

Heathrow ACP Engagement in late 2020 Stage 2A_v4

RESPONSE FROM HSPG MEMBERS TO THE STAGE 2A ENGAGEMENT

All questions are optional.

1. Michael Thornton – Lead Advisor

2. What is the name of the organisation or community group you represent?

Heathrow Strategic Planning Group

The role of the HSPG member and list of member bodies are given on the website:

<http://www.heathrowstrategicplanninggroup.com/>

The formulation of this response to the engagement exercise at Stage 2A led by the Environment and Airspace Group (E&AG) – list and website

3. Postcode

HSPG Secretariat

c/o

LB Hounslow

Hounslow House

TW3 3EB

4. Did you attend one of Heathrow's Stage 2A engagement workshops?

Yes – members attended several of the sessions

5. Thinking about the information that Heathrow has provided and/or presented to you, do you agree or disagree with the following statement about Heathrow's development of flight path options?

"I am satisfied that Heathrow has taken into account the Design Principles when developing the comprehensive list of flight path options"

Response:

I am unsure

6. Please provide any feedback on your answer in the box below.

Explanation for response to Q5.

- The engagement is helpful in that it lays out the method of generating and range of possible design options
- But at this stage the HSPG are **unsure** as to how and the degree to which the Principles are taken into account or are leading the development or selections of design options.

- Moreover, the engagement does not address the operational policies that will be applied to the use of the design option flight paths selected, so the impact on the ground cannot be assessed. For example, the overall intent to reduce the worst impacts of aircraft operations and noise by utilising PBN, directional preference and use of 09L departures. How will compliance with accurate flying requirements be incentivised? Overall, we are not given a holistic view of the intent nor impacts.

At this stage it is not possible to ascertain:

- The cumulative impact of flight operations at any place
- The Principles are not expressed in absolute terms – all rely on a judgement to be made by the promoter.
- The relative priority to be given to each of the Principles is not given. On the face of it appears 1 and then 2 are ‘top’ but these are not locally driven agenda’s / principles, but simply reflect flight operation and national guidance.
- Principle 8 – contains no commitment to reduce the number or impact of night flights, this is an priority and health imperative.
- Principle 9 - only uses one metric which is to minimise the number of people *newly* overflowed, but what about those currently overflowed, potentially subject to very high levels of disturbance, that could experience even further increase in overflights and noise disturbance? This could apply to both areas under the constrained LTO phases and area further out overflowed by one of more arrival and departure routes. The Principles fail to address this.

Other points

The presentations could be more straightforwardly worded to: acknowledge that AMS is intended to increase the airspace capacity for the number of flights in any period (see pg 4) as well as do it better (avoiding delays, cleaner, quieter). This reflects the balanced approach – sharing the benefits of technology between communities and industry.

Setting out 650,000 notional tracks for 350 options – leads to a rather baffling and unrelatable output – at this stage this feels a bit ‘academic’, although we understand the need to follow CAP 1616 process.

We welcome that an additional engagement in Q1/2023 may be more meaningful to understanding how this moves things towards measured achievement of the Principles and the straightforwardly stated holistic goals set out in the Heathrow 2.0 Sustainability Plan. We draw attention to our previous response, that how the Principles relate to these goals should be better explained as an additional piece of information to the CAA submission requirements.

In terms of the Principles, we remain concerned that:

- These are too generic and not locally (Heathrow and environs) specific enough.
- Lack clear absolute or endpoint goals such as those expressed in H2.0 and the former Noise Envelope Design for the expansion plans. i.e. Overall aim to reduce impacts by utilising: PBN, for use of directional preference to better balance of Easterly and Westerly operations, the use of 09L departures to increase alternation and respite on Easterly operations, reduction of noise on the ground by use of electric tugs, one engine etc.
- The Principles do not address the aim of reducing noise for those currently most seriously impacted by noise and annoyance (and therefore for who health is most at risk). e.g. Slide

P17 – does not appear to count number for who noise is reduced – which is a fundamental objective of the Aviation Policy Framework and Noise Policy for England.

- Principle 8 – contains no commitment to reduce the number or impact of night flights, this is an priority and health imperative.
- Principle 9 - only uses one metric which is to minimise the number of people newly overflown, but what about those currently overflown, potentially subject to very high levels of disturbance, that could experience even further increase in overflights and noise disturbance? This could apply to both areas under the constrained LTO phases and area further out overflown by one of more arrival and departure routes. The Principles fail to address this.

Some issues for the Evaluation Process – HSPG welcome the further engagement in Q1/23. Issues to discuss include:

- Population number for who exposure to 70SEL is reduced – add further thresholds (in particular higher but also lower) so that impact of design choices are made are better understood
- Pop. overflown below 7000ft. Why not consider 4000ft too?
- Newly overflown (>x20 below 7000ft. Why not consider 4000ft too?
- It is stated that at busy periods it will be necessary to fly vectored (non-PBN paths). i.e. conventional Final approach of some 8-18nm and generally 10-16nm – vectored by ATC, plus vectored departure routes. Even with PBN, departures tracks merge to one path regardless of the Runway in use. So PBN does relatively little for those most impacted in the LTO phases
- Some of the busy peaks periods are at especially sensitive periods, where more attention should be given to relieving worst impacts. (e.g. 06.00 – 07.00 within statutory definition of Night, on a straight Final descent path.
- Could we focus in on the worst impacted and what done for them i.e. Steep Continuous Descent on the Final, alternate departure tracks and routes, runway alternation, and using the efficiency gains to dramatically reduce the number late-runners and early-runners operating at Night (23:00-07:00) or in the Night Quota Period. And then, the wider geography / groups where we have more options with alternate tracks and PBN, especially outside of peak periods. (Looking for ‘wins’ for each group)
- CISHA new structure includes Working Group directly looking at AQ (mostly caused by surface access). But where does the necessary further research on attitudes to both day and night noise, most meaningful respite, attitudes to levels of annoyance, sleep disturbance etc lay?

7. Do you have any feedback on Heathrow’s potential concepts for delivering respite? (pages 50-52)

What is most valued as ‘predictable’ and ‘meaningful respite’ by the impacted local communities needs to be fully understood – research required as well as technical work.

Be clearer that PBN enables more accurate flight tracks, bringing opportunity to use this to direct low flying aircraft more accurately to predictable **alternate** tracks within any route and between routes. However, this opportunity is entirely dependent on airlines compliance with this – if airlines

are 'lazy' or unfamiliar with LHR, they will likely fly the same 'default' / most direct track, and this will lead to unnecessary and avoidable over-concentration. More is explanation required as to how dispersal will be incentivised (push and pull factors)? This offers an example of why operational policy needs to be addressed alongside the flight track options to give a overall picture of the impact.

It is suggested that a spacing between flight paths and individual tracks within flightpaths will only be sought where it will deliver a difference of 9dB for the overflown – this may be 'too high a bar' (10dB represents a doubling / halving of number of flights). If 3dB is a doubling of noise energy – would 3 or even 6dB be a more useful / refined basis for separation of alternate paths?

In the coming years the fleets mix will increase with new aircraft types for short and long haul, some likely to offer very short eS/CTOL capability with steeper and/or shorter safe LTO requirements. How can this opportunity be used to reduce impacts on local communities at LHR? Could displaced landing thresholds be used for certain operations?

8. Do you have any feedback on Heathrow's potential approach to night flights? (page 53)

Overall we should be reducing the number of Night flights and sleep disturbance as a core principle. Principle 8 does not do this, only to "Contribute to minimising the negative impacts of night flights".

We welcome alternative routes and tracks and regime for the NQP and Night time, only using PBN (with low levels of traffic) to share the load. This should include exploration of use of IPA to offer respite to those under the long ILS Final approach?

Question Title

9. Do you have any feedback on Heathrow's proposed approach to noise efficient operations? (page 54)

Support - every little improvement combines and accumulates to reduce total noise energy, the 'quality' of noise, and annoyance. The suggested practices will all help those on LTO phases in particular. See above regarding displaced thresholds.

Question Title

10. Do you have any feedback on Heathrow's overall approach to developing flight path options?

Explanation for response to Q5.

- The engagement is helpful in that it lays out the method of generating and range of possible design options
- But at this stage the HSPG are **unsure** as to how and the degree to which the Principles are taken into account or are leading the development or selections of design options.
- Moreover, the engagement does not address the operational policies that will be applied to the use of the design option flight paths selected, so the impact on the ground cannot be assessed.

For example, the overall intent to reduce the worst impacts of aircraft operations and noise by utilising PBN, directional preference and use of 09L departures. How will compliance with accurate flying requirements be incentivised? Overall, we are not given a holistic view of the intent nor impacts.

At this stage:

- It is not possible to ascertain the cumulative impact of flight option and operations at any place
- The Principles are not expressed in absolute terms – all rely on a judgement to be made by the promoter.
- There is no relative priority given to each of the Principles – this should be made clear.
- Principle 8 – contains no commitment to reduce the number or impact of night flights

Fully informed assessment and decision on routes an operations should ultimately make clear:

- minima which will apply to all movements or types of movements;
- the wider envelopes or outcomes for impact which are the result of policy; and
- the distributional consequences i.e who and where bears the greatest impact.

The cumulative impact might be seen in the distributional analysis but it is a consequence of the first two. The current ‘engagement’ is silent on them.

Regarding the aim to “future proof our operations” – in relation to Principles 11 and 12.

Page 55 refers to the need to plan for the integration of future technologies into the ACP, specifically AAM and drones. HSPG believe an urgent and thorough approach to this is required, and a most suitable network then developed for the future (less than 5yers?) – rather than assume the existing helicopter routes are the most suitable.

The HSPG would wish to engage with HAL’s team and other stakeholders to scope work to develop understanding of the issues so that integration of future flight can be allowed for. This might extend to improved integration / co-ordination of Land Use and Airspace planning.

Over the next 10years and well within the period of the new ACP’s implementation, the likely form of AAM could:

- Include directly piloted eVTOL aircraft, seating perhaps 4 passengers over a relatively restricted range of some 50-100NM. At it’s lowest, these might be few in number and little more than a replacement for some helicopter services for blue light and high net worth individuals. At its highest, it could be a far more accessible / affordable ‘uber in the sky’ – a mobility service transforming transport concepts and removing vehicles from the road. Volumes could be huge with the current leading promoters including Skyports and Ferrovial. If ATM ‘slots’ at the airfield are not to be given over to such small craft, then in all likelihood, small ‘vertiports’ and ‘drone hubs’ will be required in well-connected and close proximity to the LHR hub airport.
- A distinct concept within AAM is Regional Air Mobility (RAM) – aircraft currently being developed are eS/CTOL capable which could transform inter-regional connectivity and operate as both conventional aircraft and from additional shorter runways / new

destinations, potentially cleaner and cheaper to operate than conventional domestic operations with hydrocarbon powered aircraft, with perhaps 80plus passengers or freight. Again, should these be destined LHR or some well located alternative location well connected to LHR 'hub' airport? How will this be integrated into airspace modernisation?

- The term Drones (non-military) generally refers to remotely piloted and autonomous electrically powered vehicles, operating both within and beyond line of sight, many with eVTOL or eSTOL capability. Initial services and delivery systems are short range in the sub-25kg class but, some a little larger and now under test include Volcopter's VoloDrone, currently designed to carry a 200kg payload and is now under actual test in Germany, and apparently 'simulated' test use in busy airspace including at LHR has been conducted? (A further drone recently announced to be under test promises a 600kg payload). Furthermore, the emerging Project Skyway points to an initial 164mile fully automated airspace route between places such as Cambridge and Oxford – claimed for operation from 2024? Will this soon extend to the LHR area too?
- The place for such operations at Heathrow and across West of London, if at all, will emerge in the timeframe of the ACP, and this should be addressed now. We understand that HAL are involved in several relevant Future Flight projects.

While 'good innovation' should be facilitated, a precautionary approach should be taken to the uncertain environmental impacts. This engagement (pg 55) indicates that AAM and Drones could operate along the lines of the existing Heathrow and City of London Helicopter Routes. However, the HSPG consider that the new impacts of a large number of AAM and Drones could be very different to the current relatively few helicopters, and the veracity of this approach and the impact of new types of flying machine and operation (and new 'qualities' of noise and other non-acoustic disturbance factors) on local communities annoyance, sleep disturbance and health must be properly evaluated.

It is relevant to note that the 1984 London Heliport Study found a perceived bias of 5dB against helicopters owing to their lack of social utility. What would this factor be for some forms of AAM?

ICAO identify that acoustic factors account for only some 33% of 'annoyance' caused by conventional aircraft operations; the nature of impact of 'quieter' and 'cleaner' electric fan aircraft requires bespoke study, and routes re-evaluated as well as landing sites considered. The issues for new forms of aircraft operation where 'social acceptance' is likely to be controversial are likely to be great regardless of relative quietness and greenness compared to conventional types. Without clear worthwhile 'Use Cases' being established, 'social acceptance' will be low for such new operations. A suitable network will then developed.

The HSPG would wish to engage with HAL's team and other stakeholders to scope work to develop understanding of the issues so that integration of future flight can be allowed for. The integration of land use, surface travel and airspace will need to be considered afresh.

NAP, Monitoring and Reporting , ACP

The last HACF received reports on all three of: Noise Action Plan, performance monitoring and Future ACP. These on different timescales, using different metrics, under different regimes at defra, DfT, HAL etc. It needs to be made clearer how the processes interact and inform one another and are coordinated? This was not clear at HACF.

Conventional aircraft flight path options

New types of power plant and fuel will lead to new types and qualities of noise, and different patterns of flight operation. Targeted work is needs to be undertaken to inform the ACP assessment process better.

The population an land uses beneath flight options needs to be well understood so that impacts can be assessed. For example, many green and urban open spaces are as sensitive and valued as AONB, although only the AONB designation is noted in the ACP. HSPG is willing to assist the targeting and collection of relevant data from LAs and others.

Michael Thornton

For

HSPG members

16/12/22