

APPENDIX 4: ENGAGEMENT MATERIAL

Appendix 4A: Engagement Material

Appendix 4B: Engagement Material Documents

Appendix 4C: Engagement Material Presentations



HEATHROW - STAGE 1A DEFINE – IPA DESIGN PRINCIPLES

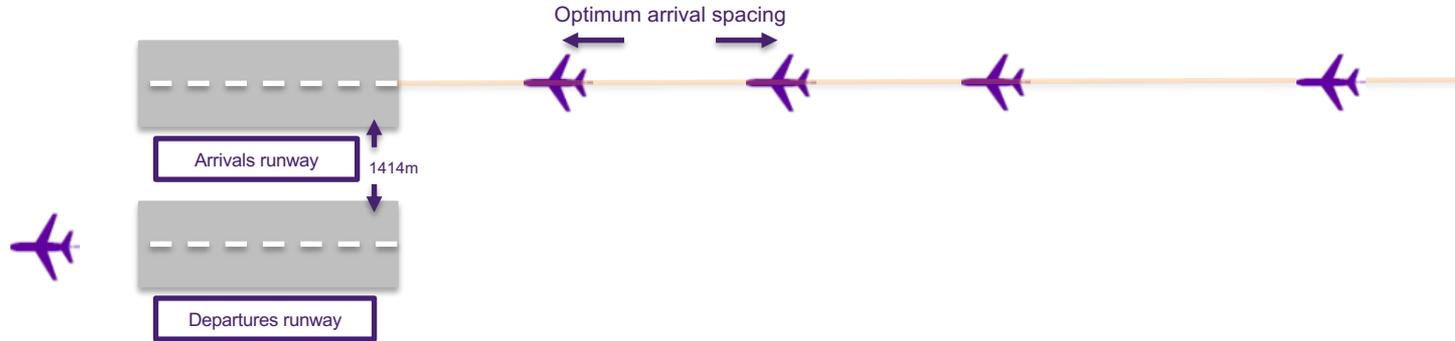
OCT 2018

Heathrow
Building for the future

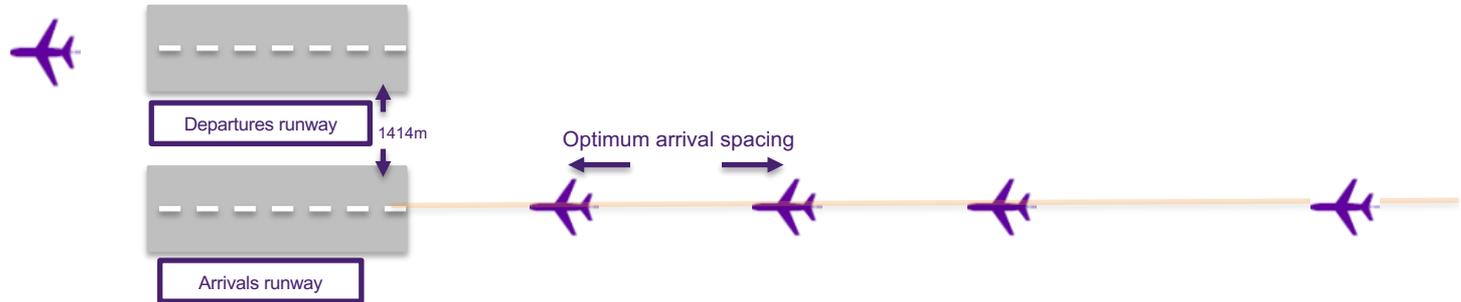
CURRENT OPERATIONS

- Heathrow's two runways currently operate simultaneously. One runway for departures, one for arrivals.
- In this mode, the runways are operated independently – arrivals to one runway do not affect departures from the other, & vice versa.
- In certain circumstances Heathrow can invoke a procedure known as “Tactically Enhanced Arrivals Mode (TEAM)”, enabling us to land some arriving aircraft on the departure runway.
- However, in this mode, the arrivals to both the departure and arrival runways are dependent on each other and cannot land at the same time, i.e. the number of aircraft landing on the arrivals runway is reduced to accommodate those landing on the departures runway.
- This dependency reduces the number of aircraft that could feasibly be landed on both runways.

CURRENT OPERATIONS



ALTERNATING TO



LANDING ON THE DEPARTURES RUNWAY

Although most of the time we use one runway for departures and one for arrivals, when there is a build-up of delays both runways can be used for landing. This can also be known as TEAM

We can land on the departures runway when airborne holding delay reaches certain thresholds:

- Between 06:00 and 06:29 where there is a forecast delay of 10 minutes or more
- Between 06:30 and 07:00 where there is a forecast delay of five minutes or more

(Between 06:00 and 07:00 there is no limit on the number of arrivals that can land on the designated departures runway)

- After 07:00 where there is a forecast delay of 20 minutes or more¹

After 07:00 no more than six arrivals per hour are permitted to land on the designated departures runway²

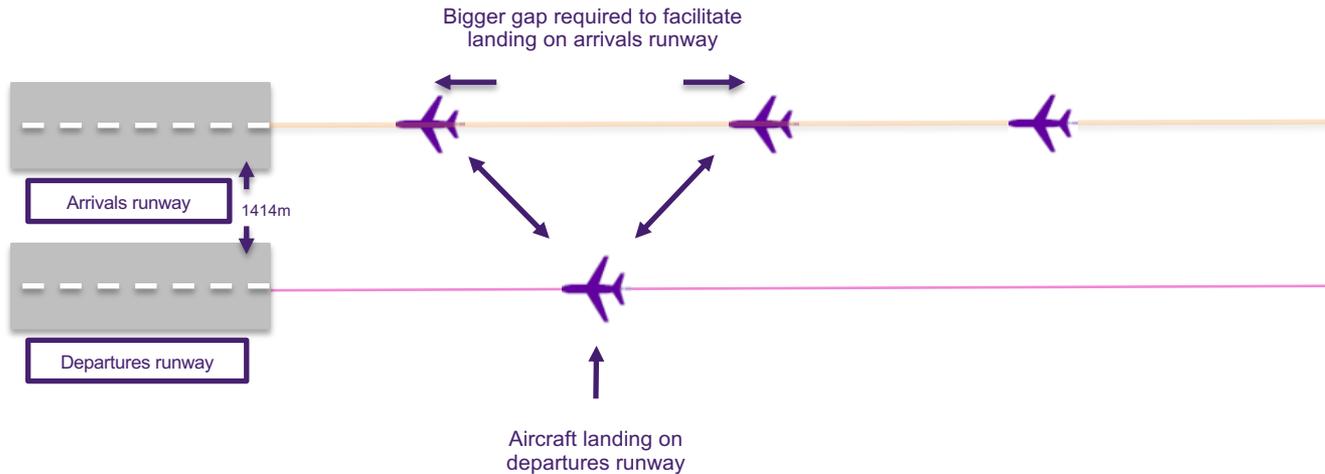
Easterly operations

Landing on the departures runway after 06:00 is also permitted on easterly operations. This is a similar practice to westerly operations although the Government limits do not apply to the numbers of arriving aircraft landing on the departures runway after 07:00.

¹ These rules apply to westerly operations only.

² Landing more than 6 per hour may occur for safety reasons only

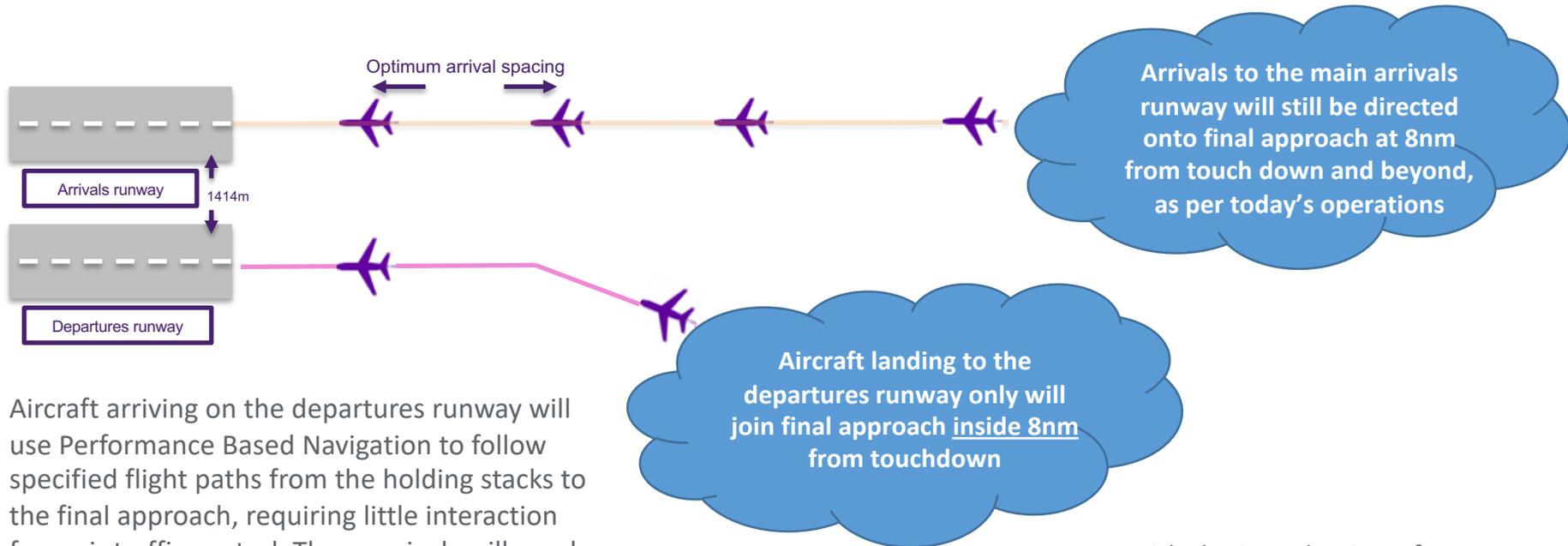
LANDING ON THE DEPARTURES RUNWAY



- When arriving aircraft are allowed to land on the departures runway, arrivals to the departures and arrivals runway must be spaced by at least two nautical miles.
- To achieve this, the spacing between aircraft on the landing runway has to be increased compared to when only one runway is used for landing.
- This additional spacing means that fewer aircraft land on the arrivals runway. So, even if six aircraft were to land on the departures runway in an hour, the overall landing rate across both runways for that hour only increases, on average, by two aircraft.

WHAT IS IPA?

Independent Parallel Approaches (IPA) will seek to remove the dependency between simultaneous arrivals to both runways so that the landing rate on the arrivals runway does not have to reduce to enable additional aircraft to land on the departures runway.



Aircraft arriving on the departures runway will use Performance Based Navigation to follow specified flight paths from the holding stacks to the final approach, requiring little interaction from air traffic control. These arrivals will need to join final approach closer than 8nm from touchdown to ensure that the tracks of the aircraft using the main landing runway remain unchanged.

This will require a change to Heathrow's Noise Abatement procedure, subject to approval from The Department for Transport.

With the introduction of IPA, aircraft landing on the arrivals runway would continue to be directed by air traffic control as they are today and be vectored onto final approach outside 8nm from touchdown.

IPA IN THE CONTEXT OF FUTURE EXPANSION

- Whilst Heathrow is operating within its maximum capacity of 480,000 Annual Transport Movements (ATMs), IPA will increase resilience which will enable more efficient prevention of and recovery from delays. We are therefore planning to introduce IPA in 2022, regardless of whether we expand.
- As part of our DCO we are also considering putting forward plans to increase the ATM cap to release additional capacity. This would be an interim measure some years ahead of the opening of the new runway.
- The use of IPA between 06:00 and 07:00 has the potential to directly support an increase in declared capacity in the hour. IPA also provides increased resilience if there are additional ATMs before the opening of a new runway.
- IPA is also one of a host of measures (eTBS, RECAT, EU598) which will support Heathrow's ambition to enable a longer scheduled night time ban.
- By increasing resilience, IPA has the potential benefits of:
 - Fewer arrivals on the departures runway, improving respite periods because we can land more aircraft in the hours when we do land on the departures runway.
 - A reduction in the number of late running flights because we are more efficient when we land on the departures runway.
 - A reduction in aircraft holding in Heathrow's stacks because we prevent and recover more quickly from delay.

IPA – WHAT DOES THIS MEAN IN PRACTICE?

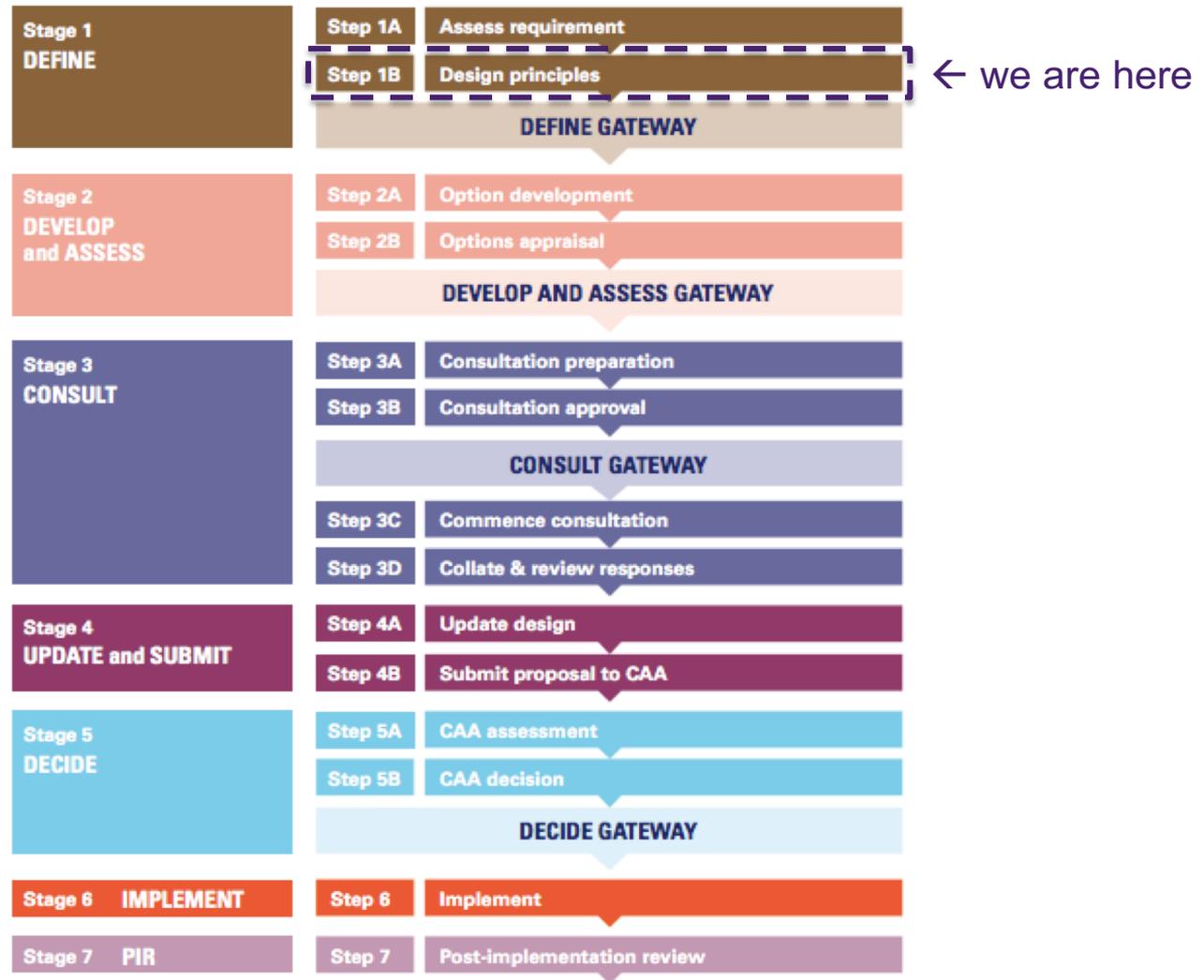
- The new flight paths needed for IPA will be using Performance Based Navigation (PBN) and will need to 'fit' into Heathrow's existing airspace and for safety reasons need to be designed to avoid the existing arrival swathes into Heathrow.
- Therefore, those aircraft landing on the departures runway will not be able to operate wholly within the existing arrivals swathe and will fly over some new areas.
- Heathrow's existing arrivals will remain unchanged as they will continue to operate within Heathrow's current arrival swathe.
- We will not be seeking to make a change to the rules on the maximum number of aircraft allowed to land on the departures runway per hour.
- The IPA routes will only exist in a two-runway environment and will be superseded by our airspace design for expansion.

CAA CAP1616

- In January 2018 the CAA launched its guidance on the regulatory process for changing airspace design: CAP1616.
- CAP1616 provides a process framework to be used when designing airspace and is split into seven stages as shown on the next page.
- We are now in the 'Define' stage of the process whereby Heathrow is seeking views on the proposed design principles to be used in considering the airspace design options for IPA.
- We will be aiming to submit the final set of design principles to the CAA for the Stage 1 Define Gateway in December 2018.

CAA AIRSPACE CHANGE PROPOSAL PROCESS (CAP1616)

Figure 1: Overview of the airspace change process



WHAT IS A DESIGN PRINCIPLE?

- The CAP1616 guidance requires the production of design principles for each airspace change.
- Design principles essentially provide a list of high level criteria that the proposed airspace design options should meet. They also provide a means of analysing the impact of different design options and a framework for choosing between options.

CAP1616 states that:

- The development of design principles should provide “a shortlist of principles to inform the development of airspace design options” and a “framework against which airspace design options are evaluated”.
- Principles “are in no way immutable and, as a part of the process for the establishment of the airspace design principles, should be challenged as part of the ongoing dialogue with stakeholders”.

HOW HAVE WE DEVELOPED DESIGN PRINCIPLES?

Heathrow has a long history of engagement through established groups:

- Heathrow Community Noise Forum (HCNF)
- Heathrow Community Engagement Board (HCEB)
- Airline groups
- Heathrow Strategic Planning Group (HSPG)
- Future Airspace Strategy Industry Implementation Group (FASIIG)

Earlier this year we also conducted a public consultation asking for views on potential design principles to be used in the redesign of airspace required for Heathrow's third runway.

After reviewing the consultation feedback and engaging further with relevant stakeholder groups, Heathrow developed a set of 10 design principles.

These were submitted to the CAA on 31st August and were approved at the Define Gateway meeting on 28th September.

Having gained significant insight into our stakeholders' priorities for airspace design, we propose to use a similar, but not identical, set of design principles for IPA as our starting point for this discussion.

HEATHROW'S MANDATORY DESIGN PRINCIPLES FOR IPA

| | |
|---|--|
| | |
| 1 | Must be safe |
| 2 | Must meet Heathrow's capacity requirements |
| 3 | Must meet three NPSe noise policy tests |
| 4 | Must meet local air quality requirements |
| 5 | Must base our airspace design on the latest navigation technology widely available |

HEADLINE DESIGN PRINCIPLES FOR IPA FOR PRIORITISATION

There are 4 categories within which the Design Principles can be placed:

- a. Minimising noise
- b. Minimising fuel and CO₂
- c. Maximising operational efficiency (air traffic control workload)
- d. Minimising impact on other airspace users

a



Minimise the impact of aircraft noise

Future airspace design will comply with Government regulation and policy on noise impact. In addition to this Heathrow will aim to reduce effects on health and quality of life from noise by considering local circumstances, and by contributing to improvements where possible.

a

b



Minimise fuel requirements and greenhouse gas emissions

Heathrow would seek to minimise the amount of fuel and CO2 emissions required by our flight paths, by keeping flight paths as short and direct as possible. Heathrow would avoid long and complicated paths that require more fuel (and therefore greater cost) for airlines.

b

c



Simple and efficient flight paths for operational efficiency

Heathrow would prioritise simple flight paths that minimise the workload of pilots and air traffic control.

c

d



Minimise impact on other airspace users

Heathrow would minimise our impact on other airspace users, especially neighbouring airports of Luton, Gatwick and RAF Northolt.

This means Heathrow are willing to share airspace where necessary, only seek extra airspace where justifiable and look for opportunities to give away airspace that is not essential for future operations.

d

NOISE DESIGN PRINCIPLES FOR DISCUSSION & PRIORITISATION

There are lots of different ways that you can apply the principle of minimising noise, and they are sometimes contradictory. For example, should you spread flight paths over a wider area (affecting more people) or try to concentrate them (affecting less people but with those people overflowed to a greater extent)?

The following slides present 4 noise-related design principles:

- e. Minimising the number of people newly affected by noise
- f. Providing predictable respite from noise
- g. Minimising the total number of people affected by noise
- h. Avoiding multiple flight paths over the same community

e



Minimise the number of people newly affected by noise

IPA flight paths will overfly areas not currently regularly overflowed by Heathrow arrivals. Where possible, we will avoid putting in routes over the most heavily populated areas.

e

f



Design multiple flight paths, with only one flight path active at a time to provide predictable respite from noise

Heathrow would provide local communities with predictable respite from noise by scheduling the use of different flight paths by day/week/month so that communities can look ahead and know when they are likely to be overflowed. The use of additional flight paths would mean each flight path was flown less frequently but more people would be affected by noise.

f

g

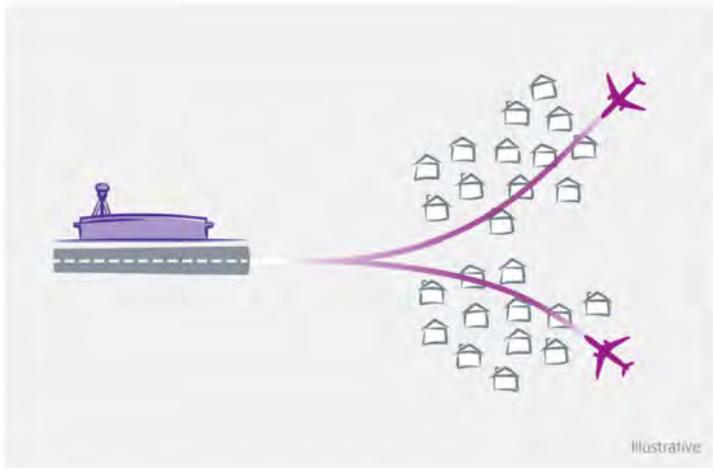


Minimise the total number of people affected by noise

Heathrow would aim to put flight paths over the areas with the lowest number of people. This will mean fewer people overflowed, but each of those communities would be more affected compared to other design principles. This will lead to planes concentrated over a smaller number of routes.

g

h



Avoid multiple flight paths over one community

Where possible, Heathrow would aim for different IPA flight paths to be placed over different communities and avoid using the same airspace as routes from nearby airports

h

OTHER DESIGN PRINCIPLES FOR DISCUSSION & PRIORITISATION

We'd now like to look at some further principles. This time, we want to understand whether or not you agree that Heathrow should be:

- i. Prioritising rural areas over urban areas
- j. Prioritising parks and open spaces over residential areas
- k. Prioritising commercial and industrial areas over residential areas

i



Prioritise flight paths over rural areas, rather than over urban areas

Heathrow would aim to put planes over rural areas rather than urban areas, as they are less populated.

i

j



Prioritise flight paths over parks and open spaces, rather than over residential areas

Heathrow would aim to put planes over parks and open spaces rather than residential areas in towns and cities.

j

k



Prioritise flight paths over commercial and industrial areas, rather than residential areas

Heathrow would aim to put planes over commercial areas (like shopping centres and business parks) and industrial areas (like factories and warehouses) rather than residential areas, wherever possible.

k

PRIORITISATION

- CAP1616 highlights that design principles can be contradictory, for example where avoiding one kind of impact is likely to increase another:

“some of the principles may contradict one another and some may be prioritised over others: this will be an iterative process and a qualitative one rather than a purely numerical exercise with binary answers.”

- Prioritisation of design principles help our airspace designers to compare different design options when we reach that stage of the CAP1616 process.



Independent Parallel Approaches (IPA) Design Principle Engagement - Discussion Guide

Overview

Changes to flight paths are submitted to and approved by the CAA, following the Airspace Design Guidance provided in its document known as 'CAP 1616'. This guidance sets out a process framework following a multi-stage approach for changing airspace. The first stage of this process is to develop a set of 'design principles'. To do this we are engaging with a number of established community and industry groups, local authorities and members of the general public through focus groups.

There are a number of core principles that we must accommodate when introducing new flight paths for Independent Parallel Approaches (IPA). These include Government policy, safety, environmental and operational factors. However, beyond these core requirements there are a number of options and 'trade-offs' to choose between when deciding where to position the future IPA flight paths. At this first stage, we are looking for your feedback to help decide how the principles should be prioritised when faced with different options or trade-offs.

The positions of the future IPA flight paths have not been decided yet. There will be two public consultations - the first of which will begin in January 2019 - where we will be seeking feedback on the geographic areas within which flight paths could be positioned, known as 'design envelopes'. At a later stage, there will be a further public consultation on the flight path options (i.e. our proposals for the actual routes where aircraft will fly).

Your area may see changes in future as a result of the introduction of IPA. Some areas that are not currently overflown by arrivals into Heathrow will be in the future, while other areas currently overflown by arrivals may experience fewer in the future.

Therefore, at this first stage, we would welcome as much feedback as possible on the IPA design principles and how they should be prioritised to ensure we consider a wide range of views from all the stakeholder groups we are engaging with.

Core Design Principles for IPA

There is always one principle that must be met – safety. There are then other principles that Heathrow has to accommodate – such as Government policy, environmental and operational factors. For example:

- We have to make sure we are able to meet our capacity requirement
- We have to make sure we don't break Government regulations on the amount of aircraft noise and the impact on air quality
- We have to use the latest technology

However, beyond these core requirements there are a number of options and 'trade-offs' to choose between. For example, we could choose to prioritise reducing the noise impact on local communities, or prioritise minimising fuel requirements for the airlines and CO₂ emissions. We would like you to consider each of these priorities and see which you think is the most important.



Heathrow Airport IPA Design Principles Engagement - Discussion Guide

Design Principles Categories

There are 4 categories within which the design principles can be placed:

- a. Minimising noise
- b. Minimising fuel and CO₂
- c. Maximising operational efficiency (air traffic control workload)
- d. Minimising impact on other airspace users

We want to find out which principles you think are most important to your area. We would like you to prioritise principles a-d in terms of which you believe are more/less important to your area.

Noise Design Principles

There are lots of different ways that you can apply the principle of minimising noise and they are sometimes contradictory. For example, should we implement more new routes to spread flight paths over a wider area (affecting more people) or minimise the number of new routes (affecting less people but with those people overflowed to a greater extent)?

There are 4 noise-related design principles that we have presented:

- e. Minimising the number of people newly affected by noise
- f. Providing predictable respite from noise
- g. Minimising the total number of people affected by noise
- h. Avoiding multiple flight paths over the same community

We would like you to prioritise noise principles e-h in terms of which you believe are more/less important to your area.

Other Design Principles

We'd now like you to look at some further principles. This time, we want to understand whether or not you agree that Heathrow should be:

- i. Prioritising rural areas over urban areas
- j. Prioritising parks and open spaces over residential areas
- k. Prioritising commercial and industrial areas over residential areas

We would like you to prioritise noise principles i-k in terms of which you believe are more/less important to your area.

Feedback

You also have the opportunity to propose any other design principles that you think we should consider and we ask that you include those in a prioritised order.

Together with your prioritisation and any other principles you have suggested please give as much other supporting rationale for your decision.

For example:

- Why is a design principle more/less important to your area?
- Why should Heathrow not prioritise a certain design principle?



Heathrow Airport IPA Design Principles Engagement - Discussion Guide

All comments and feedback need to be received by the **9th November 2018** by emailing airspace@heathrow.com.

Next steps

The feedback we receive will be collated, analysed and fed into the production of a final set of principles. This will be considered alongside other requirements such as policy, safety and environmental. We will then present our final proposed list of design principles, either in workshops or via email.

We aim to submit the final set of design principles to the CAA for the 'Stage 1 Define Gateway' in December 2018.

If accepted by the CAA, they will then be used to qualitatively evaluate our airspace design options as we move towards the next stage in the process.

We will continue to engage with you at key stages throughout the design process for IPA, including at two public consultations – the first in January 2019.

APPENDIX 4B: ENGAGEMENT MATERIAL DOCUMENTS

DOCUMENT 1

Heathrow/Heathrow Community Engagement Board Joint Working Group – Summary notes and actions

Date: Tuesday 2nd October 2018, 12 noon - 5pm

Location: Compass Centre

Attendees:

HCEB - [REDACTED]

HAL - [REDACTED]

Guest Presenters:

[REDACTED]

| | Notes | Action |
|-----|---|------------|
| 1 | <u>Introductions</u> | |
| 1.1 | [REDACTED] outlined the HCEB/HAL SharePoint system and advised [REDACTED] and [REDACTED] had also been given access. | |
| 1.2 | The meeting agreed that the best way to capture HCEB's recommendations was in a log which would be circulated to the team to validate afterwards. The meeting agreed that only high level recommendations would be made public. | |
| 1.3 | [REDACTED] encouraged the HCEB to provide suggestions as to what they wanted to be included on the meeting agendas' forward looks. | |
| 1.4 | [REDACTED] requested that all requests to engage with the HCEB from HAL came through [REDACTED] and that efforts were made to coordinate all of their meetings on the same day. | [REDACTED] |
| 1.5 | [REDACTED] offered to ensure that there was a meeting room available to the HCEB prior to the joint working group meetings. | [REDACTED] |
| 1.6 | [REDACTED] reported that HAL's view on what success looks like with the HCEB was with senior management for consideration. | |
| 1.7 | The team discussed upcoming joint working group meeting dates and [REDACTED] requested the next one was held on either 24 th or 30 th October to coordinate with other meetings [REDACTED] already booked in at Heathrow. | |

Heathrow Airspace

Heathrow's Design Principles for Independent Parallel Approaches

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| 1.8 | reviewed the actions from the last meeting. It was agreed that actions like HCEB's access to Heathrow's land referencing and SME databases would be discussed offline. | |
| 2 | <u>Construction impacts and mitigation</u> – Guest presenter: | |
| 2.1 | went through a presentation (available on Sharepoint) and provided the opportunity for the HCEB to ask questions when needed. | |
| 2.2 | advised that Heathrow was aiming to ensure that people did not feel like they were living, visiting or working within a building site. | |
| 2.3 | asked if the 'Delivery model structure' considered the impact on the community. advised that community was an underlining principle that defined HAL's whole approach to delivery and construction. | |
| 2.4 | was interested in the concept of constructing as much as possible off-site and asked about pre-fabricated projects from other countries and how expansion would measure up. discussed the issues with this type of construction and how 'smart logistics' was key. | |
| 2.5 | asked how Heathrow was learning from projects of a similar scale. advised that team had visited projects both in the UK and across the world as well as liaising with other stakeholders undertaking similar projects such as Network Rail, Highways England etc. | |
| 2.6 | asked how HAL would define a 'sustainable community'. The meeting discussed the definition and agreed that is was a community that supported the people and activities within it. felt this ambition to have sustainable communities would change how the HCEB would engage with local residents. advised that 'Heathrow 2.0' and sustainability was on the forward look for future agendas which would provide the HCEB with more clarity on Heathrow's sustainability ambitions. | |
| 2.7 | explained the concept of Heathrow's logistics hubs. asked if the hubs would be owned by Heathrow. said that HAL and its contractors would only take space within facilities that had been selected for their suitability, connectivity and to ensure that the economic benefits of expansion were spread across the UK. advised that HAL would liaise with other major projects and coordinate with them so that the process was more sustainable. | |
| 2.8 | explained the six-month phasing diagrams included in the presentation could be viewed at HCEB's leisure. | |
| 2.9 | asked if works on the Grndon Waste Plant would be started before a new plant was up and running. also asked where the new plant would be located. advised that HAL's preferred site should be close | |

Heathrow Airspace

Heathrow's Design Principles for Independent Parallel Approaches

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| 2.10 | <p>to the existing one and that the plant would be re-provided before closing the existing one.</p> <p>█ asked how noisy construction would be for local residents. █ advised that HAL had been looking into this and that a key aspect of mitigation would be 'disrupting noise' for example through via vegetated noise bunds that screen local areas from noise.</p> | |
| 2.11 | <p>█ said that it was likely that construction would be one of the community's main concerns. █ said there would be a range of mitigation measures for measures such as dust and odour etc.</p> | |
| 2.12 | <p>█ asked how the impacts of construction would be communicated to residents. █ said that it was HAL's job was to make things as comprehensible as possible for residents.</p> | |
| 2.13 | <p>█ asked about the proximity of residents to the borrow pits, and if one of the borrow pits was next to Harmondsworth. █ advised that the pit would be close to remaining residents and that HAL was in the process of assessing the impacts of this and potential mitigation measures.</p> | |
| 2.14 | <p>█ asked if all the properties that were due to be compulsory purchased would be empty by the time the earthworks happened. █ felt this was important so that people did not have to live through construction if they were not staying longer term. █ said that the construction phasing meant that this was unlikely, but that HAL would closely monitor Harmondsworth to ensure the impacts were not overly adverse to residents.</p> | |
| 2.15 | <p>█ advised that HAL was aiming to ensure that construction did not impact the M25 and people going about their daily business e.g. getting home, getting to work, getting on a plane or getting cargo loaded.</p> | |
| 2.16 | <p>█ advised that following Consultation 1, HAL had sought to reduce the number of construction support sites to minimise impacts on the local area.</p> | |
| 2.17 | <p>█ asked how workers might be accommodated close to the site. █ advised that HAL was looking at how properties acquired by Heathrow could be utilised for this purpose. However, HAL believed a number of people would be local and/ or commute to the area.</p> | |
| 2.18 | <p>█ emphasised the need for HAL to stick to the commitments that they had made such as construction mitigation impacts to ensure that HAL maintained long term relationships. █ said that there would be a legal obligation for HAL to adhere to Code of Construction Practice and the mitigation measures within it. █ said that in addition, a dedicated community engagement person/team would be on site. █ said that it would be important to provide one point of contact where any enquiry could be directed to the right team/contractor.</p> | |

Heathrow Airspace

Heathrow's Design Principles for Independent Parallel Approaches

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| 2.19 | <p>■ asked if there would be employment opportunities and apprenticeships for local people. ■ advised of Heathrow's skills taskforce – ■ advised that this was also on the forward look for the HCEB to find out more information.</p> | |
| 3 | <p><u>Community engagement workshop and HCEB update</u></p> | |
| 3.1 | <p>■ provided an update following the presentation at the last joint working group meeting. ■ advised that HAL was working on utilising local networks via politicians and local groups and that ■ team was also looking for opportunities to present at residents' meetings etc.</p> | |
| 3.2 | <p>■ continued and said that HAL was writing to housing associations and building up a list of schools, faith buildings etc. which would form the basis of a mailing list to start conversations on masterplan development.</p> | |
| 3.3 | <p>In addition, ■ advised that Brunel University was holding a firework display where HAL planned to have an information stall. This would be outside the gates so people could access the information and take part in the consultation without paying for the event.</p> | |
| 3.4 | <p>■ confirmed that ■ team would have a more developed strategy soon that could be presented back to the HCEB</p> | HAL |
| 3.5 | <p>■ agreed that an 'outreach' approach was a more effective way for engagement. ■ said that the challenge HAL had was keeping the consultation material mobile and that the team was still developing ways to do this.</p> | |
| 3.6 | <p>■ advised that HAL was planning to pre-brief ward councillors on what was being shown to residents through previews of the community events.</p> | |
| 3.7 | <p>■ asked whether it was worth having someone from property at the events for residents requesting information about compensation, CPO etc. ■ said that ■ had discussed this internally but felt it may detract from the main objective of discussing the masterplan. ■ suggested that residents wanting to have this discussion could be taken into a separate room.</p> | |
| 3.8 | <p>The meeting discussed the Residents' Advisor role description that the HCEB drafted. ■ suggested that 'an understanding of property issues' was essential so the description should be updated accordingly. However, ■ was concerned that more criterion might narrow the pool of prospects. ■ agreed that it might make recruitment more difficult but envisaged it would take less time to train the candidate.</p> | |
| 3.9 | <p>The HAL team agreed to suggest places to advertise the role to better appeal to property focused professionals. ■ advised that ■ also that the role could be undertaken as a secondment but ■ advised that it was</p> | HAL |

Heathrow Airspace

Heathrow's Design Principles for Independent Parallel Approaches

| | | |
|---|--|---|
| <p>3.10</p> <p>3.11</p> <p>3.12</p> <p>3.13</p> <p>3.14</p> <p>3.15</p> | <p>envisaged the position may need to run on until beyond 2021 when the CPO would be implemented. [REDACTED] felt this was an interesting point and said [REDACTED] would be uncomfortable to offer this role beyond [REDACTED] own term which finishes next year.</p> <p>[REDACTED] advised that an HR company would help with evaluation of the role and bench mark pay against local authority roles of a similar nature. [REDACTED] thought £35 – 40k would be suitable.</p> <p>The HCEB advised that they were holding Strategic Advisory meetings over the next few weeks with their other forum dates to be finalised.</p> <p>The team also said that they were still recruiting a Chair for the Residents' Forum but they had only had two applicants by the closing date (1st October). [REDACTED] said it was possible that the HCEB would not proceed with this role or that they would postpone the upcoming residents' forum.</p> <p>[REDACTED] reported that [REDACTED] had been to an event in Harmondsworth and heard a lot of negativity regarding the residents' chair and the process. [REDACTED] said that [REDACTED] visit highlighted the need for the HCEB to ensure that engagement reaches new residents who have not yet been involved in the consultation process.</p> <p>The HCEB advised that their next meeting was due on 17th October – in the morning, there would be a Strategic Group meeting for elected members (SAGEM), in the afternoon a Strategic Group meeting for community and other stakeholders (SAGO) and then in the evening, a residents' meeting.</p> <p>[REDACTED] asked how HAL thought [REDACTED] would continue to interact with residents through the HCEB. [REDACTED] explained that [REDACTED] had previously attended the HACCC four times a year. The meeting discussed the best way to utilise [REDACTED] time and there was a suggestion of a 'Question Time' type event where people submitted questions beforehand in order to secure meaningful answers. [REDACTED] felt that the team needed to think about the event's timing and suggested that it could be held during the consultation in January or as an annual event. [REDACTED] and [REDACTED] agreed to come back with more ideas of an event with [REDACTED]. [REDACTED] said that [REDACTED] would also speak to [REDACTED] to establish thoughts on [REDACTED] role with the HCEB.</p> <p>[REDACTED] advised that [REDACTED] was going to see [REDACTED] w/c 8th October. [REDACTED] said [REDACTED] would feed back on how it went. [REDACTED] also said that [REDACTED] wanted the HCEB to host a visit for [REDACTED] to Colnbrook.</p> | <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> |
| <p>4</p> <p>4.1</p> | <p>Airspace Update and IPA Design Principles – Guest presenters: [REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED] and [REDACTED] provided presentations on the airspace update and the Independent Parallel Approaches (IPA) Design Principles respectively.</p> | <p>[REDACTED]</p> <p>[REDACTED]</p> |

Heathrow Airspace

Heathrow's Design Principles for Independent Parallel Approaches

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| 4.2 | █ explained that IPA is a project for a 'two-runway world' where airplanes land side by side. █ explained that IPA increases resilience which would enable more efficient prevention of and recovery from delays. | |
| 4.3 | █ explained that the procedure named Tactically Enhanced Arrivals Measures (TEAM) meant that aircraft occasionally land on the designated departures runway. This procedure is allowed by Govt and has been in place many years. | |
| 4.4 | HAL explained that IPA under the existing annual movement cap of 480,000 air transport movements could deliver benefits such as a reduction in late running flights and fewer aircraft landing on the designated departures runway thereby increasing respite for residents. | |
| 4.5 | █ asked about 'managed dispersal' and whether this would be taken forward as part of the consultation in January. █ advised that this was not one of the proposed design principles which would be consulted upon by each stakeholder group who would be given four weeks to feedback. █ also advised that a workshop was being held on Thursday 4 th October for local authorities as well as a meeting before the next HCNF. Public focus groups would also be used to consult upon the principles and there would be measures to try and engage with those beyond people already engaged and overflowed. | |
| 4.6 | █ asked what HAL's strategy would be to help residents understand the impact and what it meant to be overflowed. █ and █ advised that there would be sound demonstrations as part of the consultation. | |
| 4.7 | █ asked what HAL thought was the most important thing they could get from this consultation. █ said it was to find out things that the team could not get from a map (i.e. where communities thought it was fundamentally inappropriate to fly over such as a medical clinic etc.) and to build awareness of HAL's future plans. | |
| 4.8 | █ asked what HAL wanted the HCEB to feedback on. █ advised that █ was keen to find out which principles the team thought were the most important and if there were others that should be considered. | |
| 4.9 | █ asked if HAL was speaking to local authorities. HAL advised that there was a forum meeting for all affected authorities on 4 th October. | |
| 4.10 | █ explained that the next stages of the process was to consider stakeholder feedback on design principles and then submit proposed design principles to the Civil Aviation Authority. | |
| 4.11 | █ was concerned that some residents might feel betrayed if the community was not involved in the consultation process on the principles. █ said CAP1616 guidance stated that HAL should consult with 'consultative committees' and that Heathrow was carrying out extensive engagement with groups. | |

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| 4.12 | █ asked how confidential the documents would be and █ advised that these would be published. █ advised that any responses would be redacted and made available online. | |
| 5 | <u>HCEB work plan</u> | |
| 5.1 | █ discussed how █ would seek to work with ICCAN and that █ had a meeting with the new Chair set up. | |
| 5.2 | HAL discussed their suggested amendments to the HCEB's work plan. | |
| 5.3 | █ said █ was keen for someone from HAL's governance team to check that the HCEB's funding bid was on the right track. The meeting discussed how HAL could add an extra layer of governance to the HCEB's processes. | |
| 5.4 | The team discussed a point on the work plan about exploring medical provisions in the local area. █ said that the HCEB had received feedback that in certain areas such as Harmondsworth, there was a shortfall in medical facilities. The HCEB explained that they were keen to try and support on this aspect as there was a perception that, particularly through expansion, there would be added pressure on general and mental health. █ said █ would need hard evidence to refute this need. | |
| 5.5 | █ questioned why this need was not being met already. █ clarified that in the case of Harmondsworth, suitable premises were required. █ stated that some premises were sold by MHCLG but that the community needed to find out who it had been sold to. Using their contacts, the HCEB was able to find a contact at the Ministry to help. The HCEB had also been providing advice on where the community could secure funding and how to build an evidence base for this. | |
| 5.6 | The meeting discussed what parts of the work plan would be shared publicly. █ suggested that just the high-level strategic goals would be shared with strategic groups and the Board. | |
| 5.7 | The meeting discussed the need for the HCEB to respond to various consultations. █ suggested a session on the CCF to go on the forward look as the HCEB would need to respond to this. | HAL |

Heathrow Airspace

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DOCUMENT 2

Heathrow Airspace

Heathrow's Design Principles for Independent Parallel Approaches

| Local authority | Attendee(s) |
|--------------------------------|---|
| Chiltern | [REDACTED] |
| Lambeth | [REDACTED] |
| East Sussex County Council | [REDACTED] |
| Luton | [REDACTED], London Luton Airport Limited (LLAL) [REDACTED], York Aviation) |
| Kent County Council | [REDACTED] |
| St Albans | [REDACTED] |
| Windsor and Maidenhead | [REDACTED] |
| Havering | [REDACTED] |
| North Hertfordshire | [REDACTED] |
| Bracknell Forest | [REDACTED] |
| Elmbridge District | [REDACTED] |
| Guildford District | [REDACTED] |
| Hart | [REDACTED] |
| Kingston upon Thames | [REDACTED] |
| Mole Valley | [REDACTED] |
| Wokingham | [REDACTED] |
| Basingstoke and Deane | [REDACTED] re |
| Harrow | [REDACTED] |
| Waltham Forest | [REDACTED] |
| East Hertfordshire | [REDACTED] |
| Merton | [REDACTED] |
| Reigate and Banstead | [REDACTED] |
| Buckinghamshire County Council | [REDACTED] |

Heathrow Airspace

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|----------------------------|--------------|
| Hounslow | [REDACTED] |
| Spelthorne | [REDACTED] |
| Mid Sussex | [REDACTED] |
| Runnymede | [REDACTED] |
| Woking District | [REDACTED] e |
| Wycombe | [REDACTED] |
| City of London Corporation | [REDACTED] |

Heathrow Airspace

Heathrow's Design Principles for Independent Parallel Approaches

DOCUMENT 3

Sent: 05 October 2018 14:21
Subject: Heathrow's Independent Parallel Approaches - Design Principles Engagement
Attachments: IPA Design Principles Engagement Pack.pdf

Good Afternoon,

I am writing to you as a member of NATMAC to kindly request your time to consider Heathrow's Design Principles for Independent Parallel Approaches (IPA). We are currently in Stage 1 of the CAP1616 process and are seeking input, prioritisation and feedback on Design Principles from our Stakeholders. We are aiming to submit the IPA Design Principles to the CAA in December 2018.

Earlier this year we conducted a public consultation asking for views on potential design principles to be used in the redesign of airspace required for Heathrow's third runway. After reviewing the consultation feedback and engaging further with relevant stakeholder groups, Heathrow developed a set of 10 design principles. These were submitted to the CAA on 31st August and were approved at the Define Gateway meeting on 28th September.

Having gained significant insight into our stakeholders' priorities for airspace design, we propose to use a similar, but not identical, set of design principles for IPA as our starting point for this discussion. In the attached document you will find a presentation explaining IPA and Design Principles and outlining Heathrow's IPA Design Principles. We would welcome your feedback on these principles and would invite you to prioritise them as you see fit and make any suggestions that you think are relevant, which we may not have considered.

Please provide any feedback to airspace@heathrow.com by the 9th November 2018. Once we have heard from you and our other stakeholders we will analyse and incorporate all feedback into our final set of IPA Design Principles. We will be in touch in early December 2018 to let you know the outcome.

Kind Regards

Heathrow Airspace Heathrow's Design Principles for Independent Parallel Approaches

DOCUMENT 4

Sent: 05 October 2018 14:33
To: [REDACTED]
Cc: [REDACTED]
Subject: Heathrow's Independent Parallel Approaches - Design Principles Engagement
Attachments: IPA Design Principles Engagement Pack.pdf

Good Afternoon [REDACTED]

[REDACTED] has given me your contact details due to your role in FASIIG and I was hoping you would be able to assist with getting in touch with the rest of the group. We are looking to engage with FASIIG, and other stakeholders, to consider and give feedback on the Independent Parallel Approaches Design Principles. I would be very grateful if you could pass on the email below and the attachment to the members of the FASIIG organisation. If you have any questions, or require any more information, then please get in touch.

I am writing to you as a member of FASIIG to kindly request your time to consider Heathrow's Design Principles for Independent Parallel Approaches (IPA). We are currently in Stage 1 of the CAP1616 process and are seeking input, prioritisation and feedback on Design Principles from our Stakeholders. We are aiming to submit the IPA Design Principles to the CAA in December 2018.

Earlier this year we conducted a public consultation asking for views on potential design principles to be used in the redesign of airspace required for Heathrow's third runway. After reviewing the consultation feedback and engaging further with relevant stakeholder groups, Heathrow developed a set of 10 design principles. These were submitted to the CAA on 31st August and were approved at the Define Gateway meeting on 28th September.

Having gained significant insight into our stakeholders' priorities for airspace design, we propose to use a similar, but not identical, set of design principles for IPA as our starting point for this discussion. In the attached document you will find a presentation explaining IPA and Design Principles and outlining Heathrow's IPA Design Principles. We would welcome your feedback on these principles and would invite you to prioritise them as you see fit and make any suggestions that you think are relevant, which we may not have considered.

Please provide any feedback to airspace@heathrow.com by the 9th November 2018. Once we have heard from you and our other stakeholders we will analyse and incorporate all feedback into our final set of IPA Design Principles. We will be scheduling time during your December 2018 meeting to let you know how yours, and our other stakeholders feedback, has been used.

Kind Regards

Heathrow Airspace

Heathrow's Design Principles for Independent Parallel Approaches

DOCUMENT 5

From: DD - Heathrow Community Noise Forum <hcnf@heathrow.com>
Date: 5 October 2018 at 16:27
Subject: Independent Parallel Approaches (IPA) workshop
To:

All,

As mentioned at the last meeting of the Heathrow Community Noise Forum, we will be holding an IPA workshop on Tuesday (9th October) from 13:30 to 16:00. This replaces Working Group 1. Please let me know if you wish to attend.

I have attached some slides which you may find useful to read in advance of Tuesday - explaining IPA and design principles and outlining Heathrow's IPA design principles.

We are currently in Stage 1 of the CAP1616 process. We are seeking input, prioritisation and feedback on IPA design principles from stakeholders. We are aiming to submit these principles to the CAA in December 2018.

As you will know, earlier this year we conducted a public consultation asking for views on potential design principles to be used in the redesign of airspace required for an expanded Heathrow. After reviewing the consultation feedback and engaging further with relevant stakeholder groups, Heathrow developed a set of 10 design principles. The CAA has since completed their Define Gateway Assessment of our airspace design principles for an expanded Heathrow and has given approval for us for progress our Airspace Change Proposal to the next step in the process.

Having gained significant insight into our stakeholders' priorities for airspace design, we propose to use a similar, but not identical, set of design principles for IPA as our starting point for this discussion. We would welcome your feedback on these principles and would invite you to prioritise them as you see fit and make any suggestions that you think are relevant, which we may not have considered.

Stakeholders are asked to provide feedback to airspace@heathrow.com by the 9th November 2018. After this date, we will analyse and incorporate all feedback into our final set of IPA design principles. We will be in contact in early December 2018 to let you know the outcome.

As another reminder been moved to Wednesday 24th October (13.30-16.30).

Thank you,

Heathrow Airspace
Heathrow's Design Principles for Independent Parallel Approaches

DOCUMENT 6

Sent: Tuesday, October 9, 2018 12:42 pm

To: [REDACTED]

Cc: [REDACTED]

Subject: Independent Parallel Approaches - briefing pack

Dear HCEB team

Following last week's meeting, please find attached the briefing pack on Independent Parallel Approaches (IPA) that [REDACTED] talked you through.

As [REDACTED] we would be interested in feedback from HCEB on the design principles set out in the pack. **Please let us have any comments by 6 November.**

We will also put this document on the Sharepoint site. Any questions, let me know.

Best wishes

Heathrow Airspace
Heathrow's Design Principles for Independent Parallel Approaches

DOCUMENT 7

Sent on: Monday, October 22, 2018 3:28:31 PM

To:

BCC:

[Redacted recipient list]

Subject: Heathrow's Independent Parallel Approaches - Design Principles Engagement

Attachments: IPA Design Principles Engagement Pack.pdf (10.4 MB)

Good Afternoon,

A polite reminder that the deadline for feedback on Heathrow's Design Principles for Independent Parallel Approaches is the 9th November 2018. Please provide any feedback to airspace@heathrow.com by this date.

Thank you very much.

Heathrow Airspace
 Heathrow's Design Principles for Independent Parallel Approaches

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| | <p>██████████ welcomed members and noted apologies for absence. ██████ went through the actions from the previous meeting:</p> <ul style="list-style-type: none"> • Members to propose topics & questions for a future WebTAG session: ██████ reminded members that following the DfT's WebTAG presentation to the HCNF, some members had requested a more detailed follow-up session and were asked to propose topics and questions for this. However, no suggestions have been received so this has not been pursued further. ██████████ observed that ██████ had asked DfT to provide the current impact of Heathrow's operations but they had declined. ██████ explained that monetisation calculations would be part of Heathrow's expansion work. • Community noise monitor update: This will be covered later in the meeting. • Community Noise Groups (CNG) to provide feedback on Heathrow's operational data tools: ██████ reminded members that Heathrow was continually looking to improve the operational data it provides through tools such as WebTrak, xPlane and the Noise website and encouraged members to provide feedback. • Schedule an evening learning session on noise metrics: This will be added to the HCNF work plan for 2019 which will be covered later in the meeting. • Invite the chair of the Heathrow Community Engagement Board (HCEB) to attend a future meeting to discuss ██████ objectives on working with the HCNF: HCEB chair ██████████ will be talking to the group about this later in the meeting. • Consider departure profile study proposal by Teddington Action Group (TAG): This will be covered later on. • CNGs to report back on technical advisor: This will be covered later in the meeting. • Provide feedback on updated HCNF Terms of Reference (ToR): A draft update of the forum's ToR was circulated to members in advance and will be discussed later in the meeting. |
| 2 | Independent Technical Advisor |
| | <p>█████ advised that members had met recently to discuss the appointment of an independent technical advisor to the HCNF. Heathrow will now scope out the procurement process and invite applicants to respond. ██████ noted that ██████████ from To70 provides a similar role at Gatwick Airport and will be contacted among others. ██████ asked members to provide details of anyone else they thought should be contacted. ACTION ██████</p> <p>██████████ noted that this has taken some time and asked for expected timescales. ██████ acknowledged this but stressed that Heathrow had not held this up and was eager for this to progress as quickly as possible. ██████ said that a shortlist should be ready for the next HCNF on 21 November and hoped to have someone in place in the early part of 2019. ACTION ██████</p> |
| 3 | 2019 Work Plan |

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| | <p>█ asked members to consider what should be included on the HCNF work plan for 2019, such as community noise reports and learning sessions on noise metrics and WebTAG.</p> <p>█ asked for the World Health Organisation (WHO) report and health impacts to be covered. █ confirmed that a learning session was planned for this as well. █ asked what the implications of the WHO report were. █ explained that this would be picked up by UK and Europe policy makers and that the first step was to understand what the report says and how it relates to different noise sources.</p> <p>█ thought it would be useful to have a session to cover the three stages of airspace consultation and how the whole process fits together. █ suggested this could be covered at the next working group in December. ACTION █</p> <p>█ asked for further work on respite to offer conclusions on what would be beneficial and what would not. █ confirmed that █ would ask █ to provide an update on the next steps at the next working group. ACTION █</p> <p>█ added that the work plan would also include further departure profile work including feedback from the current steeper departure study on the Detling easterly departure route.</p> <p>█ asked if the work plan could also include an update on the Government's airspace modernisation strategy. █ suggested that DfT could provide an update on this at the main HCNF. ACTION █</p> |
| 4 | HCNF Terms of Reference |
| | <p>█ reminded members that a draft update to the HCNF Terms of Reference (ToR) had been circulated to members and asked for comments.</p> <p>█ thought that membership was not clearly defined and asked if it included community groups and industry members. █ confirmed that membership extended to all attendees and agreed this should be set out in the document. █ also asked if the last bullet under the Purpose section could end "and use of Heathrow's future airspace". █ thought this sounded acceptable. ACTION █</p> <p>█ asked if the updated ToR represented a change in what the HCNF was for. █ advised that it was mostly a minor update to the wording.</p> |
| 5 | Working with the Heathrow Community Engagement Board (HCEB) |
| | <p>HCEB chair █ recapped that █ had attended a previous HCNF meeting to discuss the objectives of the HCEB. █ advised that █ was in the process of working out priorities and ways of working and asked members for their thoughts on how the HCNF and HCEB should work together going forward.</p> <p>█ asked if it was possible to see the HCEB's updated ToR. █ advised that the document was published on the HCEB website and █ would be happy to circulate it. █ asked if this was the final version. █ confirmed it was but is always subject to review.</p> <p>█ asked how the HCEB appointed directors. █ advised that the current directors were appointed by recommendation and all directors must be impartial. There are currently three directors and two more are actively being sought with an aim for one of those to be the chair of a residents group.</p> |

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| | <p>■ asked if HCEB was working solely with community groups or with industry members as well. ■ explained that the HCEB had taken on the responsibilities of the Heathrow Airport Consultative Committee (HACC) so this included working with a number of groups. However, the HCEB is independent so it is not working on behalf of any groups, but plans to put an emphasis on local communities.</p> <p>■ advised that ultimately community groups wanted the HCEB to scrutinise the decisions made by Heathrow and the decision-making process. ■ noted that forums such as the HCNF were useful for discussion but community groups had no power to enforce any outcomes. ■ was unhappy that CAA had approved Heathrow's airspace design principles as ■ felt Heathrow had not properly consulted on them. ■ stressed that community members had put in a lot of time and effort into their responses and wanted to feel that their proposals had been reasonably considered. ■ added that the Transport Select Committee had made 25 recommendations but these had all been ignored in the Airports National Policy Statement (NPS).</p> <p>■ felt there was some fatigue around consultations and noted that they should not be used as a tickbox exercise. ■ acknowledged that many stakeholders put in a lot of time and that their contributions should be properly considered. However, it was inevitable that people have contrasting opinions so there would always be some differences of opinion, not just between Heathrow and communities, but between different communities as well.</p> <p>■ asked if ■ scrutiny extended to the CAA. ■ explained that while ■ role was to scrutinise Heathrow, if ■ saw a deficiency in CAA, DfT or NATS that would probably come out too. ■ advised that the HCEB was planning to arrange some Question Time events using pre-submitted questions so that answers could be provided on the spot. ■ and ■ both thought this would be useful.</p> <p>■ observed that the Government was involved in policy whereas the CAA was involved in process. ■ asked if the HCEB would be involved in how policy is made as well as how it is applied. ■ said ■ would have to consider what that would mean in practice. ■ explained that ■ role was to scrutinise on behalf of people, ■ did not have the technical expertise to challenge complex rules herself but could represent those who did. ■ added that the HCEB would be commissioning some independent research and wanted to work with community groups to understand what they wanted to know. The HCEB also plans to work with the Independent Commission on Civil Aviation Noise (ICCAN), noting that while that was a national body it should be possible for them to do something together.</p> <p>■ suggested there was a perception among some members that the HCEB was nothing but a puppet organisation because it was funded by Heathrow. ■ acknowledged that ■ was funded by Heathrow but stressed that ■ was vigorously independent and asked that members judge ■ on what ■ does.</p> <p>■ asked for feedback on the best way for the HCEB to engage with the HCNF. ■ suggested members send comments to hcnf@heathrow.com which would be fed back to ■ ACTION ■</p> <p>■ added that ■ would share details of the HCNF work plan with ■ as there may be some overlap in terms of research. ACTION ■</p> |
| 6 | Departure Noise Mitigation Study Report |

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| | <p>Following the publication of the CAA's Departure Noise Mitigation report, [REDACTED] presented further details of [REDACTED] proposal for a higher departure profile for Heathrow on behalf of Teddington Action Group (TAG). [REDACTED] presentation is available here.</p> <p>[REDACTED] explained that [REDACTED] proposed departure profile involved higher thrust from take-off with reduced thrust further out, claiming that it could provide as much as 5-7 dB reduction in noise with the downside of an increase in NOx close to the airport and an increase in engine wear.</p> <p>[REDACTED] asked how the noise levels had been calculated. [REDACTED] responded that [REDACTED] had used physics and noise calculations to recalculate the contours from the original report.</p> <p>[REDACTED] suggested that all properties further than 5km from the Start of Roll (SoR) would benefit. [REDACTED] acknowledged there were properties closer than 5km such as the Green Lane area but assumed that Heathrow had already insulated those properties. [REDACTED] cautioned that while insulation was useful, properties close to the airport were still affected by noise through the roof.</p> |
| | <p>[REDACTED] thought the proposal looked good at first sight but the implications would have to be understood. [REDACTED] added that there would be cost implications for the airlines. [REDACTED] agreed there would likely be implications for engine maintenance costs but [REDACTED] estimated this would only cost about £50 per flight. [REDACTED] felt that because the policy was to prioritise noise up to 4,000ft the airlines should do it. [REDACTED] was concerned that the proposal could have an impact on aircraft speed and the length of the noise event.</p> <p>[REDACTED] advised that [REDACTED] would seek feedback from [REDACTED] at CAA and [REDACTED] at [REDACTED] on the proposal's feasibility and report back at the next working group. ACTION [REDACTED]</p> |
| 7 | Noise monitor update |
| | <p>[REDACTED] gave an update on noise monitor deployment planning for 2019. The presentation is available here.</p> <p>[REDACTED] advised that four community noise reports would be produced for 2018 and should be on Heathrow's Noise website by the end of the year.</p> <p>[REDACTED] explained that there was currently a shortlist of six locations for the 2019 community noise reports so the final four locations needed to be agreed. The six shortlisted locations were Cranford, Central London, Eton Wick, Lightwater, Sunninghill and Richmond.</p> <p>[REDACTED] explained that these monitors would also feed into ANCON for modelling verification. [REDACTED] proposed selecting two locations to the east of the airport and two to the west for geographical balance. [REDACTED] felt that Lightwater should be included as HCNF member [REDACTED] had raised a lot of issues about noise there. [REDACTED] noted that Lightwater and Sunninghill were quite close together so it was agreed that Sunninghill would be considered for 2020 instead. [REDACTED] asked if Windsor would be more suitable than Eton Wick. [REDACTED] responded that there was already a noise monitor in Windsor but nobody had requested a noise report there. [REDACTED] favoured Richmond as it was affected by arrivals, departures and runway alternation. [REDACTED] favoured Cranford because of local schools and a perception of more easterly departures from the northern runway (09L) this year. However, [REDACTED] advised that this number was extremely low at 108 departures to date. [REDACTED] observed that in the longer term there would be more noise monitoring in Cranford and the area would be better served by a permanent monitor. [REDACTED] added that Heathrow had a lot of information about noise levels in Cranford already and felt that Central London would be a better choice.</p> <p>The four community noise monitor locations for 2019 were therefore confirmed as Lightwater, Eton Wick, Richmond and Central London subject to suitable locations being found.</p> |

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| 8 | Westerly Detling Track Keeping - B787 Fleet |
| | <p>█████ gave a presentation highlighting improved track keeping of Boeing 787 aircraft on the westerly Detling departure route. The presentation is available here.</p> <p>█████ advised that British Airways and Virgin Atlantic had improved their track keeping through a combination of speed, SID design and turn angle. As a result, Boeing 787 track keeping on the route had improved from 69.5% (June 2016) to 93.7% (September 2018), reducing the number of aircraft flying outside the departure route over areas such as Englefield Green. Englefield Green resident █████ confirmed this was the case.</p> |
| 9 | AOB |
| | <p>█████ observed that the DCO process requires an analysis of noise to show that there is no significant adverse effect. █████ referred to a table in Heathrow's Scoping Report which defined a noise change of 1.0-2.9 dB as slight and 3.0-4.9 dB as minor. █████ observed that a 3dB change in Leq was equivalent to a doubling of flights, so this was neither slight or minor and the table was not being used correctly. █████ advised that it was only a generic table and the purpose of the process was to look at levels of change. █████ explained that Heathrow was looking at a range of different metrics and descriptors to look at this in different ways. █████ felt that the other metrics were not given enough weight. █████ proposed inviting someone from the Noise team to attend the next working group to discuss this.</p> <p>ACTION █████</p> <p>█████ added that the levels of population impacted had not been defined and the number of people affected should be ranked.</p> <p>GY asked if someone from ICCAN would be invited to the HCNF. █████ confirmed this. ACTION █████</p> |
| | <p>█████ reminded members that a workshop on design principles for Independent Parallel Approaches (IPA) had been held on 9th October and the deadline for submitting comments and feedback is Friday 9th November. █████ asked for feedback to be sent to airspace@heathrow.com. █████ added that a followup workshop was planned for 13th December. █████ advised members that an IPA presentation pack had been sent to local authorities. █████ asked who this was sent to at Runnymede. █████ advised that █████ had attended the briefing on behalf of Runnymede and was sent a link to the presentations the following week.</p> <p>█████ observed that ERCD Report 1801 contained errors in the headings of Tables E2 and E4. The corrected report is available to download from the Heathrow Noise website here.</p> <p>█████ referred to Heathrow's proposal to introduce 25,000 additional ATMs before the third runway opens and asked how many of those would be scheduled between 06:00 and 07:00. █████ advised that the details still needed to be worked out but would try and get some clarity on that. ACTION █████</p> <p>█████ referred to Gatwick's recent proposal to transform its existing infrastructure to accommodate another runway and asked how those extra flights would affect Heathrow's planning. █████ said █████ would check this with the Airspace team. ACTION █████</p> <p>█████ asked when NATS would publish their report on how airspace would be used by the five South East airports. █████ advised that this was due to be published by the end of the year.</p> |

Heathrow Airspace

Heathrow's Design Principles for Independent Parallel Approaches

Summary of actions

- Suggest potential candidates for independent advisor role (ALL)
- Present shortlist of independent advisor candidates to HCNF [REDACTED]
- Future agenda item on the three stages of airspace consultation [REDACTED]
- Respite study update [REDACTED]
- Update on Government's airspace modernisation strategy at HCNF [REDACTED]
- Update HCNF Terms of Reference [REDACTED]
- Feedback on how HCNF and HCEB should work together (ALL)
- Share HCNF work plan with HCEB [REDACTED]
- Assess feasibility of TAG's proposed higher departure profile [REDACTED]
- Future agenda item on Scoping Report metrics and descriptors [REDACTED]
- Invite ICCAN to HCNF [REDACTED]
- How many of proposed 25,000 extra ATMs would operate between 06:00 and 07:00 [REDACTED]
- How would potential extra Gatwick ATMs affect Heathrow's planning [REDACTED]

Next Meeting:

| | | |
|--|----------------------------|----------------------|
| Day and Date WG1&2: Tue 4 December 2018 | Location Compass Centre | Time 13:30- 16:00 |
|--|----------------------------|----------------------|

DOCUMENT 9

AGENDA

Heathrow Expansion meeting

| | |
|---------------|---|
| Date and Time | Thursday 8 th November 2018, 3pm – 5pm |
| Location | Iver Parish Council [REDACTED] [REDACTED] [REDACTED] [REDACTED] |
| Host | [REDACTED] |

Item:

1. Welcome and introductions
2. Scheme development proposals for Iver
3. January Consultation – Airspace and Future Operations
4. Any other business

Heathrow Airspace

Heathrow's Design Principles for Independent Parallel Approaches

DOCUMENT 10

Heathrow Airport Limited
The Compass Centre, Nelson Road,
Hounslow, Middlesex TW6 2GW
T: +44 (0)844 335 1801
W: heathrow.com

██████████
Heathrow Community Engagement Board
Ground Floor
The Future Works Building
Brunel Way
SL1 1XL

Dear ██████████

Thank you for your letter of 6th November 2018 providing HCEB's feedback on our suggested Independent Parallel Approaches (IPA) design principles.

Your letter discussed the potential implications of IPA and suggested that we have not addressed a number of issues in the development of our design principles. You have also raised several specific questions. We hope that the following response will help to address the points raised.

The Implications of IPA

We note that your comments highlight a number of areas of consideration in relation to the implications of IPA: quality of life, respite from noise in countryside areas, and the economic value of the countryside. You also commented on the potential impact of increasing capacity at Heathrow by up to 25,000 extra flights following the introduction of IPA.

We have addressed these issues in turn below in order to provide clarity on your concerns.

Quality of life

We have proposed five mandatory design principles for the IPA airspace change. These reflect the policy and regulatory requirements that our airspace change must meet to receive approval from the CAA.

In relation to your comments that the design principles should consider matters such as the importance of quality of life, our mandatory principle to meet the three aims of the Noise Policy Statement for England (NPSe)¹ will provide adequate focus on this. The NPSe's three stated aims are to:

- avoid significant adverse impacts on health and quality of life;

¹ The Government's Noise Policy Statement for England can be found [here](#)

Heathrow Airspace

Heathrow's Design Principles for Independent Parallel Approaches

- mitigate and minimise adverse impacts on health and quality of life; and
- where possible, contribute to the improvement of health and quality of life.

Meeting the three NPSe aims will be a mandatory design principle and therefore will be prioritised accordingly. In addition, the Air Navigation Guidance 2017² will of course be a requirement for the airspace change process as a whole.

Respite and countryside

We recognise that respite is an important issue for local communities, as is preserving the tranquillity of rural areas. The following design principles were presented within the IPA Design Principle pack with the aim of encouraging the discussion on how best to mitigate the effects of aircraft noise from IPA:

- 'Providing predictable respite from noise'
- 'Prioritising commercial and industrial areas over residential areas'
- 'Prioritising parks and open spaces over residential areas'
- 'Prioritising rural areas over urban areas'

For airspace changes affecting traffic below 7,000ft (known as Level 1 airspace changes) we are required by the CAA's Airspace Change Proposal process (CAP1616) to assess the impact on tranquillity in Areas of Outstanding Natural Beauty (AONBs) and National Parks. Other areas will be considered if identified through our community engagement.

When we finalised our design principles for an expanded Heathrow in September this year following feedback received from our stakeholders, the importance of avoiding overflying AONBs was recognised within those design principles, with the wording 'Where appropriate, prioritise routing flight paths over parks and open spaces (rather than over residential areas), but avoid overflight of Areas of Outstanding Natural Beauty (AONB) where possible' being included. Following your feedback, we have also included wording this as a design principle for IPA.

Given the emphasis in your letter on the need to protect countryside areas close at hand to where people live, we recognise that you place a higher importance on the principle to 'Design flight paths over commercial and industrial areas' and we will take this into consideration for the prioritisation of the design principles.

Economic value of countryside

CAP1616 requires that airspace change sponsors go through several stages to undergo an airspace change, each stage having associated requirements. Sponsors must meet these requirements before they can progress to the next stage.

We are at a very early stage of the IPA airspace change process (Stage 1B: Design Principles). Quantitative information on proposed route options will be explored in much more detail when we perform the interim appraisal in Stage 2B of the process. We are required to

² The Air Navigation Guidance 2017 can be found [here](#)

Heathrow Airspace

Heathrow's Design Principles for Independent Parallel Approaches

perform a WebTAG appraisal of the design options taken forward. WebTAG provides a framework to estimate the economic impacts of each option based on the areas overflown

Ahead of this, as part of our consultation in January 2019 we will be asking for feedback on the local factors that we should take into consideration when determining the position of the flight path options within defined geographic areas (known as 'design envelopes'). We welcome and strongly encourage HCEB to use this opportunity to highlight to Heathrow those areas of countryside which HCEB feel should be avoided, together with the rationale for doing so.

Potential impact of increasing capacity by 25,000

Your letter also raised concerns regarding the impact on communities, and on the resilience of the airport, of potentially adding 25,000 extra flights following the introduction of IPA.

It should be noted that any proposals to add capacity before the third runway opens would be the subject of further consideration. This would take place through stakeholder engagement and then our statutory Development Consent Order (DCO) consultation proposed for June 2019.

Any increase in capacity at Heathrow will require the introduction of appropriate noise mitigation measures to minimise the impact of extra flights on our local communities.

Questions asked by HCEB

1. *Heathrow needs to make clear how many of the extra 25,000 aircraft they envisage coming in will land during the hour between 6am and 7am as that would be an important indicator of the extent IPA would affect people.*

At present we are unable to provide any detail on the potential scheduling of IPA flights as we are still in the early stages of developing our proposals for IPA. We will be providing more information in our January 2019 consultation on the proposals to introduce IPA; the areas potentially impacted by the proposed change; and an introduction to IPA in the context of an additional 25,000 flights on the existing two runways.

The potential scenarios for an early increase in capacity at Heathrow will be addressed in more detail in June 2019 when we will undertake our statutory consultation on the DCO for expansion. This June 2019 consultation will further explore the options, impacts and mitigations of an early release of capacity for our existing two runways. It will also include details on the forecast operating schedule and therefore how flights may be spread across the whole day.

2. *How will Heathrow demonstrate that it has fully consulted those residents already impacted by noise and those additional/new communities who will likely be impacted by these plans?*

Heathrow Airspace

Heathrow's Design Principles for Independent Parallel Approaches

Heathrow is required by CAP1616 to engage extensively with stakeholders, including local residents, throughout the airspace change process.

During the development of our design principles for IPA we undertook public focus groups consisting of people who are not currently overflowed by Heathrow arrivals but who could potentially be affected by our IPA proposals, to understand how their priorities for design principles may differ from those already impacted by Heathrow's arrivals. Therefore the process to date has sought to engage both residents already impacted by noise and those additional/new communities who will likely be impacted.

The public consultation on IPA that we will undertake in January 2019 is an additional, voluntary consultation which we hope will spread further awareness of the proposals for IPA and encourage feedback from our stakeholders, including our local communities.

One of the key steps in the overall airspace change proposal process (Stage 3 of CAP1616) is the requirement to undertake a statutory consultation on the proposed flight path options. The CAA reviews and where appropriate approves the consultation strategy. This is to ensure the strategy is comprehensive, the materials clear and appropriate, and the questions unbiased. Only when the CAA is content, will we be allowed to proceed with the statutory consultation. Following the consultation, we are required to provide evidence of what feedback we have received and how this has informed the development of our proposal. Our statutory consultation for IPA is currently scheduled to take place in 2020.

3. Heathrow needs to address the airlines' concerns about resilience by producing evidence which points to the fact that it will be improved despite an extra 25,000 flights coming in each year.

We are in constant dialogue with our airlines regarding this matter and they will be formally consulted in our statutory consultation on the DCO in June 2019. This will explore the proposed options, impacts and mitigations of any early release of capacity in greater detail.

4. Heathrow also needs to articulate more clearly the positive impact it says IPA will have in reducing the number of aircraft departing late.

This is noted. We are at a very early stage of the IPA airspace change process. This quantitative information will be explored in much more detail in our statutory consultation for IPA during Stage 3b of the CAP1616 process.

5. HCEB recommends that Heathrow take into consideration the latest research by the World Health Organisation (WHO) published on 10th October 2018. This report includes extensive research on noise and health. We would encourage Heathrow to demonstrate they have taken this research into consideration.

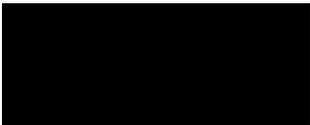
We will undertake an environmental assessment of IPA in compliance with the requirements of CAP1616. The assessment methodology will include criteria to assess noise

Heathrow Airspace
Heathrow's Design Principles for Independent Parallel Approaches

impacts and effects. This will be informed by a review of noise policy, standards and guidance including those published by the WHO.

As part of our expansion plans we have established a Noise Expert Review Group to independently assure the scientific and policy robustness of the assessment and mitigation of sound, noise and vibration, including effects on health and quality of life. This work will inform our approach to the IPA noise assessment.

Yours sincerely,

A large black rectangular redaction box covering the signature area.Three horizontal black rectangular redaction boxes covering contact information.



HEATHROW - STAGE 1A DEFINE – IPA DESIGN PRINCIPLES

PRESENTATION 1

CURRENT OPERATIONS

Heathrow's two runways currently operate simultaneously. One runway for departures, one for arrivals

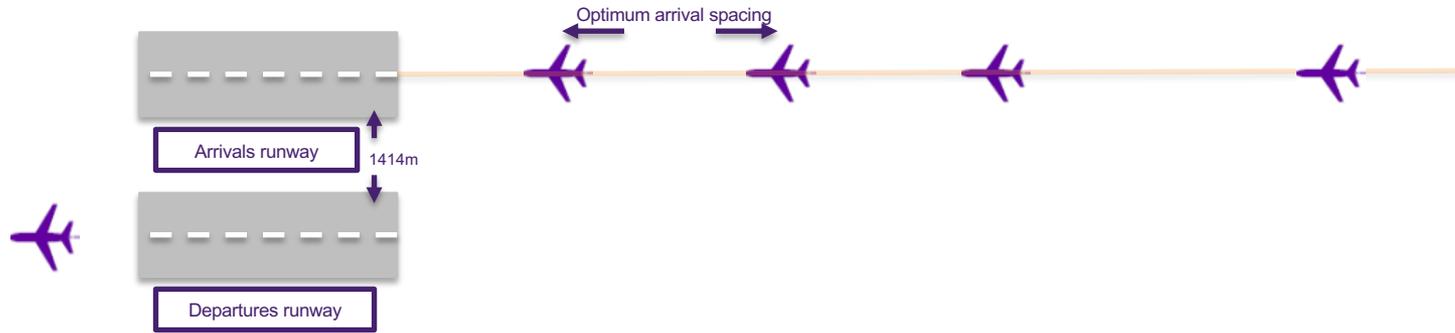
In this mode, the runways are operated independently – arrivals to one runway do not affect departures from the other, & vice versa

In certain circumstances Heathrow can invoke a procedure known as “Tactically Enhanced Arrivals Measures (TEAM)”, enabling us to land some arriving aircraft on the departure runway

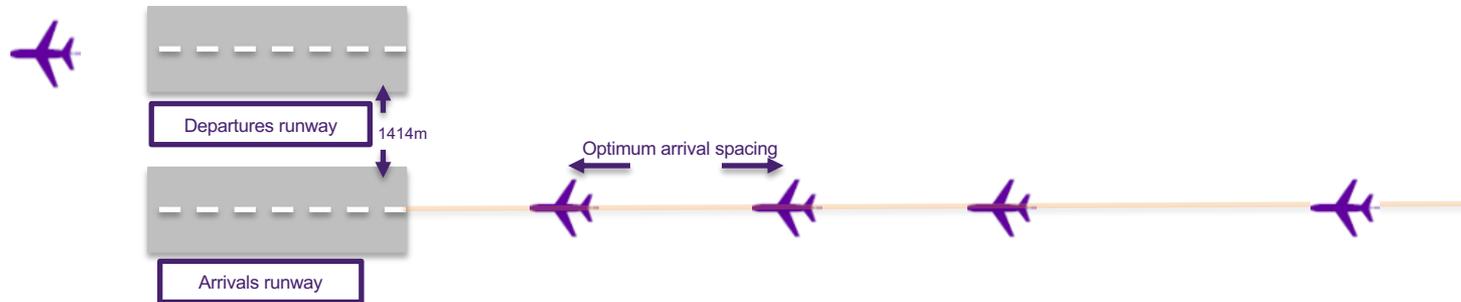
However, in this mode, the arrivals to both the departure and arrival runways are dependent on each other and cannot land at the same time, i.e. the number of aircraft landing on the arrivals runway is reduced to accommodate those landing on the departures runway

This dependency reduces the number of aircraft that could feasibly be landed on both runways

CURRENT OPERATIONS



ALTERNATING TO



LANDING ON THE DEPARTURES RUNWAY

Although most of the time we use one runway for departures and one for arrivals, when there is a build-up of delays both runways can be used for landing. This can also be known as TEAM (Tactically Enhanced Arrival Measures)

We can land on the departures runway when airborne holding delay reaches certain thresholds:

- Between 6.00am and 6.29am where there is a forecast delay of 10 minutes or more
- Between 6.30am and 7.00am where there is a forecast delay of five minutes or more
(Between 6.00am and 7.00am there is no limit on the number of arrivals that can land on the designated departures runway)
- After 7.00am where there is a forecast delay of 20 minutes or more¹
After 7.00am no more than six arrivals per hour are permitted to land on the designated departures runway²

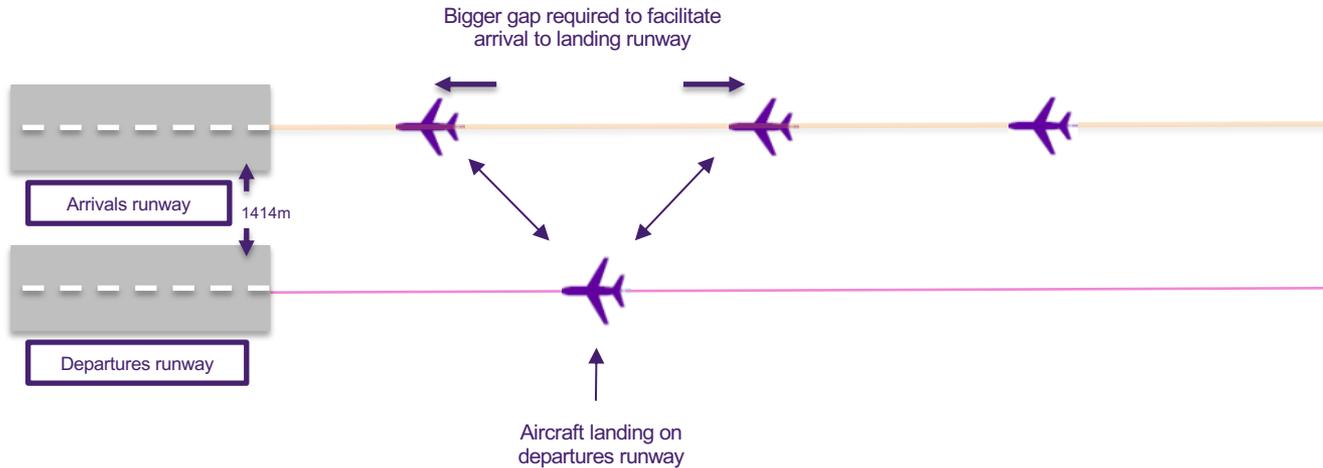
Easterly operations

Landing on the departures runway after 6.00am is also permitted on easterly operations. This is a similar practice to westerly operations although the Government limits do not apply to the numbers of arriving aircraft landing on the departures runway after 7.00am

¹ These rules apply to westerly operations only.

² Landing more than 6 per hour may occur for safety reasons only

LANDING ON THE DEPARTURES RUNWAY



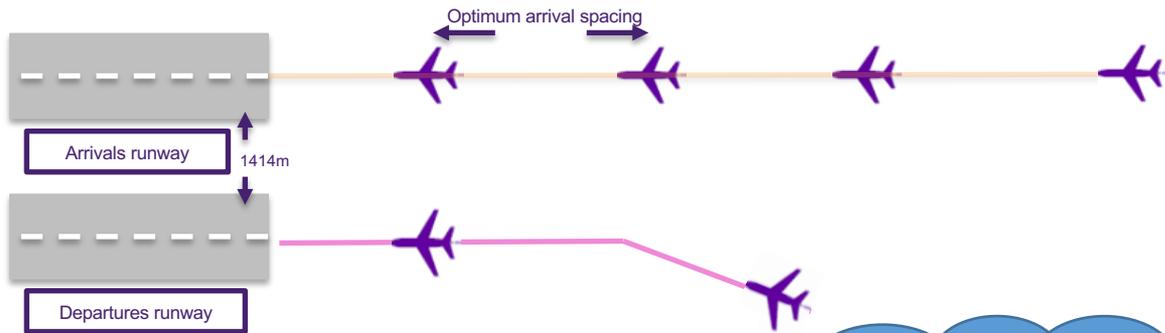
When arriving aircraft are allowed to land on the departures runway, arrivals to the departures and arrivals runway must be spaced by at least two nautical miles

To achieve this, the spacing between aircraft on the landing runway has to be increased compared to when only one runway is used for landing

This additional spacing means that fewer aircraft land on the arrivals runway. So, even if six aircraft were to land on the departures runway in an hour, the overall landing rate across both runways for that hour only increases, on average, by two aircraft

WHAT IS IPA?

Independent Parallel Approaches (IPA) will seek to remove the dependency between simultaneous arrivals to both runways 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



Aircraft arriving on the departures runway will use Performance Based Navigation to follow specified flight paths from the holding stacks to the final approach, requiring little interaction from air traffic control. These arrivals will need to join final approach closer than 8nm from touchdown to ensure that the tracks of the aircraft using the main landing runway remain unchanged

This will require a change to Heathrow's Noise Abatement procedure, subject to approval from The Department for Transport

Arrivals to the main arrivals runway will still be directed onto final approach at 8nm from touch down and beyond, as per today's operations

Aircraft landing to the departures runway only will join final approach inside 8nm from touchdown

With the introduction of IPA, aircraft landing on the arrivals runway would continue to be directed by air traffic control as they are today and be vectored onto final approach outside 8nm from touchdown

IPA IN THE CONTEXT OF FUTURE EXPANSION

- Whilst Heathrow is operating within its maximum capacity of 480,000 Annual Transport Movements (ATMs) IPA will increase resilience which will enable more efficient prevention of and recovery from delays. We are therefore planning to introduce IPA in 2022, regardless of whether we expand
- As part of our DCO we are also considering putting forward plans to increase the ATM cap to release additional capacity. This would be an interim measure some years ahead of the opening of the new runway
- The use of IPA between 0600 and 0700 has the potential to directly support an increase in declared capacity in the hour. IPA also provides increased resilience if there are additional ATMs before the opening of a new runway
- IPA is also one of a host of measures (eTBS, RECAT, EU598) which will support Heathrow's ambition to enable a longer scheduled night time ban
- By increasing resilience, IPA has the potential benefits of:
 - Fewer arrivals on the departures runway, improving respite periods because we can land more aircraft in the hours when we do land on the departures runway
 - A reduction in the number of late running flights because we are more efficient when we land on the departures runway
 - A reduction in aircraft holding in Heathrow's stacks because we prevent and recover more quickly from delay

IPA – WHAT DOES THIS MEAN IN PRACTICE?

- The new flight paths needed for IPA will be using Performance Based Navigation (PBN) and will need to 'fit' into Heathrow's existing airspace and for safety reasons need to be designed to avoid the existing arrival swathes into Heathrow
- Therefore, those aircraft landing on the departures runway will not be able to operate wholly within the existing arrivals swathe and will fly over some new areas
- The existing Heathrow arrivals will remain unchanged as they will continue to operate within Heathrow's current arrival swathe
- We will not be seeking to make a change to the rules on the maximum number of aircraft allowed to land on the departures runway per hour
- The IPA routes will only exist in a two-runway environment and will be superseded by our runway airspace design for expansion

CAP1616

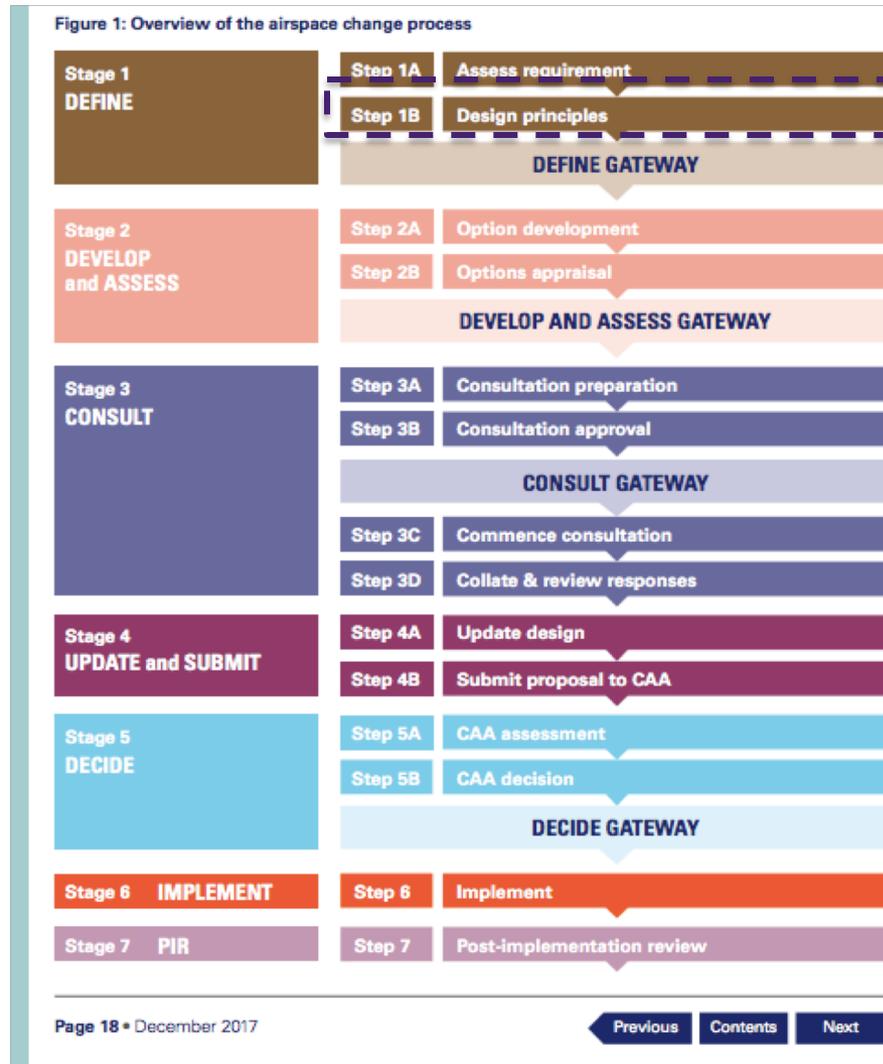
In January 2018 the CAA launched its Guidance on the regulatory process for changing airspace design: CAP1616

CAP1616 provides a process framework to be used when designing airspace and is split into 7 Stages as shown on the next slide

We are now in the Define Stage of the process where by Heathrow is seeking views on the proposed design principles to be used in considering the airspace design options for IPA

We will be aiming to submit the final set of design principles to the CAA for the Stage 1B Gateway in December 2018

THE CAA'S AIRSPACE CHANGE PROPOSAL PROCESS (CAP1616)



← we are here

WHAT IS A DESIGN PRINCIPLE?

The CAP1616 guidance requires the production of design principles for each airspace change

Design principles essentially provide a list of high level criteria that the proposed airspace design options should meet. They also provide a means of analysing the impact of different design options and a framework for choosing between options

CAP1616 states that:

- the development of design principles should provide “a shortlist of principles to inform the development of airspace design options” and a “framework against which airspace design options are evaluated”
- principles “are in no way immutable and, as a part of the process for the establishment of the airspace design principles, should be challenged as part of the ongoing dialogue with stakeholders.”

HOW HAVE WE DEVELOPED DESIGN PRINCIPLES

Heathrow has a long history of engagement through established groups:

- Heathrow Community Noise Forum (HCNF)
- Heathrow Community Engagement Board (HCEB)
- Airline groups
- Heathrow Strategic Planning Group (HSPG)
- Future Airspace Strategy Industry Implementation Group (FASIIG)

Earlier this year we also conducted a public consultation asking for views on potential design principles to be used in the redesign of airspace required for Heathrow's third runway (3R)

After reviewing the consultation feedback, and engaging further with relevant stakeholder groups, Heathrow developed a set of 10 design principles

These were submitted to the CAA on 31st August and were approved at the Define Gateway meeting on 28th September

Having gained significant insight into our stakeholders priorities for airspace design we propose to use a similar, but not identical, set of design principles for IPA as our starting point for this discussion

HEATHROW'S MANDATORY DESIGN PRINCIPLES FOR IPA

| | |
|---|--|
| | |
| 1 | Must be safe |
| 2 | Must meet Heathrow's capacity requirements |
| 3 | Must meet three NPSe noise policy tests |
| 4 | Must meet local air quality requirements |
| 5 | Must base our airspace design on the latest navigation technology widely available |

HEADLINE DESIGN PRINCIPLES FOR IPA FOR PRIORITISATION

There are 4 categories within which the Design Principles can be placed:

- a. Minimising noise
- b. Minimising fuel and CO₂
- c. Maximising operational efficiency (air traffic control workload)
- d. Minimising impact on other airspace users

a



Minimise the impact of aircraft noise

Future airspace design will comply with Government regulation and policy on noise impact. In addition to this Heathrow will aim to reduce effects on health and quality of life from noise by considering local circumstances, and by contributing to improvements where possible.

a

b



Minimise fuel requirements and greenhouse gas emissions

Heathrow would seek to minimise the amount of fuel and CO2 emissions required by our flight paths, by keeping flight paths as short and direct as possible. Heathrow would avoid long and complicated paths that require more fuel (and therefore greater cost) for airlines.

b

c



Simple and efficient flight paths for operational efficiency

Heathrow would prioritise simple flight paths that minimise the workload of pilots and air traffic control.

c

d



Minimise impact on other airspace users

Heathrow would minimise our impact on other airspace users, especially neighbouring airports of Luton, Gatwick and RAF Northolt.

This means Heathrow are willing to share airspace where necessary, only seek extra airspace where justifiable and look for opportunities to give away airspace that is not essential for future operations.

d

NOISE DESIGN PRINCIPLES FOR DISCUSSION & PRIORITISATION

There are lots of different ways that you can apply the principle of minimising noise, and they are sometimes contradictory. For example, should you spread flight paths over a wider area (affecting more people) or try to concentrate them (affecting fewer people but with those people overflowed to a greater extent)?

The following slides present 4 noise-related design principles:

- e. Minimising the number of people newly affected by noise
- f. Providing predictable respite from noise
- g. Minimising the total number of people affected by noise
- h. Avoiding multiple flight paths over the same community

e



Minimise the number of people newly affected by noise

IPA flight paths will overfly areas not currently regularly overflowed by Heathrow arrivals. Where possible, we will avoid putting in routes over the most heavily populated areas.

e

f



Design multiple flight paths, with only one flight path active at a time to provide predictable respite from noise

Heathrow would provide local communities with predictable respite from noise by scheduling the use of different flight paths by day/week/month so that communities can look ahead and know when they are likely to be overflown. The use of additional flight paths would mean each flight path was flown less frequently but more people would be affected by noise.

f

g

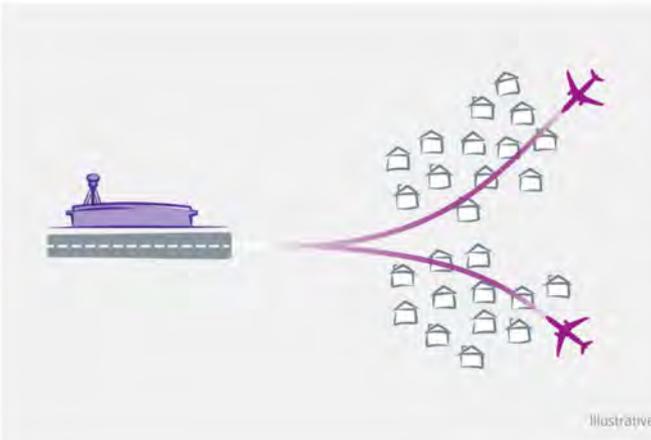


Minimise the total number of people affected by noise

Heathrow would aim to put flight paths over the areas with the lowest number of people. This will mean fewer people overflowed, but each of those communities would be more affected compared. This will lead to planes concentrated over a smaller number of routes.

g

h



Avoid multiple flight paths over one community

Where possible, Heathrow would aim for different IPA flight paths to be placed over different communities and avoid using the same airspace as routes from nearby airports

h

OTHER DESIGN PRINCIPLES FOR DISCUSSION & PRIORITISATION

We'd now like to look at a couple more principles. This time, we want to understand whether you agree or not that this is the right thing for Heathrow to prioritise:

- i. Prioritise rural areas over urban
- j. Prioritise parks and open spaces over residential areas
- k. Prioritise commercial and industrial over residential

i



Prioritise flight paths over rural areas, rather than over urban areas

Heathrow would aim to put planes over rural areas rather than urban areas, as they are less populated.

i

j



Prioritise flight paths over parks and open spaces, rather than over residential areas

Heathrow would aim to put planes over parks and open spaces rather than residential areas in towns and cities.

j

k



Prioritise flight paths over commercial and industrial areas, rather than residential areas

Heathrow would aim to put planes over commercial areas (like shopping centres and business parks) and industrial areas (like factories and warehouses) rather than residential areas, wherever possible.

k

PRIORITISATION

CAP1616 highlights that design principles can be contradictory, for example where avoiding one kind of impact is likely to increase another:

“some of the principles may contradict one another and some may be prioritised over others: this will be an iterative process and a qualitative one rather than a purely numerical exercise with binary answers.”

Prioritisation of design principles help our airspace designers to compare different design options when we reach that stage of the CAP1616 process

NEXT STEPS FOR DESIGN PRINCIPLES

**How would you prioritise our suggested Design Principles in the context of IPA?
Do you have any others for us to consider?**

All comments and feedback need to be received by the **9th November 2018** by emailing airspace@heathrow.com

Following this we will collate and consider feedback from you and other key stakeholder groups to produce our final list of principles for IPA

NEXT STEPS IN THE DESIGN PROCESS

We will then re-engage, either in workshops or via email, to present back our final proposed list of design principles, having taken your feedback into consideration

We will be aiming to submit the final set of design principles to the CAA for the Stage 1B Gateway in December 2018

If accepted by the CAA, they will then be used to qualitatively evaluate our airspace design options as we move towards the next stage in the process

We will continue to engage with you at key stages throughout the design process for IPA, including at two public consultations



HEATHROW - STAGE 1A DEFINE – IPA DESIGN PRINCIPLES

PRESENTATION 2

CURRENT OPERATIONS

Heathrow's two runways currently operate simultaneously. One runway for departures, one for arrivals.

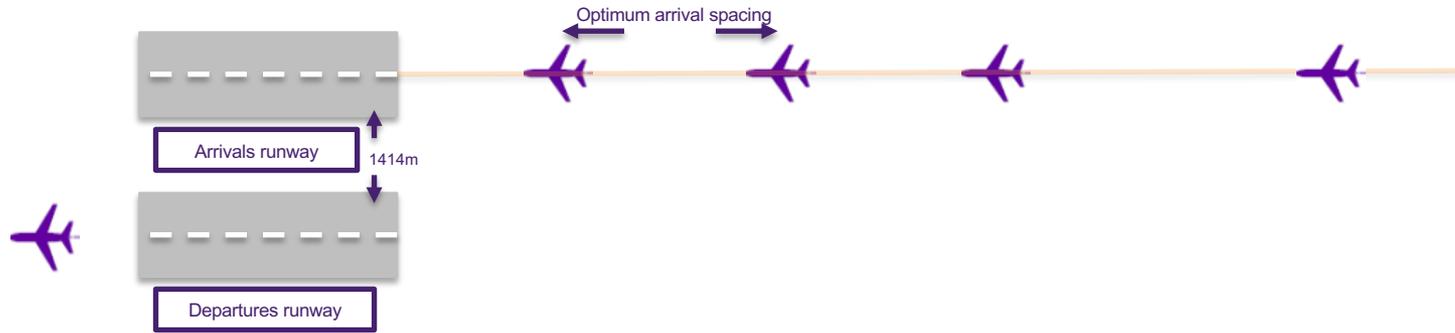
In this mode, the runways are operated independently – arrivals to one runway do not effect departures from the other, & vice versa.

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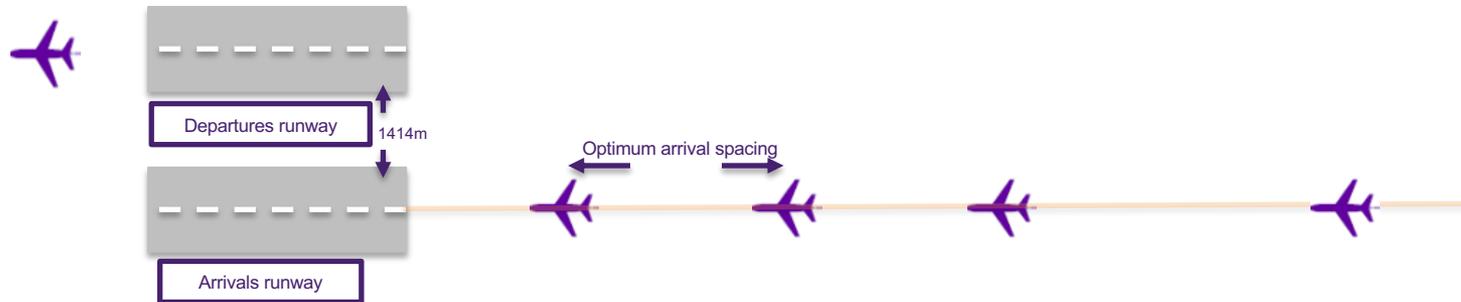
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CURRENT OPERATIONS



ALTERNATING TO



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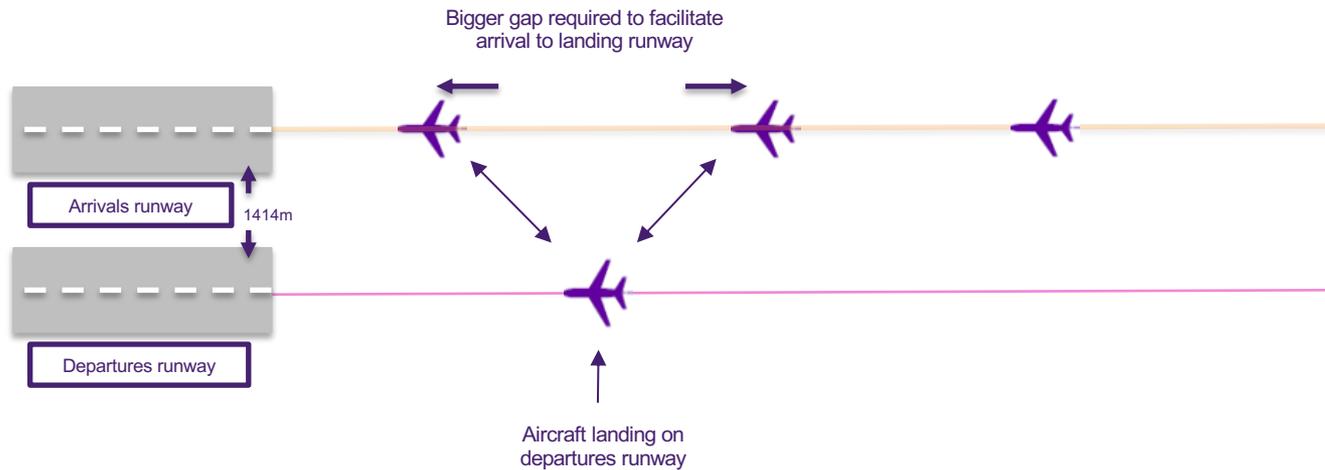
Easterly operations

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¹ These rules apply to westerly operations only.

² Landing more than 6 per hour may occur for safety reasons only

LANDING ON THE DEPARTURES RUNWAY



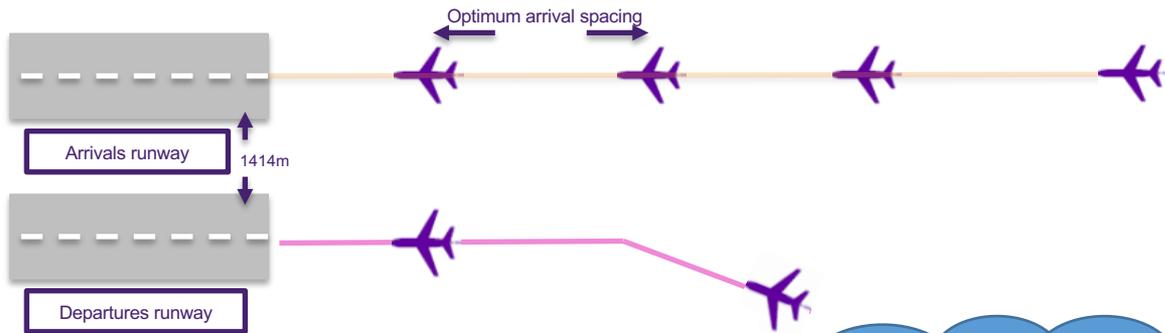
When arriving aircraft are allowed to land on the departures runway, arrivals to the departures and arrivals runway must be spaced by at least two nautical miles

To achieve this, the spacing between aircraft on the landing runway has to be increased compared to when only one runway is used for landing

This additional spacing means that fewer aircraft land on the arrivals runway. So, even if six aircraft were to land on the departures runway in an hour, the overall landing rate across both runways for that hour only increases, on average, by two aircraft

WHAT IS IPA?

Independent Parallel Approaches (IPA) will seek to remove the dependency between simultaneous arrivals to both runways 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



Aircraft arriving on the departures runway will use Performance Based Navigation to follow specified flight paths from the holding stacks to the final approach, requiring little interaction from air traffic control. These arrivals will need to join final approach closer than 8nm from touchdown to ensure that the tracks of the aircraft using the main landing runway remain unchanged.

This will require a change to Heathrow's Noise Abatement procedure, subject to approval from The Department for Transport

Arrivals to the main arrivals runway will still be directed onto final approach at 8nm from touch down and beyond, as per today's operations

Aircraft landing to the departures runway only will join final approach inside 8nm from touchdown

With the introduction of IPA, aircraft landing on the arrivals runway would continue to be directed by air traffic control as they are today and be vectored onto final approach outside 8nm from touchdown

IPA UPDATE

- Whilst Heathrow is operating within its maximum capacity of 480,000 Annual Transport Movements (ATMs) IPA will increase resilience which will enable more efficient prevention of and recovery from delays. We are therefore planning to introduce IPA in 2022, regardless of whether we expand.
- As part of our DCO we are also considering putting forward plans to increase the ATM cap to release additional capacity. This would be an interim measure some years ahead of the opening of the new runway.
- The use of IPA between 0600 and 0700 has the potential to directly support an increase in declared capacity in the hour. IPA also provides increased resilience if there are additional ATMs before the opening of a new runway.
- IPA is also one of a host of measures (eTBS, RECAT, EU598) which will support Heathrow's ambition to enable a longer scheduled night time ban.
- By increasing resilience, IPA has the potential benefits of:
 - Fewer arrivals on the departures runway, improving respite periods because we can land more aircraft in the hours when we do land on the departures runway.
 - A reduction in the number of late running flights because we are more efficient when we land on the departures runway.
 - A reduction in aircraft holding in Heathrow's stacks because we prevent and recover more quickly from delay.

IPA – WHAT DOES THIS MEAN IN PRACTICE?

- The new flight paths needed for IPA will be using Performance Based Navigation (PBN) and will need to 'fit' into Heathrow's existing airspace and for safety reasons need to be designed to avoid the existing arrival swathes into Heathrow.
- Therefore, those aircraft landing on the departures runway will not be able to operate wholly within the existing arrivals swathe and will fly over some new areas.
- The existing Heathrow's arrivals will remain unchanged as they will continue to operate within Heathrow's current arrival swathe
- We will not be seeking to make a change to the rules on the maximum number of aircraft allowed to land on the departures runway per hour.
- The IPA routes will only exist in a two-runway environment and will be superseded by our runway airspace design for expansion

CAP1616

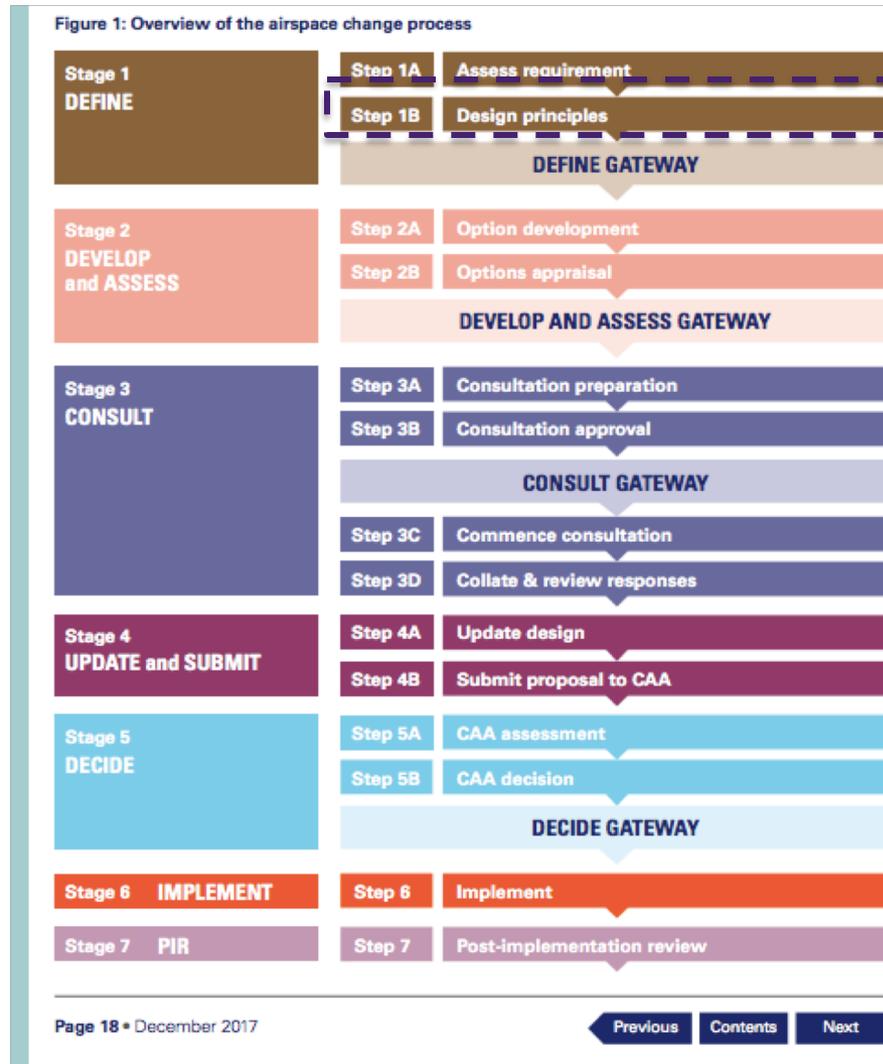
In January 2018 the CAA launched its Guidance on the regulatory process for changing airspace design: CAP1616

CAP1616 provides a process framework to be used when designing airspace and is split into 7 Stages as shown on the next slide

We are now in the Define Stage of the process where by Heathrow is seeking views on the proposed design principles to be used in considering the airspace design options for IPA.

We will be aiming to submit the final set of design principles to the CAA for the Stage 1B Gateway in December 2018.

THE CAA'S AIRSPACE CHANGE PROPOSAL PROCESS (CAP1616)



← we are here

WHAT IS A DESIGN PRINCIPLE?

The CAP1616 guidance requires the production of design principles for each airspace change

Design principles essentially provide a list of high level criteria that the proposed airspace design options should meet. They also provide a means of analysing the impact of different design options and a framework for choosing between options

CAP1616 states that:

- the development of design principles should provide “a shortlist of principles to inform the development of airspace design options” and a “framework against which airspace design options are evaluated”.
- principles “are in no way immutable and, as a part of the process for the establishment of the airspace design principles, should be challenged as part of the ongoing dialogue with stakeholders.”

HOW HAVE WE DEVELOPED DESIGN PRINCIPLES

Heathrow has a long history of engagement through established groups:

- Heathrow Community Noise Forum (HCNF)
- Heathrow Community Engagement Board (HCEB)
- Airline groups
- Heathrow Strategic Planning Group (HSPG)
- Future Airspace Strategy Industry Implementation Group (FASIIG)

Earlier this year we also conducted a public consultation asking for views on potential design principles to be used in the redesign of airspace required for Heathrow's third runway (3R)

After reviewing the consultation feedback, and engaging further with relevant stakeholder groups, Heathrow developed a set of 10 design principles

These were submitted to the CAA on 31st August and were approved at the Define Gateway meeting on 28th September

Having gained significant insight into our stakeholders priorities for airspace design we propose to use a similar, but not identical, set of design principles for IPA as our starting point for this discussion

REQUESTING YOUR INPUT & FEEDBACK ON IPA DESIGN PRINCIPLES

In your handout you will find 3 documents:

- An Introduction to IPA
- A IPA Design Principle Discussion Guide
- Today's presentation, with additional slides on Heathrow's mandatory IPA Design Principles and Heathrow's proposed Design Principles.

All comments and feedback need to be received by the **9th November 2018** by emailing airspace@heathrow.com.

Following this we will collate and consider feedback from you and other key stakeholder groups to produce our final list of principles for IPA.

NEXT STEPS IN THE DESIGN PROCESS

We will then re-engage, either in workshops or via email, to present back our final proposed list of design principles, having taken your feedback into consideration.

We will be aiming to submit the final set of design principles to the CAA for the Stage 1B Gateway in December 2018.

If accepted by the CAA, they will then be used to qualitatively evaluate our airspace design options as we move towards the next stage in the process.

We will continue to engage with you at key stages throughout the design process for IPA, including at two public consultations.



HEATHROW EXPANSION: AIRSPACE AND INDEPENDENT PARALLEL APPROACHES UPDATE

PRESENTATION 3

SCOPE

- **Heathrow Expansion; Airspace Update**
 - Design Principles submission
 - CAP1616 Stage 2
 - What we will be consulting on in the second consultation

- **Independent Parallel Approaches (IPA)**
 - Update and next steps

HEATHROW EXPANSION: AIRSPACE UPDATE

What have we done? Where are we now? What happens next?

DESIGN PRINCIPLES SUBMISSION SUMMARY

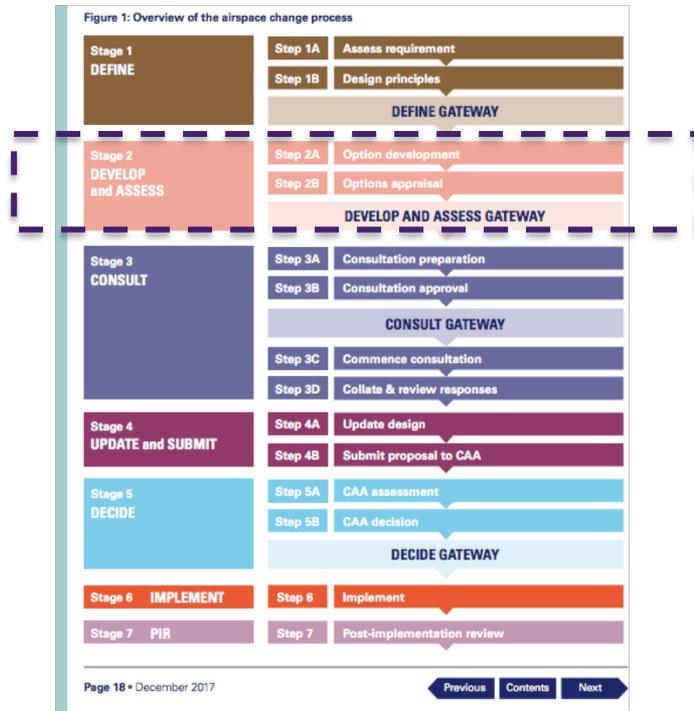
- Heathrow's Design Principles for Expansion were accepted by CAA on 28th September
- Our submission and supporting documents have been published on the Heathrow Expansion website www.heathrowexpansion.com

And on the CAA's website

<https://www.caa.co.uk/Commercial-industry/Airspace/Airspace-change/Decisions-from-2018/London-Heathrow-airspace-departure-and-arrival-procedures/>



NEXT STEPS IN THE AIRSPACE CHANGE PROCESS



The next stage of the process is Stage 2 – Develop and Assess

Stage 2A – Options development

- Develop a comprehensive list of options that address the Statement of Need and that align with the design principles agreed at Stage 1

Stage 2B – Options appraisal

- Each option assessed to understand impact, both positive and negative.

THREE STAGES OF AIRSPACE CONSULTATION FOR EXPANSION

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Design principles

In January – March 2018 we carried out our first airspace consultation on some of the key design principles we could use to redesign our airspace.

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Design envelopes

In the second consultation, we will present the geographic areas within which flight paths could be positioned. We will ask what local factors should be taken into account when developing new flight paths within these geographically defined areas known as 'design envelopes'

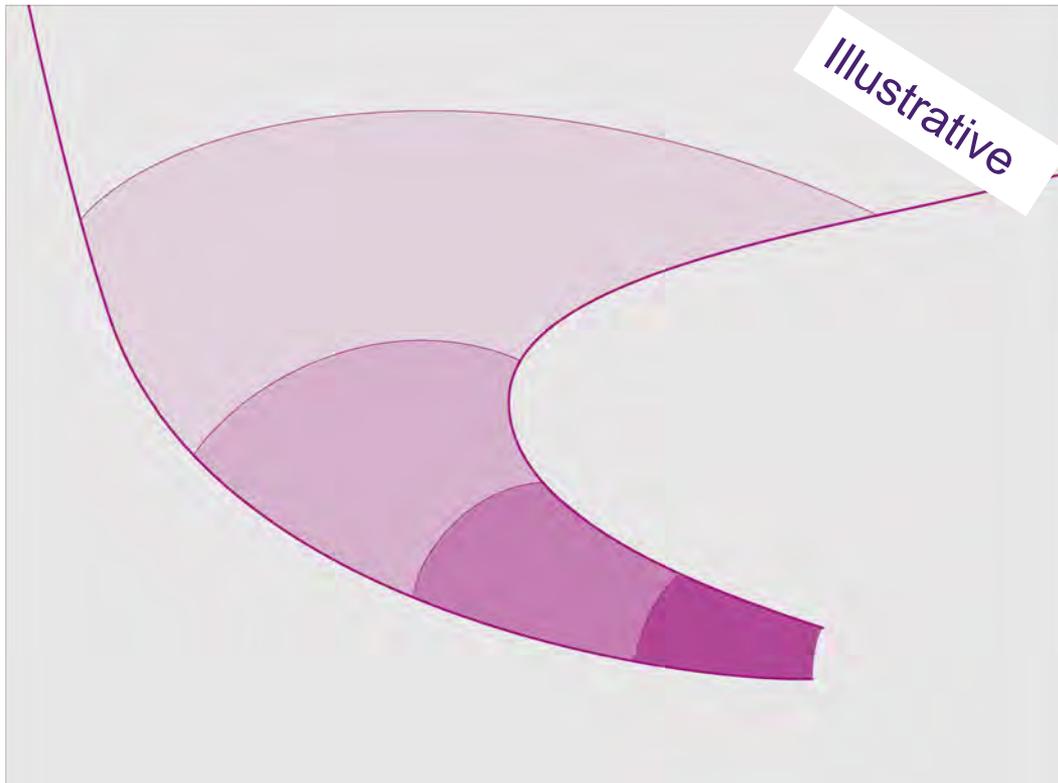
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Consultation 3:

Flight path options

The feedback we receive will help to inform the design of 'flight path options' (i.e. our proposals for the actual routes aircraft will fly), which will be presented in a third and final statutory consultation.

WHAT IS A DESIGN ENVELOPE?



- A design envelope is a broad geographical area within which a flight path or flight paths could be positioned
- It **does not** mean that the final flight path or paths will be spread across the extent of the envelope
- Information will also be provided such as an indication of the numbers of aircraft, height ranges, and average noise levels within the envelopes

What will you be seeking feedback on in January?

- We will present the design envelopes, within which the flight paths could be positioned. We will ask what local factors should be taken into account when developing new flight paths within these geographically defined areas
- We will be seeking feedback on the design envelopes for an expanded Heathrow and Independent Parallel Approaches

RUNWAY OPERATIONS

- In January 2019, we will also be consulting on options for how we operate our future runways
- We recognise that noise as a result of expansion is a significant concern for local communities so we are committed to developing our future Heathrow whilst ensuring that we minimise the effects on our surrounding communities.

Directional preference



Runway alternation



Night flights



Noise mitigation measures are core to the development of our proposals for a future Heathrow.

INDEPENDENT PARALLEL APPROACHES - UPDATE AND NEXT STEPS

LANDING ON THE DEPARTURES RUNWAY

Although most of the time we use one runway for departures and one for arrivals, when there is a build-up of delays both runways can be used for landing. This can also be known as TEAM (Tactically Enhanced Arrival Measures)

We can land on the departures runway when airborne holding delay reaches certain thresholds:

- Between 6.00am and 6.29am where there is a forecast delay of 10 minutes or more
- Between 6.30am and 7.00am where there is a forecast delay of five minutes or more
(Between 6.00am and 7.00am there is no limit on the number of arrivals that can land on the designated departures runway)
- After 7.00am where there is a forecast delay of 20 minutes or more¹
(After 7.00am no more than six arrivals per hour are permitted to land on the designated departures runway²)

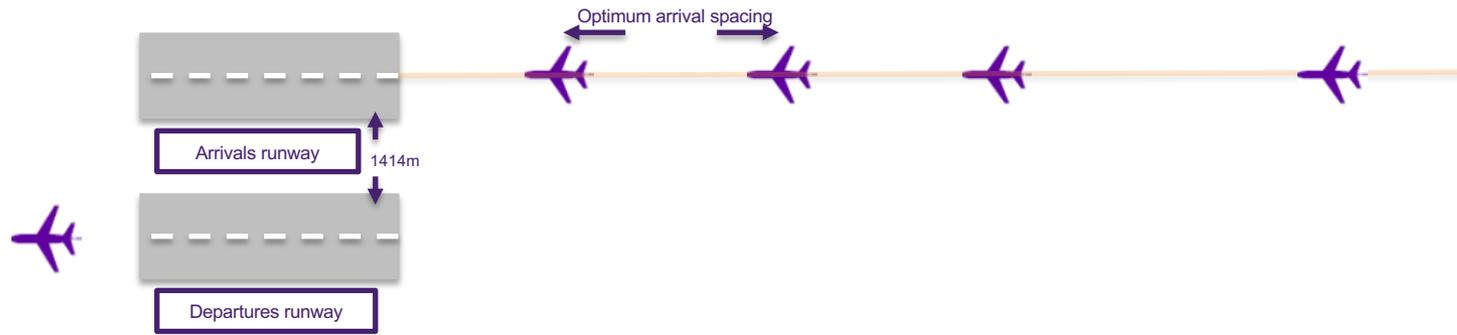
Easterly operations

Landing on the departures runway after 6.00am is also permitted on easterly operations. This is a similar practice to westerly operations although the Government limits do not apply to the numbers of arriving aircraft landing on the departures runway after 7.00am.

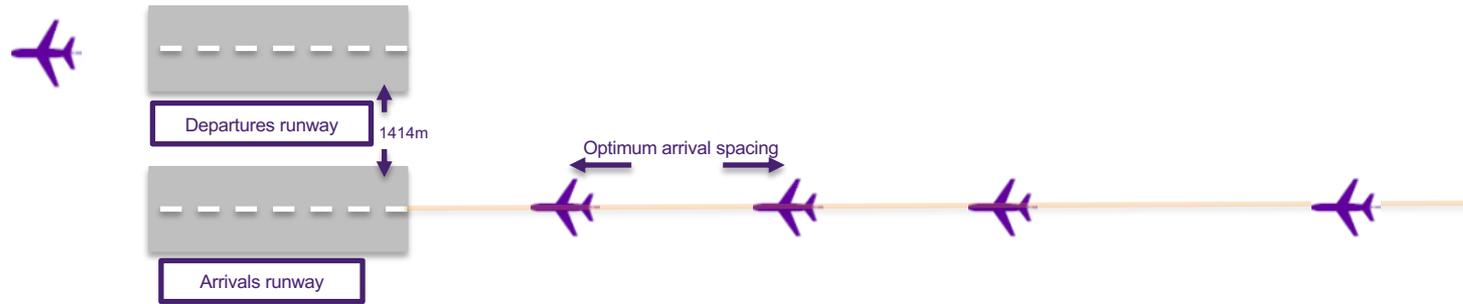
¹ These rules apply to westerly operations only.

² Landing more than 6 per hour may occur for safety reasons only

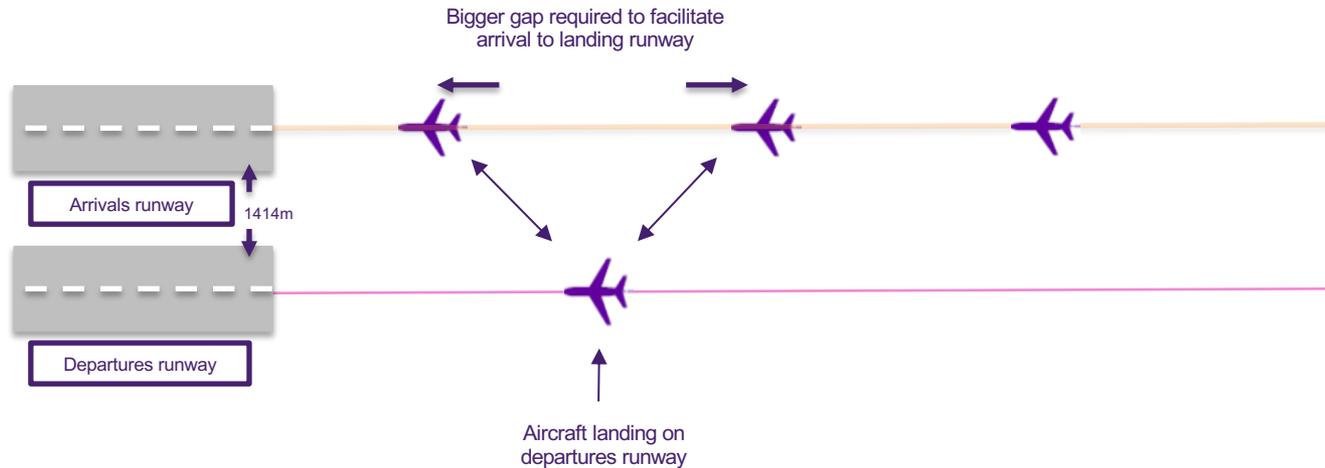
CURRENT OPERATIONS



ALTERNATING TO
(westerly only)



LANDING ON THE DEPARTURES RUNWAY



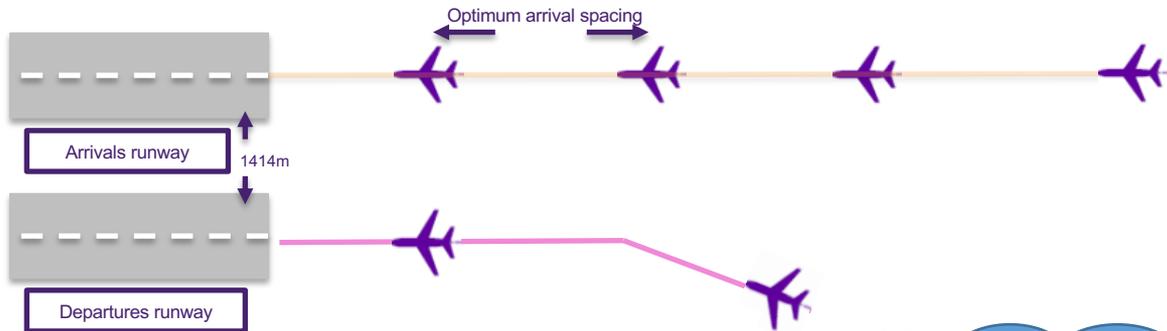
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WHAT IS IPA?

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Arrivals to the main arrivals runway will still be directed onto final approach at 8nm from touch down and beyond, as per today's operations

Aircraft landing to the departures runway only will join final approach inside 8nm from touchdown

With the introduction of IPA, aircraft landing on the arrivals runway would continue to be directed by air traffic control as they are today and be vectored onto final approach outside 8nm from touchdown.

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- Whilst Heathrow is operating within its maximum capacity of 480,000 Annual Transport Movements (ATMs) IPA will increase resilience which will enable more efficient prevention of and recovery from delays. We are therefore planning to introduce IPA in 2022, regardless of whether we expand
- As part of our DCO we are also considering putting forward plans to increase the ATM cap to release additional capacity. This would be an interim measure some years ahead of the opening of the new runway
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 - A reduction in aircraft holding in one of Heathrow's stacks because we prevent and recover more quickly from delay

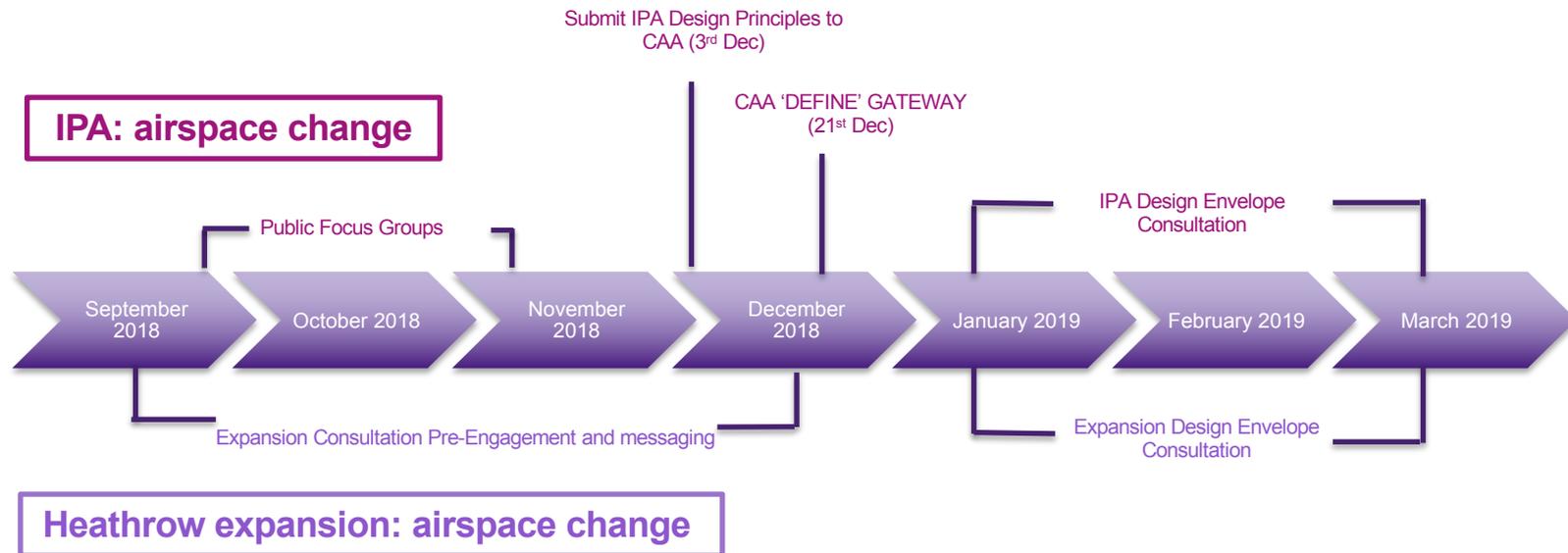
IPA – WHAT DOES THIS MEAN IN PRACTICE?

- The new flight paths needed for IPA will be using Performance Based Navigation (PBN) and will need to 'fit' into Heathrow's existing airspace. For safety reasons they need to be designed to avoid the existing arrival swathes into Heathrow.
- Therefore, those aircraft landing on the departures runway will not be able to operate wholly within the existing arrivals swathe and will fly over some new areas.
- The existing Heathrow arrivals will remain unchanged as they will continue to operate within Heathrow's current arrival swathe.
- We will not be seeking to make a change to the rules on the maximum number of aircraft allowed to land on the departures runway per hour.
- The IPA routes will only exist in a two-runway environment and will be superseded by our airspace design for expansion.

IPA DESIGN PRINCIPLES – HOW WILL WE DO THIS?

- The CAA's Airspace Change Process (ACP) requires us to engage on design principles specifically for IPA - as this is a separate airspace change from expansion
- Our design principles for expansion have been approved by the CAA. We have used those as the starting point for IPA because we believe they are transferable across all Heathrow's ACPs. Stakeholders are now being asked if there are any reasons why those design principles and their prioritisation should not also apply to IPA
- Between now and mid-November, we will be engaging with Local Authorities, Heathrow Community Noise Forum (HCNF), Heathrow Community Engagement Board (HCEB), Industry Bodies (NATMAC and FASIIG) as well as arranging public focus groups to develop and agree our IPA design principles
- Our IPA Design Principles will be submitted to the CAA on 3 December 2018, for their consideration at the Gateway on 21 December 2018

EXPANSION AND IPA CONSULTATION - TIMELINE





HEATHROW - STAGE 1A DEFINE – IPA DESIGN PRINCIPLES

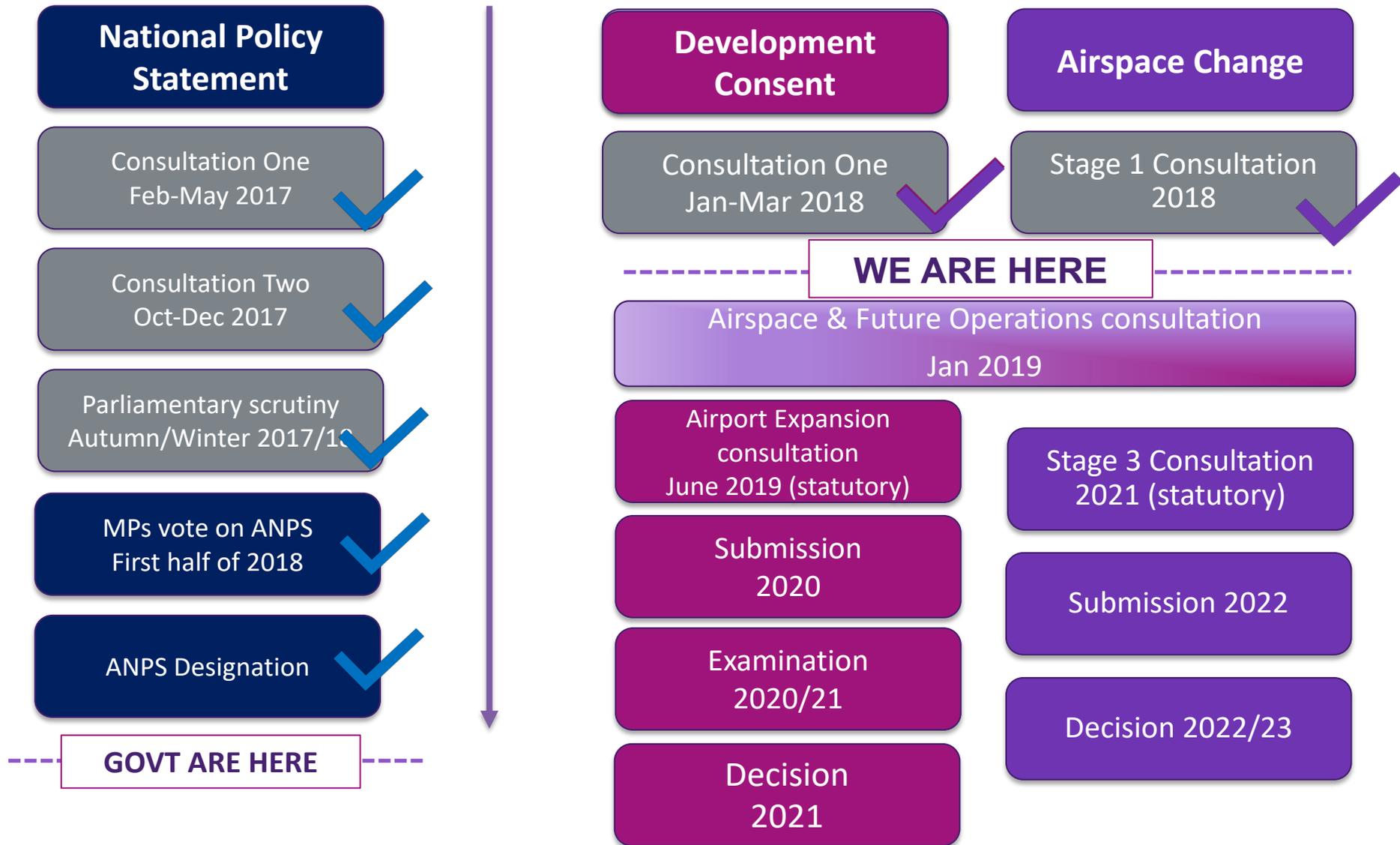
PRESENTATION 4

CONSULTATION OVERVIEW

- There will be two consultations in 2019, building on consultation feedback from earlier this year, which will seek views on the following topics:
- **January 2019 – Airspace and Future Operations Consultation**
 - Airspace design envelopes
 - Future runway operations
- **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 where we are in the planning process and provides an overview on what we will be seeking feedback on in January’s consultation.

POLICY AND CONSENTING PROCESSES: INDICATIVE TIMELINE



JANUARY – AIRSPACE & OPERATIONS CONSULTATION

Airspace design envelopes – two runways

- We will be seeking feedback on the design envelopes for new arrival routes for our two-runway airport, with the introduction of Independent Parallel Approaches

Airspace design envelopes – three runways

- Following Stage 1 consultation on design principles earlier this year, we will be seeking feedback on the design envelopes for an expanded Heathrow

Runway Operations – three runways

- Operating three runways will be different to operating two runways, and we will be seeking feedback on a number of elements such as directional preference, night flights, and runway alternation

AIRSPACE CHANGE PROCESS

The **DfT** is responsible for all aviation policy in the UK, including airspace.

The **CAA** is responsible for the Airspace Change Process which all airports must follow when proposing changes to airspace.

NATS is responsible for changes to airspace above 7000ft.

Heathrow is responsible for the design of any changes to flight paths into and out of the airport up to approximately 7000ft.

- Changes to flight paths are submitted to and approved by the CAA, following the Airspace Design Guidance provided in its document known as 'CAP 1616'.
- This guidance sets out a process framework following a multi-stage approach for changing airspace. It places great importance on engaging and consulting on airspace proposals throughout the process with a wide range of stakeholders, including potentially affected communities.

THREE STAGES OF AIRSPACE CONSULTATION FOR EXPANSION

1

Consultation 1:

Design principles

In January – March 2018 we carried out our first airspace consultation on some of the key design principles we could use to redesign our airspace.

2

Consultation 2:

Design envelopes

In the second consultation, we will present the geographic areas within which flight paths could be positioned. We will ask what local factors should be taken into account when developing new flight paths within these geographically defined areas known as 'design envelopes'

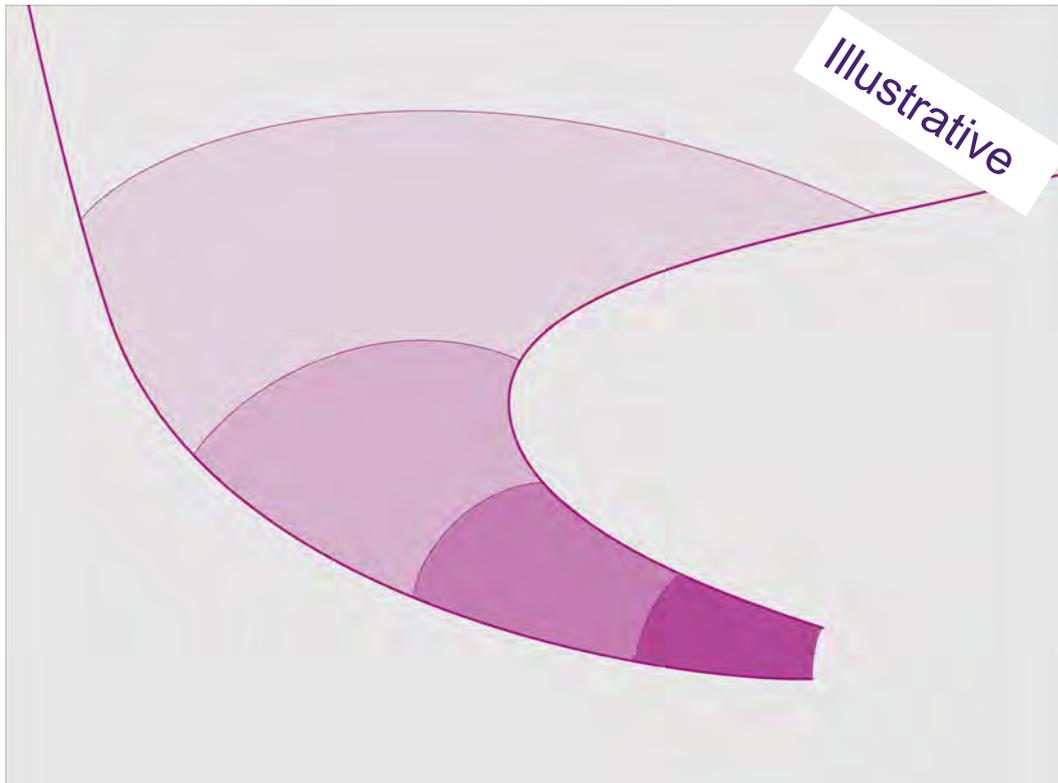
3

Consultation 3:

Flight path options

The feedback we receive will help to inform the design of 'flight path options' (i.e. our proposals for the actual routes aircraft will fly), which will be presented in a third and final statutory consultation.

WHAT IS A DESIGN ENVELOPE?



- A design envelope is a broad geographical area within which a flight path or flight paths could be positioned
- It **does not** mean that the final flight path or paths will be spread across the extent of the envelope
- Information will also be provided such as an indication of the numbers of aircraft, height ranges, and average noise levels within the envelopes

What will you be seeking feedback on in January?

- We will present the design envelopes, within which the flight paths could be positioned. We will ask what local factors should be taken into account when developing new flight paths within these geographically defined areas
- We will be seeking feedback on the design envelopes for an expanded Heathrow and for Independent Parallel Approaches

INDEPENDENT PARALLEL APPROACHES

What is IPA?

An arrivals procedure which will enable us to land our arriving aircraft more efficiently on our existing two runways, until the new runway is operational.

Why is it being introduced?

It will help us to:

- Improve punctuality
- Reduce the flight cancellations and diversions
- Reduce the number of late running flights into the night
- Recover more quickly from delays
- Improve the overall efficiency of how the airport operates

It could also enable the release of additional capacity before the third runway is operational.



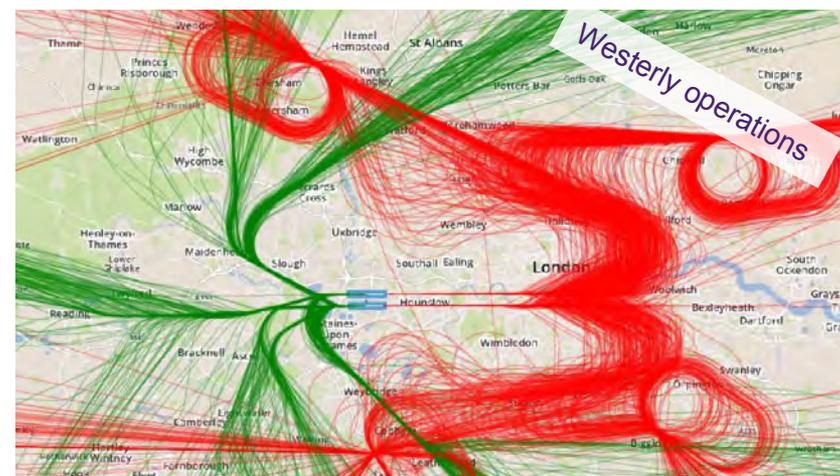
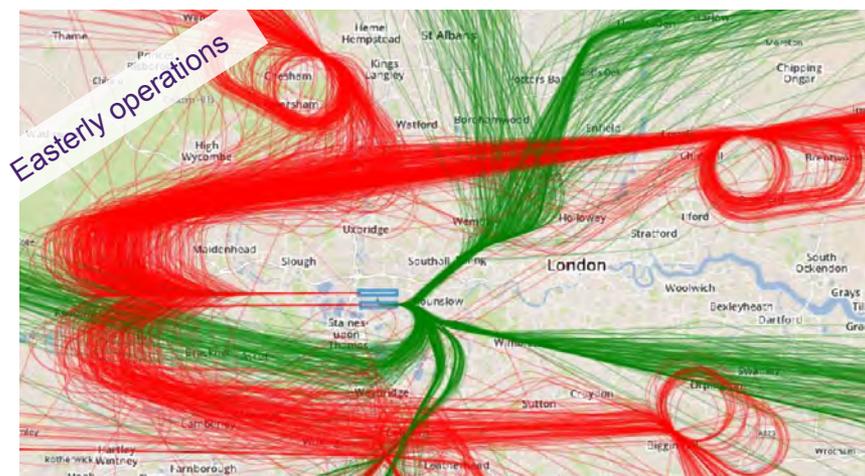
When will it be introduced?

We are planning to introduce IPA in 2022 (regardless of whether we expand)

INDEPENDENT PARALLEL APPROACHES

What will this mean for local communities?

- IPA will mean making a change to how a small number of aircraft arrive at Heathrow, using our current two runways
- IPA flights will use Performance Based Navigation (PBN) which means aircraft will fly more accurately
- The new flight paths need to ‘fit’ into Heathrow’s existing airspace without affecting current flight paths, which are illustrated below



What will you be seeking feedback on in January?

- We will present the geographic areas, known as “design envelopes”, within which the IPA flight paths could be positioned. We will ask what local factors should be taken into account when developing new flight paths within these geographically defined areas.

RUNWAY OPERATIONS

- We recognise that noise as a result of expansion is a significant concern for local communities so we are committed to developing our future Heathrow whilst ensuring that we minimise the effects on our surrounding communities.
- In January 2019, we will be consulting on aspects for how we operate our future runways

Directional preference



Runway alternation



Night flights



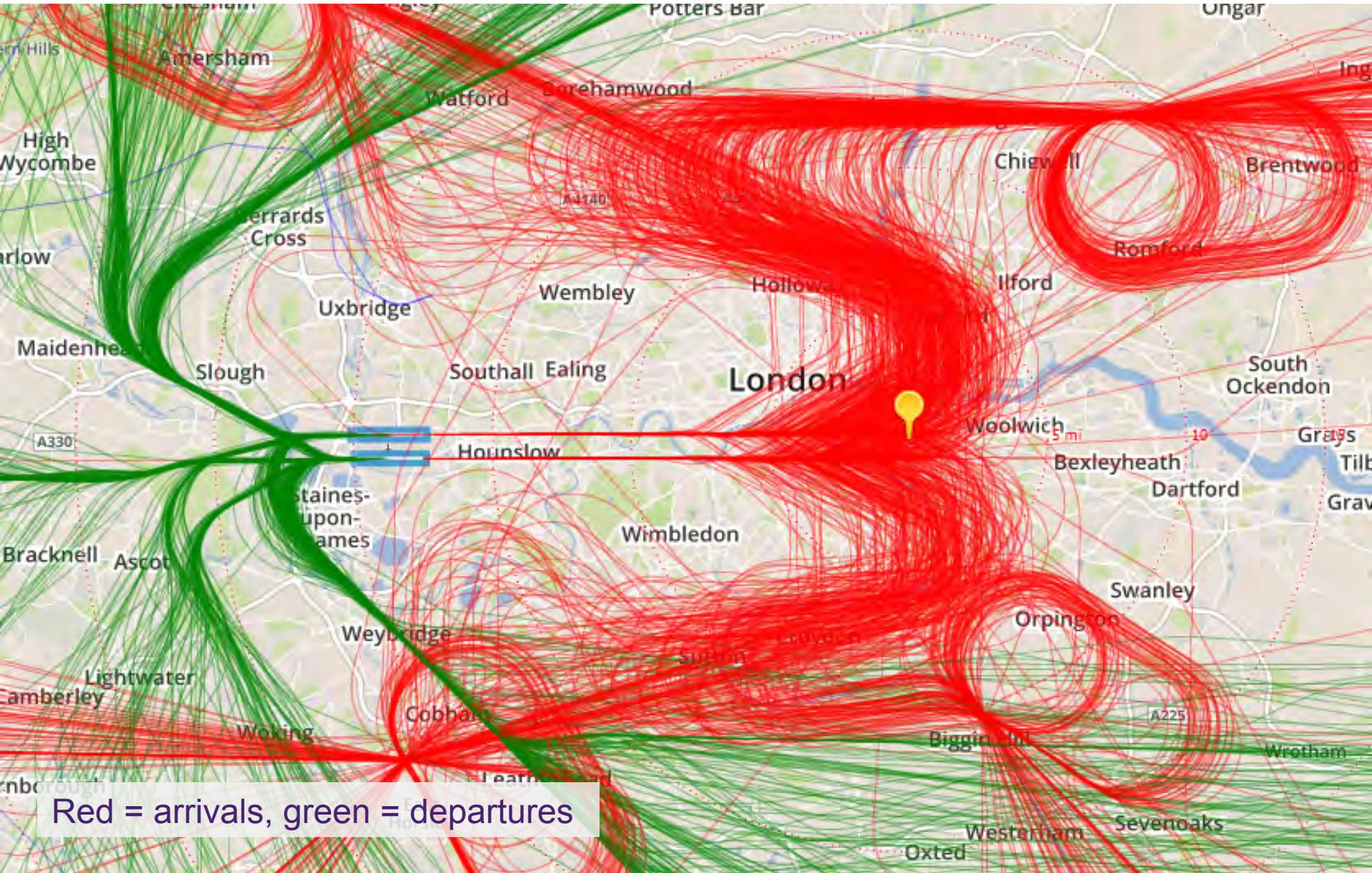
Noise mitigation measures are core to the development of our proposals for a future Heathrow.



HEATHROW - STAGE 1A DEFINE – IPA DESIGN PRINCIPLES

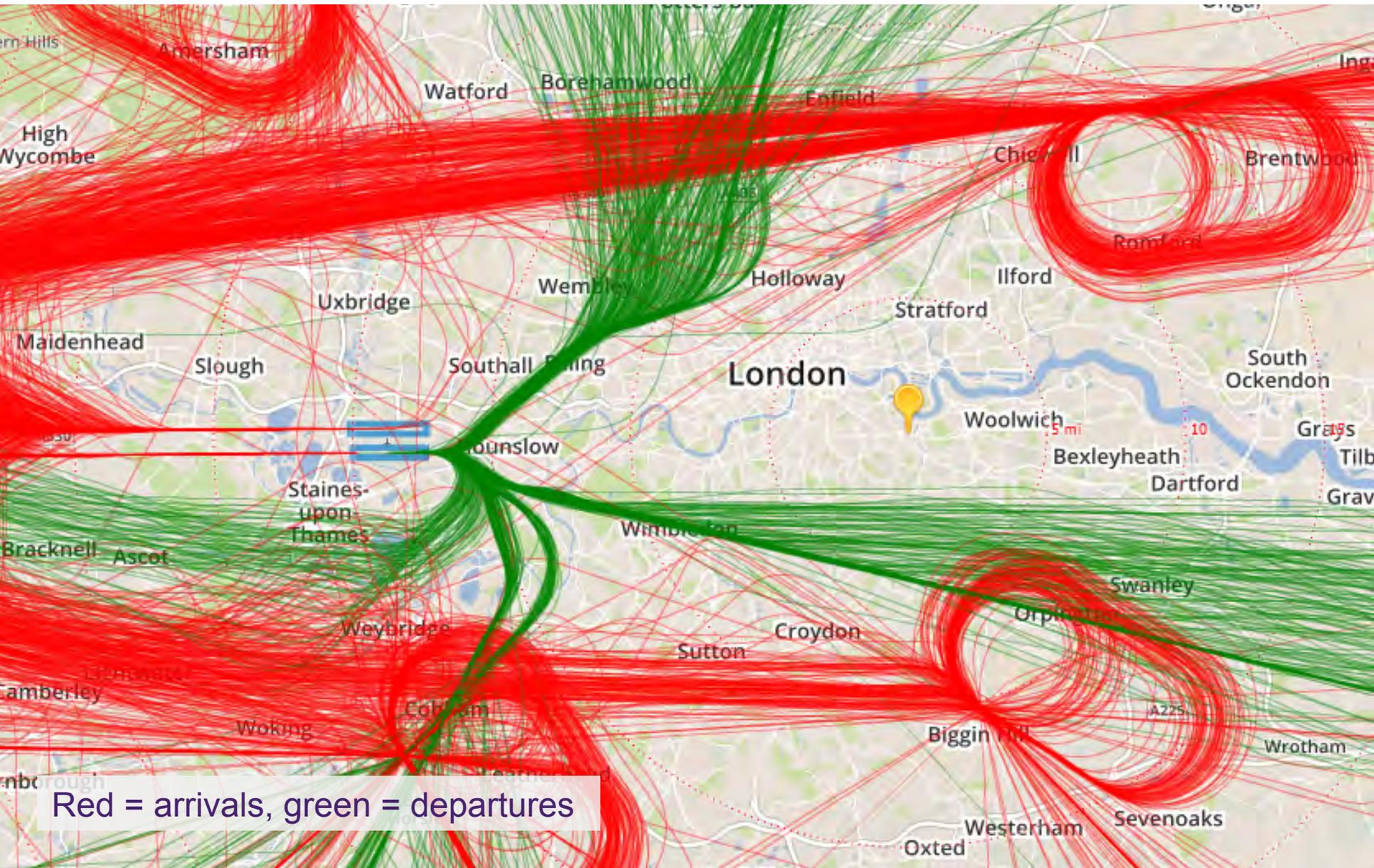
PRESENTATION 5

THIS MAP SHOWS A DAY OF WESTERLY OPERATIONS ON 1 NOVEMBER 2018. A POSTCODE IN LEWISHAM & DEPTFORD IS MARKED IN YELLOW.



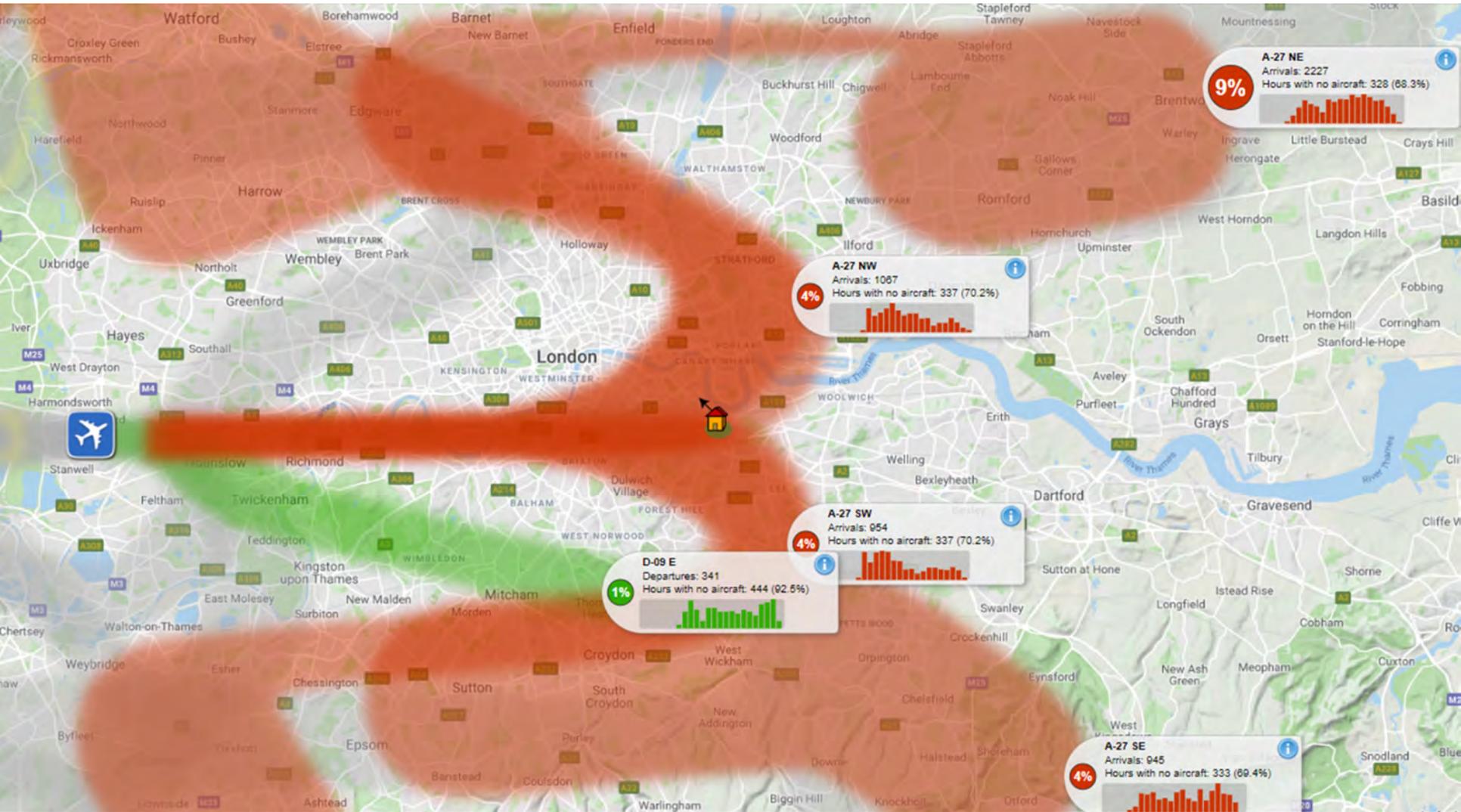
Red = arrivals, green = departures

THIS MAP SHOWS A DAY OF EASTERLY OPERATIONS ON 31 OCTOBER 2018. A POSTCODE IN LEWISHAM & DEPTFORD IS MARKED IN YELLOW.



Red = arrivals, green = departures

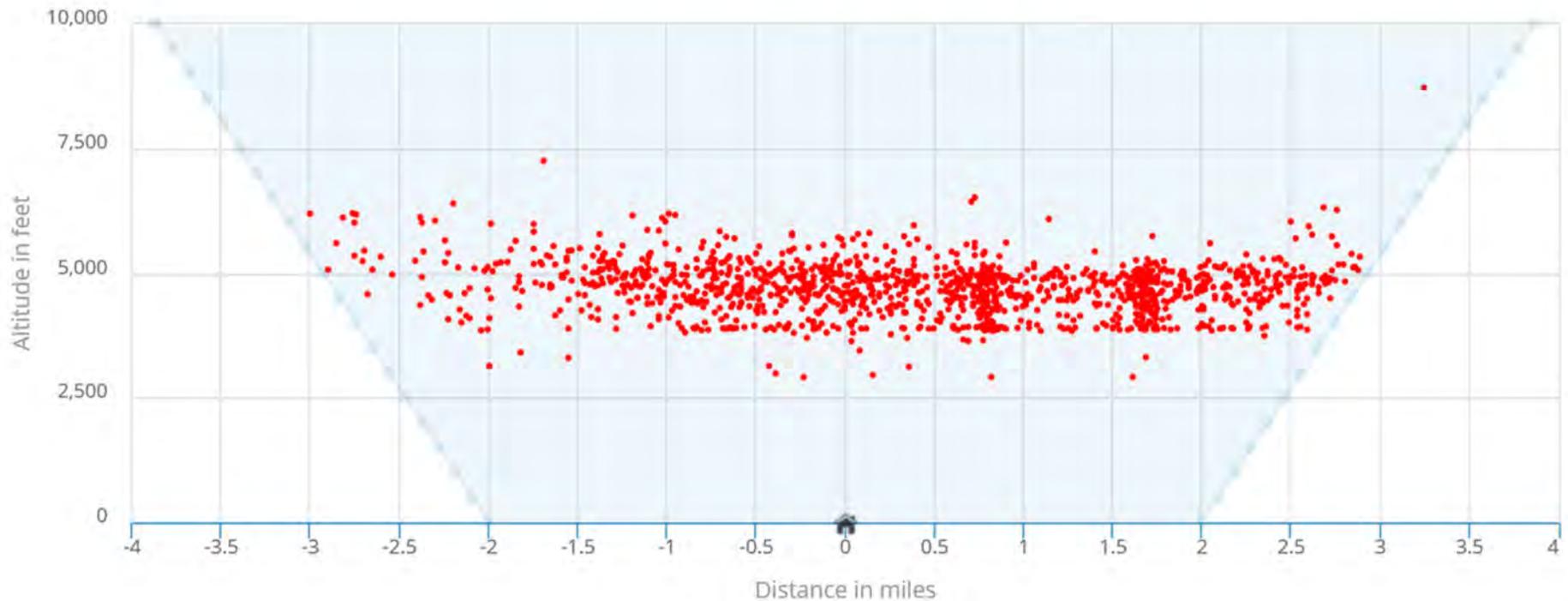
LEWISHAM POSTCODE SE8 3PG – NORTHERLY POSTCODE



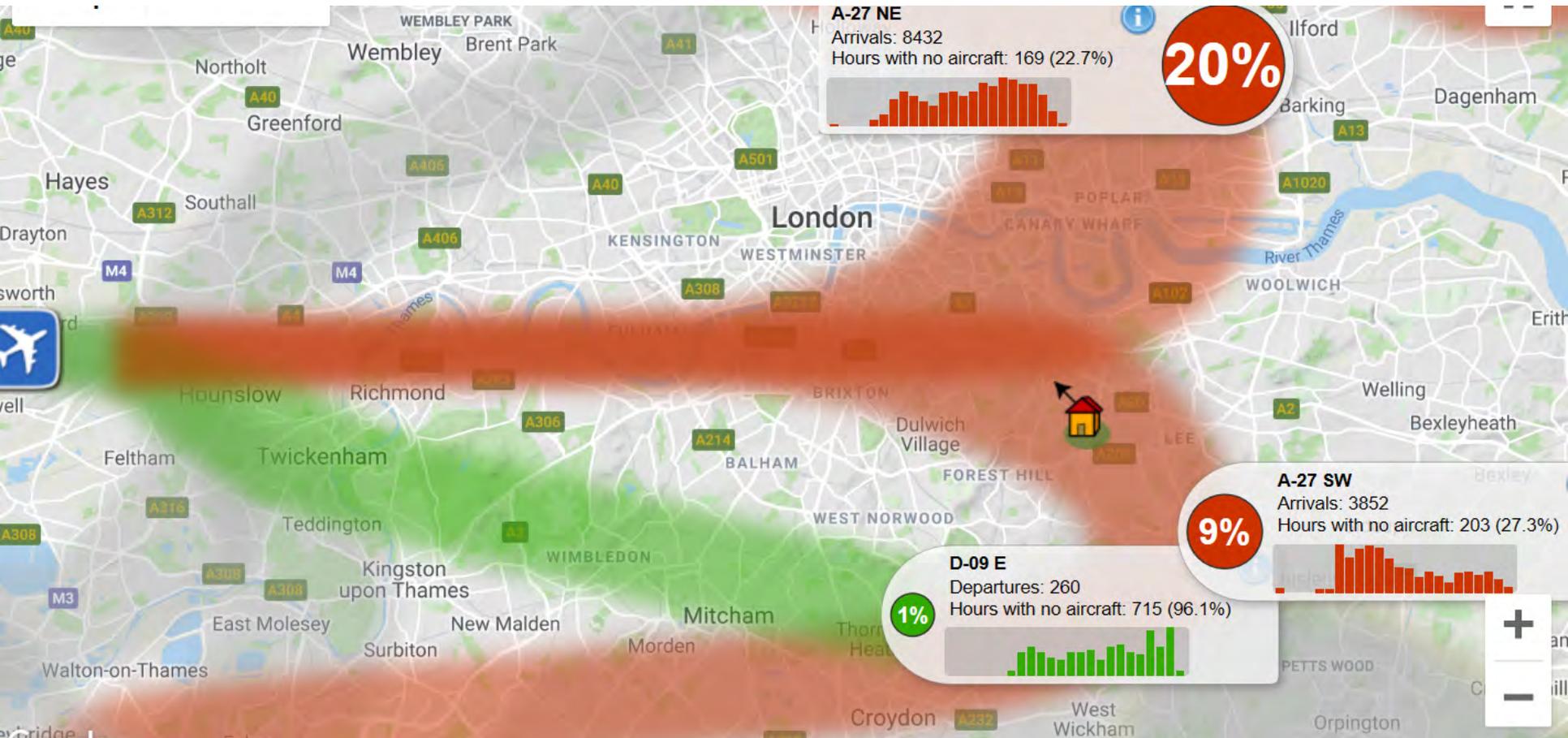
LEWISHAM POSTCODE SE8 3PG - ARRIVALS FROM 27NW/27NE AND 27SE/27SW

Arrival **1370** Departure **0** Total **1370**

- Operation Type
- Runway
- Route
- Aircraft Size
- Period of Day
- Aircraft Type



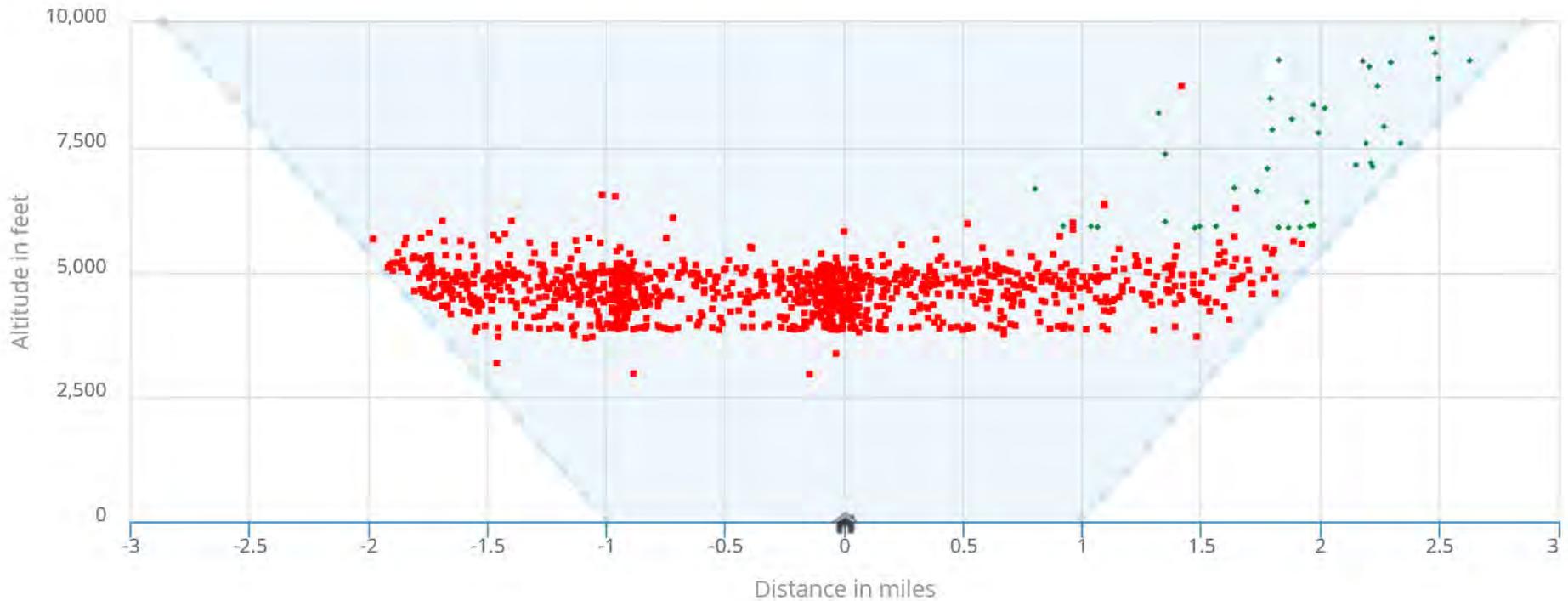
LEWISHAM POSTCODE SE4 1LT - VENUE



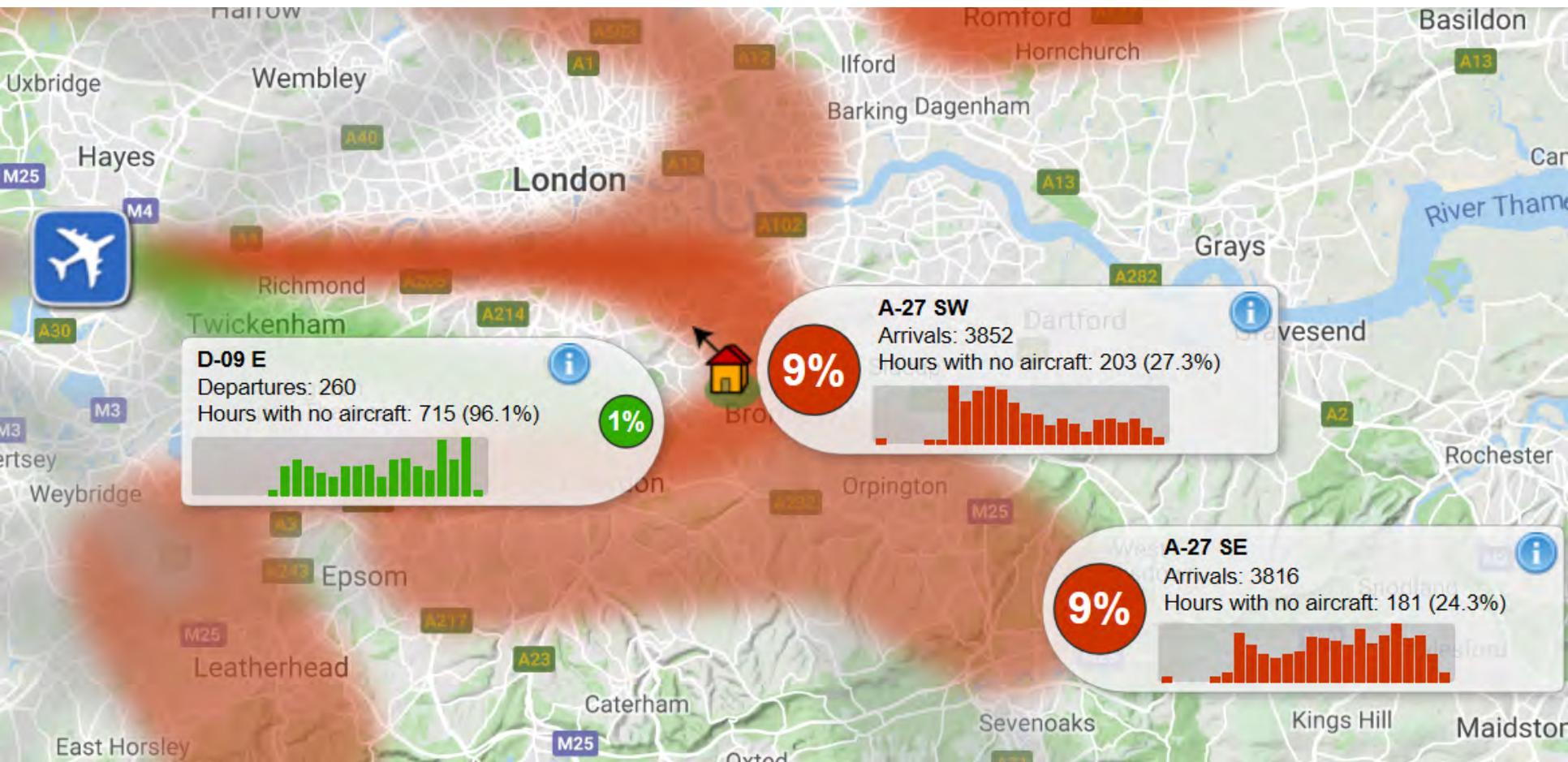
LEWISHAM POSTCODE SE4 1LT

Arrival **1139** Departure **41** Total **1180**

Operation Type Runway Route Aircraft Size Period of Day Aircraft Type



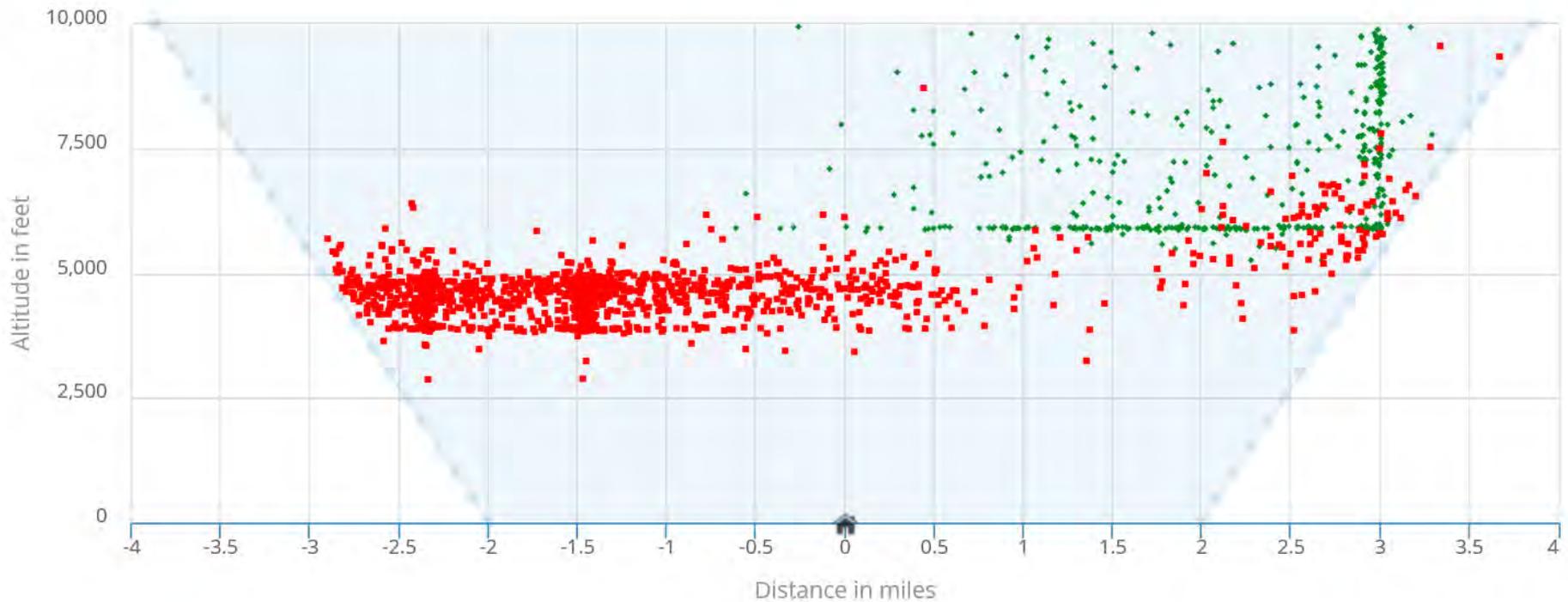
LEWISHAM POSTCODE SE23 1AS – SOUTHERLY POSTCODE



SOUTH LEWISHAM SE23 1AS- ARRIVALS 27SE/27SW AND 09DET DEPARTURES

Arrival **1327** Departure **461** Total **1788**

Operation Type Runway Route Aircraft Size Period of Day Aircraft Type

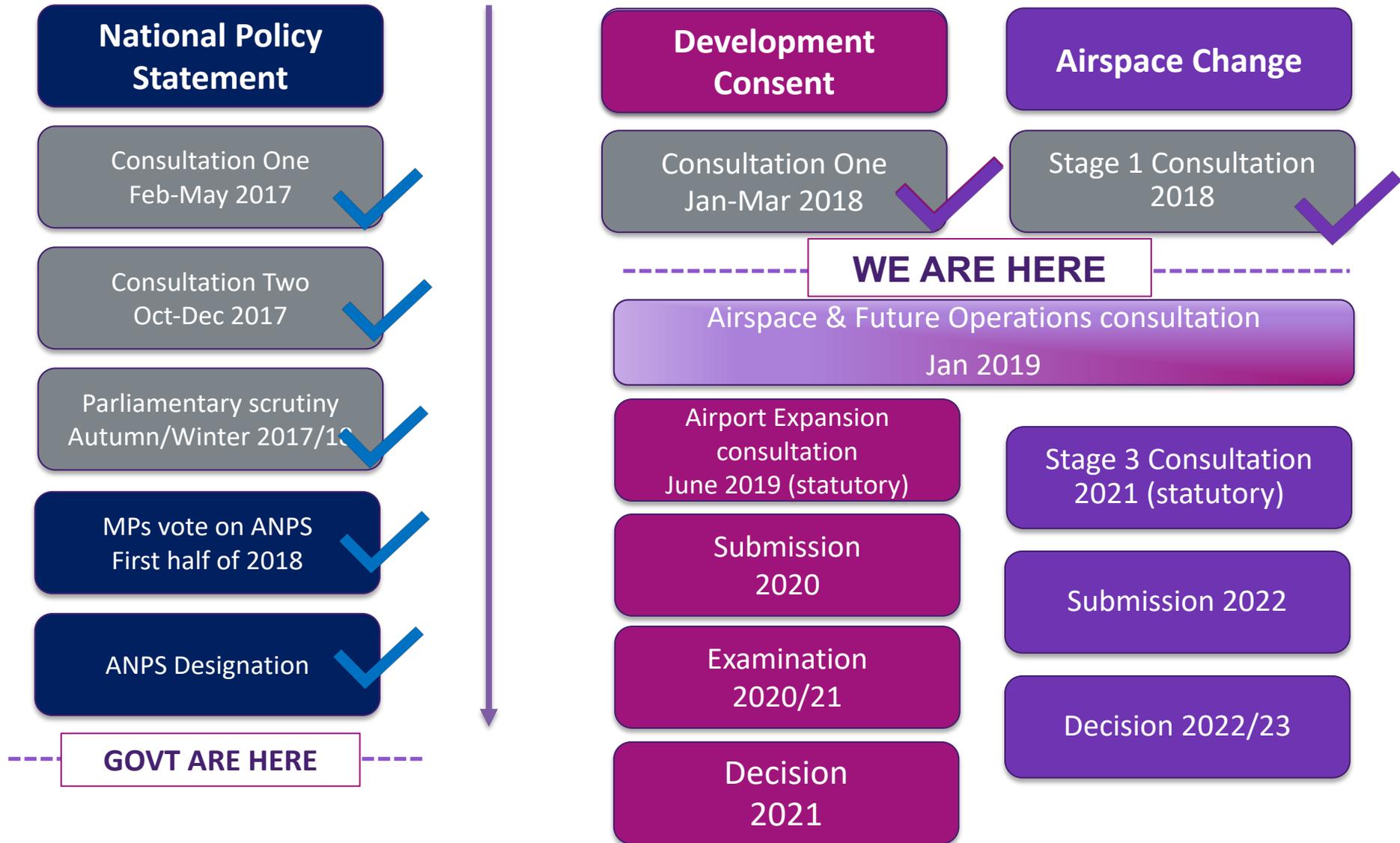


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WHAT IS A DESIGN ENVELOPE?



- A design envelope is a broad geographical area within which a flight path or flight paths could be positioned
- It **does not** mean that the final flight path or paths will be spread across the extent of the envelope
- Information will also be provided such as an indication of the numbers of aircraft, height ranges, and average noise levels within the envelopes

What will you be seeking feedback on in January?

- We will present the design envelopes, within which the flight paths could be positioned. We will ask what local factors should be taken into account when developing new flight paths within these geographically defined areas
- We will be seeking feedback on the design envelopes for an expanded Heathrow and for Independent Parallel Approaches

INDEPENDENT PARALLEL APPROACHES

What is IPA?

An arrivals procedure which will enable us to land our arriving aircraft more efficiently on our existing two runways, until the new runway is operational.

Why is it being introduced?

It will help us to:

- Improve punctuality
- Reduce the flight cancellations and diversions
- Reduce the number of late running flights into the night
- Recover more quickly from delays
- Improve the overall efficiency of how the airport operates

It could also enable the release of additional capacity before the third runway is operational.



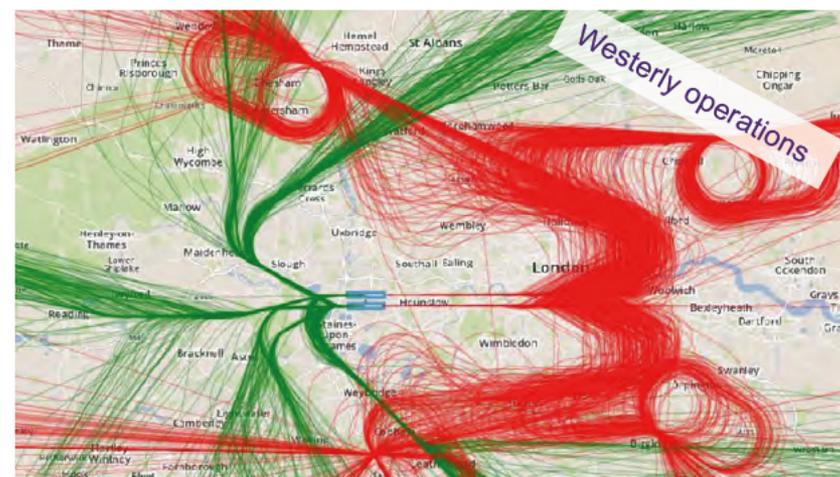
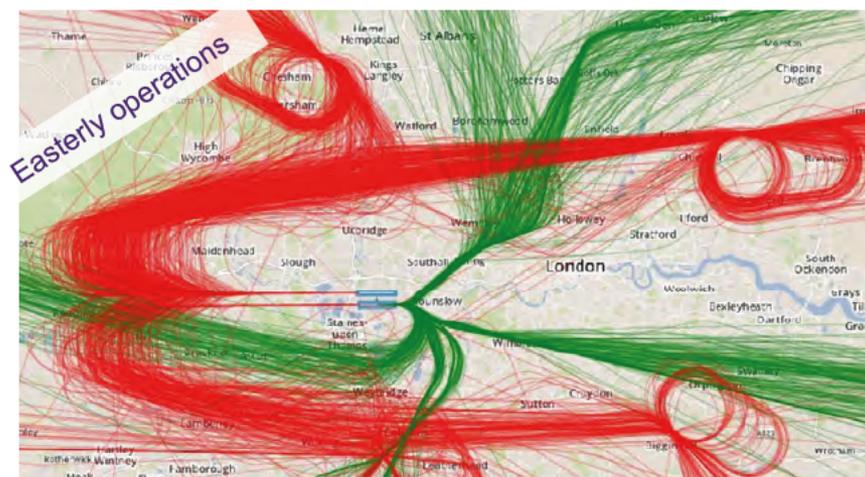
When will it be introduced?

We are planning to introduce IPA in 2022 (regardless of whether we expand)

INDEPENDENT PARALLEL APPROACHES

What will this mean for local communities?

- IPA will mean making a change to how a small number of aircraft arrive at Heathrow, using our current two runways
- IPA flights will use Performance Based Navigation (PBN) which means aircraft will fly more accurately
- The new flight paths need to 'fit' into Heathrow's existing airspace without affecting current flight paths, which are illustrated below



What will you be seeking feedback on in January?

- We will present the geographic areas, known as “design envelopes”, within which the IPA flight paths could be positioned. We will ask what local factors should be taken into account when developing new flight paths within these geographically defined areas.



HEATHROW - STAGE 1A DEFINE – IPA DESIGN PRINCIPLES

PRESENTATION 6

KEY RESPONSES TO IPA DESIGN PRINCIPLES

| Stakeholder Group | Key Point Raised |
|-------------------|--|
| Airlines | <ul style="list-style-type: none"> • Resilience with 25K • Maximise operating performance/resilience |
| HCNF | <ul style="list-style-type: none"> • Share • Air Navigation Guidance 2017 • NPSe • WHO Guidance |
| HCEB | <ul style="list-style-type: none"> • Countryside/Greenbelt • Share/Respite • 25K • WHO Guidance |
| Local Councils | <ul style="list-style-type: none"> • For those currently overflown, share • For those not, minimise newly effected |
| Public | <ul style="list-style-type: none"> • Share/Respite • Minimise New • Air Quality |

IPA DESIGN PRINCIPLES

| | |
|---|--|
| | |
| 1 | Must be safe |
| 2 | <p>Must meet the three aims of the NPSe</p> <ul style="list-style-type: none"> • Avoid significant adverse impacts on health and quality of life • Mitigate and minimise adverse impacts on health and quality of life • Where possible, contribute to the improvement of health and quality of life |
| 3 | Must meet local air quality requirements |
| 4 | Must base our technology on the latest navigation technology widely available |
| 5 | Must meet Heathrow's hourly landing rate requirements |
| 6 | <p>Should limit, and where possible reduce, local noise effects from flights</p> <ul style="list-style-type: none"> a) Use more noise efficient operational practices b) Maximise sharing through predictable respite c) Avoid overflying communities with multiple flight paths d) Minimise the number of people newly overflown e) Minimise total population overflown f) Design flight paths over commercial and industrial areas (rather than residential areas) g) Where appropriate, prioritise routing over parks and open spaces (rather than residential areas), but avoid overflight of Areas of Outstanding Natural Beauty (AONB) where possible |
| 7 | Should minimise impact on Heathrow's existing traffic patterns and other airspace users |
| 8 | Should minimise fuel and CO2 greenhouse gases per flight |
| 9 | Should be simple and efficient flight paths for operational efficiency |

Heathrow

Building for the future