



AIRSPACE AND FUTURE OPERATIONS CONSULTATION - JANUARY 2019

HEATHROW COMMUNITY NOISE FORUM (30.1.19)

Heathrow
Building for the future

2019 CONSULTATIONS

This consultation is the first of two consultations in 2019, building on consultation feedback from last year, which will seek views on the following topics:

January 2019 – Airspace and Future Operations Consultation

- Future runway operations
- Airspace change for an expanded Heathrow
- Airspace change to make better use of our existing two runways

June 2019 – Airport Expansion Consultation

- Statutory consultation for Development Consent Order
- Heathrow's preferred masterplan, including the new runway and associated infrastructure
- Managing and mitigating the effects of airport growth

This presentation is an overview of what we are seeking feedback on in January's consultation.

FUTURE RUNWAY OPERATIONS

1) DRAFT NOISE OBJECTIVE

- Where we can, we want to take the opportunities presented by expansion to share the benefits of improving aircraft technology to reduce the impacts on local communities while enabling airlines to grow.
- The Government also has to make sure that “noise objectives” are set for certain airports where noise might be a problem, including Heathrow.
- We have been engaging with the Government on the development of proposals for a noise objective for Heathrow. Although it is for the Government to set the noise objective, we are consulting on a proposal for the Government to consider.

Our draft noise objective:

“To limit and, where possible, reduce the effects of noise on health and quality of life and deliver regular breaks from scheduled flights for our communities during the day and night. We need to do this whilst making sure the measures we put in place are proportionate and cost effective”.

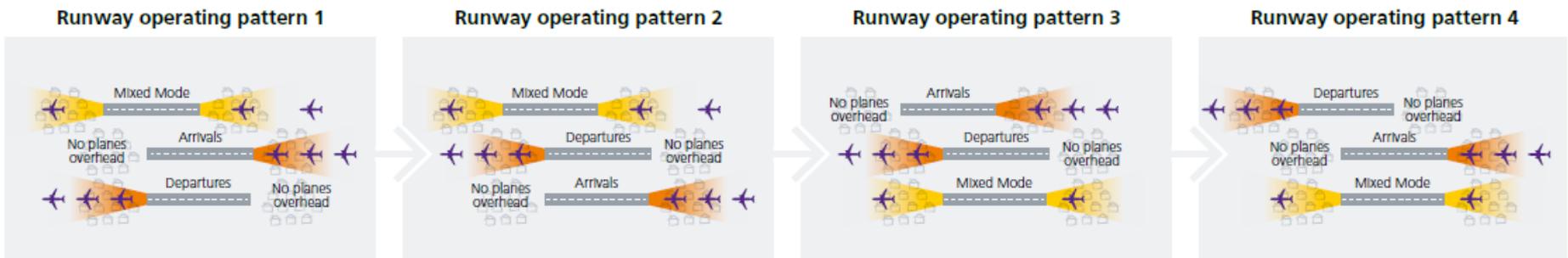
Consultation question: Do you support our proposals for a noise objective?

2) *RESPITE THROUGH ALTERNATION*

- At Heathrow we use specific runway operating procedures to manage noise and provide regular breaks from planes flying overhead for our communities.
- With expansion we will be able to provide respite to communities affected by aircraft noise in two ways:
- By **alternating our runways**, we will provide respite for those living closer to the airport
- By **alternating our airspace**, we will provide respite for those living further away
- With three runways, one runway will be used for arrivals, one runway will be used for departures and the remaining runway is 'mixed mode' which means it will be used for both departures and arrivals.

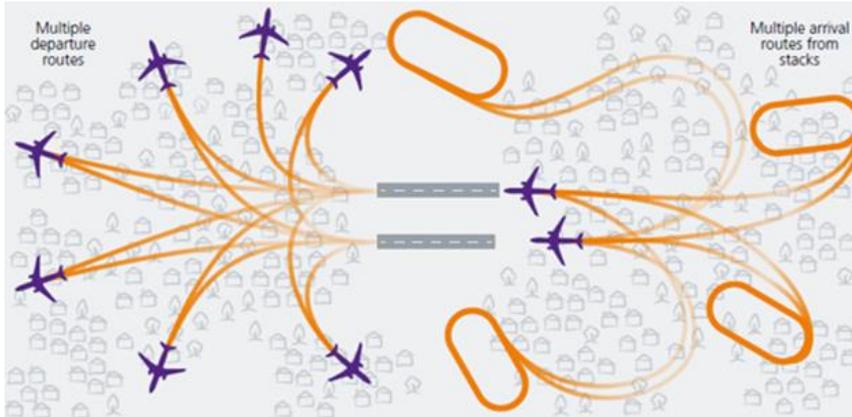
RUNWAY ALTERNATION

- We know that in order to provide daily respite for every community close to the airport we would need to use each of the four runway operating patterns.
- This means that if each runway operating pattern was of equal length there would be a change every 4-5 hours.
- Alternatively, we could provide longer periods of respite, but not every day.
- It is not possible for every community to have respite every day for more than 4-5 hours.

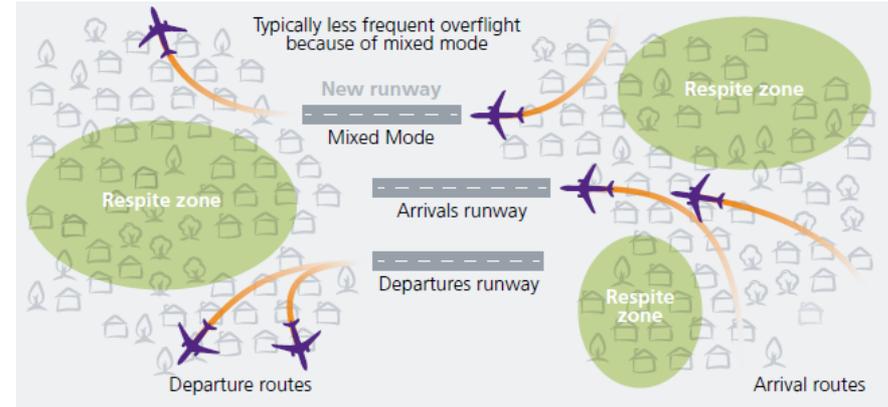


This example shows westerly operations

AIRSPACE ALTERNATION



How aircraft currently arrive & departure



How aircraft could arrive & depart with airspace alternation in future

- Airspace alternation will use specific areas of airspace for specific runways, both on arrivals and departures
- As the runway alternation pattern changes, we will also alternate the corresponding areas of airspace that are in use at any particular time
- **This will allow us to provide periods of respite from overflight for the first time to areas much further away from the airport – something that is not possible today**

Consultation question: Would you prefer to have longer periods of respite less frequently (all day on some days but no relief on other days) or a shorter period of respite (e.g. for 4-5 hours) every day?

3) DIRECTIONAL PREFERENCE



Question: Should we prefer westerly operations during the day and easterly operations at night to reduce the total number of people affected by noise?

Question: Should we sometimes intervene to manage the direction of arriving and departing aircraft to provide relief from prolonged periods of operating in one direction – even if that means slightly increasing the number of people affected by noise?

When winds are light (below 5 knots) aircraft can potentially take off or land in either direction. At Heathrow, winds are light on average 20% of the time. This is when preference can be applied.

4) NIGHT FLIGHTS

- We know that night flights are a particularly sensitive aspect of the operation for local communities
- Night flights are also 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 flights at night and early in the morning.
- We continue to support the Government's expectation of a 6.5 hour scheduled night flights ban. Our view is that a 6.5 hour ban should not begin before 11pm or end after 6am.

It is important to understand the difference between the scheduled time (the times shown on arrival and departure boards) and the time planes arrive or depart from the runway.

Using arrivals as an example:

- The **scheduled time** of an arrival is the time that the plane reaches the airport stand (when the plane stops at the terminal gate and you get off)
- The **runway time** is the time the plane touches down on the runway.

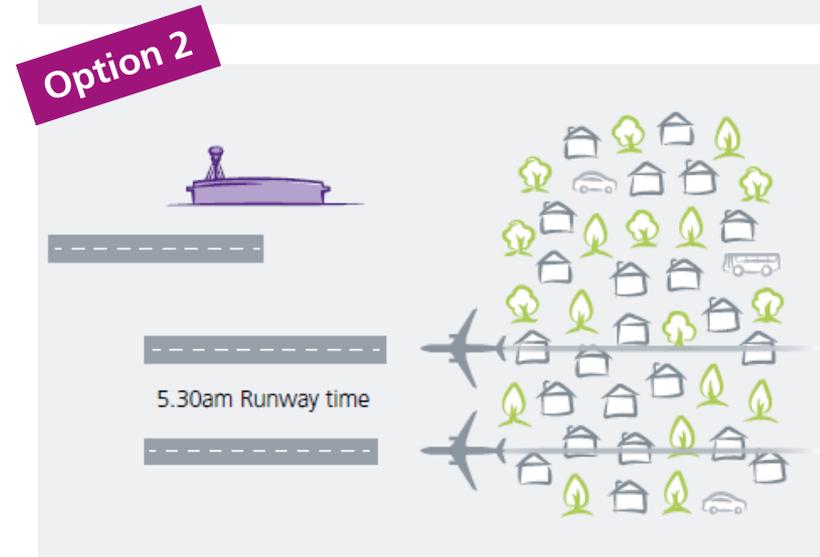
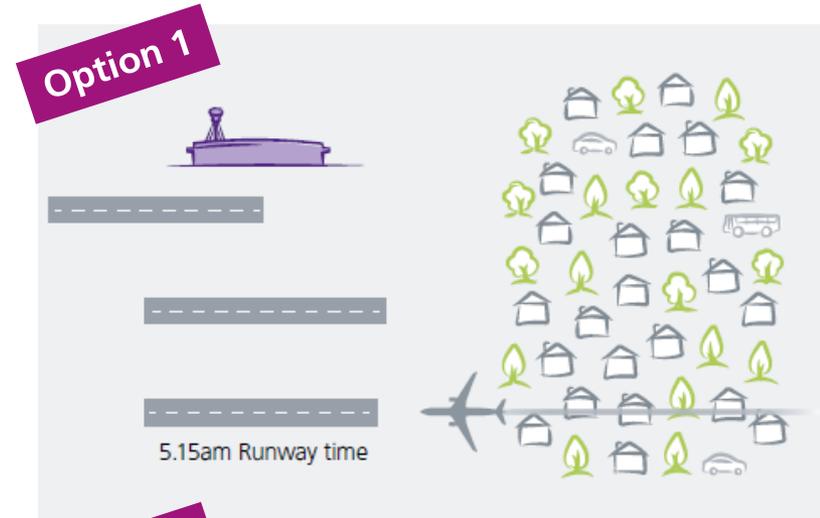
NIGHT FLIGHTS

Our early work has shown that to land our early morning arrivals later in the morning but still land the same number of flights (in a shorter amount of time) there are two options:

1. **Schedule flights from 5.30am** (runway time 5.15am) using one runway.
2. **Schedule flights from 5.45am** (runway time 5.30am) using two runways.

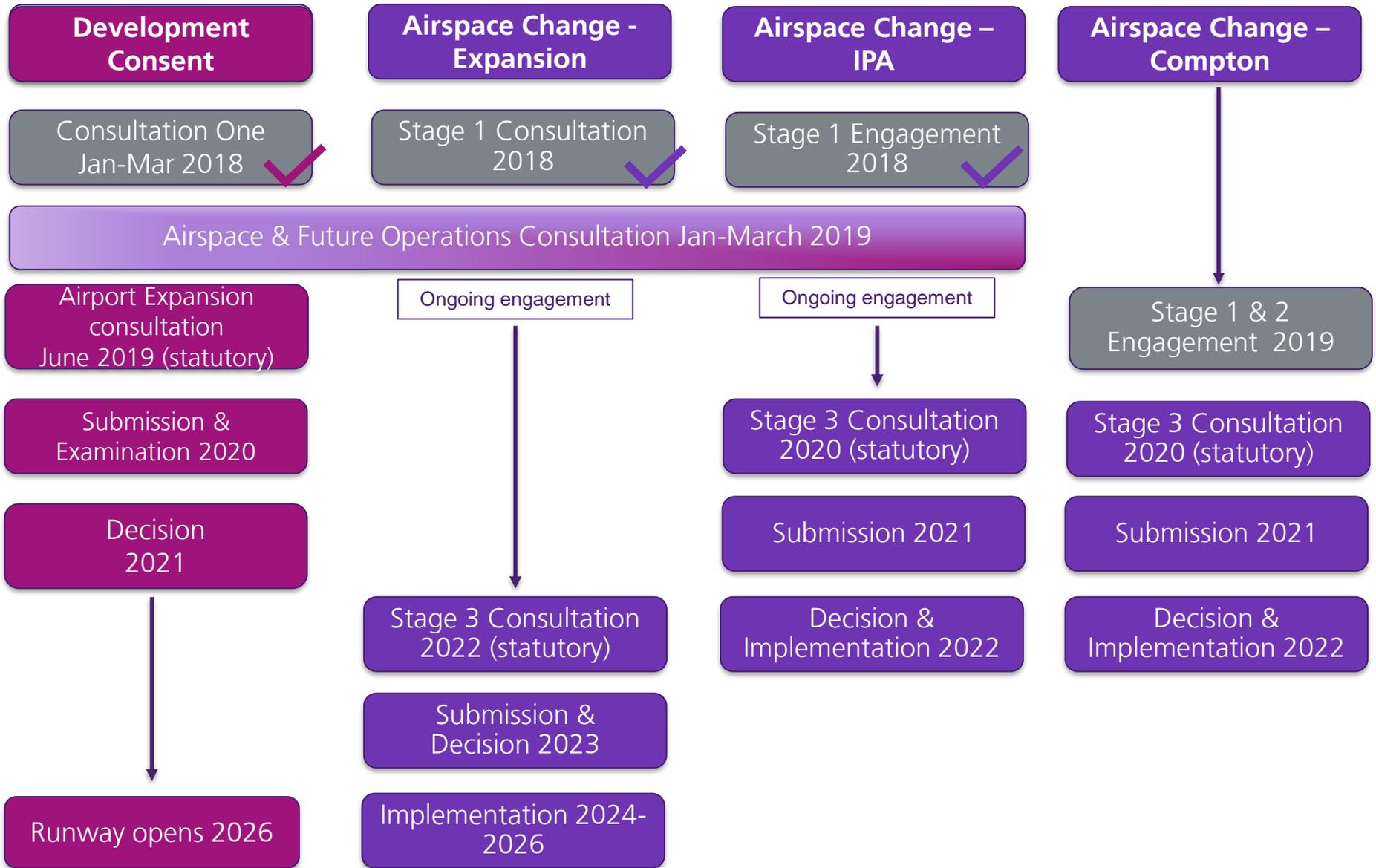
Consultation question (early morning arrivals): To help inform our consideration of the options for early morning arrivals, we want to know whether you would prefer Option 1 or Option 2.

Consultation question (other restrictions): How should encourage the use of the quietest type of aircraft at night (outside the proposed scheduled night flight ban)?



AIRSPACE CHANGE

INDICATIVE TIMELINE – EXPANSION AND CURRENT OPERATIONS

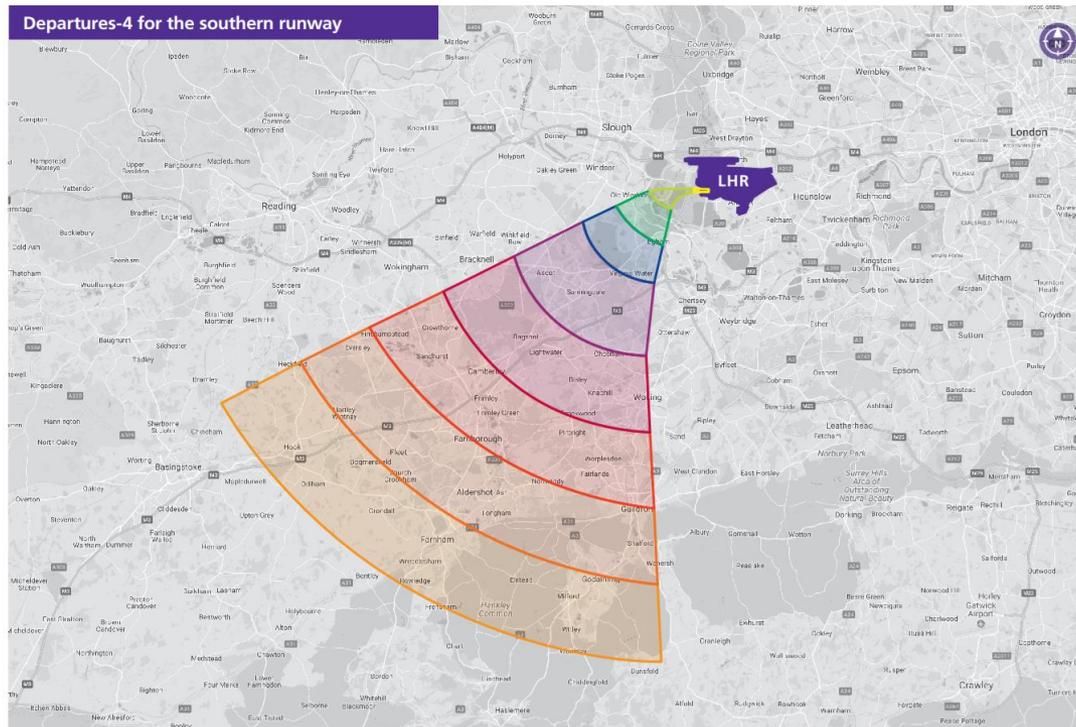


5) AIRSPACE CHANGE - FOR EXPANSION AND EXISTING TWO RUNWAYS

- We want local communities to tell us what we should take into account when designing new flight paths – both for expansion, and to make better use of our existing runways.
- In this consultation, we are presenting the geographic areas within which flight paths could be positioned. We are asking what local factors should be taken into account when developing new flight paths within these geographically defined areas known as '**design envelopes**'.
- The design envelopes presented cover both:
 - Potential flight paths for an expanded Heathrow i.e. with a third runway
 - Potential new flight paths for some arrivals to make better use of our existing two runways i.e. prior to the operation of a third runway.

EXAMPLE OF A DESIGN ENVELOPE FOR EXPANSION

In total there are 18 design envelopes for arrival and departure flight paths into each of the three runways (northern, middle and southern) on easterly and westerly operations.

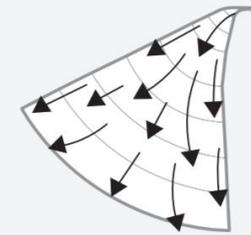


KEY

-  Design envelope
-  Heathrow Airport
-  below 500ft
-  500ft to 3000ft
-  1000ft to 6000ft
-  2000ft to 9000ft
-  3000ft to 12000ft
-  4000ft to 15000ft
-  5000ft to 18000ft
-  6000ft to 21000ft

This is the design envelope for **departures** from the **southern runway** on **westerly operations**

Direction of ascending aircraft within the envelope Departures-4

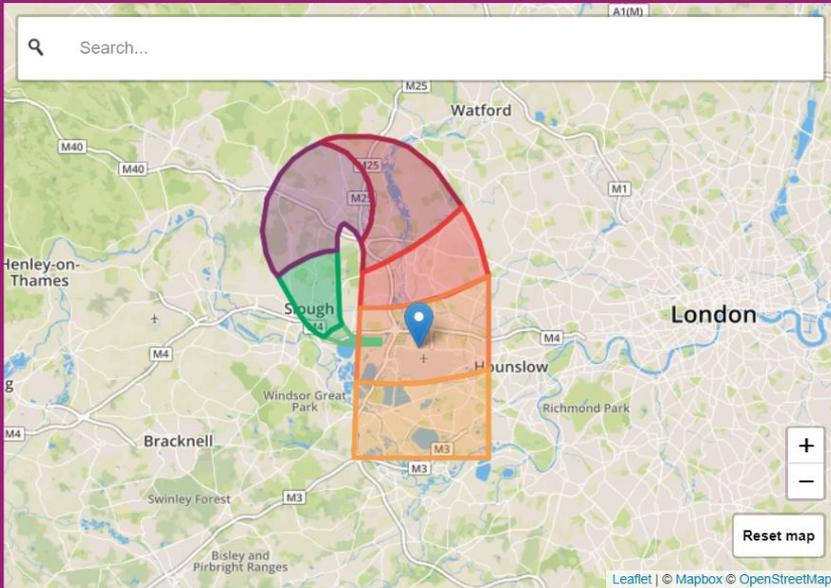


The arrows illustrate the range of potential flight paths we could position within an envelope. They do not indicate that flights would be spread throughout the envelope.

Consultation question: What sites or local factors should we be aware of in your area (or other area of interest to you), when designing flight paths for an expanded three-runway Heathrow?

ONLINE POSTCODE CHECKER - EXAMPLE

Below is a list of design envelope(s) that the postcode or area of interest you have searched for is situated within.



Please click on the individual coloured segments for an indication of aircraft heights in each location.

Using postcode '**TW6 2GW**' – it shows that this area is within 5 different design envelopes = D10, D7, D8, D9, I3, I2, I1

[D = Expansion departures, A = Expansion arrivals, I = Two runway arrivals with IPA]

By providing information on the **number**, **height** and **noise** of potential flights in an area, our design envelopes aim to give residents an understanding of the potential impact of flights and helps you to respond to this consultation.

Please click on the individual coloured segments for an indication of aircraft heights in each location.

Select a design envelope below for more information on the number, height and noise of potential flights.

A = Expansion arrivals, D = Expansion departures, I = Two runway arrivals with IPA

D10 D7 D8 D9 I3 I2 I1

Expanded Heathrow (3 runways)

Design envelope:	D10
Envelope Type:	Departure
Height band:	5000ft to 18000ft
Number of flights:	0-17 Flights per hour
Number of these flights above 65 decibels:	0-3 Flights per hour

Flight paths within this area may be active at the same time as flight paths within the arrivals design envelopes in the same area, but arrivals would be at a much lower height (below 1000ft).

*MAKING BETTER USE OF OUR EXISTING RUNWAYS -
INDEPENDENT PARALLEL APPROACHES*

MAKING BETTER USE OF OUR EXISTING RUNWAYS - INDEPENDENT PARALLEL APPROACHES

- As part of this consultation, we are also consulting on a proposed short-term change to the way that some aircraft arrive at Heathrow.
- This is known as Independent Parallel Approaches (or “IPA”) and involves some new arrival routes into Heathrow from the holding stacks. Some of these flight paths could overfly areas that are not affected by Heathrow arrivals today.
- The introduction of IPA requires an airspace change to be approved by the CAA, and our current consultation on IPA will form part of our evidence of engagement with local communities and affected stakeholders.
- IPA will make us more efficient and more resilient to disruption, reducing the chances of delays for passengers. Any airspace changes required would be replaced by our longer-term airspace design, if our third runway is approved.
- IPA is also one of a host of measures which could be used to enable up to 25,000 extra flights per year on our existing two runways, in advance of the completion of the third runway. Additional flights would have to be granted through the DCO.

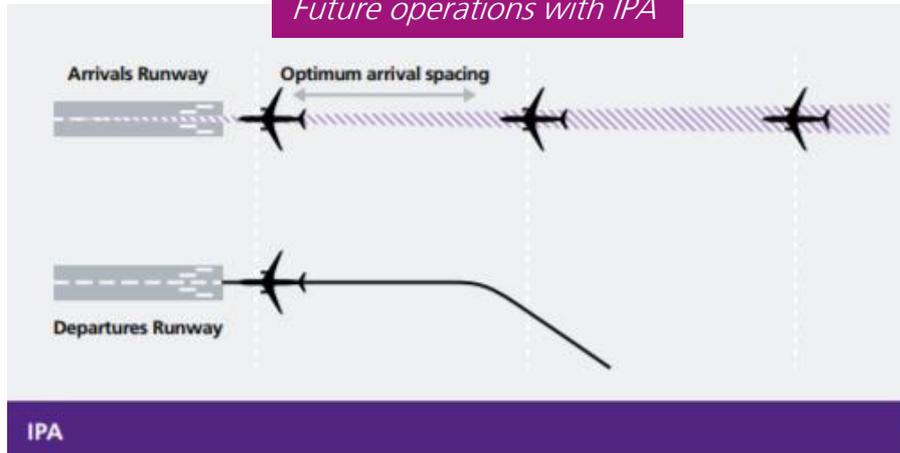
AIRSPACE CHANGE – TWO RUNWAY OPERATIONS

How does IPA work in practice...

Current operations



Future operations with IPA



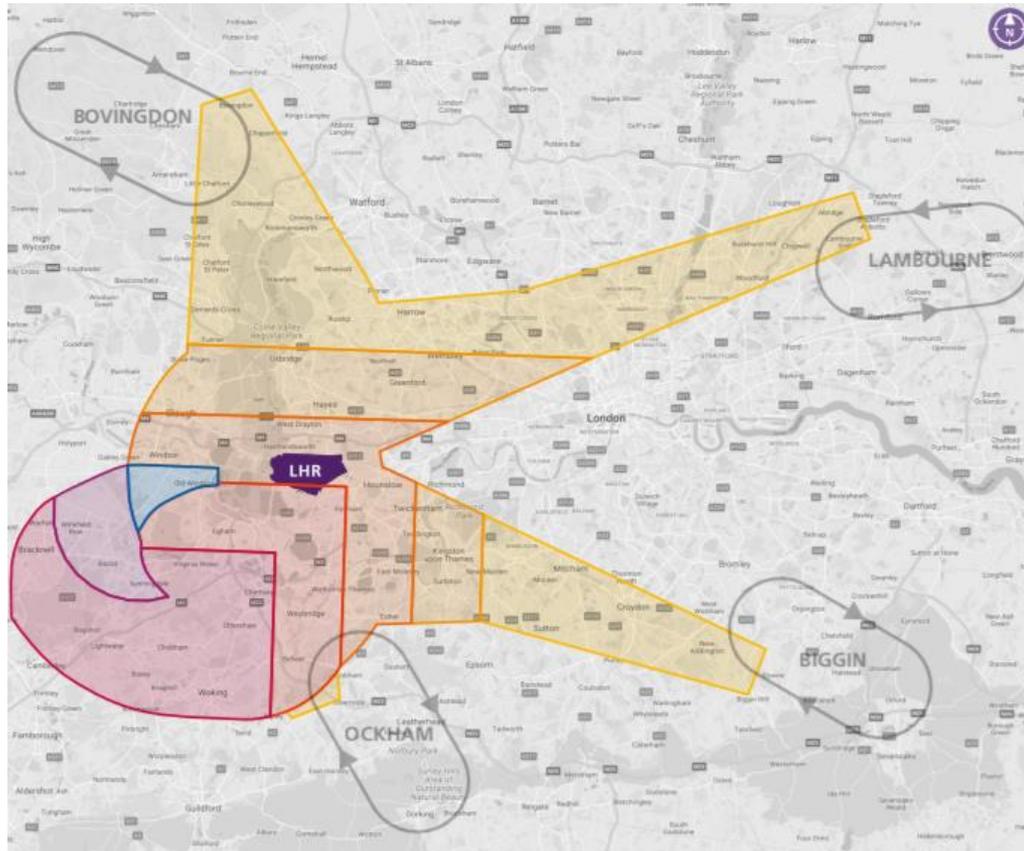
IPA

EXAMPLE OF AN IPA DESIGN ENVELOPE

In total there are 3 design envelopes for arrivals flight paths

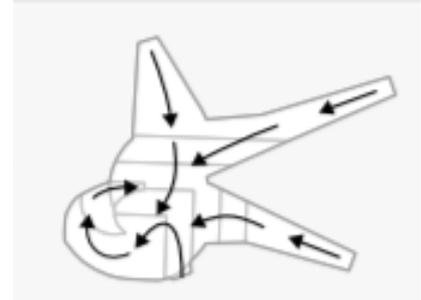
KEY:

-  Design envelope
-  Holding stack
-  Heathrow Airport
-  1,000 - 2,000ft
-  2,000 - 3,000ft
-  3,000 - 4,000ft
-  4,000 - 5,000ft
-  5,000 - 6,000ft
-  6,000ft - 7,000ft
-  7,000ft +



This is the design envelope for the southern runway on easterly operations

Direction of descending aircraft within the envelope IPA A3



Consultation question: What sites or local factors should we be aware of in your area (or other area of interest to you), when designing new arrival flight paths to make better use of our existing two runways?

REDESIGNING THE EASTERLY COMPTON DEPARTURE ROUTE

COMPTON DEPARTURE ROUTE – EASTERLY OPERATIONS

- Over the next few years we would like to make changes to address the issues with the easterly Compton route by considering the options for a new departures procedure
- To do so we will need to go through the CAA's airspace change process
- To start this process we plan to engage on the **design principles** for this change in the Spring of this year, and later in the year we will engage on the **design envelopes**
- This will be targeted engagement specific to the areas in the vicinity of the Compton route - we would welcome your feedback on our approach to this
- In 2020, we plan to carry out the statutory 'flight paths options' consultation.

Indicative timeline

**Airspace Change –
Compton**

Stage 1 & 2
Engagement 2019

Stage 3 Consultation
2020 (statutory)

Submission 2021

Decision &
Implementation 2022