



The existing situation

Heathrow's two runways operate simultaneously. One runway is used for departures whilst the other runway is used for arrivals. Whilst operating in this mode, the runways are operated independently, meaning that arrivals to one runway do not affect the departures from the other and vice versa.

In certain circumstances, Heathrow is permitted to land some arriving aircraft on the runway being used for departures. This is a resilience measure which has been in use since runway alternation was introduced in 1972, allowing Heathrow to prevent and recover more quickly from delay during periods of excessive airborne holding. This is sometimes known as TEAM (Tactically Enhanced Arrivals Measures).

TEAM is a tactical procedure which allows for a temporary suspension of runway alternation after 0700¹ to increase the flow of arriving aircraft, allowing some aircraft to land on the departures runway. TEAM can be used when severe inbound congestion involving airborne holding delays of 20 minutes or more occurs, or is likely to occur. In this circumstance, NATS has the discretion to land up to 6 aircraft per hour² on the departure runway³.

Although not described as TEAM, Heathrow is also able to use the departures runway for arrivals between 0600-0700 without being limited to a maximum number. This is because this is the busiest time of day for arrivals into Heathrow.

When both runways are in use for landing, arrivals to both the departure runway and arrival runway are dependent on each other. This is because arriving aircraft landing on both runways cannot arrive at exactly the same time. This dependency means use of the departure runway for landing is not as efficient as it could be. The result is that even though Heathrow can land some additional aircraft on the departures runway, the number it lands on the main arrival runway during that time must reduce.

The table below shows the average number of aircraft landing on the departures runway over the last 5 years⁴

Time period and mode of operation	Average number of aircraft that landed on the departures runway during the last five years
6.00 - 7.00 am (westerly operations)	18 an hour
After 7.00 am (westerly operations)	15 per day
6.00 - 7.00 am (easterly operations)	16 an hour
After 7.00 am (easterly operations)	23 per day

Currently, those aircraft that land on the departures runway, overfly the same geographic areas between the stacks and joining final approach as the aircraft landing on the main landing runway.

Heathrow's capacity limit

Heathrow Airport's planning conditions allow a maximum 480,000 Air Transport Movements (ATMs) per year however, the airport does not achieve this maximum capacity. The intensive use of Heathrow's runways means that any disruption to the daily schedule can result in non-optimal performance. This non-optimal performance can result in the form of increased airborne holding (delays), flight cancellations, flight diversions or late running flights which can result in aircraft arriving or taking off in the night time period⁵.

Heathrow expansion

The Airport National Policy Statement expects Heathrow expansion to enable at least an additional 260,000 ATMs from the airport whilst including a 6.5 hour ban on scheduled night flights between 11pm and 7am (with the exact start and

¹ All times in this document are in local.

² Rare exceptions to increase this number may occur for safety reasons.

³ These TEAM rules only apply to westerly operations. Landing on the departure runway is permitted on easterly operations without formal restriction. Whilst landing on the departure runway on easterly operations is not technically referred to as TEAM operations, in practice it is a similar operation.

⁴ Between 1st May 2013 and the 30th April 2018.

⁵ 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 section 78 of the Civil Aviation Act 1982.



finish times to be determined following consultation)⁶. As part of Expansion, the restriction of 480,000 ATMs will of course be removed.

As part of the development consent order to authorise Expansion, Heathrow is considering putting forward plans for a phased introduction of the removal of the 480,000 ATM restriction before the construction and operation of the new runway. This would be achieved through the increased use of the existing two runways as the first phase of expansion, though delivery of a number of operational enhancements. It would be accompanied by necessary measures, including noise abatement measures, to mitigate impacts. Such noise abatement measures might include operating restrictions such as a change to the start of scheduled operating hours⁷.

The issue to be addressed and the opportunity

This Airspace Change Proposal (ACP) will seek to remove the dependency between simultaneous arrivals to both runways during TEAM so that the landing rate on the arrivals runway does not have to reduce to enable the additional aircraft to land on the departures runway. The project will be known as Independent Parallel Approaches, or IPA. Removing this dependency will enable more efficient prevention and recovery from delay and therefore reduce airborne holding, the number of late running night flights, the number of cancellations and the number of arrivals that land out of alternation in comparison to not making this change. Accordingly, this will significantly improve the operational resilience of Heathrow.

IPA is required to provide operational resilience, with or without any additional ATMs. The need for the additional resilience will increase with any additional ATMs. In addition, subject to further verification, the use of IPA between 0600 and 0700 has the potential to directly support an increase in declared capacity in the hour. An increase in capacity could either contribute to an increase in ATMs (within or beyond the current annual limit), and/or support Heathrow's ambition to deliver a 6.5 hour ban on scheduled night flights between 11pm and 7am.

Any early increase in capacity and change to the restrictions on night flights are subject to separate planning consent and not within scope of this ACP.

Some of the modern navigation capabilities of the Heathrow fleet are not being utilised in the Heathrow route system. We have undertaken feasibility studies to investigate whether there is an opportunity to utilise this capability for IPA routes. This work has confirmed that the potential exists and so we are seeking to initiate an ACP to exploit this opportunity to enable IPA. This ACP would significantly contribute to meeting the UK's legal obligation to implement Performance-based Navigation (PBN) routes at Heathrow⁸.

The cause of the proposal

Heathrow wishes to take advantage of the opportunities described above.

What this proposal will involve

If successful, this ACP will result in the re-distribution and concentration, via use of Performance-based Navigation (PBN), of those Heathrow arrivals landing on the departures runway from 0600 onwards.

Unlike with TEAM today where all arrivals remain within Heathrow's main arrival swathes, the IPA routes will need to be positioned outside of these flows. This is to ensure existing tracks over the ground for the remaining (majority) of Heathrow's arrivals will remain unchanged. Therefore, the new IPA routes are required to be positioned over areas not commonly overflowed by Heathrow arrivals.

This proposal will require a change to Heathrow's Noise Abatement procedures⁹ for IPA arriving aircraft¹⁰ which will require approval from The Department for Transport. Heathrow are engaging with the Department for Transport on this.

This ACP will seek to introduce IPA routes to Runway 27L, 27R and 09R only.

⁶ See [para 3.54 of ANPS](#)

⁷ See [Page 5](#) of Heathrow Airport's Expansion Consultation Document January 2018.

⁸ See ATM Functionality 1 of [EU 716/2014](#) and [EU 2018/1048](#)

⁹ UK AIP EGLL AD 2.21 Para 10 (a) – (d)

¹⁰ Heathrow will not be seeking to make changes to the joining point for all approaches; only for IPA arrivals.



The IPA routes will require a high specification of technical equipment and approval by those aircraft using them. Those aircraft would fly these routes precisely, meaning that when viewed from the ground the aircraft will be flying the same tracks repeatedly and accurately.

An increase to Heathrow's annual ATM cap may be sought ahead of the opening of a third runway¹¹ via the Heathrow Expansion Development Consent Order (DCO) application¹². IPA would be part of a suite of measures for the future operational environment necessary to practically deliver this increase in annual ATMs. Any increase in ATMs and the impacts and benefits of such an increase (including any impacts on Heathrow's operation) will be addressed as part of the DCO process. However, Heathrow intend to progress this ACP regardless of any proposed expansion at Heathrow Airport in order to further enhance the resilience of the current operation.

IPA is being sought in advance of the broader redesign being developed under a separate ACP for expansion but much of the development, consultation and design work for these two ACPs will occur in the same time periods. Our business objective for IPA is limited to adding new routes within the existing route/flight path framework, leaving more fundamental change to the scope for the expansion ACP. Without this objective the boundary between the two ACPs may blur, which is not in the interests of the sponsor or stakeholders.

What this proposal does not affect

This proposal does not seek a change to the Government rules on the maximum number of aircraft allowed to land on the departures runway per hour.

At present, 09L is not used regularly for departures as the airport does not have the appropriate taxiways in place to support a full service in this operational mode.¹³ Runway 09L is therefore most often the main landing runway when operating in an easterly configuration (approximately 30% of the time). In light of this, this ACP will not deliver the capability to land arrivals independently onto Runway 09L. In the future, should Heathrow seek to implement full easterly alternation in a two runway operation via a separate ACP, the separate ACP would contain the requirement for additional routes to enable use of IPA onto 09L.

This specific airspace change proposal only relates to a two runway operation. Whilst this project's concepts may be transferrable to a three runway environment, the life time of this airspace change is expected to cease when/if the third runway becomes operational.

¹¹ See [Page 5 and Page 52](#) of Heathrow Airport's Expansion Consultation Document January 2018.

¹² The application will be submitted under the Planning Act 2008.

¹³ See [Section 3.7 and 4.7](#) of [Heathrow's Operation Handbook 2018](#)