APPENDIX 3: STAKEHOLDER FEEDBACK

8 November 2018

Introduction:
This document represents the response of the Aircraft Noise 3 Villages (AN3V) Campaign to the Heathrow Airport Limited (HAL) consultation titled 'Heathrow - Stage 1A Define - IPA Design Principles 2018'.

AN3V represents residents from Lightwater, Windlesham and Bagshot Surrey and is a founding member of the Heathrow Community Noise Forum and as such has actively engaged with Heathrow to seek solutions to remedy the adverse and increasing impacts Heathrow's operation now has on residents in terms of environmental issues in general, and noise issues specifically.

Response:
AN3V fundamentally disagrees with the proposed implementation of Independent Parallel Approaches ("IPA") and also Precision Based Navigation ("PBN") at Heathrow Airport, on which IPA will rely.

Heathrow has failed to present evidence within the documentation to justify the main principles proposed, i.e., to Minimise the total number of people affected by noise, as well as minimise the number of people newly affected by noise. The very serious deficiencies in the current process will lead to unacceptable outcomes with regard to the Airspace Design Principles.

The worst effects of IPA will be felt between 6am and 7am and will disturb the sleep of thousands of residents in Surrey Heath and elsewhere. This is totally unacceptable. In the IPA Design Principles Document ("the Document"), it is stated:
"The use of IPA between 06:00 and 07:00 has the potential to directly support an increase in declared capacity in the hour."
AN3V residents would experience IPA in relation to easterly arrivals. As IPA will only be used in relation to aircraft landing on the departures runway, in this case the southern runway, the area to the south of the airport will bear the full burden of IPA. Aircraft landing on the northern runway would continue to land in the same manner as they do today and would not be affected by IPA or PBN.

Furthermore, there is no runway alternation due to the Cranford Agreement and so this area could see IPA arrivals potentially at any time of the day under the TEAM (Tactically Enhanced Arrivals Mode) procedure when there are delays. This puts residents to the west of the airport at a huge disadvantage when compared with those living to the east, where there is runway alternation at 3pm. In addition, the rules capping movements under TEAM to six per hour, which currently only apply to westerly operations, should be extended to easterly operations.

In our view, modern airports, including Heathrow, should not be located in densely and increasingly populated areas. HAL should be making every effort to minimise its noise impact on residents, particularly during hours when there is a reasonable expectation that they will be asleep (between 11pm and 7am). The industry should not be attempting to implement IPA & PBN simply to increase capacity at the obvious expense of the health and wellbeing of resident.

Our comments on the design principles, as outlined in the Document, relate specifically to arrivals airspace design and are as follows:
We agree that aircraft noise should be minimised (a) and should be the overriding principle. However, there is no substance or detail included in the Document on which we can comment. We agree with the principle of minimising fuel and greenhouse gas emissions (b) but not at the expense of residents in the vicinity of Heathrow airport. In our view, the polluter must always be made to pay, not a third party (ie local residents). There is no incentive for the polluter to change its behaviour if the downside of the polluter's actions (aircraft noise) is borne by those not a party to the activity. Furthermore, HAL should be focussing on the environment under this principle, not on financial savings for the airlines.

The principle of simple and efficient flightpaths for operational efficiency (c) is a reference to PBN. AN3V opposes its introduction as it is known to severely adversely impact communities. Minimising the impact on other airspace users (d) is not relevant as a principle in this case. Luton or Gatwick flights are not present over Surrey Heath at the times and heights we envisage IPA will operate.

We strongly disagree with the proposed principle of minimising the number of people newly affected by noise (e). Noise from arriving aircraft must be shared in a more equitable manner so that more people are affected but less severely.

It is impossible to comment on the principle of designing multiple flightpaths to provide predictable respite from noise (f) without a plan or any sort of guidance on the possible location or heights of aircraft. However, it is highly unlikely that there will be sufficient airspace within the already constrained and confined area where IPA will operate, to create multiple routes capable of offering the required levels of meaningful respite.

We strongly disagree with minimising the total number of people affected by noise (g) for the same reasons as point (e) above.

We agree with the principle of avoiding multiple flightpaths over the same community (h). The impact of living under one, let alone several, PBN flightpaths would be severe and intolerable. This issue is of particular relevance for areas such as Surrey Heath which are affected by flightpaths on both easterly and westerly operations.

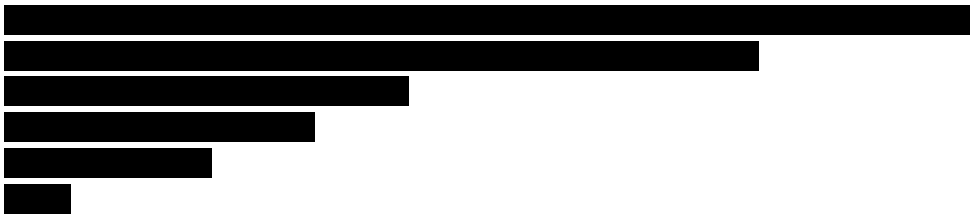
We strongly disagree with the principle of prioritising flightpaths over rural areas rather than urban ones (i). This principle discriminates against a minority group because in any consultation exercise, rural residents are likely to be outnumbered and therefore outvoted by urban residents. In addition, the impact on rural areas is more severe as there is less background noise. Most people living and working to the west of London do so for reasons entirely unrelated to Heathrow and frequently relating to the proximity to our capital city, London. Some choose to live in areas which are semi-rural (and pay more to do so) as they are quieter and Heathrow should respect this reality, not exploit it.

The issue of flightpaths over open space and parks (i) is a difficult one. We feel that it would be appropriate to prioritise IPA flightpaths over such areas between 6am and 7am when most people are asleep and not using these areas. However, during the day time, noise should be shared more equitably as people go to these spaces to relax and unwind and they are a vital resource for the health and wellbeing of residents.

We agree that flightpaths should be prioritised over commercial and industrial areas rather than residential ones (k).

AN3V has engaged with HAL for several years now as part of the HCNF. This has involved hundreds of unpaid hours of work by our team and yet we still await evidence of a single action taken by HAL to improve (reduce) the aircraft noise in our area. In this context, it is therefore somewhat galling to learn that HAL intends to pursue an initiative which will increase aircraft noise over Surrey Heath. The only benefit of IPA is to the aviation industry by increasing its capacity and profit and introducing PBN by stealth, with residents apparently being expected to pay the full price!

Aircraft Noise 3 Villages Campaign Group Windlesham, Bagshot and Lightwater Surrey
Cc:



Submission by British Airways Plc – 9th November 2018

BRITISH AIRWAYS ENGAGEMENT FEEDBACK TO HEATHROW AIRPORT LIMITED
STEP 1B - HEATHROW'S PROPOSED AIRSPACE DESIGN PRINCIPLES FOR INDEPENDENT PARALLEL APPROACHES (IPA)

INTRODUCTION

1. British Airways (BA) is pleased to submit comments to Heathrow Airport Limited (HAL) in response to the proposed airspace change design principles for the introduction of Independent Parallel Approaches (IPA) at Heathrow Airport.

2. During 2018, HAL has consulted on its airspace change design principles for expansion. These were approved by the CAA at the end of September 2018. As HAL is now progressing its proposed airspace change for IPA under the CAA's CAP 1616 airspace change process, BA welcomes the opportunity to outline our position on the IPA proposals for the existing 2-runway airport within the wider context of maximising operating performance and resilience, Heathrow expansion, and the development of the UK's airspace modernisation strategy. This response will outline and re-iterate BA's key messages shared to date as well as providing our comments on the proposed design principles.

IPA DEVELOPMENT AT HEATHROW - BA VIEWS

3. BA supports HAL's drive to modernise its airspace for existing and future operations. Where an airspace change can deliver benefits, it should be progressed at the earliest opportunity. BA has previously stated that plans to introduce IPA should be progressed at the earliest opportunity and should not wait for Heathrow expansion.

4. BA's support for progressing and investing in IPA and other ATM operational efficiency initiatives, has always been predominantly based on the need to preserve and ideally improve day-to-day on time performance. This is in line with the joint industry "Strive for Five Punctuality and Efficiency Programme". Given the growing year on year pressures being placed on our already crowded skies and the lack of progress in modernising the wider UK/European airspace, it is becoming increasingly evident that such initiatives will be vital in the short term just to stand still.

5. BA is also strongly supportive of IPA to provide much needed resilience and stability to the very challenging Heathrow operation. IPA would enable more efficient prevention of and recovery from delays, and to assist in preventing any late running of the Heathrow Airport flying programme beyond the end of the operating day for scheduled flights.

6. As well as the primary performance/resilience benefits of IPA there is also the potential for it to be used to facilitate some additional capacity growth ahead of Heathrow expansion. In principle BA welcomes the potential for growth alongside the clear airfield performance and resilience benefits that IPA would deliver. However, this is subject to the following cautionary observations.

7. Where IPA is evidently needed to support additional capacity before R3, we have our reservations over whether the improved airfield performance and increased resilience levels provided by IPA can be achieved and retained or whether it becomes entirely diluted by early ATM growth. BA has yet to understand the full set of trade-offs between improved performance/resilience and additional capacity and how these will be balanced. In this regard, BA is extremely wary that IPA is essential ineffective in low visibility conditions and this must be considered in balancing additional capacity with performance/resilience. More work is needed to understand and demonstrate how and why IPA capacity should be used. BA does not support a situation where performance/resilience benefits are

either not apparent or are entirely traded away to achieve a pre-expansion uplift in ATM capacity. A recent 2019 Service and Investment Plan slide pack from NATS only talks about IPA in the context of 'facilitating greater resilience' and nothing else.

8. To support IPA being used to achieve early ATM growth and to justify the associated fleet equipage investment required, BA would need to fully understand the business case, including the true commercial benefits, the operational feasibility and the impact to performance/resilience. Whilst raising ATM capacity should contribute positively to an affordable expansion programme, introducing consequential restrictions to the operating day ahead of a third runway (such as a ban on early morning arrivals) only serves to erode the economic benefits and is challenging on several fronts.

9. Consequently, we believe it is not appropriate for HAL to make unilateral commitments regarding how IPA will be used or have the final say over any operating and noise management restrictions, including where this applies to night flight policy. Airports cannot be the sole advisor for operating restrictions and airlines must be integral to the decision-making process. We cannot have a situation where HAL propose IPA facilitated changes to the night flight regime which are ultimately geared towards the prize of securing *additional ATM growth capacity* without balancing consumer/airline, community and the national interest.

10. If IPA is used for growth and HAL look to use it as part of package involving linkages to night flights, it will require Government and the Secretary of State to be involved as they have oversight and accountability for decisions that determine night flights policy, operating restrictions and the setting of key noise management elements for nationally significant airports and airspace. BA supports the ICAO Balanced Approach to noise mitigation, which provides a transparent process for managing demonstrated noise problems on an airport-by-airport basis. It recognises and is based on the principle that solutions need to be tailored to the specific characteristics of the airport concerned. Of course, the specific characteristics of a three runway Heathrow will be very different to the specific characteristics of the existing two runway Heathrow and therefore the any solutions would need to be tailored very differently. Further and as incorporated in EU Regulation 598/2014, additional operating restrictions, such as the proposed night ban that HAL claims to have committed to, should be the last resort after other measures have been explored.

11. BA is committed to work with HAL to do everything we can to minimise the impacts of our operations on local communities. We support the Government policy objectives of achieving the best possible overall outcome on noise, air quality, capacity, safety and environmental performance and this should apply to the development and application of IPA for enhancing operational performance and resilience and potentially for early ATM growth as it will for expansion. HAL must commit to proper consultation with airlines going forward on IPA to determine how it should be developed and used to minimise impacts on communities whilst delivering the greatest benefit and operational flexibility to airlines.

12. Adherence to the ICAO Balanced Approach and the airspace change framework and decision-making processes being followed here should support these objectives.

IPA AIRPSACE DESIGN PRICNIPLES – HAL PROPOSALS

13. BA notes that the proposed IPA airspace design principles closely correlate to the HAL Expansion airspace design principles recently approved by the CAA. BA supports HAL's IPA design principles being developed in line with the principles proposed for expansion. There is a benefit for HAL, industry and community stakeholders in adopting the same broad and consistent approach for airspace changes at Heathrow Airport. **The key themes highlighted previously for each of the correlating expansion**

design principles are including here in the Appendix. As outlined below, we have picked up on a couple of instances where Expansion airspace design principles and the IPA airspace design principles do not quite match up as explained below.

Other IPA airspace design principles
14. The **"minimising noise"** principle does not include the sub-principle of "using more noise efficient operating practices" which was included in the Expansion principles. BA would support this being included as part of the IPA principles to assure communities that the most noise efficient IPA routes have been developed as part of this airspace change.

15. The **"maximising operational efficiency"** principle should be expanded to include **"operating performance/resilience"** as well. In the first instance the key objective of IPA is to increase operational performance/resilience at Heathrow and to mitigate airport operations outside of planned operating hours. This principle should reflect that objective and there needs to be strong links here to the core principle of meeting Heathrow's capacity requirements in terms of maximising airspace capacity, operational efficiency and performance/resilience. The principle as currently drafted only extends to ATC workload. BA would support this IPA principle being expanded to maximise benefits for all stakeholders as per the equivalent Expansion airspace change design principle.

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END Submission by British Airways Plc – 9th November 2018

APPENDIX – SUMMARY OF BA POSITION ON PROPOSED PRINCIPLES IPA Core Requirements	Equivalent Expansion Requirements	Alignment with Expansion Comments
Must be Safe	**Must be Safe (CORE)**	BA strongly agrees that safety is a fundamental requirement of the industry and should never be compromised by other airspace DPs. We agree that this should be a **core requirement**. Any design must be able to handle the anticipated growth in air traffic with levels of safety that are at least equivalent to today.
Must meet Heathrow's capacity requirements	**Must meet NPS capacity requirements (CORE)**	BA strongly agrees that meeting LHR's capacity requirements should be a **core requirement**. However, as well as catering for an additional capacity, we would also like to see more emphasis here on safeguarding enough headroom capacity and redundancy in the system to **maximise operational performance** and **increase operational resilience**. The need for resilience is not only about ensuring airspace is designed to enable recovery from disruption on a bad day but also about managing day-to-day traffic with acceptable levels of performance and minimal delays. Realistically, increased resilience will only be achieved by maximising capacity.
Must meet three NPS noise policy tests	**Must meet NPS noise policy tests (CORE)**	BA agrees in principle that meeting noise policy tests needs to be a **core requirement**. In terms of using WebTAG methodology to assess options, we need to ensure that the aviation module is fit for purpose. Our understanding is that the WebTAG road and rail modules are more developed than the aviation module, e.g. we understand that WebTAG is currently not capable of assessing respite associated with airspace change options. Any noise

		policy tests must be in step with International ICAO standards and EU regulations which require a 'Balanced Approach'.
Must meet local air quality requirements	**Must meet local air quality requirements (CORE)**	BA agrees in principle that meeting air quality requirements needs to be a **core requirement** however, other areas such as surface access policy must be considered alongside aviation to ensure compliance with local air quality requirements. One point to note here is that whilst flight efficiencies below 1000ft is a core principle, in reality there is little room for changing aircraft flight profiles up to 1000ft. In general, we cannot make any significant turns below 500ft and the vertical profile is determined by Regulated Performance Rules. Thrust is the only control and yet less thrust takes aircraft lower over the ground and more thrust creates more noise and emissions. The BA view is that minimising air quality emissions below 1000ft can only be achieved by maximising the use of flex thrust which is something we already do.
Must meet commitments to UK's Future Airspace Strategy (CORE)		
Must be based on latest navigation technology widely available	Base our airspace design on latest navigation technology widely available	BA agrees with this principle as a **core requirement** and the need to stretch navigation standards beyond 1990s RNAV technology. We support the ICAO requirement for PBN in all phases of flight and would therefore recommend design principles which puts the emphasis on using 'an appropriate standard of PBN' as opposed to setting 'minimum navigational standards' which can be widely interpreted. Where it can be proven to optimise the capacity and resilience of the network and

		where we are capable (through equipage and training), we should be looking to incentivise advancement of RNAV/RNP operations to take advantage of existing technology now, where it is not already used. Of course, this must identify the technology road map and capabilities required to meet performance and navigational needs for the LTMA, e.g. the equipage and flight crew training needed to meet potential long-term mandates for advanced functionality (please refer to para 3 in next section).

IPA **Other Requirements**	**Equivalent Expansion Requirements**	**Alignment with Expansion Comments**
Minimise noise a) Minimise people newly affected by noise b) Providing predictable respite from noise c) Minimising total number of people affected by noise d) Avoiding multiple flight paths over the same community e) Prioritising rural areas over urban areas f) Prioritising parks and open spaces over residential areas g) Prioritising commercial and industrial areas over residential areas	Minimise local noise effects *a) Use more noise efficient operational practices* b) Minimise number of people newly overflown c) Maximise sharing for predictable respite d) Avoid overflying communities with multiple routes *e) Maximise sharing through dispersal* f) Minimise total population overflown g) Design flight paths over commercial and industrial areas	**PLEASE REFER TO PARAGRAPH/SECTION 14:** BA agrees that noise is the next highest priority after the core requirements identified above. BA also agrees with the priority of identified sub principles contained within this DP, although a degree of balance is also required here with maximising operational efficiency in delivering an improved system for consumers in terms of minimising delays and maximising safety, runway throughput and resilience on a sustainable basis. BA is prepared to operate airspace as designed in accordance with the sub principles outlined here, providing it does not limit or constrain throughput or compromise trajectories and entry/exit point links with upper airspace. In the interests of efficient operations, the sub principles contained here should not result in unreasonably long flight

	h) Prioritise routing over parks and open spaces (rather than residential areas) but avoiding Areas of Outstanding Natural Beauty (AONB)	tracks or steep turns and climb gradients, especially as this often has detrimental consequences for noise and emissions. Whilst Government policy prioritises noise over carbon emissions below 7,000ft this DP should possibly reflect the fact that there is a provision for CAA intervention to address disproportionate increases in carbon emissions, and that there are international obligations and commitments made by both Governments and industry to mitigate against climate change issues. Safety and the capability of aircraft must also be considered here, with the technology road map required to meet performance and navigational needs for the LTMA identified, e.g. the equipage and crew training needed to meet potential long-term technical, design and airspace change deployment mandates. Whilst we believe current equipage levels should be sufficient to deliver an 'appropriate standard of PBN', we would be somewhat wary of the proposals for multiple flight paths. We would hope the number of options would be limited both to simplify flight planning, Flight Management System management and crew issues and to minimise confliction (and a reduction in capacity). Engagement and involvement of NATS and other sponsors of airspace change below 7,000ft is essential for avoiding sub-optimal designs here. Finally, with the desire to move flights over rural areas and parkland rather than built-up areas, there is the issue of 'peace and tranquillity' versus higher ambient noise in urban areas. It's worth

		remembering that LAMP plans for Gatwick were ultimately rejected following a campaign to minimise the impact of aviation on areas of open countryside.

Dear Sir

The BHA agrees in principle with design.

We in particular support the intent of not impacting other users of the airspace. During discussions for the 3rd runway there was mention of modification to the existing London Helilanes structure. The BHA would strongly oppose any change to the current Helilane structure which disadvantages the UK rotorcraft community.

Yours

[redacted]

[redacted]

EANAG
Ealing Aircraft Noise Action Group
email [redacted]

8 November 2018

To Heathrow Airport Ltd
airspace@heathrow.com

Independent Parallel Approaches (IPA) Design Principles
Dear Sirs,

EANAG has not been able to produce a detailed response to the Heathrow proposals on IPA design principles. The Group wishes however to submit the following response:

Ealing suffers very great intrusion of aircraft noise during the 30% of the time that the airport is on easterly operation and up to 40% of departures are routed over Ealing. Clearly it would be totally unjust and a great increase in the burden of aircraft noise suffered in the Borough if arrivals were ever routed over Ealing on westerly operation, whether due to IPA or any other cause, and this is a move which should not be contemplated.

Heathrow is full, and must not increase its capacity by IPA or other sleight of hand. The new WHO regulations, and also the recent reports on climate change, show that there is no scope for increasing aircraft operation, and indeed that it needs to be reduced.

Yours faithfully,

[redacted]

Independent Parallel Approaches (IPA)
Response from HACAN

HACAN is the long-established regional organisation which gives a voice to residents under the Heathrow flight paths.

We welcome the opportunity to respond to these proposals.

Our response is divided into three sections:

- General comments on the proposals
- Tackling the questions asked
- Some further detailed comments.

General Comments

HACAN does not support the principle of 25,000 more flights a year using the airport. Heathrow would like to introduce IPA in 2022 whether it remains a two runway airport or if planning permission has been given for a third runway. In the case of a two runway airport, the plan is for the additional flights to become permanent. HACAN is opposed to this as we believe the current cap of 480,000 should be retained for a two runway airport. In the case of a third runway the IPA proposals would be in place until the new runway opened. If these proposals go ahead, HACAN argues that there should be clear community benefits embedded in them.

Responses to the Questions

1. What are the most important Design Principle Categories?

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

Our view is that a. minimising noise is the most important. These proposals will create extra noise (certainly for some communities) whilst they are unlikely to have much impact one way or the other on fuel, CO2 or, we think, on other airspace users. They may, though, reduce air traffic control workload through the introduction of the new PNB routes.

2. What are the most important Noise Design Principles?

a. minimising the number of people newly affected by noise
b. providing predicable respite from noise
c. minimising the total number of people affected by noise
d. avoiding multiple flight paths over the same community

Our members are very clear: they would not support c. minimising the total number of people affected by noise because this would almost certainly mean concentrating all the planes on one route. It is not a principle we support at all but it is particularly important that this option is avoided in this case as the proposed Independent Parallel Approaches are reliant on establishing new PBN routes which, in part, will fly over new areas. Experience shows that residents who have not had flights before react badly to getting them for the first time. The way to minimise this impact is ensure they get predicable breaks from the noise through the introduction of more than one PBN route.

In this case that may rule out a. minimising the number of people newly affected by noise.
We would support b and d. Both are necessary.

3. What are your views on Other Design Principles?
a. prioritising rural areas over urban areas **– neither should be prioritised**
b. prioritising parks and open spaces over residential areas - **neither should be prioritised**
c. prioritising commercial and industrial areas over residential areas **– the priority should be to avoid residential areas.**

Further Comments
We need clarity from Heathrow on a number of points:

How evenly will the extra planes be spread throughout the day?
Heathrow needs to make clear how many of the extra 25,000 aircraft it envisages 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. In our view, there is a significant difference between the extra flights being spread reasonably evenly throughout the day and a majority being squeezed into the 6am – 7am hour.

Will 25,000 more flights cancel out any resilience improvements IPA may bring?
Heathrow argues that IPA will make the airport more resilient. This is true if IPA were just to operate within the current 480,000 cap but Heathrow needs produce evidence that an additional 25,000 flights a year would not cancel out any improvements to resilience.

Will IPA mean a reduction in late-running departures?
Heathrow needs to spell out more clearly than has been done the extent to which IPA will reduce the number of aircraft departing late.

[redacted]

[redacted]

Subject: Airspace Design Change Proposals

According to the CAA's Airspace Change website (http:// airspacechange.caa.uk), Heathrow have submitted an airspace change proposal to the CAA on 1 st October 2018. The proposal is at the Stage 1A "Define" Stage of the CAA's Airspace Change Design Process.

A "Potentially Affected Area" Map is shown on this page which indicates that Hammersmith & Fulham is inside the area that could be impacted by the intended change. However, we have not received any contact from Heathrow or the CAA to inform us that this process had started. Consequently, officers only found out this morning at a meeting of the Local Authority Aircraft Noise Council (LAANC) about this process and the fact that the first stage consultation ends today. We do not understand why wider engagement with potentially affected boroughs has not been undertaken. We have not even been notified that this process was underway. Consequently we have very little time to submit a response, which should be regarded as an officer response due to not having time to report to and get approval from the Cabinet Member for Environment. If possible we would request that an extension is provided so we can give further consideration to the work undertaken and documents published to date. We would also like information on how the CAA and Heathrow have publicised the existence of the airspace change proposal, including details of the local authorities contacted to notify of this process and details of any publicity that has been given to publication of the Stage 1A materials.

Key points that we wish to raise in the very limited time that we have had to examine the information on the CAA website (and an "IPA Design Principles" document seen at the LAANC meeting) include:

1) Inconsistent with the Airports NPS

According to the Airports NPS adopted by Government in June 2018, it is Government policy to support construction of a 3 rd Runway at Heathrow. The NPS also covers the issue of how airports should make best use of their existing infrastructure. In this respect it is stated in Para 1.6 that: "The Airports Commission's remit also required it to look at how to make best use of existing airport infrastructure, before new capacity becomes operational. The Commission noted in its final report that a new runway will not open for at least 10 years. *It therefore considered it imperative that the UK continues to grow its domestic and international connectivity in this period, which it considered would require the more intensive use of existing airports other than Heathrow and Gatwick".* I.e., due to the intention to expand Heathrow the Commission's recommendation for airports to make more intensive use of their runways etc specifically excludes Heathrow. Para 1.7 confirms that: " *On 14 December 2015, the Government accepted the Airports Commission's recommendation for increased capacity in the South East of England, and its shortlisted scheme options*".

Para 1.39 of the NPS goes on to say that: "On 21 July 2017, the Government issued a call for evidence on a new Aviation Strategy. *Having analysed the responses, the Government has confirmed that it is supportive of airports beyond Heathrow making best use of their existing runways".* Again, the NPS is making clear here that the Government is specifically supporting the introduction of measures for airports other than Heathrow to make best use of their runways.

Therefore, in our view, Heathrow should not be seeking to introduce measures that will allow more intensive use of its runways, which is what the proposed Independent Parallel Approaches (IPA) will

be used for. To do so is not consistent with the Airport Commission's recommendations which were accepted by the Government and referenced in the NPS document.

2) Inadequate Information provided in the Statement of Need

Guidance in the CAA's CAP1616 Airspace Design Change document states that it is important to establish whether the airspace change process is the correct mechanism for resolving the identified issue. This has not been done. The Statement of Need also serves to provide transparency over the perceived need for the change. CAA guidance on the information to be included in the Statement refers to including information on any associated factors (including environmental impacts). This information has not been provided. Clearly making changes of any kind to Heathrow's operations have the potential to change environmental impacts such as noise, which affect may communities under the flightpaths. The Statement of Need has not considered this issue at all. The Statement of Need focusses on the number of arrivals on the runways and how these can be increased through the use of IPA. However, it is not clear how many additional ATMs will be possible when IPA is in use. This should be stated as this is a key part of being able to determine whether there is a need or not for the changes to be made. Also, there is no acknowledgment that IPA will result in a significant change in the final approach flight paths used by aircraft on an IPA route. Again, this is something that should be identified at this first stage in our view. Given that it is stated that "aircraft landing to the departure runway will join final approach inside 8nm from touchdown, why has this not been illustrated on a map of Heathrow and the surrounding area to clearly identify which areas would be affected by this change in flightpaths? This should be provided. It is not clear when the IPA proposals are expected to be adopted and operational.

3) Non-compliance with Airspace Change Procedure

The CAA airspace change website indicates that the IPA change process is at Stage 1A (Assess Requirements). Stage 1B is shown as not being started. Stage 1B stage relates to "Design Principles". Despite Stage 1A not being completed and Stage 1B not commencing yet according to the CAA, Heathrow are already canvassing opinions on airspace design issues, although it is not known who they are consulting already on this issue, certainly we do not appear to have been invited to comment. We would like to know who are involved in this process and how they have been engaged in it as we are concerned that views are only being sought from a small number of stakeholders and it is not clear that communities that will be impacted by the airspace changes are involved when they should be.

4) Airspace Design

We are not going to make any detailed comments at this stage on airspace design issues because it would be inappropriate to do so. The questions being asked in the IPA Design Principles document on prioritising various design principles to use in designing the IPA are not supported so far as we can see by any evidence base or other supporting research or reports that could help inform people's choices. There are no clear definitions of the terms used in the principle summaries. In relation to respite, Heathrow commissioned Anderson Acoustics to carry out a Review on the State of the Art on Respite which was published in June 2016. This made a number of key conclusions on respite issues and identified research priorities in areas such as "What does the community value as effective respite?"; "How can respite be delivered by an airport that is both operationally feasible, cost effective as well as valued by the local community?"; "What are the objective measures to describe respite in a way that reflects community perception?" To our knowledge, the issues and priorities recommended in this work have never been progressed. How can changes to airspace around Heathrow be implemented when critical issue of respite is not properly understood? It is premature in our view to

be proposing changes without a better understanding of the impacts of airspace change. We also consider that it is inappropriate for Heathrow to be pushing ahead with airspace changes independently of the Government's national airspace change process. The national strategy on airspace needs to be established first.

5) Impacts on Night Flights

It is stated that use of IPA between 06:00 and 07:00 has the potential to directly support an increase in declared capacity in the hour. This is part of the night time period where flight numbers and their noise quota count are controlled by Government. Therefore, IPA is to be used to help increase the number of night flights, but this is not for Heathrow to decide unilaterally. The Airports NPS states at Para 5.61 that: *"The Government also expects a ban on scheduled night flights for a period of six and a half hours, between the hours of 11pm and 7am, to be implemented".* Heathrow should therefore not be planning any operational changes which could result in an increase in night flights. The Government has committed that: "The rules around its operation, including the exact timings of such a ban, should be defined in consultation with local communities and relevant stakeholders, in line with EU Regulation 598/2014. In addition, outside the hours of a ban, the Government expects the applicant to make particular efforts to incentivise the use of the quietest aircraft at night".

[redacted]

Feedback from The Heathrow Community Engagement Board Ltd. on Independent Parallel Approaches (IPA) design principles

Introduction

1. The Heathrow Community Engagement Board Ltd. (HCEB) welcomes the opportunity to provide feedback to Heathrow in regard to the Independent Parallel Approaches (IPA) design principles.

2. This feedback has been put together following consultation with HCEB's two strategic advisory groups. The following is a combination of responses and feedback from members of these groups.

The implications of IPA

3. The aircraft being guided by PBN technology would be required to join their final approach to the airport closer to the airport than arrivals do at present. (They would need to join closer than 8 nautical miles). That means these aircraft would fly over new areas.

4. Heathrow has highlighted that the IPA could be particularly important for the hour between 6am and 7am. This is an especially sensitive time of day for communities. This also suggests that the additional flights will not be averaged out over the day at 4 per hour.

5. Heathrow argues that IPA will make the airport more resilient and that it could lead to improved respite with fewer aircraft departing late after 11.30pm and fewer planes circling in the holding stacks. However, we understand that some of the airlines are questioning whether the resilience of the airport will improve. Their view is that IPA introduced within the existing 480,000 cap would improve resilience but they are concerned that an additional 25,000 flights might cancel out any improvements to resilience.

6. The IPA design principles need to be considered in the context of the wider impact on the natural environment around Heathrow (land which is predominantly Green Belt and needs protection) and in line with Heathrow's commitment to the concept of sustainable communities. Any air space change needs to be planned to at least protect if not better, well connected green infrastructure, which uses land effectively to achieve connected green infrastructure and which uses land efficiently to achieve multiple environmental, social and economic benefits.

7. The design principles as published appear not to address these issues and opportunities are missed to consider matters such as the importance for quality of life and of respite from noise in countryside areas close at hand to where people live, and the economic value of countryside places potentially affected by air space change.

HCEB is asking for clarity on a number of points:

- 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.

- 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 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.

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

8. 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. The WHO report can be found here.

We would be grateful if Heathrow could respond to us on the above points by **30 November 2018.**
The Heathrow Community Engagement Board Ltd
6 November

LONDON BOROUGH OF HOUNSLOWS RESPONSE TO HEATHROW AIRPORT LIMITED (HAL) CONSULTATION ON THE INDEPENDENT PARALLEL APPROACHES (IPA), DESIGN PRINCIPLE ENGAGEMENT – DISCUSSION GUIDE.

November 2018

DECLARATION

This response is submitted by the London Borough of Hounslow (Local Authority). The views of the organisation were collated following discussion with the Portfolio Holder (Cllr Steve Curran, Leader of the Council and the Head of Service).

In the proceeding sections the London Borough of Hounslow (hereby referred to as the 'Council') has provided a response to the questions posed by Heathrow Airport Limited (HAL) as part of this consultation.

DESIGN PRINCIPLE 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 the 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.

LBH Response:

The Council believe that the above four principles should be prioritised as follows:

a) Minimising noise – more important
b) Minimising fuel and CO2 – more important
d) Minimising impact on other airspace users – less important
c) Maximising operational efficiency (air traffic control workload) – less important

The borough's close proximity to Heathrow Airport means that our residents are already exposed to noise levels that are much higher than the threshold of significant community annoyance. It is our understanding, that there are currently no limits on the number of arrivals that can land on the designated departures runway as part of the proposed Independent Parallel Approach (IPA) airspace change. Considering that the proposed airspace change has the potential to contribute up to additional 25,000 Air Traffic Movements (ATM) per year, the Council considers it would be appropriate to assess the impact of the change in terms of the number of maximum noise level events exceeding LA,max, 65dB (N65) and Lnight bearing cognisance to the fact that 11% participants were highly sleep-disturbed at a noise level of 40dB, Lnight, as outlined in the revised WHO Environmental Noise Guidelines (October 2018) strong recommendation to manage aircraft noise. With this in mind, the Council believes that HAL should consider, engage and agree a methodology to assess adverse impacts associated with the proposed operational change that is likely to heavily impact our residents, and propose suitable mitigation measures.

NOISE DESIGN PRINCIPLES

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.

LBH Response:
The Council believe that the above four principles should be prioritised as follows:

f) Providing predictable respite from noise – most important
g) Minimising the total number of people affected by noise – most important
e) Minimising the number of people newly affected by noise – less important
h) Avoiding multiple flight paths over the same community – less important

Hounslow residents value the importance of predictable respite from aircraft noise. Whilst we welcome the extensive research that has been undertaken on the importance of respite for communities situated near airports, the Council holds the view that the respite provided under current Heathrow operations and the predictable respite that will be provided once IPA is implemented need to be clearly defined and understood by communities, before the impact of IPA could be assessed and mitigated, as part of the noise design principles for the proposed airspace change.

Furthermore, it is important to determine the threshold limit for predictable respite that the 'noise design principles' should aim to achieve. The Council believes that the threshold limit should make reference to the current level of respite with the aim to *'where possible, contribute to the improvement of health and quality of life through the effective management of and control of environmental (aircraft) noise, in the context of Government policy on sustainable development'.*

By introducing IPA, it is claimed (on page titled "IPA in the context of future expansion") that IPA '*has the potential benefit of few arrivals on departures runway*' and '*improving respite because we can land more aircraft….*'. The Council disagree with this statement and believe that predictable respite under IPA is not comparable with the current level of respite in place at Heathrow. The Council also disagrees with the proposed potential benefit of '*A reduction in the number of late running flights because we (HAL) are more efficient when we land on departures runway'*, because the proposed airspace change is interfering with the current flight alternation pattern designed to provide respite.

The Council also places equal importance on principle (g), however, we believe that it should be driven by sharing of noise equitably between communities. For example, if an airspace change can deliver reduction in overall noise, the overall benefit should be distributed proportionately to those already most affected, and conversely, if an airspace change results in an increase in overall noise, the dis-benefit (burden) should be distributed proportionately to those least affected already. Such a design principle is likely to involve dispersion rather than concentration of multiple flight paths, and as such, probably one of the limited number of design scenarios capable of delivering better public health outcomes due to reduced noise level and therefore reduced noise exposure.

The Council accepts principle (e), however, we would suggest that design principles should aim to share burden of noise between two arrival paths (existing and new) for example reducing the number

of flights by half reduces noise level by 3dB under the existing flight path, which could potentially reduce noise at ground from 60dB to 57dB under the existing flight path and noise could potentially increase from current background noise level of 51dB to 54dB for the newly flown over communities.

The consultation documentation states that new flight paths for IPA would "need to be designed to avoid the existing arrival swathes", resulting in communities newly flown over. The Council's view is that any change in exposure relative to the baseline (2012, before operational trails) is assessed and then mitigated in accordance with the requirements outlined in the Noise Policy Statement for England. For example, it should aim to "mitigate and reduce to a minimum potential adverse impact resulting from noise…" and "avoid noise giving rise to significant adverse impacts on health and quality of life", mitigate and minimise adverse impacts on health and quality of life from environmental noise, where possible, contribute to the improvement of health and quality of life, the 3rd principle of NPSE.

OTHER DESIGN PRINCIPLES
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.

LBH Response
The Council believes that the above three principles should be prioritised as follows:

i) Prioritising rural areas over urban areas – less important
j) Prioritising parks and open spaces over residential areas – important
k) Prioritising commercial and industrial areas over residential areas – more important

The overriding priority should be to reduce the overall number of people affected by aircraft noise and the Council is of the view that the most important priority should be to position flight paths over commercial and industrial areas and existing sources of (transportation/ other less sensitive uses) noise, instead of residential areas. However, we are also of the view that a balance needs to be struck between the options outlined in principles (i) and (j). Communities located in urban areas such as Hounslow should not be expected to travel large distances in search of green spaces in rural areas. Rural areas must share some burden due to increased noise level/exposure level and increased frequency in air transport movements, provided the increased noise is reasonable (in order to achieve the right balance between noise exposure level between urban and rural communities). Urban areas may exhibit higher total general noise, however this feature should not be used to mask noise due to additional aircraft noise attributed to Heathrow expansion, instead existing higher urban noise should be used to balance against increased rural noise due to expansion. Also, urban areas are more densely populated as compared with rural areas, which increases the population exposed to a certain noise contour rather than reducing it as claimed by Heathrow.

ADDITIONAL FEEDBACK
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 provide supporting documentation/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? Etc.

LBH Response:
The Council views IPA as an interim measure to provide the resilience necessary to cope with congestion and delays. However, we seek clarity on whether IPA would continue, should 3rd runway expansion go-ahead, considering an expanded Heathrow would deliver huge additional capacity?

HAL suggests within its IPA consultation documentation that the IPA process will require a change to Heathrow's Noise Abatement Procedure. Can HAL clarify the nature of change in noise impacts, methodology to assess such impacts and the nature of change to the 'Noise Abatement Procedure' required to fully mitigate the impacts?
-ENDS

Dear Airspace Team

This is the response from the Local Authorities' Aircraft Noise Council (LAANC).

At a meeting of LAANC's Executive Committee meeting this morning the committee asked that the following comments be submitted in response to the information provided on this issue to some members of the Heathrow Community Noise Forum (HCNF) October 2018.

Overall LAANC members expressed extreme disappointment with the lack of engagement and consultation on the topic of IPA. Members expressed a unanimous view that even the October 2018 (revised) Discussion Guide is generally unhelpful and obscure and not currently available on the HAL website – which is not good in an engagement exercise.

At an overall level there appears to be no proposal from HAL that establishes the value of TEAM let alone TEAM enhanced with IPA. Members asked what has changed since the CAA evaluation on team (CAP 1117) concluded 'the trial had revealed no 'silver bullet' solution to improving Heathrow's resilience". LAANC members therefore doubt there is any tangible benefit for "Team" after 07:00 on the typical 300 No. "Green days" per year that occur.

On the Statement of Need – members expressed their disappointment that this has not been revised (as required by the CAA) to make it clear to stakeholders that the new design concepts such as curved approaches and proposed reduced distances for final joining point may well inform and be a trial for future proposals for a 3 runway airport. Members were of the view that IPA should in fact have been submitted as an airspace trial subject to 6 monthly reviews by the CAA as its real practical purpose would appear to be trial new concepts for a 3-runway airport.

The Proposed Airspace Design Principles

The (HAL) IPA consultation document applies similar design principles to those signed-off by the CAA on 28th 2018 September in respect of HAL's third runway airspace change proposal. The principles are controversial and LAANC members are concerned that they do not accurately reflect the responses of consultees in the lead up to the sign off stage for the R3 airspace change. It appears that it is HALs intention to use its R3 consultation to inform and underwrite its IPA design principles. Even without the above criticisms, the R3 consultation responses were to a different scenario and the hypothesis that it is possible to "read across" from one situation to another has not been proven.

Options and Trade Offs (para refs as per HAL document)

Considering the options and 'trade-offs' presented it seems right that 'a' - Minimising Noise' should be the top priority. But with little or no information of the other options it is difficult to rank them in any meaningful way:
For example option f – Providing Meaningful Respite

For (f) we are assuming that that true 'respite' is distinguishable, available, effective and unbroken for significantly long periods. The meaning of (h) is not clear, and even less clear when viewing the graphic. It sounds good but what does it mean? The downside to (g) is that 'minimising the total' is achieved by concentrating worse noise over the few unlucky people. Nobody would want to be there. Hence the low ranking is aimed at sharing the noise more fairly, which would sadly mean noise for more people. This might be fairer but would again be seen as unjust and objectionable by those

who would get extra noise. Conversely, (e) would give priority to those who do not have much noise in preference to those who already have too much, and deserve less.

The task in 'Other Design Principles' is again not clear, but the graphic explains the intention as to what is meant by:
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

Items (i)and (j) appear straightforward, in favour of flight paths which avoid the areas with the greatest concentration of people. But then we remember that many communities use their open space and rural areas for their respite, and many of the areas are designated as 'outstanding' and their tranquillity should be preserved. This is also of benefit to those who live on the fringes of these areas, who would otherwise suffer a concentration of noise right over them. (k) seems more logical, that noise should where possible avoid residential areas, and fly over commercial instead but the opportunity for this around Heathrow would appear to be virtually non existent.

Night Flights

LAANC does not accept that night ends at 06:00, we hold that the night does not end until 07:00, so the statement that 'Between 06:00 and 07:00 there is no limit on the number of arrivals that can land on the designated departures runway' is a cause for considerable alarm, in the context of increases with IPA. Night flights should be reducing, not increasing. Likewise the statement regarding easterly operations that 'Government limits do not apply to the numbers of arriving aircraft landing on the departures runway after 07:00.' There is no technical reason we are aware of to prevent easterlies being treated the same as westerlies, with a limit of 6 per hour now that the Cranford Agreement has effectively been scrapped.

'Forward plans to increase the ATM cap to release additional capacity.

Members are concerned at prospect of more flights, especially if they are bunched together before 07:00. The ATM figure we have heard is that Heathrow wants an extra 25,000 per year - with possibly up to half of those in 06:00 to 07:00 hour. The consultation document appears to foreshadow this with the statement that the use of IPA between 06:00 and 07:00 has the potential to directly support an increase in declared capacity in the hour.

In theory 'a longer scheduled night time ban' sounds like good news. But again unfortunately it is obscure, as we know the HAL 6.5 hours proposal for a scheduled night ban differs from the Airports Commission recommended 6.5 hours.
ENDS

Kind Regards
[redacted]

London (Heathrow) Airline Consultative Committee

HAL's Independent Parallel Approaches Design Principles

Introduction

On behalf of the London (Heathrow) Airline Consultative Committee (LACC), the Airline Operators Committee (AOC) and collectively representing the 86 airlines currently operating at Heathrow Airport, we remain of the strong conviction that airspace must be modernized as quickly as possible. Independent Parallel Approaches is one solution in a menu of options necessary to enhance capacity, resilience and safety outcomes aligned with the Government's decision to expand Heathrow as the national hub airport and consequently realise the wider economic benefits for the UK in a sustainable manner.

Summary

The Heathrow airline community is broadly supportive of the 4 key principles for airspace design as outlined in the HAL presentation to the Airline Working Group on 22 June 18. These are safety, capacity, NPS noise tests, and air quality.

However the need for resilience is not explicitly recognised as a design feature in the capacity planning function. Consequently airlines would ask that consideration to be given to the following:

- The need to identify a quantified additional resilience factor into the capacity calculation to assure optimised operational day to day performance as well as recovery from disrupted operations.
- The economic importance of night flights, the Government's role in defining operating restrictions and the need to follow the ICAO and the EU's Balanced Approach when assessing the need for further operating restrictions.
- Note that the world's airlines fleet is not homogenous and careful planning is required to secure pragmatic usage of already available modern aircraft capabilities. Furthermore any potential longer term mandates anticipated for airspace modernization, for example, advanced functionality associated with noise mitigation must be supported by clear operational benefits offsetting the costs in avionics upgrades.

Design principles categories:

The airline community can support the 4 categories identified by HAL as in line with the following priorities:

a) Minimising noise
b) Minimising fuel/emissions
c) However we find that the concept of resilience is missing and ought to be factored into the category identified as maximising operational efficiency not just in terms of air traffic

d) Minimising the impact on other airspace users

Noise design principles

The airline community can broadly support the four noise design principles identified by HAL as follows:

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

Other design principles

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

The airline community has no position on the relative merits of principles i) to k) other than those proposed under the noise design principles e) to f) above. However, the concept and application of resilience, for example, how to protect the current schedule in a variety of scenarios is missing. The design limit should be set at a level which takes account of a resilience factor, x%, which enables operations to recover from a disrupted day. The x factor will need to take account of any policy or regulatory requirements to satisfy consumer or airline needs around disrupted operations and opportunities to restore services to certain standards within a disrupted day. In the light of potential new operational restrictions as well as some additional flights ahead of a new runway, the current resilience level must be protected. An additional 25K movements per year may not be realistic and will require validation and further consultation.

Additional comments on HAL's Mandatory Design Requirements:

1) Resilience designed into the design and operating model

The airline community is of the view that HAL's Mandatory Design Requirements outlines on slide 13 are not fully reflective of both airline or passenger needs to recover from disrupted operations. Whilst there is a trade-off to be made, and airlines are sensitive to expanding capacity in the short term, there is not sufficient recognition in the current design principles to take account of resilience needs.

Similarly there is a need to ensure that the integrity of the current day to day operation is maintained. In summer 2018, Europe experienced its worse performance in many years when *en-route* delays doubled mainly due to lack of air traffic control capacity/staffing and weather events. In this scenario, the use of IPA is an important tool to protect the current resilience levels particularly after many years of investment by HAL and airlines in new systems, procedures and international coordination. Airlines would be concerned if current resilience levels were reduced by an, unjustifiable, increase in movements or capacity during the transition to a new runway.

2) **Need for a Balanced Approach**

Whilst airlines understand the importance of meeting NPS noise policy tests, these must be in step with International ICAO standards and EU regulations which require a "*Balanced Approach".* The European Union in its Regulation regarding Operating Restrictions (EU 598/2014) has ensured that ICAO's Balanced Approach is directly applicable across the 28 Member States ensuring that there is a

level playing field in the application of any operating restrictions and consequently ensuring there are no market distortions. In the context of a "*Balanced Approach*", we look forward to seeing the benefits of increased investment and new technology with local communities over time.

3) **Airspace design based on latest navigation technology**

Predictable respite has been identified as valuable to local communities and has traditionally been achieved by runway alternation. Splitting flight paths into multiple routes will need to take into account the business case for changes to the existing concept of operation including any implications for aircraft avionics capabilities, the complexity of operational procedures including manpower resourcing and the safety case arising from a mixed international fleet. These aspects are particularly important for later phases in the CAA's airspace design process where assumptions need to be made regarding avionics capabilities. For these reasons we urge NATS, HAL and the CAA to provide early indications of the navigational standards to be applied so that airlines can assess the implications for equipage and compliance to safety certification processes.

It should be noted that airline empirical evidence highlights that airspace users (AU) including those operating into Heathrow fly a wide variety of airframe types equipped with an equally varied level of communications, navigation and surveillance (CNS) avionics. Also of significance is the disparity between airframe equipage and flight crew certification**.** It's imperative that Heathrow project planners be cognizant of this during any airspace re-design process. It must also be borne in mind that it typically takes a number of years to upgrade large fleets of aircraft when supported by a positive cost benefit analysis (CBA) and/or airspace mandates. Any requirement for new airborne CNS equipage and/or ground infrastructure must be determined in coordination with airspace users so that pragmatic elements of avionic upgrades and flight crew training can be fully accounted for. Airlines will unlikely to purchase airborne kit or pay for ground infrastructure without a positive CBA or a regulatory mandate in line with SESAR requirements.

[redacted]
[redacted]
[redacted]
Sent by email to [redacted]

Ministry of Defence

9 October 2018

Heathrow Airport Ltd
LHR Airspace Consultation

MINISTRY OF DEFENCE RESPONSE TO THE HEATHROW AIRSPACE PRINCIPLES INDEPENDENT PARALLEL APPROACHES

Thank you for the opportunity to comment on the Heathrow airspace principles consultation for independent parallel approaches. In response to this stage of consultation, the MOD has no specific comments on your proposed design principles, and acknowledges the ongoing work with RAF Northolt to ensure continuing integration of RAF Northolt Operations. As a result, the MOD is mostly focussed on the assurance that the design principles will continue to strive to minimise the impact to other airspace users. The MOD is keen to ensure that this working relationship remains productive.

[redacted]

NATS
Future Airspace and ATM
CTC, 4000 Parkway
PO15 7FL

Airspace Design Principles
Independent parallel Approaches (IPA) Engagement
Heathrow Airport Limited

29/10/2018

NATS response to Heathrow's IPA Design Principle engagement
The UK's existing airspace structure has changed little since the 1950s and modernisation is required if we are to handle the forecasted levels of growth in air traffic or maximise new capacity on the ground, as well as take advantage of the substantial environmental benefits that new aircraft technology enables. However, modernising airspace is timely and complex. It takes many years and we are already behind schedule.

The process of modernisation moves the UK away from relying on ground-based beacons to using modern satellite navigation. This brings clear benefits. Through better operating procedures there is a potential carbon saving to the UK aviation by 2050 of between 9% and 14% and, alongside the introduction of quieter aircraft, 'the potential to reduce UK aviation noise output by 2050 compared to 2010' according to Sustainable Aviation, the cross-industry alliance.

Modernisation will create greater flexibility in the design of aircraft flight paths due to the streamlining of our airspace and the precision of satellite navigation compared with the current beacon based navigation. This capability can be used to enable environmental improvements such as respite for communities who are regularly overflown if that is what is required.

Modernisation also brings clear economic advantages as a result of reduced journey times and fewer delays. According to research by the International Air Transport Association (IATA), airspace modernisation across Europe will deliver over £29bn to UK GDP and 116,000 jobs by 2035. If we fail to modernise existing airspace structures, delays faced by passengers are likely to soar, with one in three flights departing more than 30 minutes late by 2030 and average delays 72 times higher than today.

NATS supports Heathrow's general Design Principles A,B, C and D.
As an air navigation service provider, NATS is particularly interested in Design Principle C (maximise operational efficiency).

We do not state a view on the environmental Design Principles E through K posed in the engagement material, as we believe they are for local communities to answer and express their preferences.

We believe that collaborative airspace modernisation over the next few years, combined with the most efficient use of existing infrastructure in the near-term, remains crucial to the aviation industry's contribution to the UK.

Kind regards,

[redacted]

Dear Sirs,

Thank you for the opportunity to comment the proposed Independent Parallel Approaches (IPA) Design Principles for London Heathrow.

Reigate & Banstead Borough is situated in Surrey, directly to the north of Gatwick Airport. Whilst Reigate & Banstead is - geographically - some distance from Heathrow Airport, the north of the borough is overflown by aircraft departing from and arriving at Heathrow, and key transport corridors used to directly or indirectly access Heathrow Airport pass through the borough, specifically the M25, and the North Downs Line.

We therefore have some general comments in response to the current consultation.

In assessing airspace design options, including the potential to use IPA, it will be important that Heathrow Airport gives consideration not only to the impact of flight paths on the immediate local area, but also on the wider area. This includes consideration of the amenity of residents in the northern parts of Reigate & Banstead borough, who are currently overflown by Heathrow flights.

It is also vital that airspace planning takes into account flights from Gatwick Airport and is planned in a coordinated way with Gatwick Airport. At the moment, aircraft flying Gatwick's departure Routes 3 and 4 (both of which overfly Reigate & Banstead borough) are held at a lower altitude than would otherwise be the case because of Heathrow departures on the Detling, Midhurst and Mayfield routes. It is essential to protect the amenity of our residents that this situation is not exacerbated by future airspace planning at Heathrow.

We trust that these comments are of help and will be taken on board as you continue to plan for the future of Heathrow Airport. We would be very happy to discuss the issues raised above with you.

Your faithfully,

[redacted]

I would like to formally record the endorsement of Richings Park Residents Association to the submission made by the Teddington Action Group (TAG).

Regards

[redacted]

INDEPENDENT PARALLEL APPROACHES (IPA) CONSULTATION
HEATHROW
Response from Richmond Heathrow Campaign
9 November 2018

INTRODUCTION

1. This is a written response of the Richmond Heathrow Campaign (RHC) to the Heathrow Airport Limited (HAL) consultation titled *'Heathrow - Stage 1A Define - IPA Design Principles 2018'*.

2. RHC represents three amenity groups in the London Borough of Richmond upon Thames: The Richmond Society, The Friends of Richmond Green, and the Kew Society, which together have over 2000 members. The members of our amenity groups are adversely affected by noise from Heathrow Airport's flight paths, poor air quality and road and rail congestion in west London. We acknowledge Heathrow's contribution to the UK economy and seek constructive engagement in pursuit of a better Heathrow. We are an active participant in the Heathrow Community Noise Forum.

3. Our premise is that it would be preferable to aim for a better Heathrow rather than bigger Heathrow and to capitalise on the world beating advantage of London's five airports, in particular by improving surface accessibility to all five airports, which would be a major benefit to users. Our approach is to continue supporting the case for no new runways in the UK and we believe this is well supported by the evidence produced by the Airports Commission and the DfT in relation to the Airports National Policy Statement.

4. Over recent years we have undertaken extensive research on Heathrow and submitted a large number of papers to the Airports Commission, the DfT, CAA and others - all of which can be found at www.richmondheathrowcampaign.org.

AIRSPACE CHANGE PROCESS

5. We note that with regard to the CAA's Airspace Change Process (CAP 1616) (ACP), there is a proposal, ACP-2017-42. An assessment meeting was held between the CAA and HAL on 14 September 2018, at which HAL made a presentation on the introduction of Independent Parallel Approaches (IPA) at Heathrow. The presentation material was similar to that presented to the HCNF on 19 September 2018. Then on 9 October HAL held a workshop for some HCNF members and presented a fuller report referred to in the Introduction above and on which we base our response.

6. An initial Statement of Need was submitted to the CAA in 2017 and a revised statement of need was submitted in September 2018. This is required for Step1A of the ACP. **We do not believe there has been any engagement with stakeholder communities on the need for the proposal and the consultation document contains no proper assessment of the need**. We believe it would be contrary to the ACP and the CAA's duties to sign-off Gateway 1 without proper engagement with community stakeholders on the need for the proposal. We raise a number of questions in our response on the issue of need.

7. Regarding the Airspace Design Principles, Step 1B of the ACP, we understand HAL intend submitting their Final Airspace Design Principles to the CAA in December 2018 with a view to CAA's sign-off of the Define Gateway 1 of the ACP on 21 December 2018.

8. The proposed date of submission of the Change Proposal is 15 September 2021. During the next 3 years, detailed flight paths will be designed and formal consultation will be undertaken. The Airspace Design Principles will be used to establish and assess the design options.

9. We remain concerned that according to HAL, the design principles are "fixed" by the CAA's sign-off and cannot be changed. We are also concerned that seemingly the IPA proposals are not widely available, e.g. on HAL's website and that the documents on the CAA's portal are incomplete. Very few stakeholder communities are aware of the consultation.

10. We conclude below that the proposal is for a minimum of 3 additional IPA arrival flight paths curving in from the holding stacks - one each onto the northern and southern departure runways on Westerlies and one onto the southern departure runway on Easterlies. Quite possibly there will be more than three flight paths established to provide IPA.

11. HAL says the IPA routes will only be required while Heathrow has two runways. **We therefore question why this proposal has been determined by the CAA as a permanent airspace change. Also, HAL says it will be introducing PBN on these IPA fight paths and we believe the purpose is in effect a trial of PBN, curved flight paths and mixed mode, which would be required should there be a 3rd runway. Accordingly, we believe the proposal should be treated as a trial and temporary and not as a permanent airspace change.**

TACTICALLY ENHANCED ARRIVAL MEASURES (TEAM)

12. Westerlies (arrivals from the east). When Heathrow is on Westerlies, there is alternation between the use of northern and southern runways for arrivals over the 16 hour day with the change taking place at 3pm. The sequence changes every week. The runway not being used for arrivals at any point time is used for departures. On occasion, arriving aircraft are landed on both runways using TEAM (Tactically Enhanced Arrival Measures) but the aircraft have to be separated further apart than normal because of the vortexes - the impact of which depends on the relative weights of aircraft in the landing sequence. The two runways are 1414 metres apart, which is not sufficient to avoid the local air turbulence and safety risk to parallel approaches. Avoiding the air turbulence requires the flow rate of aircraft arriving on the arrivals runway to be reduced and therefore the number of additional arrivals on the departures runway is partly offset by a reduction in number on the arrivals runway. This exposes TEAM's inefficiency.

13. Easterlies (arrivals from the west). When Heathrow is on Easterlies, aircraft do not depart from the Northern runway because of the Cranford Agreement (although now dissolved – the required taxiways have yet to be introduced). This means that with few exceptions all departures leave from the southern runway and all arrivals land on the northern runway. There is no runway alternation so that the equivalent of TEAM may be applied to the southern departures runway at any time throughout the 16 hour day.

14. Night Shoulder 6am to 7am. The rules in the night shoulder period, 6am to 7am, allow aircraft to land on both runways, which in effect is TEAM. There is no night quota in this period.

15. TEAM Restrictions. The Government has also ruled out mixed mode operations at Heathrow airport to ensure that local residents can continue to benefit from the regular respite from noise provided by runway alternation. (September 2010 Written Ministerial Statement on "Heathrow Operations"). Mixed mode operations (planned use of a runway for near simultaneous landing and departing) are essential fora three runway airport, and so HAL will have to apply during the DCO process for mixed mode. Furthermore, restrictions on use of TEAM are in place and HAL say the intention is not to change these. These rules concern the restrictions on when TEAM can be triggered and on the maximum number of aircraft that can use TEAM.

a. During the 16 hour day, 7:00am-23:00pm, TEAM can be used when there is a forecast delay of 20 minutes or more but no more than 6 arrivals per hour are permitted to land on the

designated departures runway. The restriction on the number of arrivals does not apply to easterlies, which strictly speaking are not TEAM arrivals although in practice they operate as such.

b. In the morning shoulder period 6am to 7am TEAM can be triggered when there is a forecast delay of 10 minutes or more between 6am and 6:29am and a delay of 5 minutes between 6:30am and 7am. There is no limit on the number of arrivals that can land on the designated departures runway.

INDEPENDENT PARALLEL APPROACHES (IPA)

16. The aim of IPA is to reduce the inefficiency of TEAM, whereby the arrivals flow rate is reduced with TEAM. HAL's proposal is to curve in the arriving aircraft on the departures runway so as to join the ILS near the airport, thus keeping the aircraft apart. The typical joining point for aircraft on the arrivals runway is around 13 nautical miles from touch down but HAL suggest the IPA will create a joining point on the departures runway at around 6 to 7 nautical miles from touch down. IPA is therefore to be used when TEAM is applied and two runways are used for arrivals.

17. The ACP proposal by HAL is for an additional arrival flight path from Heathrow's holding stacks to the joining point on the departures runway. This additional flight path to the east of the airport would be from the south when Heathrow is on Westerlies and the southern runway (27L) is being used for departures and from the north when the northern runway (27R) is being used as the departures runway. On easterlies the additional flight path would be from the south curving onto the southern departures runway.

18. Our understanding is that the three or more additional IPA arrival flight paths therefore would be restricted for use between 6am and 11:00pm. Their use would depend on whether Heathrow were on Westerly or Easterly operations and on alternation in the former case.

19. Heathrow's proposal for IPA does not specify the joining points or the three or more flight paths, so that the above description at this stage is the broad intention. HAL say that Performance Based Navigation (PBN) would be applied to the flight paths. Other things being equal this would result in very precise use of the flight paths, and hence concentrated noise. In theory each single flight path might be divided into multiple flightpaths which either through separation or respite from flight path rotation could disperse the noise. IPA could mean in excess of three additional flight paths and multiple joining points. Meaningful separation is needed to effectively disperse noise and this applies whether or not respite is used.

20. Joining Point Rules. The Airport's AIP (Aeronautical Information Publication) states that the minimum height at which aircraft can join the ILS during the day (between 6am and 11pm) is 2,500ft which is approximately 7.5 nautical miles (around 8.5 miles) from Heathrow. At night (between 11pm and 6am) an aircraft must be no lower than 3,000ft which is approximately 10 nautical miles (around 11.5 miles) from Heathrow. Because of the IPA joining point being near Heathrow, the additional IPA flight paths will not satisfy these rules. No case has been made to revise the rules. It is not clear whether the assessment is part of the ACP. We believe it should be because the rules affect the noise impact.

21. Continuous Descent Approaches. Heathrow has successfully promoted CDA which results in aircraft remaining higher for longer and reducing the use of engines when flights descend in steps. The current Arrivals Code of Practice is 3 degrees but there is a current Airspace Change Proposal to increase this to 3.2 degrees. It is not clear whether the additional curved flight paths can or will adhere

to the then current Arrivals Code of Practice. Heavy aircraft heading directly for the normal stream of arrivals at a steep descent angle with pilots needing to stabilise the aircraft in good time before touch down must surely present operational and safety issues. This is not addressed in the proposal and potentially has noise impact.

22. TEAM traffic and benefit. HAL's initial statement of need 2017 provides the following table:

Time period and mode of operation	Average number of aircraft that landed on the departure runway during the last five years
6:00am to 7:00 am (westerly operations)	18 per hour
After 7:00 am (westerly operations)	15 per day
6:00am to 7:00 am (easterly operations)	16 per hour
After 7:00 am (easterly operations)	23 per day

The table shows the average number of aircraft landing on the departure runways over the last 5 years (1 May 2013 to 30 April 2018). The problem with this evidence is that it is averaged.

23. The SEAT Report 2011 page 24 deals with resilience - it says:
"*In terms of resilience it is useful to classify the operational year as green, amber and red days where:*
*a. normal operations occur on **green** days,*
*b. moderate disruption is experienced on **amber** days. This disruption is manifested as long delays attributable to the airport and moderate levels of cancellations, with some dispensation on night jet movement restrictions needed to enable recovery,*
*c. severe disruption on **red** days experienced as very long delays attributable to the airport and a high cancellation rate, with no on-the-day recovery being possible despite extensive night jet movement dispensation.*
The ratio of green:amber:red days is approximately 300:50:15 across the year"

24. It is not clear from the table whether the proportion of westerlies in a year is factored into the 15 TEAMs a day. In any event these out-of alternation arrivals are mainly on the 65 amber and red days, and there could be say 80 TEAM flights a day in these disruptive days. The maximum allowed at 6 per hour is 96 per day.

25. To put these numbers into perspective, Heathrow operates near its planning limit of 480,000 flights a year or 240,000 arrivals, which amount to around 641 arrivals per day (excluding the 16 night flights).

26. There are around 63 scheduled flights between 6am and 7am which rises to over 80 an hour for the rest of the day, peaking at 90 mid afternoon before falling to around 50 for the rest of the day after 10pm. The majority of the 63 flights are arrivals.

27. There appears to be no proposal by HAL that establishes the value of TEAM let alone TEAM enhanced with IPA. We doubt there is any net benefit of TEAM on the 300 Green days after 7am, given the noise impact on communities of broken respite on Westerlies. HAL claims that there should be fewer late departures and arrivals but again there is no evidence with the proposal and there is significant spare capacity after 10pm. There may be some benefit on amber and red days in reducing delays, improving punctuality and restoring the flow of flights after disruption but there is no evidence provided by HAL.

28. HAL's initial statement of need in 2017 says it wishes to add 25,000 flights a year through gaining permission in the DCO process. This amounts to an additional 34 arrivals a day. HAL goes on to say *"IPA is required to provide operational resilience, with or without any additional ATMs. The need for the additional resilience will increase with any additional ATMs. In addition, subject to further verification, the use of IPA between 0600 and 0700 has the potential to directly support an increase in declared capacity in the hour. An increase in capacity could either contribute to an increase in ATMs (within or beyond the current annual limit), and/or support Heathrow's ambition to deliver a 6.5 hour ban on scheduled night flights between 11pm and 7am."*

29. We are very concerned that the main impact of IPA will be to increase the number of flights between the night shoulder hours of 6am and 7am, partly through time shifting flights from the night and partly from the additional 25,000 flights a year. The current TEAM rules apply no restriction to the number of TEAM flights in this shoulder hour. **We strongly believe there should be no increase in arrivals or departures from the approximate 63 flights that exist today between 6am and 7am. This then seriously questions the value of IPA.**

30. In 2012 and 2013, HAL undertook a series of Freedom Trials**.** While IPA itself was not included, the CAA seriously questioned the value of enhanced TEAM. The CAA's report *"Heathrow Airport Operational Freedoms Trial CAP 1117 in 2013"* says: *"The hypothesis being tested by the trial, as proposed by the South-East Airports Taskforce, was that granting additional operational freedoms at Heathrow could potentially deliver:*
1. significant benefits for passengers by improving the resilience and reliability of the airport, and
2. environmental benefits, with fewer unscheduled night flights, lower emissions and less stacking.

However, the data from the trial is inconclusive. The CAA would agree with Heathrow Airport Ltd (HAL) that it is possible that the freedoms trialled did benefit airport operations. Intuitively, greater operational flexibility should help air traffic controllers to get the airport back on schedule. But the benefits claimed in the HAL report have not been statistically proven. Any operational benefits of operational freedoms are offset by some redistribution of aircraft noise among local communities, and preliminary work suggests some detrimental impact. Communities below the westerly approach paths have their respite period interrupted by aircraft arriving on the runway usually used for departures, while others are affected by vectoring off the established departure routes."

Performance Based Navigation (PBN)
31. The concentration of flights by use of PBN will cause considerable harm to peoples' health and quality of life. To some extent this may be mitigated by creating multiple flight paths but the inability to provide meaningful separation or respite will mean that this additional aspect of the IPA proposal will have a negative noise impact on communities around Heathrow.

AIRSPACE DESIGN PRINCIPLES
32. HAL's consultation document applies similar design principles to those signed-off by the CAA on 28 September in respect of HAL's third runway airspace change proposal.

33. **RHC has raised with Heathrow, the CAA and Aviation Minister its grave concerns with both the process and outcome of the Design Gateway for the 3rd runway. As currently structured the current process for IPA is equally deficient and inevitably will lead to a wholly unacceptable outcome with regard to the Airspace Design Principles.**

34. Annex 1 lists the Airspace Design Principles for the 3rd Runway Airspace Change Proposal signed off by the CAA on 28 September. It also lists the principles included in the current IPA consultation document. While they largely match, different wording is used and they are ordered differently.

35. Our concern with the IPA design principles is that they do not reflect stakeholder community views. RHC and others are not in favour of concentration which is very much promoted by Heathrow in its 3R design principles by minimising the number of people newly overflown (6b) and minimising total population overflown (6f). We believe it is very difficult to agree with the set of principles proposed in a vacuum.

36. Accordingly, we set out our approach to airspace design principles in Annex 2, which is a presentation to the HCNF on behalf of members of the Community Noise Group (CNG) on 19 September 2018 on the subject of Heathrow's Noise Objectives and Airspace Design Principles.

37. The presentation does not support redistribution of existing noise as would arise with IPA. In so far as the IPA results in an increased number of flights and noise the presentation does not support the additional noise being concentrated over those already impacted by aircraft noise.

38. This position stems from a proposed additional local noise objective: **"Where there is a reduction in overall noise the benefit be distributed proportionately to those already most affected and where there is an increase in overall noise the dis-benefit be distributed proportionately to those already least affected."** This noise objective results in dispersion rather than concentration and it minimises the average noise cost per household or person rather than minimising the total noise impact.

39. We continue to support the NPS noise objective alongside the additional local noise objective, as described in the presentation.

40. Based on the above and further detail in the Annex 2, RHC believes the noise cost out weighs the benefits of TEAM enhanced IPA both in the case of no additional flights and in the case of additional flights.

Contact details:

[redacted]

Annex 1

Airspace Design Principles				
3R Airspace Change Proposal			IPA Airspace Change Proposal	
1		Must be Safe		Safety Principle must always be met
2		Must meet Airport NPS requirements, including capacity		We have to make sure we are able to meet our capacity requirements
3		Must meet 3 Airports NPS Policy tests	a	Minimise Noise
4		Must meet local air quality requirements		We have to make sure we don't break Government regulations on the amount of aircraft noise and the impact on air quality
5		Must meet commitments to the UK's Future Airspace Strategy		
6		Should limit, and where possible reduce, local noise effects from flights by:		
	a	Using more noise efficient operating practices	c	Maximise operational efficiency
	b	Minimising number of people newly overflown	e	Minimising number of people newly affected by noise
	c	Maximising sharing through predictable respite	f	Providing predictable respite from noise
	d	Avoiding overflying communities with multiple routes	h	Avoiding multiple flight paths over the same community
	e	Maximising sharing through dispersal		
	f	Minimising total population overflown	g	Minimising the total number of people affected by noise
	g	Designing flight paths over commercial and industrial areas	k	Prioritising parks and open spaces over residential areas
	h	Where appropriate, prioritising routing flight paths over parks and open spaces (rather than residential areas), but avoiding overflight of Areas of Outstanding Natural Beauty (AONB)	j	Prioritising parks and opens spaces over residential areas
7		Minimise fuel/CO2/greenhouse gases per flight	b	Minimise fuel and CO2
8		Ensure operational efficiency and resilience to maximise benefits to all stakeholders		
9		Base our airspace design on the latest navigation technology widely available		We have to use the latest technology
10		Minimise impact on other airspace users	d	Minimising impact on other airspace users
			i	Prioritising rural areas over urban areas

Heathrow Noise Objectives and Airspace Design Principles

Heathrow Community Noise Forum
19th September 2018
Presented by the Community Noise Group (CNG)

Heathrow Noise Objectives and Airspace Design Principles - On behalf of CNG representatives:

- Englefield Green Action Group
- Windsor & Maidenhead
- Richmond Heathrow Campaign
- Teddington Action Group
- Aircraft Noise 3 Villages
- Harmondsworth and Sipson Residents' Association
- Richings Park Residents' Association
- Ealing Aircraft Noise Action Group
- Iver Parish Council

Heathrow Noise Objectives and Airspace Design Principles

• The Government has changed its Air Navigation Guidance and the objective is now to minimise the adverse impacts of aviation noise.

• It follows that the effects on health and quality of life must now take the highest priority rather than a simplistic assessment of numbers of people affected and thresholds now shown to be out of date.

• The NPS was justified to Parliament on the basis of the wider benefits to society. It follows that the impacts should be shared on a fair and equitable basis. The approved NPS also contained a number of conditions and assurances in relation to health impacts, especially noise, accordingly the Airspace Design Principles need to deliver noise objectives.

• The shared approach to noise impacts was supported by the majority of the respondents to Heathrow's Airspace Design Principles consultation.

Existing Government Noise Objectives

High tier Noise Objectives are essential to establishing a set of Airspace Design Principles but are missing from Heathrow's Proposal on Principles.

The 3 existing Government national noise objectives are below. They have been reaffirmed by the CAA's Air Navigation Guidance October 2017 and the NPS 2018 confirms Objective 1, albeit with slightly different language.

1. To limit and, where possible, reduce the number of people in the UK significantly affected by adverse impacts from aircraft noise.

2. Any benefits from future improvements in aircraft noise performance should be shared between the aviation industry and local communities.

3. A fair balance should be sought between the negative impacts of noise and the positive economic impacts of flights.

We recommend two further informative qualifications be introduced:
a. Current and emerging WHO guidance on community noise be reflected in interpreting Objective 1.

b. Objective 2 to include the phrase 'taking account of base year levels of noise and

trends in noise reduction'

Proposed Additional Local Noise Objective

National Objective 1 implies directly a fourth Local Objective - particularly with regard to Heathrow's location in the middle of the densest population in Europe.

Additional Local Noise Objective 4.

Where there is a reduction in overall noise the benefit be distributed proportionately to those already most affected and where there is an increase in overall noise the disbenefit be distributed proportionately to those already least affected.

This objective should be adopted and given high priority in establishing Heathrow's Airspace Design Principles. We believe it is fair and rational way to share the adverse impact of aircraft noise.

Noise Objectives and Airspace Design

Objectives 1 and 4 should be the basis for airspace design (to be reflected in Gateway 1 of the ACP):

- The impact on those already exposed to noise should not be increased by additional flights or loss of respite.

- Additional noise should be distributed over areas not currently affected. This should result in no community presently overflown seeing any increase in noise from today using an appropriate set of noise metrics.

The Airspace Design Principle flowing from Objective 2 is:

- If an increase in ATM's is proposed over any community already impacted the Industry should demonstrate overall noise levels are reduced and improvements are being shared with communities on a reasonable basis vs a 2013 baseline using an appropriate set of noise metrics.

Airspace Design Principles

Safety is paramount

Enable application of ICAO balanced approach;
- Reduction of noise at source (fleet transition rate)
- Land-use, planning and management
- Noise Abatement - Operational procedures

Airspace Design Principles should include;

- Consideration of flight path concentration/dispersion,
- Respite levels,
- Night noise management,
- Separation of new flight paths,
- Altitude based noise priority heights,

All appropriate metrics to be used (including LDEN, N> and single mode) and their

weightings to be established with a robust evidence base.

Airspace Design Principles
Examples of Issues

PBN & Concentration

Until it can be demonstrated that PBN with concentration can be introduced without giving rise to adverse impacts on noise, health and wellbeing – it should not be applied in relation to redesigning airspace around Heathrow.

As noted previously international experience of PBN and concentration is overwhelmingly negative. A PBN paper was presented to HCNF on 16th May 2018 highlighting the issues and challenges but to date no response has been received.

Respite

Unless it can be demonstrated that different levels of Respite can be introduced without giving rise to adverse impacts on health and wellbeing – present Respite levels should not be reduced in relation to redesigning airspace around Heathrow.

Airspace Design Principles
Current gaps in the knowledge base

- There is no research or understanding of the current health impacts relating specifically to Heathrow or its proposed expansion. It is essential this is addressed as a priority as following from the Government's revised objectives it must guide airspace design. The Department of Health or Public Health England should lead on this.

- SoNA is unreliable and should be independently reviewed.

- WebTAG cannot be relied upon until its values and inputs are supported by fully independent medical and social research.

- The international experience of concentration and PBN is overwhelmingly negative – locally evidenced by the public backlash to the 2014 trials.

- In order to reach any acceptable outcome, respite will be of fundamental importance to airspace design. At present there is no concluded research or understanding about how much respite is needed to result in acceptable living conditions, how much separation is required between flight paths to achieve this and what in technical aviation terms will be possible.

Conclusion

• Until the noise objectives in this presentation are discussed and agreed a deferral of the CAA Gateway Process is required.

• Until the issues relating to design principles presented in this presentation are resolved a deferral of the CAA Gateway Process is required.

• CNG will be formally notifying Heathrow of this conclusion

Slough Borough Council

Heathrow Airport
IPA Design Principles Engagement

The design principles are organised in order of prioritisation, with 'a' being the most important and 'd' being the least important priority. However, it should be noted that all listed priorities are important to SBC and residents living in the Borough.

Design Principles Categories

a. Minimising noise
b. Maximising operational efficiency (air traffic control workload)
c. Minimising fuel and CO_2
d. Minimising impact on other airspace users

With the upcoming expansion, noise will inevitably increase, disturbing residents during day and night flight hours. Slough already face challenges from noise originating from rail and road traffic, which is set to increase during the construction phase of the expansion. For these reasons, the highest priority for Slough is minimising the noise impact.
Operational efficiency is the next highest priority. Having efficient air traffic control can lead to structured airspace use, increasing potential for structured respite periods. Residents are likely to adjust to a structured routine of overflight noise rather than sporadic noise events.
Minimising fuels and CO_2 emission is a lesser priority over noise, however CO_2 is still an important priority for Slough. The financial impact of fuel burn does not impact Slough, however Slough is interested in fuel efficiency as it can be correlated with particulate matter emission.
Minimising impact on other airspace users is the lowest priority for SBC, as residents in the Borough are unlikely to be affected.

Noise Design Principles

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

The most important priority for Slough is minimising the number of people newly affected by noise. Implementation of IPA will increase flight frequency and increase noise levels between 06:00 and 07:00, which may increase number of residents affected by noise, and will be disturbing for those living in areas closest to the airport such as Colnbrook. With the introduction of the 3rd runway, new areas of Slough will be subjected to overflight aircraft noise during both day and night, so a greater proportion of Slough's residents will be disturbed by aircraft noise, which will impact their daily lives and also increase risk of sleep disturbance.
Providing predictable respite is a high priority for SBC and can only be achieved with structured flight routines. Noise levels are more likely to be acceptable when they are predictable and having a structured approach ensures areas are periodically given respite from aircraft noise at given intervals. However, the definition of respite should be defined more clearly. Residents may feel that they are not experiencing a respite period when aircraft are still visible, despite having a reduced noise impact.

The next priority is avoiding multiple flight paths over the same community. Whilst it is unacceptable to subject small communities to continuous aircraft noise, many would be averse to being newly overflown. This conflicts with a previous principle to reduce number of people newly affected by noise, however to ensure certain communities are not adversely impacted by frequent overflights, it may be necessary to distribute flight paths so more people are affected in smaller doses. Neither option is favourable.
Minimising the total number of people affected by noise is an obvious priority, however it seems the most unlikely to be achieved because implementation of IPA will lead to a greater number of aircraft arrivals and therefore contributing to noise levels.

Other Design Principles

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

Prioritising parks and open space over residential areas would reduce noise impact for those living in the Borough. However, large areas of open space is very limited. The only areas that could be considered large open space is the southern border of the Borough at Upton Court Park and the north-eastern border at Wexham.
Concentrating flight paths to over commercial and industrial areas will reduce the noise impact on some residential areas of Slough, however the majority of industrial activity is located in the centre of the Borough, so targeting this area will also impact residential areas surrounding the industrial estate.
Overflying rural areas over urban areas is the lowest priority, because residents living in rural areas are just as valued as those living in urban areas, and they should not be subjected to more frequent adverse noise events purely because they live in a less populated area.

Feedback – Additional Principles

- Slough expect the night time respite period (23:00-07:00) to be implemented as stated in the Airport National Policy Statement, however this period should be extended to allow residents to have 8 hours undisturbed sleep.
- It is also expected that quiet aircraft are used during the night time period to reduce noise impact on residents.

Dear [redacted]

Independent Parallel Approaches (IPA) Design Principles Consultation 2018 - Comments from Surrey County Council

Thank you for the opportunity to comment on IPA design principles that could be used as the basis for time-bound changes to Heathrow's airspace design. This is an officer response, which has been agreed with the Cabinet Member for Environment and Transport. The County Council's comments are set out below and I trust you will take them into consideration.

Relationship to DCO

The length of time this specific airspace change could apply for must be made clear through the January 2019 engagement and public consultation. This will involve clarifying the relationship between IPA proposals and the DCO and the distinction between IPA to improve resilience in the short term or longer term to enable additional ATMs. Airspace change is a very technical area but a key concern for local residents and it is important that consultation material clearly explains these points and also the relationship between this airspace change proposal and the airspace changes linked to expansion. This includes clarifying how IPA proposals to enable early release of capacity conform to night flight ban expectations. Further explanation is also needed on the controls that will be in place to ensure that any airspace changes agreed through this specific airspace change process will be time limited.

Noise Design Principles

From the information presented it does not appear that design principle E "minimising the number of people newly affected by noise" is an appropriate design principle given the nature of the way in which IPA will need to operate by avoiding the existing arrival swathes into Heathrow.

The County Council has concerns around the impact on Surrey residents that will be newly overflown. With a peak of flights landing through IPA first thing in the morning this will have an impact on communities not accustomed to hearing landing noise, to which they may be more susceptible during hours of sleep. The cap on the number of flights landing per hour using the IPA approach after 7am is also not limited for easterly operations as it is for westerly. Further clarification is needed as to why this is the case.

We do not take a view on the merits of routing flight paths more or less over rural areas (or parks), compared to urban areas. In reality there are not continuous uninterrupted swathes of rural or parkland and large urban areas will inevitably be overflown.

As stated in the previous airspace change consultation, Surrey County Council generally supports the design of airspace to reduce the overall number of people experiencing significant adverse effects in terms of noise.

Assessment and engagement

We query what precedent the introduction of IPA would set. For example, if a community is newly overflown for IPA purposes, what guarantee is there that this will not be seen as the new norm? We would expect such communities to remain categorised as "not overflown" for the purposes of assessment against the overarching longer term airspace design principles. We would not expect time-bound IPA routes to be included in a new baseline.

There needs to be ongoing dialogue with local communities and their representatives as you continue to develop your airspace change proposals generally, with specific detail on IPA proposals in the January consultation. It may be that some more targeted engagement will be needed around IPA, including consultation events in areas of Surrey likely to be impacted including Spelthorne and Elmbridge.

If you require further information please contact [redacted] by email at [redacted] or by phone on [redacted].

Yours sincerely

[redacted]

[redacted]

Teddington Action Group

Heathrow Airport - Independent Parallel Approaches (IPA) Design Principles Engagement

TAG Response

09 November 2018

Introduction and context

This paper sets out TAG's response to the Discussion Guide issued in relation to IPAs by Heathrow to the HCNF and its working groups in September and October 2018.

Adopted Government Policy (Airspace Navigation Guidance 2017) requires;

- Environmental impacts of aviation to be mitigated as much as is practicable and realistic to do so (an overall objective).
- To limit and where possible reduce the number of people in the UK significantly affected by adverse impacts from aviation noise (a key environmental objective).

With respect to IPA consultation documents no evidence has been presented to justify two of the noise related principles proposed in the Discussion Guide against the above;

- Minimising the number of people newly affected by noise (e)
- Minimising the total number of people affected by noise (g)

Adopted national policy leads directly to the conclusion that **prioritisation should be given to the significance of the impact and the level of adversity**. Consideration of these requirements has been omitted in Heathrow's consultation material and supporting documents to date.

Revised UK Air Navigation Guidance issued in 2017 makes clear that minimisation of noise is to be prioritised in airspace design up to 7,000 feet. It is inappropriate and incorrect to proceed in a public consultation without making this clear, or how the adopted Government Policy stated above is to be addressed or satisfied. Rather the Discussion Guide implies that noise minimisation as a principle can be traded off against operational efficiency (c), minimising fuel and CO2 (b) or minimising impact on other airspace users (d).

The long-awaited WHO updated guidance in relation to aviation noise was issued by the WHO in October 2018. This was preceded by a series of earlier warnings, including the Chief Medical Officer for England highlighting the impact of noise and lack of sleep on health and other recent and comprehensive noise related studies covering aviation, such as the extensive and independent German study, NORAH (Noise-Related Annoyance and Health), issued in 2016.

WHO 2018 Guidance and its implications

Current WHO updated guidance states;

- For average noise exposure, a **strong** recommendation to reduce noise levels below 45 dBLden, as aircraft noise above this level is associated with adverse health effects.

- For night noise exposure, a **strong** recommendation to reduce noise levels during night time below 40dBLNight (the 8-hour period between 11pm and 7am) as aircraft noise above this level is associated with adverse effects on sleep.
- For specific interventions, suitable changes in infrastructure are recommended.

WHO advice must be reflected in any cost benefit analysis - in relation to either flight path strategies or indeed expansion. In particular, the health and wellbeing impacts and costs must now be independently validated and verified before any key strategic decisions with long term implications are taken.

It is clear that to comply with UK Aviation Policy and **to reflect the Government's duties of care to its citizens**, the overriding principle must be to minimise the number of people significantly adversely impacted by aviation noise. Heathrow's IPA Design Principles Engagement and Discussion Guide fails to address or consider how this can be achieved.

It is clear in the light of WHO guidance that the evidence prepared by the CAA in relation to the impact of aviation noise, its SoNA report, finalised in 2017 is fundamentally unreliable. Apart from the huge disparity between the headline principle conclusions and recommendations drawn on what are acceptable noise levels, other SoNA deficiencies and flaws include its unrepresentative population sampling, errors in its statistical analysis, errors in the CAA's noise modelling system itself (which has led to under predicted noise levels), and the fact that the report's conclusions were changed significantly through the drafting process (established through FOI).

Proposed Design Principles for IPA

It is obvious that the level of adverse impact (health and quality of life) must increase as the intensity noise becomes higher. Therefore, the only way the negative impacts of aviation on human receptors can be minimised is by setting operational constraints (to reduce noise at source), reducing the number of flights - particularly at night and in the shoulder hours - and by reducing the level of impact over individual communities by sharing noise as far as possible. **This can only be achieved by designing airspace at low altitude by prioritising the sharing of noise rather than concentration (the Airports Commission's Maximum Respite scenario)**. Conversely, both 'minimising total' and 'minimising new' will intensify noise levels and increase the adversity of impact over many communities.

Noise sharing is also the only approach that can be supported on moral and equality grounds. The current flight path routes were designed over 50 years ago, when the characteristics of aviation were very different. **It must be assumed airspace modernisation (including IPAs) is being designed with the long term in mind (perhaps 60 years or more) – and on this basis, short term adherence to legacy arrangements or pushing on blindly with concentration in an effort to minimise a headline total using inappropriate or simplistic metrics, contours and thresholds cannot be justified.**

This is especially relevant in the context of Heathrow's proposals for a huge expansion in flight numbers. The case for expansion put to Parliament was that notwithstanding environmental impacts it is being pursued for the 'greater good' of society. If this is so, it cannot be morally (or practically) argued that the burdens should be concentrated on those most afflicted at present. Rather noise around Heathrow must be shared on a fair and equitable basis making best use of all available airspace around the airport to minimise noise levels over individual communities, so that all areas can be made as 'liveable' for as many people as possible.

Reference is made in the Discussion Document to 'providing predictable respite from noise'. This

phrase is meaningless and should cease to be used. **Predictable respite (which all communities already have in one form or another) is of no benefit if the respite offered is incomplete or insufficient.** Despite taking its proposals for expansion to the current stage, neither Heathrow the DfT nor the CAA have established what noise conditions create effective respite. The communities who currently experience overflight consider that this should be a minimum of 8 hours during any 16-hour day period and that relief through both operational mode and runway alternation should be maintained at current levels as a minimum.

The Night and Shoulder Periods

During the night, late evening and early morning periods, in order to maintain public health communities should have a minimum 8 hours uninterrupted sleep – not the 6.5 hours proposed in the NPS (which will be subject to a Health Impact Assessment as it passes through the DCO process). At present communities under departures have 7.5 hours without scheduled overflight, **so rather than benefitting from the proposed 6.5-hour night flight (partial) ban, these areas will experience significantly worse conditions.**
For those under arrivals, Heathrow has stated a preference to commence operations at 5.30 am. This will be very prejudicial to health, **embedding unhealthy sleep patterns over huge numbers of people, which will for practical purposes will be extremely difficult to reverse.**

IPA Consultation -Conclusions and Recommendations - Resilience and Additional Capacity

Through its IPA proposals Heathrow is seeking to introduce highly concentrated routes (using PBN), ostensibly by arguing that this will improve 'resilience' and only to be used in specific circumstances (where there are delays in arrivals). In practice, it is much more likely this is about introducing PBN incrementally and increasing capacity - putting 'a foot in the door' – and the proposal should be regarded as such.

This is made obvious by the linkage to IPA with an application for an increase in capacity of 25,000 additional ATMs per year. The present 480,000 movement cap was originally set following the exhaustive T5 public enquiry (where Heathrow entered a number of commitments it has subsequently renounced) for environmental reasons. No environmental or even overriding economic reasons have been put forward to override this. This initial application for additional flight movements without justification could set a precedent for subsequent incremental applications.

Many communities suffer greatly from night flights and in particular, under departures due to many flights occurring after 10.50 pm, frequently extending into the 'night period' after 11.30, creating havoc to healthy lifestyles and family life.

The current proposals will do nothing to address this – unless along with additional resilience comes with an unbreakable commitment by Heathrow to reduce the number of late evening flight movements, with much stricter noise limits for aircraft flying during the shoulder hours. This is not part of the current package being put forward by Heathrow. **Indeed, it is quite possible that additional capacity to an airport that claims it is 'already full' will put more pressure on the airport at the beginning and end of the day and make conditions in the shoulder hours even worse.**

These issues should be clearly set out in Heathrow's engagement documents and made clear in any public consultation.

Call for formal response from Heathrow to this submission

This submission, prepared by TAG, has been seen by the following community group representatives who are members of the HCNF and who have confirmed their endorsement of it;

[redacted]

Some of these, and other Community Noise Groups (CNGs), will be submitting their own responses to the IPA Design Principle Engagement Discussion Guide.

This submission - and the others made by CNGs - raise significant issues concerning the interpretation of National Airspace Guidance Policy, and most importantly whether health impacts and quality of life issues are being properly or independently assessed.

These HCNF community representatives **call for a full and reasoned response by Heathrow** to this and the other submissions made by community groups. These groups (many of whom will be most affected by Airspace Changes) consider that despite their considerable efforts and time taken in responding to Heathrow's Gateway 1 application this was not done satisfactorily in the first application and that many of the key points that will have a significant impact on the future of their areas have not been addressed.

Thank you for the opportunity to comment on this document.

Virgin Atlantic Airways have participated in the drafting of the joint industry response from the AOC and IATA (LACC) and we support the views expressed in that response.

In addition, we would like to make the following comments.

It is important that the Airspace changes necessary for the introduction of IPA at LHR are able to progress through the CAP 1616 process, as smoothly as possible.
We await the details of the proposed airspace changes to better understand the implications of the IPA proposals.

We are surprised that there are no obvious specific references in the document to the planned (necessary?) use of RNP-AR PBN navigation standard for flying an IPA approach procedure. Airlines will need to be fully aware of all operational requirements in order to plan accordingly.

HAL are proposing an additional 25k movements p.a. equating to approx. 4 movements / hr, all day, every day (excluding the night period). What percentage of these additional movements are planned to come from the introduction of IPA?

To re-emphasise one of the main aspects of the AOC/IATA submission, the introduction of IPA at LHR, must bring with it the benefit to enable a greater level of resilience, both during normal and disrupted operations.

Many thanks.
Kind regards

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Royal Borough of Windsor & Maidenhead

Name: [redacted]
Email address [redacted]

Heathrow Airport
IPA Design Principles Consultation
airspace@heathrow.com

Tuesday 6th November 2018

Dear Sir / Madam
Re: Royal Borough of Windsor & Maidenhead Consultation Response
Heathrow – Stage 1A Define – IPA Design Principles

On behalf of the Royal Borough of Windsor & Maidenhead (RBWM), I would like to take the opportunity to formally submit representations to the Independent Parallel Approach (IPA) Design Principle consultation; ahead of Heathrow's submission to the Civil Aviation Authority (CAA) on its final set of design principles in December 2018.

This submission is made without prejudice and follows representations to the Department for Transport concerning its previous consultations on airspace design earlier this year and further to correspondence regarding our objection to expansion at Heathrow; sent to the Secretary of State for Transport and the Governments legal department, via our instructed legal representatives (Harrison Grant) in partnership with the London Boroughs of Hillingdon, Richmond, Wandsworth, Hammersmith & Fulham, the Mayor of London and Greenpeace.

With regard to the four noise-related principles that sit at the heart of this consultation, the Royal Borough would agree with their broad principles; however their interpretation requires careful underpinning, definition and further clarification:

a) minimising the number of people newly affected by noise
b) providing predictable respite from noise
c) minimising total number of people affected by noise
d) avoiding multiple flightpaths over the same community

Before the airport and CAA consider these principles, the consultation must firstly recognise that for all communities noise is not equal. This is due to the continuation of the Cranford agreement, which restricts current easterly departures to the southern runway and easterly arrivals to the north.

It must also be noted that the airport's decision to withdraw its former taxiway proposals and instead incorporate such proposals within its forthcoming Development Consent Order (DCO), has created the effect of unnecessarily prolonging noise burden to those communities, such as Windsor, under the northern runway approach on easterly operations.

This method of easterly operations has in effect created both unacceptable noise burdens over Windsor and disproportionate noise benefits at these times for communities, such as Old Windsor, under the southern runway approach. Due to the aforementioned impacts of 'Cranford Operations',

the introduction of IPA design principles appear unlikely to introduce noise benefits for those to the west of the airport, as put forward by the four principles. It is for this reason that any airspace consultation put forward by the airport should be coupled with a renewed process to undertake the taxiway works required to abandon Cranford Operations ahead of the DCO timescale recently put forward.

With regard to the impact of the four design-related principles themselves; it is considered that these need to be closer aligned to the aims set out within DEFRA's Noise Policy Statement for England 2010 (NPSE), namely:

i. avoid significant adverse impacts on health and quality of life;
ii. mitigate and minimise adverse impacts on health and quality of life; and
iii. where possible, contribute to the improvement of health and quality of life.

This alignment should be supported by a suite of new noise metrics, to allow for the complete impact on communities to be defined, most importantly pertaining to health, pupil attainment and residential disturbance. Such metrics would allow for these impacts to be better quantified and understood – particularly for those new people "affected", in the context of the principles being put forward.

Using Performance Based Navigation (PBN), the location of aircraft noise impact can be put forward with greater certainty, allowing (as within this consultation) choices to be made over what areas can be prioritised in terms of noise impact: rural over urban, parks over residential or indeed commercial over residential. Before such decisions can be made however, a greater understanding needs to be obtained in relation to the complete suite of health impacts such operations would bring - with many parks and rural areas offering sanctuary from noise impacts for example.

Ultimately, the Royal Borough believes more work is needed to understand noise impacts (most importantly on health) in this densely populated area. This needs to occur before any further decisions can be made with regard to airspace changes, such as those being consulted upon.

Yours sincerely

[redacted]

[redacted]

Royal Borough of Windsor & Maidenhead

Local Resident Comment

Dear Sirs

I have been forced to endure living under a concentrated flight path for the past 28 months. No one asked me what I felt about living under a aviation motorway, operational 19 hours a day at decibel levels rarely below 60dB from as early as 4.30am and continuing often until 11 or 11.30pm when Heathrow is on westerly operations. Before July 2016, living at the same address for 30 years as I still, do I was not living under a concentrated flight path. Heathrow has not yet deigned to explain what the change is related to. I can tell you with great feeling that the guidance you should take when considering implementation of Independent Parallel Approaches is this:

Those currently affected should not have to bear any increase in noise or Air Traffic Movements; in fact the current level should be shared widely i.e. a greater number of people affected but to a far lesser extent than the current situation where a smaller number of people is affected all the time. Heathrow is a national asset. The assumption is that we all benefit from its activities. We should, therefore, all take our share of the disbenefit. The Community Noise Group words it succinctly and worthily:

"Where there is a reduction in overall noise the benefit be distributed proportionately to those already most affected and where there is an increase in overall noise the disbenefnit be distributed proportionately to those already least affected."

Furthermore, no one should be overflown by aircraft destined for more than one airport.

Please will you
1. acknowledge receipt
2. contact me when further consultations are available
3. contact me with the outcomes of the consultation

Thank you

[redacted] and others affected by planes.

Thank you for your letter inviting comments on the above principles.

My own views are as follows.

Design principles. The order listed from a to d is in my view the correct listing.
Noise has to be the first and agree with the rest in order.

Noise design principles.
I believe that g should be first, min no of total people affected, ideally.
H re avoiding multiple flight paths. F respite prediction, E min. number of newly affected people.

Other design principles, j k as listed.

Apart from the first item, Design principles, the rest are obviously very subjective and views will often reflect how people are currently affected.

Living close to an airport means respite and prediction are very important, except in heavy delays or disruption.

I hope this is of some value and look forward to hearing the outcome in due course.

Kind Regards [redacted] but these views are my own.

[Response from Spelthorne – sent to Heathrow on 27 November 2018]

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

Should be received by the 9th November 2018 by emailing airspace@heathrow.com

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.

In principal Spelthorne Borough Council objects to an increase of 25,000 ATMs due to the intensification of impacts this will have on residents of Spelthorne.

Spelthorne Borough Council objects to being asked to make uninformed decisions; we are being asked to put forward our preferences on the design principles in the absence of information on the air quality and noise impacts on our residents. No information has been provided as to the potential increases in noise and air quality which will result from the introduction of IPA and the increase of 25,000 ATMs, as such the Council is unaware as to which will have the most significant and serious impact, and what those impacts will be, health or otherwise. Unless this is known, meaningful prioritisation is not possible.

Spelthorne Borough Council considers the impacts of noise and the impacts of aviation activities on air quality to be equally of the highest importance and priority, particularly when considering both have serious impacts on health and wellbeing. Both aspects have negative impacts on the health and quality of life for residents. It is therefore essential that impacts arising from the expansion of Heathrow including the introduction of IPA are proven to be fully mitigated as part of the approval process, with mitigation being implemented prior to the introduction of IPA.

With regards to maximising operational efficiency and minimising the impacts on other airspace users, our only concern with these aspects is that HAL must ensure that public safety is ensured at all times.

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 overflown 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.

For residents of Spelthorne who live close to the airport (i.e. residents in Stanwell Moor and Stanwell Village) none of the options (e to h) are particularly relevant. Also, HAL has not released information relating to the levels of noise impacts that will be caused by IPA, or how this affects respite periods. As such, it cannot been seen how any of the options would effectively minimise the additional noise to which residents would be exposed.

It is appreciated that if flightpaths have yet to be designed that it might be difficult to predict impacts. However, for locations close to the airport this information is available to HAL because the impacts are associated with aircraft take-off/landings and airfield activities, and are therefore not dependent on flightpaths, as such the impacts can be predicted. This being the case it is not unreasonable in the interests of openness and transparency for this information to be made available as part of the consultation process so that informed decisions can be made. This is particularly important when considering that the impacts of introducing IPA and the utilisation of performance based navigation systems could significantly intensify the noise disturbance of residents, through increased noise levels, increased frequency of disturbance with less respite, and continued night time disturbance.

When mitigation measures are considered HAL must take into account the impacts that the noise will have on all aspects of people lives (work, uninterrupted sleep, rest, play, quiet study) to ensure that resident's life potentials are not disadvantaged by the close proximity of Heathrow.

HAL must resolve the issues with problematic flightpaths such as the Compton Route, and ensure that new routes are not similarly problematic or make exiting routes worse.

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.

Spelthorne believes in the minimisation of noise across all environmental receptors. However it would prioritise the safeguarding of residential, sensitive receptor premises, and parks and open spaces, over commercial and industrial areas.