

APPENDIX D – ENGAGEMENT MATERIAL/ EMAILS/PRESENTATIONS

From: [REDACTED] on behalf of [REDACTED]

Sent on: Friday, August 9, 2019 11:01:21 AM

BCC: [REDACTED]

Subject: Heathrow - Slightly Steeper Approaches Design Principles Update & Q&A

Attachments: Appendix D - Stakeholders Asked, Heathrow Answered.pdf (387.34 KB)

Good Afternoon,

I recently wrote to inform you that Heathrow are looking to introduce Slightly Steeper Approaches for arriving aircraft and ask for your feedback on our proposed design principles for this airspace change proposal. Following engagement with stakeholders, we have developed our final list which will be submitted to the CAA:

	Final Design Principles
1	Must be safe
2	Must achieve the objective of reducing noise compared to a 3.0° approach
3	Must not increase the numbers of go-arounds
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6	Should not reduce the ability of arrivals to perform Continuous Descent Approach
7	Should maximise the number of aircraft able to fly the slightly steeper approach
8	Should not adversely increase pilot or ATC workload

During our engagement, several stakeholders asked questions and provided comments concerning Slightly Steeper Approaches and the potential impacts of this airspace change. We have compiled these questions, with Heathrow's answers, into a document which is attached to this email. This document will form part of our submission to the CAA – all of which will be available on the CAA Portal in the next few weeks.

Thank you very much for your feedback and time on this project.

Kind Regards

EMAIL TO FLOPSC

From: [REDACTED] on behalf of [REDACTED]

Sent on: Friday, August 9, 2019 3:18:44 PM

To: [REDACTED]

Subject: Slightly Steeper Approaches – design principles update and Q&A

Attachments: Slightly Steeper Approaches_Stakeholder Engagement Q&A.pdf (384.63 KB)

Good afternoon,

As you will be aware, Heathrow are looking to introduce Slightly Steeper Approaches for arriving aircraft (3.2° as opposed to 3.0°) and although the procedures have been operational for over 3 years, to do this permanently we need to go through the Civil Aviation Authority's (CAA) airspace change process. Following engagement with stakeholders, we have developed a list of 'design

principles' - essentially a list of high-level criteria that the proposed airspace design options should meet. These design principles, which we will submit to the CAA, are listed below.

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We would like to thank stakeholders for providing their feedback, and hope that this document is helpful. Should you have any further questions on this airspace change then please do not hesitate to contact me.

Thanks,

[Redacted Signature]

Community Relations Manager

EMAIL TO HCEB

From: [Redacted] on behalf of [Redacted]
Sent on: Friday, August 9, 2019 2:29:48 PM
To: Team HCEB [Redacted]
CC: [Redacted]
Subject: Slightly Steeper Approaches – design principles update and Q&A

Good afternoon,

As you will be aware, Heathrow are looking to introduce Slightly Steeper Approaches for arriving aircraft (3.2° as opposed to 3.0°) and although the procedures have been operational for over 3 years, to do this permanently we need to go through the Civil Aviation Authority's (CAA) airspace change process. Following engagement with stakeholders, we have developed a list of 'design principles' - essentially a list of high-level criteria that the proposed airspace design options should meet. These design principles, which we will submit to the CAA, are listed below.

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Thanks,

[Redacted]

[Redacted]

Community Relations Manager

EMAIL TO HCNF

From: DD - Heathrow Community Noise Forum

Sent: 09 August 2019 15:28

To: DD - Heathrow Community Noise Forum [Redacted]

Subject: Slightly Steeper Approaches – design principles update and Q&A

Good afternoon,

As you will be aware, Heathrow are looking to introduce Slightly Steeper Approaches for arriving aircraft (3.2° as opposed to 3.0°) and although the procedures have been operational for over 3 years, to do this permanently we need to go through the Civil Aviation Authority's (CAA) airspace change process. Following engagement with stakeholders, we have developed a list of 'design principles' - essentially a list of high-level criteria that the proposed airspace design options should meet. These design principles, which we will submit to the CAA, are listed below.

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We would like to thank stakeholders for providing their feedback, and hope that this document is helpful. Should you have any further questions on this airspace change then please do not hesitate to contact me.

Thanks,

[Redacted]

Community Relations Manager

EMAIL TO LOCAL AUTHORITIES

From: [REDACTED] on behalf of [REDACTED]
Sent on: Friday, August 9, 2019 5:24:27 PM
To: [REDACTED]
Subject: Slightly Steeper Approaches – design principles update and Q&A

Good afternoon,

We recently wrote to Heathrow Community Noise Forum members (which your council is a member of) to inform them that Heathrow are looking to introduce Slightly Steeper Approaches for arriving aircraft (3.2° as opposed to 3.0°). Although the procedures have been operational for over 3 years, to do this permanently we need to go through the Civil Aviation Authority's (CAA) airspace change process. Following engagement with stakeholders, we have developed a list of 'design principles' - essentially a list of high-level criteria that the proposed airspace design options should meet. These design principles, which we will submit to the CAA, are listed below.

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We would like to thank stakeholders for providing their feedback, and hope that this document is helpful. Should you have any further questions on this airspace change then please do not hesitate to contact me.

Thanks, [REDACTED]

LIST OF LOCAL AUTHORITIES

A	B	C	D
Local authority			
Hillingdon			
Bracknell Forest			
Buckinghamshire County Council			
Elmbridge			
Hounslow			
Ealing			
Hammersmith & Fulham			
Richmond Upon Thames			
Runnymede			
South Bucks			
Spelthorne			
Surrey Heath			
Surrey County Council			
Slough			
Windsor & Maidenhead			
Wokingham			

EMAIL TO HSPG

From: [REDACTED] on behalf of [REDACTED]
Sent on: Friday, August 9, 2019 2:33:00 PM
To: [REDACTED]
Subject: Slightly Steeper Approaches – design principles update and Q&A
Attachments: Slightly Steeper Approaches_Stakeholder Engagement Q&A.pdf (384.63 KB)

Good afternoon [REDACTED] and [REDACTED],

As you will be aware, Heathrow are looking to introduce Slightly Steeper Approaches for arriving aircraft (3.2° as opposed to 3.0°) and although the procedures have been operational for over 3 years, to do this permanently we need to go through the Civil Aviation Authority's (CAA) airspace change process. Following engagement with stakeholders, we have developed a list of 'design principles' - essentially a list of high-level criteria that the proposed airspace design options should meet. These design principles, which we will submit to the CAA, are listed below.

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Thanks,

[REDACTED]

EMAIL TO HILLINGDON COUNCIL

From: [REDACTED] on behalf of [REDACTED]
Sent on: Friday, August 9, 2019 5:30:27 PM
To: [REDACTED]
Subject: Slightly Steeper Approaches – design principles update and Q&A
Attachments: Heathrow_Slightly Steeper Approaches_Design Principles_Briefing_June 2019.pdf (453.89 KB)

Good afternoon,

As you will be aware from recent correspondence, Heathrow are looking to introduce Slightly Steeper Approaches for arriving aircraft (3.2° as opposed to 3.0°) and although the procedures have been operational for over 3 years, to do this permanently we need to go through the Civil Aviation Authority's (CAA) airspace change process. Following engagement with stakeholders, we have developed a list of 'design principles' - essentially a list of high-level criteria that the proposed airspace design options should meet. These design principles, which we will submit to the CAA, are listed below.

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We would like to thank stakeholders for providing their feedback, and hope that this document is helpful. Should you have any further questions on this airspace change then please do not hesitate to contact me.

Thanks,



STAKEHOLDERS ASKED, HEATHROW ANSWERED

HCEB

Q1. Are there any environmental impacts of Slightly Steeper Approaches (SSA) and if so, have they been considered? Environmental impacts can include whether SSA create additional pollution or noise in other locations.

A1. The SSA trials found peak noise (Sound Exposure Level - SEL) reductions of 1.4dBA and peak increases of 0.1dBA with overall average reductions of 0.5dBA. There was no increase in track miles flown or Continuous Descent Approach (CDA) performance (therefore CO₂). No negative environmental impacts were found however, the Options Appraisal of this ACP will re-confirm all environmental impacts.

Q2. HAL should consider references to the feedback that communities have given (in support of SSA) to aid transparency. We would suggest something similar to the 5 bullet points on page 3.

A2. On page 5 of our Slightly Steeper Approaches briefing document, we provided a list, with links to the previous engagement; meeting notes 30 June 2016 HCNF Working Group 2 and meeting notes 30 June 2016 HCNF Working Group 2, where Slightly Steeper Approaches were referred to as a 'win-win' during one community group forum. Statistics on community feedback can also be found in the trial report Heathrow Slightly Steeper Approach Trial 2017 Final Report.

Q3. Reference is made to "local communities have supported the trials", does this mean that there are communities that are not local who have not supported the trials?

A3. No - we mean all communities represented by the Heathrow Community Noise Forum (HCNF) and Heathrow Airport Consultative Committee (HACC - as it was known at the time).

Q4. Where you refer to stakeholder groups under the table of consultees, does this refer to those in the table? Are local communities considered to be part of this stakeholder group?

A4. Stage 1 of the CAA's CAP1616 process requires us to develop and agree design principles with elected representatives. For this ACP, we consider local community groups to be those represented by the HCEB and HCNF.

Q5. Will any communities experience negative effects from what is proposed? If so, which communities and how?

A5. The trial found peak noise (SEL) reductions of 1.4dBA and peak increase of 0.1dBA with overall average reductions of 0.5dBA. Any impacts to communities will be assessed in the CAP1616 options appraisal stages, Stage 2B and Stage 3A.

Q6. Is there scope for a review of SSA should issues become apparent at a later stage?

A6. These steeper approaches are already in operation at Heathrow and have been since 2017. Stage 7 of the Airspace Change Process is known as a 'Post Implementation Review', performed by the CAA 12 months after permanent introduction. This is where the CAA checks to ensure that the changes proposed, and their impacts are as articulated in the Airspace Change Proposal.

Q7. The technical details behind the short document are beyond our expertise and that of most lay people, so we would suggest that HAL considers whether or not their assessment should be peer reviewed?

A7. Trials were analysed by Environmental Research and Consultancy Department (ERCD). We are happy to discuss any areas of uncertainty at an HCEB Working Group.

Q8. The design principles seem good and we must assume that none are incompatible – if not what if steeper flights did reduce Heathrow's capacity – which design principle would have priority?

A8. All 'musts' must be achieved. However, we already know from our trials that the SSA's already meet all our proposed design principles.

Q9. Are the design principles ranked in order?

A9. No, they are not in order but all 'musts' are mandatory. Due to the nature of this proposal we do not anticipate there will be any options (in stages 2 & 3 of the ACP) that require choices to be made, therefore there is no need to prioritise the principles. This is different to the other on-going Heathrow Airspace Change Proposals.

Q10. Will you be switching from ILS to RNAV?

A10. No, ILS will remain at 3.0° and will still be the most common landing procedure. In the future we aim to introduce increased angles of approach for all Heathrow arrivals, including ILS when introducing new airspace for an expanded Heathrow as explained during our Airspace and Future Operations Consultation in January 2019.

WINDSOR & MAIDENHEAD

Q11. Is it correct that the heavier and noisier long-haul aircraft are unable to use this procedure, due to aircraft approach performance and the infrequency of pilots using Heathrow?

A11. No, there is no relationship between the size of aircraft and whether they can fly the RNAV approaches. The trial reports detail the aircraft types which flew the RNAV approaches and these include a mix on short and long-haul aircraft.

QATAR AIRWAYS & BALPA

Q12. There is a minimum temperature for promulgated approaches, but no maximum. Should these approaches be restricted to 30°C and below?

A12. The CAA does not currently promulgate a maximum temperature for their use, this is left to operators to determine. During the trials the maximum temperature was 34°C equating to an RNAV approach angle of 3.34° which was performed without issue. We will give consideration to promulgating a maximum temperature which equates to a 3.49° angle as approach angles above this are not allowed. However, this will need to be discussed with the CAA.

BALPA & BRITISH AIRWAYS

Q13. Will the ILS continue to be available to pilots who do not want to or are unable to fly the RNAV slightly steeper approach?

A13. Yes, and we expect this will continue to be the most common approach flown.

BRITISH AIRWAYS

Q14. Will the PAPI's (Precision Approach Path Indicators) be set at 3.2° once the procedure is permanently implemented?

A14. No, the PAPI's have remained at 3.0° during the ongoing trial. No reports have been received in relation to this, although it was discussed at length before the trials began. Once these slightly steeper approaches are made permanent, the PAPI's will remain at 3.0° as the most common approach flown will remain a 3.0° ILS.

LUFTHANSA GROUP

Q15. How will Heathrow propose to enable types of aircraft restricted to a maximum glideslope of 3.15° to fly an Autoland approach?

A15. The Autoland function is not relevant to this Airspace Change Proposal.

BRITISH AIRWAYS

Q16. Will there be two separate ILS approaches, with different glideslopes?

A16. No. This Airspace Change Proposal relates only to the 3.2° RNAV approaches which are already in operation at Heathrow. The ILS' will remain at 3.0°. In the future we aim to introduce increased angles of approach for all Heathrow arrivals, including ILS when introducing new airspace for an expanded Heathrow as explained during our Airspace and Future Operations Consultation in January 2019.

POINTS RAISED DURING FEEDBACK & HEATHROW'S RESPONSES

GENERAL AVIATION ALLIANCE

P1. An assumption that GA including sporting and recreational aviation is entitled to continued safe use of airspace and that commercial aviation does not have a right to limit airspace access.

R1. No changes to Controlled Airspace boundaries or the procedures and priorities for accommodating other airspace users' access are required for this Airspace Change proposal.

P2. Sponsors must show how they are integrating their proposal within the overall UK airspace modernisation context (for example, proposals which do not connect efficiently between upper and lower airspace (potentially under different airspace "management") would only inhibit overall airspace efficiency and therefore not receive our support).

R2. Agree, however this Airspace Change Proposal has no effect on the UK airspace network.

P3. Reiteration that the UK airspace's default classification is G.

R3. Slightly Steeper Approaches are entirely within existing Class D controlled airspace boundary.

P4. Reiteration that Class E airspace default is without the addition of a TMZ or RMZ.

R4. Slightly Steeper Approaches are entirely within existing Class D controlled airspace boundary.

P5. Expectation that data used, particularly forecasts, will be verifiable including details of any and all assumptions.

R5. Forecasts will be in line with CAP1616 requirements for baseline.

P6. Expectation that there will be proper validation of forecast traffic levels.

R6. Forecasts will be in line with CAP1616 requirements for baseline.

P7. Expectation that there will be proper analysis of overall airspace safety changes, i.e. based on modelling and evidence rather than purely subjective opinion.

R7. The two live trials on Slightly Steeper Approaches provide tangible evidence of their safety.

P8. Minimum size of controlled airspace.

R8. Slightly Steeper Approaches are entirely within existing Class D controlled airspace boundary.

P9. Steeper and continuous climbs and descents for cost and environmental benefits as well as minimisation of CAS footprint.

R9. This Airspace Change proposes steeper descents. Whilst the live trials found evidence of small reductions in noise and no impact to CDA performance, they found no evidence to support benefits in fuel reduction and are contained within the existing Class D controlled airspace boundary.

P10. Use of Class E airspace as an alternative to class A, C or D airspace.

R10. This Airspace Change does not propose any change to existing Controlled Airspace boundaries or classifications.

P11. Optimisation of the development work above and below the 8,000ft NATS en-route split.

R11. This Airspace Change proposal has no effect on the UK airspace network.

P12. Flexible use of airspace including interoperability with existing e-conspicuity, e.g. FLARM and PilotAware.

R12. This Airspace Change does not propose any change to existing Controlled Airspace boundaries or classifications or requirements and procedures for access.

P13. Efficient consultation.

R13. In addition to this engagement on design principles for Slightly Steeper Approaches, we will be re-engaging on our comprehensive list of options in September/October 2019 and will carry out a statutory consultation in 2020 in line with CAP1616 requirements.



*SLIGHTLY STEEPER APPROACHES:
ENGAGEMENT ON COMPREHENSIVE LIST OF OPTIONS*



PURPOSE OF THIS PRESENTATION

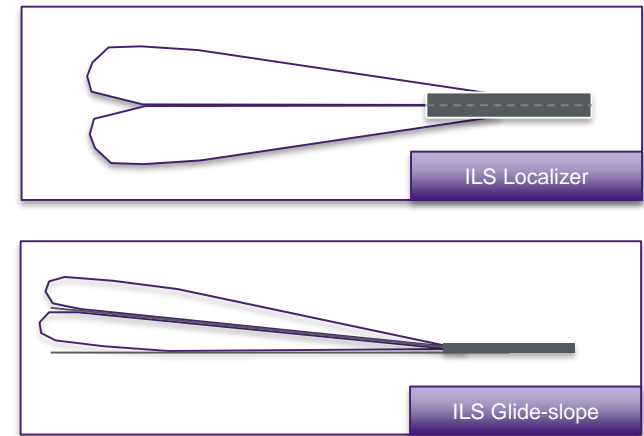
To explain the different options explored for introducing Slightly Steeper Approaches (SSA) at Heathrow in the short-term, ahead of airspace modernisation and expansion

We will cover:

- *What is an Instrument Landing System (ILS)?*
- *What are Area Navigation (RNAV) Approaches?*
- *Heathrow's proposal to introduce slightly steeper approaches using RNAV*
- *Options for different RNAV approach angles*
- *Next Steps*

¹⁵ *WHAT IS AN INSTRUMENT LANDING SYSTEM (ILS)?*

- The ILS is a radio navigation system which provides aircraft with horizontal and vertical guidance just before and during landing
- It consists of physical equipment on the airfield which gives a 'precision approach' meaning it is accurate in any weather condition or level of visibility



¹⁶ *LIMITATIONS OF THE INSTRUMENT LANDING SYSTEM (ILS)*

- International guidelines state that for 'high precision' approaches, angles greater than 3.0° should only be used for obstacle clearance (i.e. the glide path of the arriving aircraft makes a 3.0° angle to the ground)
 - *e.g. London City Airport has a 5.5° approach due to obstacle clearance, but aircraft cannot land during low visibility*
- Heathrow's ILS is only certified to operate at 3.0° during low visibility (i.e. bad weather)
- It is not possible to change the ILS approach angle between 'good' and 'bad' weather conditions without suspension of the Heathrow operation for a significant amount of time
- In addition, many *aircraft* are limited to a maximum approach angle of 3.15° when using an ILS in low visibility

➤ **Introducing a steeper approach using the ILS is not an option for Heathrow at this time**



WHAT ARE AREA NAVIGATION (RNAV) APPROACHES?

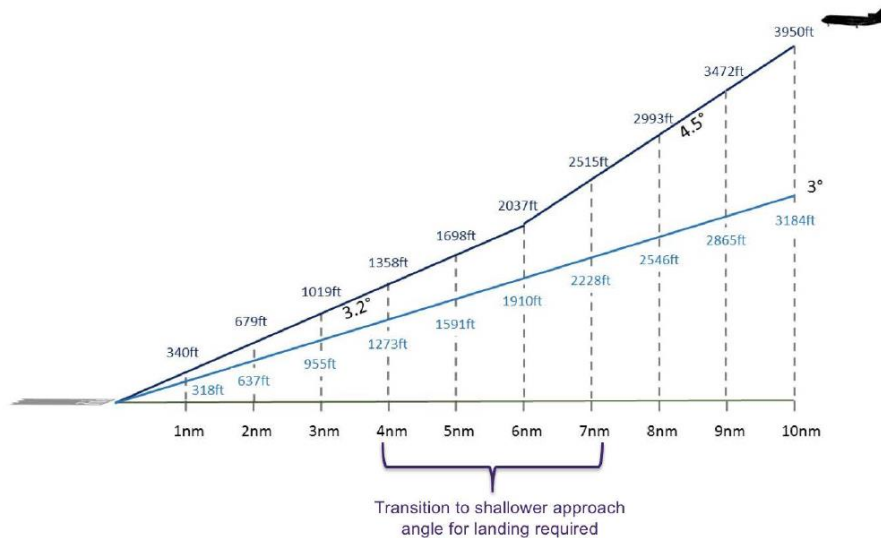
- RNAV approaches use satellite technology to provide the navigational accuracy required to guide aircraft to the runway: RNAV approaches can only be flown by aircraft with specific modern technology on board
- Once established on Final Approach, there is no difference to the position of aircraft over the ground when using an ILS or RNAV approach
- RNAV approaches are not as precise as ILS approaches which means in poor visibility, RNAV approaches become redundant and ILS approaches are required in order to land aircraft safely

¹⁸*HEATHROW'S PROPOSAL TO INTRODUCE SLIGHTLY STEEPER APPROACHES USING RNAV*

- International rules permit RNAV Approaches at angles of up to 3.5° in 'good' weather conditions
- It is therefore possible to increase the angle of Heathrow's RNAV approaches above 3.0°, leaving the ILS unaffected and available for use in all weather conditions
- It is important to note that only 1-2% of Heathrow's arrivals fly RNAV approaches. This is due to the increased Air Traffic Control and Pilot workload associated with these approaches
- This airspace change proposal is not related to Heathrow's Expansion project. If a 3rd runway is consented, Heathrow aspire to introduce Slightly Steeper Approaches for **all** arrivals as part of that airspace change



OPTIONS FOR DIFFERENT RNAV APPROACH ANGLES



>3.5° Landing on the runway from angles greater than 3.5° is not operationally viable for many aircraft and some may require modifications.

To have a final approach angle steeper than 3.5° at Heathrow would require a 'segmented approach' which is where the steeper angle has to shallow prior to landing. Operators would require training and individual operational approval from the CAA to fly segmented approaches.

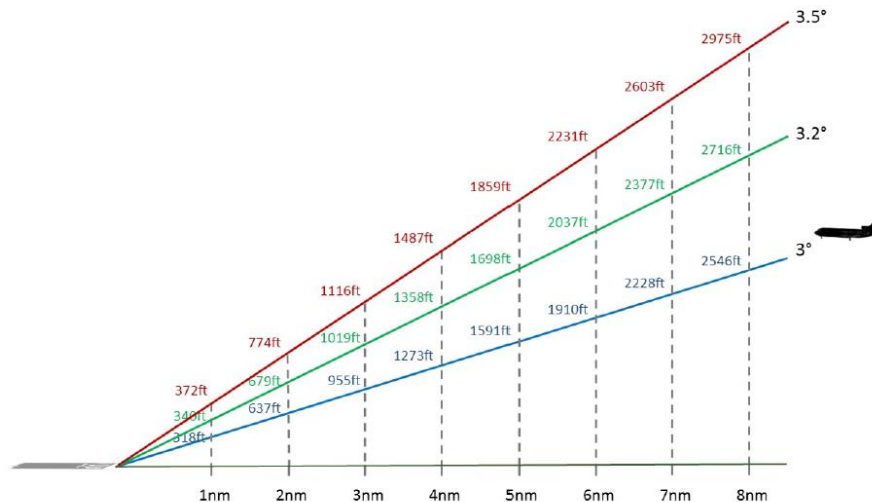
Heathrow safely trialled segmented approaches in 2014 for just 6 flights with a minimum final approach spacing of 10nm between arriving pairs. This significant increase in final approach spacing would be detrimental to the existing Heathrow operation.

3.5° Operators expressed concerns over the ability to adhere to the strict speed limits imposed on final approach at Heathrow which could lead to increased risks of go-arounds or increased runway occupancy time. In addition, increased spacing on final approach would be necessary to address the risk of turbulence from following aircraft flying a 3.0° approach.

No data available on the impact of 3.5° approaches on a high intensity operation.

3.2° Heathrow's live trials have provided evidence that this angle provides a small noise reduction (average 0.5db SEL) with no negative operational impact.

3.0° Today's approach angle.



NEXT STEPS

- Late 2019: Evaluation and Appraisal of the Options
- Spring/Summer 2020: Consultation on Preferred Option
- Late 2020: Submit ACP
- 2021: Permanent adoption of RNAV Slightly Steeper Approaches at Heathrow



ATTENDEES AT HSPG BRIEFING – 05/09/2019

From: [REDACTED]
Sent on: Friday, September 13, 2019 11:34:29 AM
To: [REDACTED]
CC: [REDACTED]
Subject: RE: HSPB - SSA Briefing 5 Sep 18

Hi all,

Apologies for the delay in getting back to you – the attendance list wasn't handed back so I was waiting for my team to check the list for me, but they are very busy with their AEC response.

Attendees

[REDACTED] - HSPG Core Team (Chair)
[REDACTED] - HSPG Core Team
[REDACTED] - HSPG Core Team
[REDACTED] - HSPG Core Team
[REDACTED] - Bucks CC/HSPG Core Team
[REDACTED] - HSPG Core Team
[REDACTED] - HSPG Core Team
[REDACTED] - HSPG Core Team

Members:

[REDACTED] - Colne Valley Regional Park
[REDACTED] - Runnymede Council
[REDACTED] - Surrey CC
[REDACTED] - LEP
[REDACTED] - Spelthorne
[REDACTED] South Bucks
[REDACTED] - Slough Borough Council
[REDACTED] - RBWM

Observers:

[REDACTED] - Highways England
[REDACTED] presenting Western Rail - DfT
[REDACTED] - DfT
[REDACTED] - DfT
[REDACTED] - DfT

Apologies: [REDACTED] - HSPG Core Team

EMAIL TO NATMAC

From: [REDACTED] on behalf of [REDACTED]
Sent on: Thursday, September 12, 2019 8:36:00 AM
To: [REDACTED]
BCC: [REDACTED]



Subject: Slightly Steeper Approaches Airspace Change Proposal - Request for Feedback

Attachments: SSA Stage 2 Engagement on Options_Sep 2019.pdf (481.67 KB)

Good Morning,

As you are aware, Heathrow are conducting an airspace change proposal for Slightly Steeper Approaches. We are now in Stage 2 of the CAP1616 process and are required to engage with our Stakeholders on the comprehensive list of options. As a member of NATMAC we are requesting your feedback.

The attached slides explain more about this proposal and the options for Heathrow. We would welcome your feedback on the slides and any of the options we have considered by **Friday 27th September 2019** to airspace@heathrow.com

Any questions, please get in touch.

Kind Regards



Airspace & Stakeholder Engagement

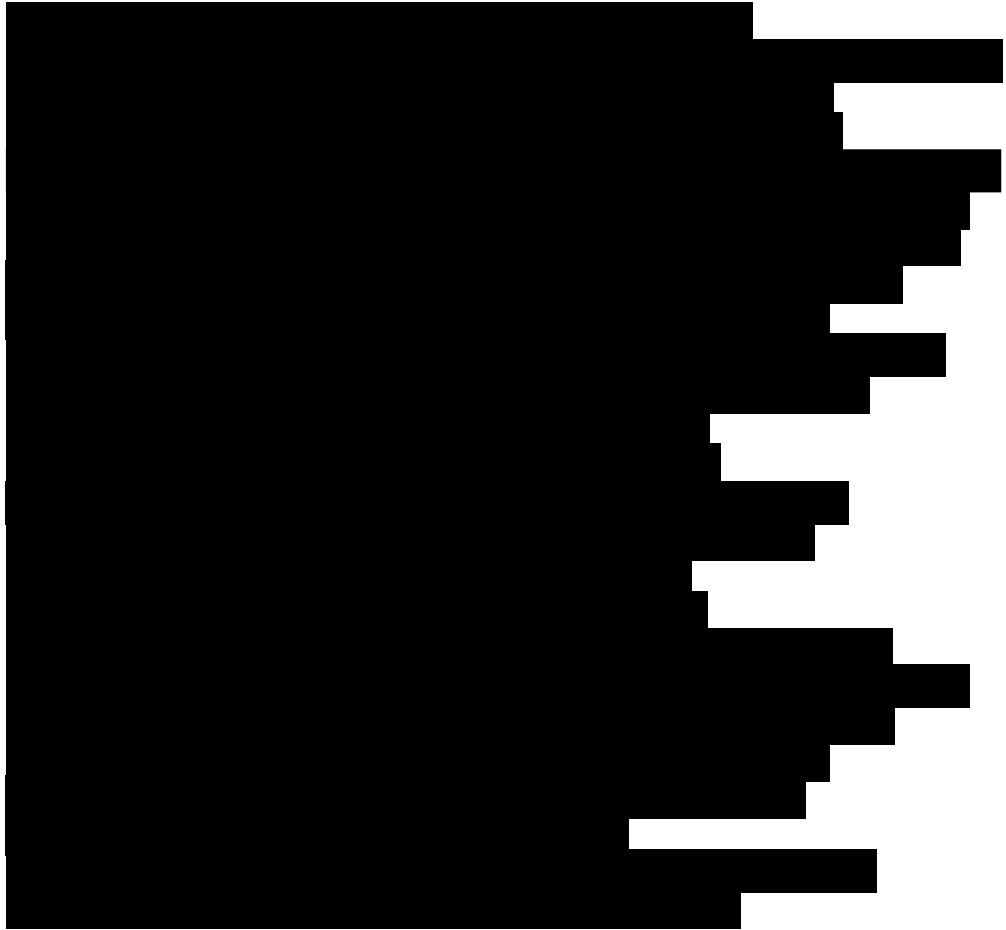
EMAIL TO FLOPSC

From:   on behalf of

Sent on: Thursday, September 12, 2019 9:57:00 AM

To:





Subject: Slightly Steeper Approaches ACP - Engagement on Comprehensive List of Options - Request for Feedback

Attachments: SSA Stage 2 Engagement on Options_Sep 2019.pdf (481.67 KB)

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Any questions, please get in touch.

Kind Regards

[Redacted Signature]

Airspace & Stakeholder Engagement

EMAIL TO HCEB

From: [REDACTED] on behalf of [REDACTED]
Sent on: Wednesday, September 18, 2019 8:19:18 AM
To: Team HCEB [REDACTED]
CC: [REDACTED]
Subject: SSA Slides/Feedback
Attachments: 17.09. SSA Stage 2 Engagement on Options_Sep 2019.pdf (481.67 KB)

Good morning all – please see attached SSA slides as presented by [REDACTED] yesterday.
Please send any feedback or comments directly to airspace@heathrow.com by Friday 4th October.

If you have any questions, please let me know.

Many thanks, [REDACTED]

[REDACTED]
Stakeholder Engagement Manager
Heathrow Community & Stakeholder, Expansion



HEATHROW
COMMUNITY
ENGAGEMENT
BOARD

Heathrow
Making every journey better

Heathrow/Heathrow Community Engagement Board meeting – Summary notes and actions

Date: Tuesday 17th September 2019, 12:00pm

Location: Meeting Room 4 - E1 S64, Compass Centre

Attendees:

HCEB – [REDACTED] [REDACTED] [REDACTED] Heathrow - [REDACTED]
[REDACTED], [REDACTED] [REDACTED]

Guest Presenters – [REDACTED] [REDACTED], [REDACTED])

1. 12:30 – Slightly Steeper Approaches

- 1.1. [REDACTED] presented the slides on SSA Stage 2 Engagement on Options, outlining that the trial is ongoing with no detrimental impact. The plan for the 3rd runway is to increase ILS approaches and reduce the manual input required.
- 1.2. [REDACTED] asked whether auto landing can be adjusted for steeper approaches to which [REDACTED] explained that this a possibility for part of the segmented approach, ILS landing for more shallow angles is also a possibility.
- 1.3. There is currently a number of options and technical solutions and for Heathrow a 3.2-degree approach is suitable and safe. However, Heathrow have to go through the Airspace Change Process to continue 3.2-degree approaches and drive airspace changes going forward.
- 1.4. [REDACTED] asked whether Slightly Steeper Approaches provide respite for residents. [REDACTED] explained that slightly steeper landings have a marginal effect on noise. Some communities will benefit at the detriment of others depending on runway alternation. The overarching goal is to have more than one flightpath available to enable alternations and provide respite to local areas.

2. 13:0 – Home Purchase Bond

- 2.1. [REDACTED] presented a slide deck on Home Purchase Bond Scheme asking for HCEB's feedback on the content and a first draft of the Home Purchase Bond Scheme Homeowner Pack which [REDACTED] shared a hardcopy of. The Pack will be part of face-to-face meetings with residents.
- 2.2. Compensation for tenants – Heathrow's approach is consistent with the statutory compensation code. The current estimate is that approx. 50-55% of properties in the CPZ are tenanted. Therefore, it is important that the property team liaise with landlords as well as tenants, initial engagement with landlords is scheduled from September 2019.

Any dissent from this note to be notified within five working days of issue, otherwise it will be deemed to be an accurate record requiring action.



- 2.3. It is the landlords' obligation to provide vacant possession as part of the Bond scheme. This means that the tenant may have to leave their property without any compensation. ■ shared initial insights from recent market research, revealing that there was a difference of background knowledge depending whether people rented or owned properties. ■ agreed with the property team's approach to consider a different approach for tenants. ■ will receive the final market research report in the next few weeks and will share with ■ for insight.
- 2.4. ■ highlighted the importance to consider vulnerable tenants, as displacement may not be uncomplicated and additional support may be required. He advised the importance to involve local authorities which ■ recognised.
- 2.5. ■ asked whether the timescales for taking tenanted properties are flexible, ■ advised that Heathrow will not take properties until they are required. Therefore, tenants may be able to stay as long as possible and this will also minimise losses for landlords. It was agreed that Heathrow needs to ensure visibility and communication to residents to help them understand timescales.
- 2.6. ■ highlighted the importance to avoid properties standing empty to which ■ replied that the main contractors will want reassurance of property availability to start construction. However Heathrow will need to manage and minimise this period of time to avoid unoccupied areas. Continued collaboration with construction teams will be needed to ensure there is a shared understanding of this issue.
- 2.7. ■ asked about potential issues for tenants to find new properties. ■ explained that approx. 50 properties in the CPZ are social housing managed by Hillingdon BC. Social housing availability and cost could potentially be difficult and was noted.
- 2.8. ■ explained the plan for the Home Relocation Support Service. A Heathrow team will be recruited which will work in collaboration with WSP's interim Support Service team. The whole Home Relocation Support Service team will be immersed in Heathrow values to ensure consistency.
- 2.9. The property team has received approx. 200 contact request forms back from 756 sent to residents in the CPZ. About 60% indicate the preference of a sooner moving date. ■ asked whether residents will have to wait for DCO approval before moving home. ■ stated that it is under review whether Heathrow is planning to buy properties at risk. Currently the plan is to buy properties as soon as DCO is accepted, working on the basis that as many residents as possible sign up to the Home Purchase Bond after it is launched.

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- 2.10. [REDACTED] stated that WPOZ residents will criticise the process as it may be perceived as unfair and the availability of prime property may become an issue, [REDACTED] is aware of the tension and advised that the plan for launch in the WPOZ will be firmed up. The process will need to be managed as there are an estimated 3,750 eligible properties in the WPOZ.
- 2.11. [REDACTED] outlined that training plans for the Home Relocation Service team are being planned and asked [REDACTED] whether he would like to participate in the training and to give an introduction to the HCEB. [REDACTED] will confirm once reviewed at the team meeting on 18th Sep.
- 2.12. A residents panel is being set up to shape the Home Purchase Bond pack, [REDACTED] will invite WPOZ residents to participate and will confirm a suitable venue, possibly in Colnbrook. Of the two dates proposed (01 and 02 October), 01 October is being targeted for a 2 hour session between 5.30 and 7.30. The meeting offers a great opportunity to gain valuable feedback and [REDACTED] and [REDACTED] agreed that avoiding the use of a NDA for participants by managing the content and supply of the Bond pack is preferable. [REDACTED] advised that market research company Britain Thinks may want to participate, he will confirm.
- 2.13. Attendees discussed the first draft of the Home Purchase Bond Pack for initial feedback from the working group. The booklet is perceived as well set out with a good framework. However, the user guide needs to be adapted to make the form more user-friendly and accessible with clearer language. [REDACTED] advised that market research shows that Heathrow is perceived as positive in local communities, however Heathrow also asks a lot from residents living in the CPZ and WPOZ. Therefore, residents want adequate information and compensation. [REDACTED] recommended to outline Heathrow's guiding values and principles that govern the bond up front to show right intentions.
- 2.14. [REDACTED] recommended a change in language from "acquiring land" to "buying homes".
- 2.15. [REDACTED] commented that the Eligibility Response Form should link back to the policy and clearly state "to be eligible for Home Purchase Bond". [REDACTED] explained the concept of 'no prior knowledge' - under which people are not eligible if they moved in or bought a property with prior knowledge of expansion plans. Residents are still entitled to statutory compensation if moved in after to 17th Sep 2013 - the date of airport commission announcement on Heathrow as a preferred option for expansion.
- 2.16. [REDACTED] asked how many people are affected by this, [REDACTED] advised that the team has no data as it can be difficult to demonstrate a date of purchase, however as the size of the issue needs to be scoped and the property team will gather the required information.

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- 2.17. ■ confirmed that the enhanced compensation offer is the same for CPZ and WPOZ residents and it was agreed that flexibility is needed in dealing with the eligibility criterion if residents were genuinely unaware of expansion plans.

3. Review of draft forward look plan

- 3.1. ■ presented the draft forward plan for the remainder of 2019, asking for feedback. ■ shared a softcopy of the document with HCEB for discussion at their team meeting on 18th Sep.
- 3.2. ■ advised that Heathrow will update on engagement plans on the next working group meeting on 1st Oct, including plans for Local Liaison Groups. The wider community engagement team will attend for introductions.
- 3.3. It was noted that the Board meeting is scheduled for the 15th Oct, therefore the Working Group meeting will have to be earlier in day and preferably at Central Working in Slough, ■ to firm up plans.

4. AOB

- 4.1. ■ asked for background information and briefing pack to be shared with Heathrow in preparation for the Roundtable discussion meeting planned with ■ on 3rd October.
- 4.2. ■ advised that the draft consultation response from HCEB will be shared with Heathrow by the end of September as agreed between ■ and ■. A publication of the fuller document, including the consultation response, recommendations and next steps, is expected in October. Heathrow will get sight of the draft document in advance of publication.
- 4.3. ■ advised that during the consultation period some land interests have newly been identified, which land or property owners were not directly contacted during the statutory consultation. Therefore, Heathrow offer those affected to share consultation feedback between 23 September and 6 November 2019. Any feedback will be processed by Heathrow in line with responses already received to the Airport Expansion Consultation.
- 4.4. The numbers affected are just above 3,000, all of whom will receive a letter and a hard copy questionnaire at the start of the consultation period and advised of where they can view the consultation documents. ■ asked HCEB members to take the name and contact details of any residents who contact HCEB regarding this. Once shared, Heathrow will confirm whether they are part of this small targeted consultation. ■ advised that the list of newly identified residents will need to be cross-referenced with people who didn't want to be contacted again.

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- 4.5. [REDACTED] advised that Heathrow received the Stanwell Moor AEC response and updated on recent engagement with the local councillor. It was agreed that engagement needs to be managed and as the local councillor is interested to meet with HCEB it was agreed that HCEB will coordinate and support engagement going forward.
- 4.6. [REDACTED] asked whether the Stanwell Moor noise monitor is in operation and if the current noise profile is up to date. [REDACTED] will check with the noise team and clarify.
- 4.7. [REDACTED] asked for a response from the noise working group which [REDACTED] shared with [REDACTED] in July. [REDACTED] will chase a response and send to [REDACTED].
- 4.8. The Great Barn have advised that they are unable to meet before 11th October, Heathrow is still keen to go ahead. [REDACTED] will coordinate and advise.
- 4.9. [REDACTED] shared a proposal for a resident letter, [REDACTED] will get the draft signed off and share with working group.
- 4.10. [REDACTED] gave a brief update on a local resident mentioning suicide at an LFF event. Heathrow has reinforced processes and plans to better support mental health. [REDACTED] advised that funding from CCG and DfT is available for a self-referral service for mental health support in local villages. [REDACTED] confirmed that it is taken seriously to provide better support and she will update the working group in due course.

Ref	Item	Owner	Status
2.3	[REDACTED] will receive the final market research report in the next few weeks and will share with [REDACTED] for insight.	HCEB	
2.11	[REDACTED] outlined that training plans for the Home Relocation Service team and asked [REDACTED] whether he would like to participate in the training and to give an introduction to the HCEB, [REDACTED] will confirm once reviewed at the team meeting on 18th Sep.	HCEB	

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HEATHROW AIRPORT AIRSPACE UPDATE




Airspace Strategy Lead
Future Heathrow

Heathrow

AN UPDATE ON HEATHROW'S AIRSPACE CHANGE PROGRAMME

1. The Airspace and Future Operations Consultation (Jan – Mar 19)
2. Airport Expansion Consultation (Jun - Sep 19)
3. Other Airspace Change proposals



A REMINDER OF THE PROCESSES WE NEED TO FOLLOW TO DELIVER EXPANSION

There are two separate approval processes that Heathrow are following to deliver the third runway:

Airspace Change Process (ACP)

- This is the approval for the design and operation of new or changing flight paths and any changes to airspace boundaries

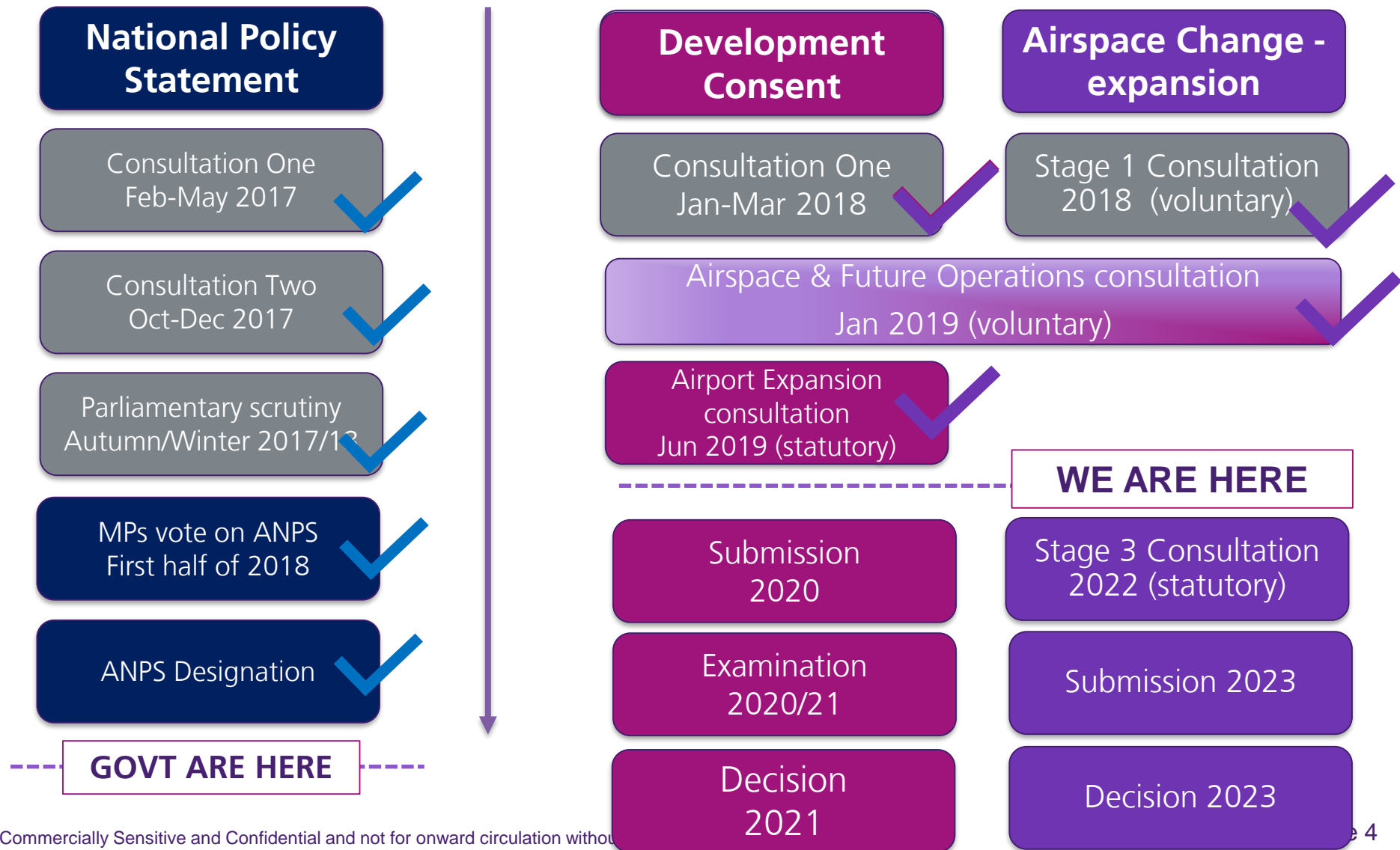


Development Consent Order (DCO)

- This is the approval for the physical construction of the third runway and all the related ground infrastructure

Both processes emphasise the need for effective ongoing stakeholder engagement in addition to formal public consultation requirements

POLICY AND CONSENTING PROCESSES: INDICATIVE TIMELINE



AIRSPACE AND FUTURE OPERATIONS CONSULTATION JAN – MAR 19

We consulted on:

- 1) Airspace change
 - For an expanded Heathrow
- 2) Respite through Runway/Airspace alternation
- 3) Directional preference
- 4) Night flights
- 5) Draft noise objective
- 6) Independent Parallel Approaches
 - To make better use of our existing two runways



1) AIRSPACE CHANGE - FOR EXPANSION AND EXISTING TWO RUNWAYS

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



THE AIRSPACE AND FUTURE OPERATIONS CONSULTATION CLOSED ON 4 MARCH

We received:

- 15,250 website responses
- 4,500 emails (estimated)
- 550 paper responses (estimated)
- **Approx. 20,500 responses in total**

Our independent consultation experts (Wood) have analysed the feedback and are finalising their report.

Feedback on the runway operations components in our proposals was used to help develop our proposals included in the Airport Expansion Consultation.



AIRPORT EXPANSION CONSULTATION

JUN – SEP 19

- 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
- Not an airspace consultation, but it did cover operational aspects:
 - Runway alternation
 - Airspace alternation
 - Flight path alternation
 - Night flights

Key facts and figures

- 43 consultation events over a 12 week period
- 7,228 attendees
- **Over 10,000 responses received**



NEXT STEPS FOR EXPANSION

DCO: Submission 2020

Expansion airspace: we are working through CAP 1616 Stage 2 – Develop and Assess

Stage 2A

- we will engage with stakeholders as we develop our comprehensive list of options to address our statement of need and carry out an evaluation of these against the design principles we developed with stakeholders last year during stage 1

Stage 2B

- we will complete an Initial Options Appraisal to refine our options that will be taken forward into Stage 3.

We will continue to engage stakeholders during this process

2022 Statutory Consultation on Flight Path Options

2023 Submit our Airspace Change Proposal to the CAA

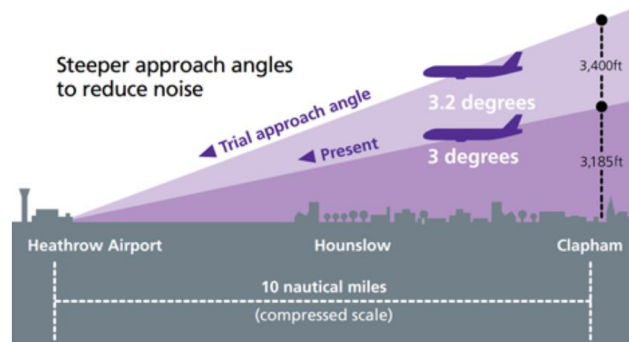


OTHER AIRSPACE CHANGE PROPOSALS

NO NEW CONTROLLED AIRSPACE

• Slightly Steeper Approaches

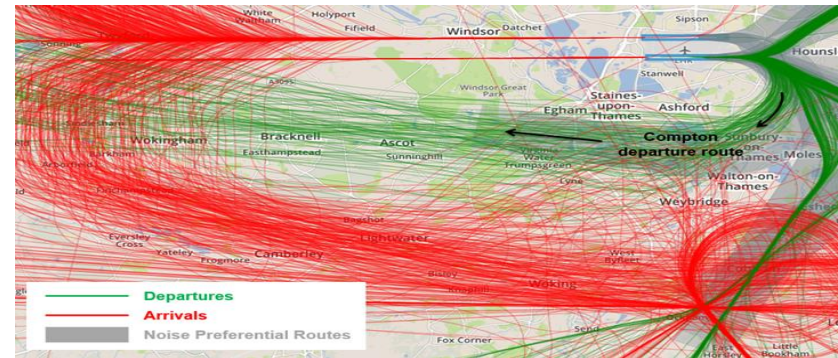
- Makes permanent, the current trial of RNAV1 approaches to all runways at 3.2° (instead of 3.0°)



- Small noise benefit
- No environmental/ops issues
- Currently in Stage 2 – Develop and Assess
- Consultation in 2020
- Target implementation in 2021

• Compton 09R SID Redesign

- To improve Noise Preferential Route (NPR) Compliance



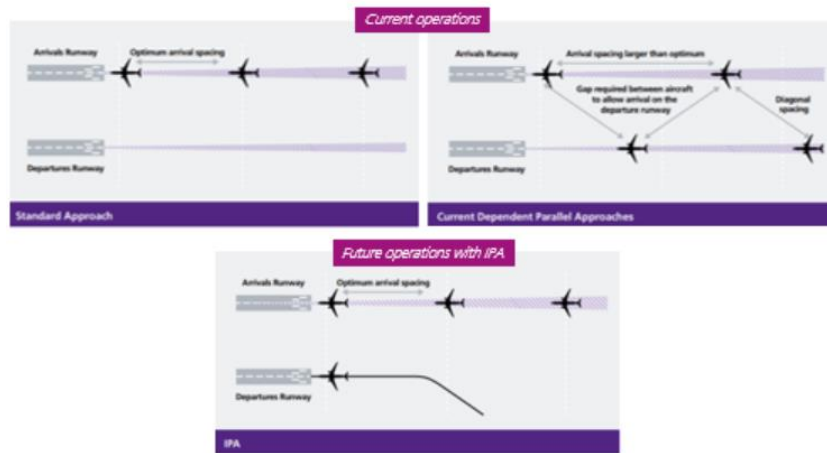
- Currently at Stage 1 - Define Gateway
- Consultation in 2021
- Target implementation in 2022

OTHER AIRSPACE CHANGE PROPOSALS

NO NEW CONTROLLED AIRSPACE

Independent Parallel Approaches

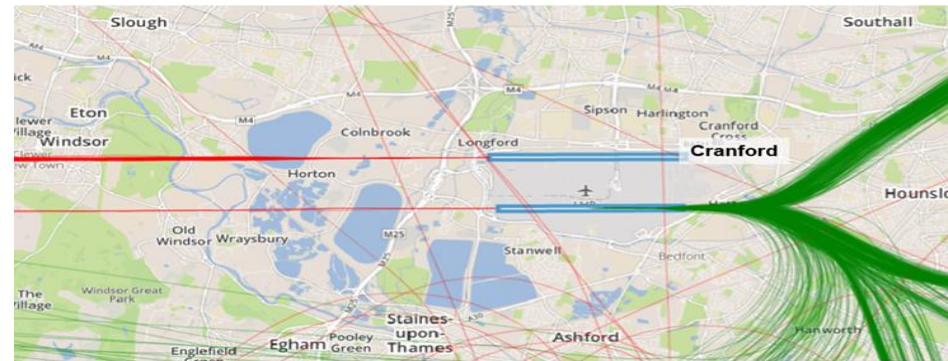
- To make better use of our existing 2 runways



- Currently in Stage 2 – Develop and Assess
- Consultation in 2020
- Target implementation in 2022

Easterly Alternation

- To enable runway alternation when RW09 operations are in use



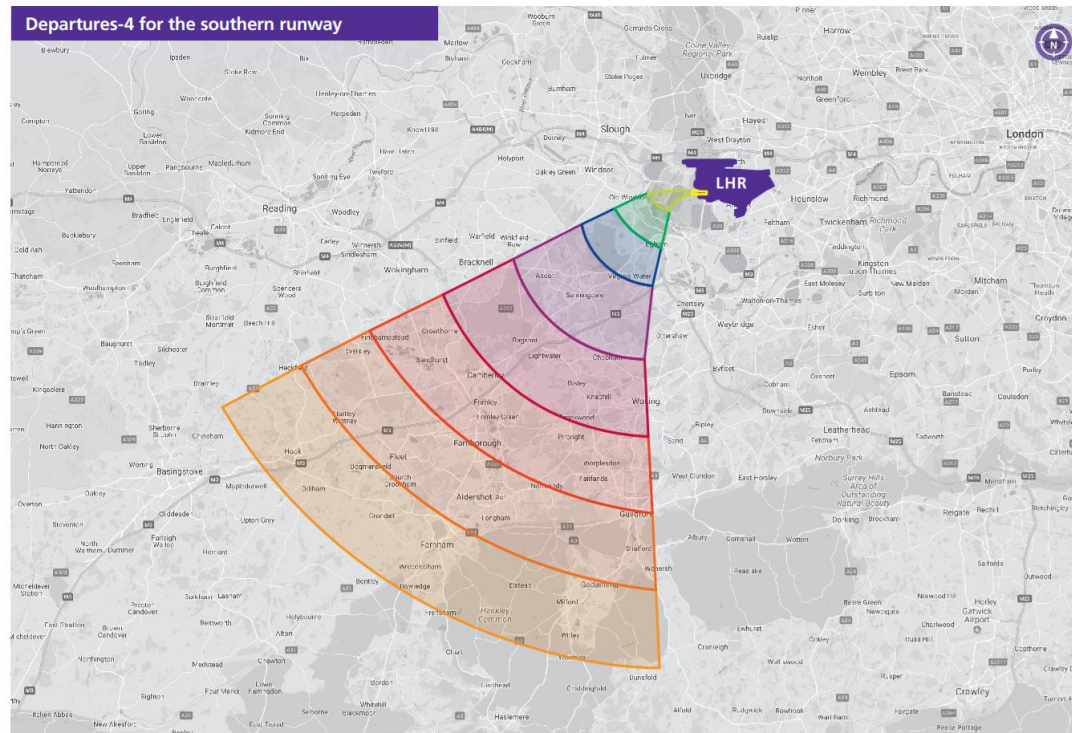
- ACP** to introduce of IPA to RW 09L (not included in main IPA ACP)
- Currently at Stage 1 - Define
 - Statement of Need
 - Design Principles
- Consultation in 2022
- Target implementation in 2024

QUESTIONS?



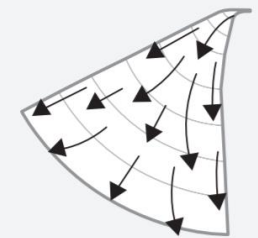
EXAMPLE OF A DESIGN ENVELOPE FOR EXPANSION

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



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

Direction of ascending aircraft within the envelope
Departures-4



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

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

White Waltham Airspace Update, hosted at West London Aero Club

16 October 2019; 1930 - 2030

Presented by [REDACTED]

Attendees: [REDACTED], members of West London Aero Club (see separate sheet)

1. Presentation Given

2. Comments / Questions

- 1) How many AEC responses were useful?
 - Don't have reports back, can't answer definitively. Whilst some replies simply registered opposition to expansion in principle most provided useful feedback.
- 2) Who are our stakeholders for 2a?
 - Same as stage 1; we are developing our engagement plans and this will include local communities, GA, local authorities, HCNF, airlines, NATS etc.
- 3) Is the ACP dependent on 3R being built?
 - Nationally, we still need to modernise UK airspace. We are one of 16 airports in the south of the UK undertaking airspace modernisation in line with government policy and it makes sense for us to combine this with developing our 3rd runway. If the 3rd runway wasn't approved then we would still need to modernise our airspace for 2 runways but we would need to change some designs. Other airports might also potentially want to look at their designs again to make best use of the available airspace
- 4) Is SSA diagram to scale?
 - No. it is compressed to make it easier to see the difference between a 3 degree and 3.2 degree approach angle.
- 5) SSA: Would we change ILS approach too?
 - Not at this stage but looking to increase the ILS angle of approach for the new airspace design in the future.
- 6) IPA: can we use both runways for take-off too?
 - Not routinely.
- 7) What is the current proposal for Heathrow airspace?
 - Still being developed. Will return to White Waltham in 2020 to engage on the stage 2 process and then routes + options later. Design envelopes were presented at the consultation, flight paths will be in certain areas within that envelope, we don't know exactly where yet.
- 8) Are there any graphical representations of the routes yet?
 - Not yet.
- 9) Because Northolt is currently closed, are LHR already trialling new departures/arrivals routes? Local areas are detecting changes in the airspace.

- Emphatically no changes in flight paths. Any temporary trial has to go through the CAA process for approval.
- 10) Are PARs (Precision Approach Radar) still in existence?
- In military yes, not at LHR
- 11) Once 3R is in operation, given angle of approach remains similar, is it not inevitable that class A airspace will extend west and envelope WW?
- Covered at last meeting, not what we expect to happen. Planning to use steeper approaches + departures. WW is 10NM from end of new North West runway, threshold for new runway only moves west a bit. We don't think route containment will need to change the boundary of controlled airspace although we can't be certain until we have completed that work so we can't give an absolute guarantee at this stage. Once we have developed our routes and worked out the requirements for containment we would like to be able to give back any controlled airspace not required. Until this work is done we can't promise to be able to, but that is our approach.
- 12) Comments about changes to the White Waltham circuit restriction reducing from 1300' to 1200' due to concerns about infringements/warnings.
- This was agreed by a white Waltham representative in response to issues raised. ■ wasn't involved in the conversation and unable to comment on the detail.
- 13) At what stage will general flying population find out about the 16 airports ACPs changes? It's hard to keep track of.
- All airports want at least the same arrivals and departures angles as today or steeper. All 16 airports have to do the same CAP1616 process and level of engagement at the various stages of the CAP1616 process. We suspect CAA will want to see all ACPs at about the same time in order to make a decision to assess the cumulative effect and this might mean that airports need to carry out their formal consultations at similar times.
- 14) Concerned that GA/WW will only hear about changes once decisions have been made and can do nothing about it.
- All airports need to engage during the process and formally consult, ■ suggests responding to these engagements and consultations. The results are reported to the CAA as part of the process.
- 15) Comment on design envelopes from Airspace and Future operations Consultation: colour coding is useful. Suggest 2 more categories: for each colour category indicate noise levels + relative noise levels to everyday sounds
- This was provided during the consultation; sound booths + noise experts
- 16) Could ■ comment on airspace on being messy because it's based on point-point navigation systems, but in future when trajectories are used, capacity + efficiency could be improved – is this valid?
- Free route airspace is being developed for higher levels and if this provides improved capacity and environmental benefit then it would make sense to consider it at lower levels although it may not be possible in busier more complex areas.
- 17) Envelopes looks like it suggests departures of 18000ft – correct?

- Assumes minimum 5% climb gradient (better than today) but want to accommodate better climb gradients. Makes connecting to network difficult – technical problems that are being worked on.

We plan to engage again, hopefully before Easter with further updates.

End

Heathrow Airspace Engagement (White Waltham Airfield)

Date: 16th October 2019

Attendees:

Age Group	Gender	Percentage Vaccinated
18-24	Male	~15%
18-24	Female	~10%
25-34	Male	~25%
25-34	Female	~20%
35-44	Male	~35%
35-44	Female	~30%
45-54	Male	~45%
45-54	Female	~40%
55-64	Male	~55%
55-64	Female	~50%
65-74	Male	~65%
65-74	Female	~60%
75-84	Male	~75%
75-84	Female	~70%
85+	Male	~85%
85+	Female	~80%