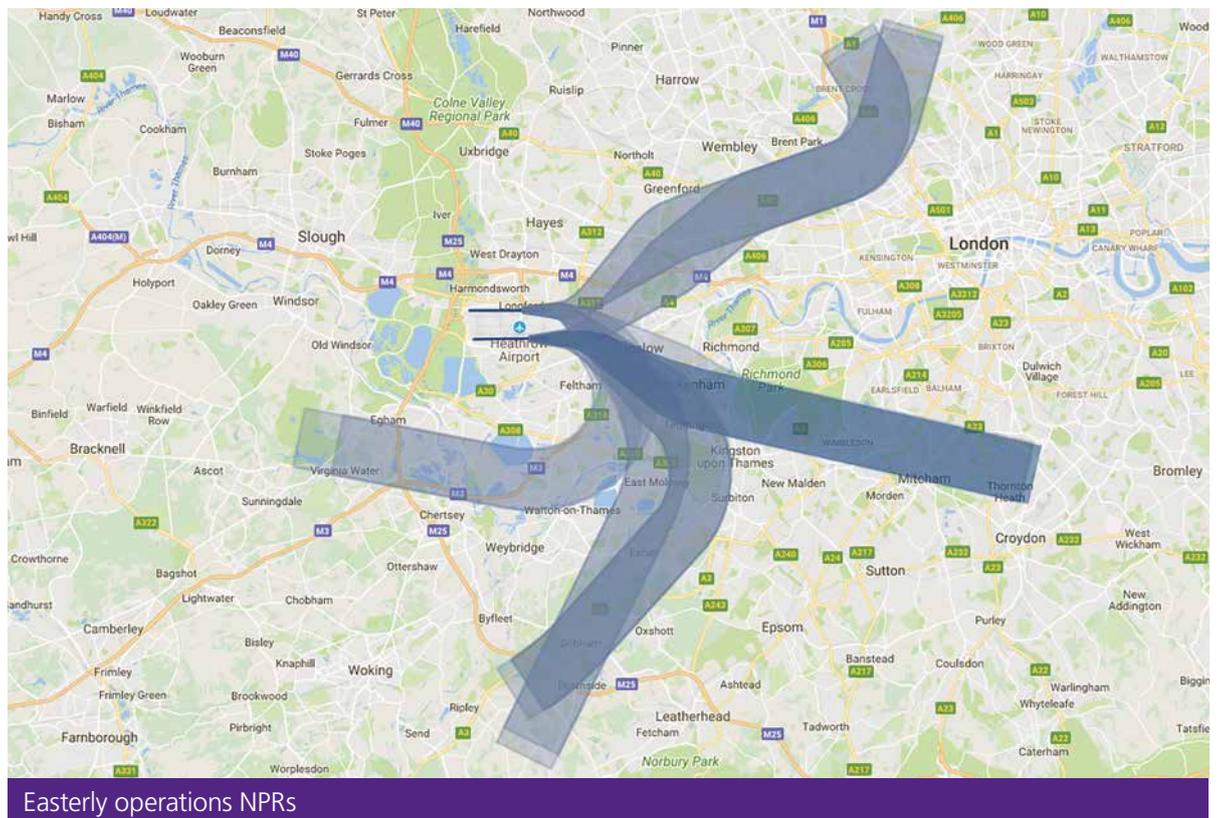
## 4.2 Noise Preferential Routes (NPRs)

Either side of the SID is a 1.5 kilometres corridor known as the Noise Preferential Route (NPR). Aircraft do not have to follow the centreline of the SID precisely but have to stay within the 3km wide NPR up to 4,000ft, unless directed off for safety or operational reasons.

These corridors are necessary because aircraft perform differently and so there will be some variation as to where aircraft fly relative to the centreline of the SID.

Once aircraft reach 4,000ft, NATS air traffic controllers can direct them from the SID on to a more direct heading towards their destination.





### 4.3 Continuous Climb Operations (CCO)

The principle of CCO is to provide a continuous climb from lift-off to optimum cruise level with potential improvements for fuel burn, carbon dioxide (CO<sub>2</sub>) emissions and noise.

### 4.4 Noise abatement (reduction) procedure

Aircraft departing Heathrow are required to maintain a climb gradient of at least 4% from 1,000ft to (not less than) 4,000ft to reduce noise.

### 4.5 Track keeping

Track keeping refers to how well aircraft stay within the NPR up to 4,000ft. The Heathrow Noise and Track Keeping (NTK) system is used to detect any aircraft which deviate from a Noise Preferred Route (NPR).

Track keeping on Heathrow's departure routes is very high overall, with about 96% of all departures staying within the published routes. The exception is the easterly Compton route: track keeping compliance is much lower on this route and has been for many years (see section below for more details).

Information regarding track deviations is sent to the airline and statistics showing track keeping performance are shared regularly. Data shows good levels of achievement and has remained broadly consistent across recent years.

Track deviations occur for a variety of reasons. They may be necessary for weather avoidance or strong winds, and the speed and weight of the aircraft are also significant factors. For example, modern faster aircraft have a wider radius of turn than older, slower aircraft.

## 4.6 The Compton Easterly Departure Route

As described above, track keeping compliance for the Compton easterly departure route is much lower than our other departure routes. Over time, as the number of flights using Heathrow has increased, the route has become challenging to manage because of its proximity to the Ockham holding stack to the south of the airport.

This requires NATS air traffic controllers to manually direct aircraft on this route to separate them from the stream of arrivals making their way from the holding stack to the airport.

Heathrow is exploring options to introduce a new Compton route on easterly operations that will enable aircraft to achieve better track keeping compliance.

## 4.7 The Cranford Agreement (taking off from the northern runway on easterly operations)

The Cranford Agreement was established in the 1950s. Cranford is a village at the eastern end of the northern runway. The agreement prevented aircraft from taking off over the village except in exceptional circumstances and applied when Heathrow was on easterly operations.

The agreement favoured residents of Cranford at the expense of other communities such as Windsor and southern parts of Hounslow. Although the agreement is no longer in place we cannot implement full runway alternation on easterly operations as we do not have the appropriate taxiways in place to support a full service.

In 2010, the then Government confirmed that the Cranford Agreement should be removed and that Heathrow should take the necessary steps to implement easterly alternation as soon as possible to ensure a fairer distribution of noise when operating on easterlies.

Heathrow submitted a planning application to the London Borough of Hillingdon in 2013 to construct an additional taxiway at the western end of the northern runway to enable full runway alternation on easterly operations.

In 2014 the London Borough of Hillingdon refused our planning application, which we appealed. Following a public inquiry in 2015, our planning appeal against the London Borough of Hillingdon's refusal was eventually allowed on the same date that the Government published the draft Airports National Policy Statement (2nd February 2017) on Heathrow expansion and a third runway.

We have been assessing whether the taxiway works approved at appeal fit with the airfield design for an expanded Heathrow. The work has indicated the potential need to reposition the taxiway works further to the east for an expanded Heathrow.

Moving the location of the taxiway works will change the noise impacts from departing aircraft. Taken together, this will require a new planning application to account for these changes.

After careful consideration we have taken the decision to pursue this work through the planning process for expansion: the Development Consent Order (DCO) application.

This decision has been taken because we believe that there would be little practical difference in the timescales for delivery of easterly alternation, whether we pursued this through a new local planning application or through the DCO for expansion.

Following two rounds of consultation, we plan to submit our DCO in 2020 with a decision expected in 2021. We would plan to move ahead with this project as quickly as possible following DCO consent and the approval of the necessary airspace changes. Our current view is that runway alternation on easterlies could then be introduced in 2022/23.



This information along with operational data,  
statistics and other reports can be found at:  
**[www.heathrow.com/noise](http://www.heathrow.com/noise)**

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