

Zac Goldsmith MP  
401 Norman Shaw South  
House of Commons  
Houses of Parliament  
London  
SW1A 0AA

Ref: RP/rt

8 August 2014

<http://www.heathrowappg.com/submit-evidence/>

Dear Zac

**Re: Hillingdon's response to All Party Parliamentary Group on Heathrow and the Wider Economy**

We would like to thank you for formally setting up this new Parliamentary Group and for allowing us the opportunity to provide input into the Inquiry.

We have set out our responses to each of your questions below:

**A. THE RECENT AND FUTURE TRENDS IN AIR TRAFFIC NOISE LEVELS AT HEATHROW TO 2025**

- 1. By what margin - in terms of the number of people affected - does the present noise from Heathrow's existing flight paths exceed the World Health Organisation's community noise guideline values in the day/evening period (0700-2300) and in the night period (2300-0700)? How does this compare with other airports within the UK and the EU?***

The issue of achieving the World Health Organisation (WHO) guidelines appears to be ignored when it comes to aspects such as aviation noise. This is in direct contrast with air quality legislation where the WHO guidelines for pollutants are transposed into legislation

as set limits which must be met within set timescales. The thrust behind the air quality legislation is the protection of vulnerable people.

Communities do not appear to be given the same level of protection when it comes to noise. Instead the Government have simply chosen to set a benchmark labelled as onset of community annoyance. This benchmark was set based upon a social survey carried out in 1982. More discussion of its relevance is given in Question 2. It is unclear why there is this discrepancy. Given the substantial numbers of people adversely impacted by noise around Heathrow Airport this issue deserves immediate attention.

The substantial detrimental impact of Heathrow airport becomes clear when comparisons are made with other airports. This was demonstrated in the Airports Commission Discussion Paper 05, Aviation Noise. Using the metric  $55L_{den}$  contour for comparison with European airports, Heathrow impacts on the most population, i.e. 725,500 people whereas Frankfurt is second highest at 238,000. In the UK using the metric  $57L_{aeq,16h}$  contour Heathrow impacts on a population of 258,550 with Manchester second highest at 35,200.

By any measure, it is clear Heathrow has the largest adverse noise impact on people. Given the associated links between noise annoyance and sleep disturbance, hypertension and cardiovascular risks, cognitive impairment in children etc, it is considered that more attention should be paid to ensuring the metric used to evaluate the impacts is based upon clear established evidence.

The WHO has guidelines which include a low limit for night noise to reduce health impacts. By contrast, the controls of night noise in the UK, is by a limit on the number of aircraft movements in the night period and a noise quota based on the noise of the individual aircraft. Although such controls in this sensitive time period are welcome, given the associated detrimental health impacts of sleep disturbance, a move towards a ban on night flights is a measure that would gain community support.

**2. *Does the Environmental Noise Directive enable the UK to meet fully the criticisms that were made in the Heathrow Terminal Five Public Inquiry Report that the 57 decibel noise contour was by itself an inadequate measure for assessing the full impact of air traffic noise?***

The T5 Inquiry Inspector criticised the continued use of the  $57 LA_{eq,16}$  contour, a metric based upon a social study in the early 1980s (the ANIS study) when the airport was only handling 221,513 movements a year (LAHT5 evidence para 21.3.14). The Government undertook a piece of work following the conclusion of the T5 Inquiry aimed at reviewing the community annoyance metric. This was the ANASE study. The study reported in 2007 and

the conclusions indicated that the proportion of people highly annoyed had increased and that people were becoming more sensitive to the increasing numbers of aircraft movements. On the eve of publication, a peer review criticism of the study was published, but the authors were not asked to respond to the criticism and the whole report and its findings was shelved and never re-visited.

In our response to the Aviation Policy Framework consultation, we submitted a technical paper which highlighted our concerns on this issue.

This paper examined the differing aircraft annoyance studies included in the European Environment Agency (EEA) 2010 report. It was intended to help policymakers and competent authorities to understand and fulfil the requirements of the Environmental Noise Directive, and the UK's ANASE 2007 study. The paper concluded that both the EEA report and the ANASE study showed that there had been a significant shift in terms of peoples' attitudes to aircraft noise and that this now caused annoyance at lower levels than it did previously, as found in the older ANIS study.

We were very disappointed that the Government did not take the opportunity to put this right when publishing the Aviation Policy Framework, which still supports the use of the  $57L_{aeq}$  contour to evaluate community annoyance.

The Airports Commission has similarly failed to get to grips with the key issue that it is unacceptable to continue with a metric that suggests peoples' attitudes remain the same some 30 years later and with a doubling of flight numbers. To this end, as part of the 2M Group, we paid for the ANASE study team to respond to the criticism of their original work. We have submitted this to the Airports Commission and can make it available for the Inquiry.

In terms of ensuring all noise impacts are adequately quantified, it should be noted that the use of either the  $L_{eq}$  metric or the  $L_{den}$  as adopted by the EEA still suffer from a number of deficiencies. As both are based upon average conditions, they cannot account for runway alternation. They do not indicate the maximum noise of individual events and therefore cannot account for the number of times activities, e.g. school lessons, are interrupted. Both also fail to give adequate weight to the number of aircraft movements. However, whilst these issues remain to be resolved, what is clear is that aircraft noise now causes annoyance at lower levels than previously found 30 years ago and that this issue must be addressed immediately. As an interim measure the  $55L_{den}$  adopted by the EU may represent a more realistic measure of community annoyance.

If the Parliamentary Group finds our evidence persuasive, we would welcome its support to urge the Government to make its decisions on the extent of community impacts based on sound science and accounting for all the differing noise impacts. This is essential if the impacts are to be properly mitigated. There should also be an aim to correlate future noise metrics with the WHO guidelines for the protection of health of the most vulnerable in society.

**3. What are the prospects for significantly less noisy aircraft at Heathrow over the next ten years and are the prospects in any way dependent on the development of the proposed third runway? To what extent is there a conflict between the optimum reduction of aircraft noise and carbon emissions?**

Whilst we are not experts in this field, we do have concerns over the use of over-optimistic assumptions for future aircraft in terms of predicted noise and emissions reductions. We have examined the CAA annual noise contours for Heathrow Airport, as provided by the Richmond Heathrow Campaign. What these indicate is a significant (approximately 50%) reduction in the noise contour area from 1991 to around 2003, as the noisiest of aircraft such as Concorde were retired. Our concerns arise in relation to the annual contours from the last 10 years which do not show any significant annual reductions. Given that the CAA report "Managing Aviation Noise" cautions that the introduction of new aircraft types is a "slow and typically cyclical process that can be fraught with delays and issues", it would be helpful to seek independent advice as to the likely extent of any significant change in this trend.

We have noted in the recent HAL noise submission that the fleet assumptions they have used to form the basis of their environmental assessments are "slightly more optimistic than the DfT forecasts for 2030 and 2040" (page 15).

The consequence of using over-optimistic assumptions for future aircraft efficiency in terms of noise and emissions reductions, is that they are then translated into future predictions of community impacts. If these hypothetical projections do not actually come to pass, this will manifest in increased negative environmental and social impacts upon the local communities. We believe that if aircraft fleet assumptions were subjected to an independent peer review process, this would go some way to gaining confidence in what the future noise climate is actually likely to be in terms of community experience. It would be helpful if the Parliamentary Group could investigate this.

With regard to the future priorities between designing for noise reduction or for emission reduction we would refer the Parliamentary Group to the CAA Managing Aviation Noise report. This suggests that concerns over climate change and local air quality could

increase the likelihood of trading off designing for emission reductions against improved noise performance. (page 30). More evidence is needed to clarify this and to ensure that this is appropriately factored into the future fleet assumptions.

**4. Are there additional operational procedures for noise reduction and respite at Heathrow that could be introduced within the next ten years; or are any such noise improvements being held back for the development of a third runway?**

The CAA Managing Aviation Noise report suggests that issues such as a later deployment of landing gear and reduced landing flap setting (page 38, 39) could result in reductions in the noise experienced by the overflowed local communities. These two measures could be investigated for early implementation because they do not appear to be linked to a need for an increase in runway capacity.

The use of steeper glideslopes is said to be possible both on the existing runways as well as any new runway by 2030 (HAL noise submission, para 4.3.2). Again this does not appear to be linked to a need for an increase in runway capacity.

The use of displaced runway thresholds for noise reduction is associated with the provision of a new runway (HAL noise submission, para 4.2.2). Existing runways are said to "*require significant modifications*", such as new taxiways, to enable significant displacement of the thresholds. It is presumed that this will only occur as a noise reduction measure if the airport is granted expansion.

The HAL noise submission assumes the use of displaced runway thresholds and steeper glide-slopes in their future noise modelling work (3.2 glideslopes in 2030, increasing to 3.5 in 2040). However the CAA Managing Noise report raises concerns about these issues: "*a displaced threshold whilst providing noise benefits, could have potential impacts on capacity, operational resilience, air quality*" (page 41)

*"the additional benefits of 3.2 degree approaches are relatively small" and "even 3.2 degrees could interfere with the ability to use low power/low drag and reduced landing flap techniques"* (page 43)

If the measures that have formed the basis of future noise modelling work do not deliver the reductions as assumed or have knock on detrimental impacts on other issues such as local air quality, it will be the local communities who bear the brunt of the ensuing detrimental impacts. It would be helpful if the Parliamentary Group could investigate the actual deliverability of noise reduction measures included in the HAL submission.

## **B. IMPACT OF THE PROPOSED THIRD RUNWAY ON AIR TRAFFIC NOISE LEVELS AFTER 2025**

### **5. Over what areas will the arrival and departure flight paths for the proposed third runway be routed, and which of those areas are not currently overflowed by Heathrow air traffic, either at all or only occasionally?**

The flight paths shown within the HAL noise submission are unfortunately in insufficient detail to enable us to properly identify our potentially impacted communities. In regards to the question as to whether it will create new areas exposed to aircraft noise, we can only assume that the north-west runway option will require new flight paths and hence expose totally new areas and populations to aviation noise. The HAL north-west runway submission includes a proposal for night flights runway rotation which if implemented would then also subject new communities to night noise.

We are aware of the recent briefing publication from HACAN (Third Runway's Flight Paths). This reports that the communities in line with the new third runway will be experiencing planes overhead every 90 seconds between 6am and 11pm with a break of only just over 4 hours.

We would welcome any clarity the Parliamentary Group is able to obtain in terms of the new flight paths and ask that this is published as soon as possible. It would be useful in terms of local authorities being able to understand the potential impacts on our communities if clearer information were available on which communities will be subjected to the suggested new operating modes and also the actual noise impacts that communities will be exposed to.

### **6. Would the flight paths for the third runway cause any alteration to the present routing of the flight paths for the existing runways; and if so, to what extent?**

We are not experts on this issue. We would suggest that the Parliamentary Group invites NATS to provide clarity on this issue.

The HAL submission indicates that NATS is confident that a three runway Heathrow will not adversely affect any other airports (HAL noise submission, Appendix C, page C4). RAF Northolt is in close proximity to Heathrow. As this airport is also in our borough, we would be grateful if the Parliamentary Group could invite NATS to any future inquiry sessions so that any potential impact on RAF Northolt operations could be identified.

**7. How would the proposed segregated mode respite periods operate with three runways, compared with the existing runway alternation arrangements (between 0700-2300 and 2300-0700)?**

The HACAN briefing paper indicates that the current respite periods experienced by communities with the existing two runway airport would be substantially reduced. For some communities this could be a reduction from a current 8 hours to just over 4 hours.

The HAL submission suggests that the impact of night flights is reduced by rotating the use of all three runways, with each approach used 1 night in 6 thereby providing respite for 5 nights out of 6 (para 4.3.3). However it does need to be recognised that will then include communities who will be exposed to night noise for the first time.

We are not clear what the health impacts would be of such measures. As an example, what are the health impacts associated with only being sleep disturbed 1 night in 6 against the impacts of losing respite periods or by being newly exposed to aircraft noise?

We do not believe the HAL submission for a third runway meets the Aviation Policy Framework objective "to limit and where possible reduce the number of people in the UK significantly affected by aircraft noise". (para 3.12)

As the local authority which will be impacted by any future expansion options at Heathrow, we are concerned about the current lack of detail and clarity as to what the communities will actually experience. This detail is necessary to inform any future mitigation strategies.

**8. Would the third runway enable Heathrow to operate without flights in the night period (2300-0700)?**

It does not appear that it is a lack of runway capacity which drives the need for night flights. These would occur regardless of expansion, as stated in the HAL noise submission "*night flights would continue but there would be no more than today*"(Table 5.1, page 36).

The Aviation Policy Framework indicates the reason for night flights is one of economic need (para 3.34). This is confirmed in the Economic Value of Night Flights at Heathrow, Oxford Economics, 2011 which gives figures of £158 million in value added (GDP) in 2011. This report also states the timing of the flights in the night period is important as this is the key window for flights arriving from South East Asia. To lose these would result in a loss of connectivity for the UK (Exec Summary, page 2).

There is experience that can be gleaned from other European hubs airports such as Frankfurt, where night flights have been banned in spite of threats that airlines would move their business. The threatened moves have not materialised in reality.

**9. How quickly would Heathrow with the proposed third runway reach its stated capacity of 740 000 aircraft movements (ATMs) per year? In view of the resilience difficulties at Heathrow with 480 000 ATMs (a problem not identified at the Terminal Five Public Inquiry), how much resilience would there be with 740 000 ATMs?**

The HAL submission assessments have been based upon an early phase operation case, considered to be 2030 with 570k movements serving 103mpa; and mature operations considered to be 2040 with 740k movements serving 130mppa. (page 3).

It is not clear if this is the actual theoretical operating capacity of the three runway airport or whether operational resilience has been built into this figure.

The technical assessment (Technical Assessment Ref 62) carried out by the Airports Commission has indicated an opening year of 2026 with the airport reaching 80% capacity by 2030 and 100% by 2050. Again it is not clear whether operational resilience has been built into this figure.

If operational resilience is not built in, then we would see the same mistakes repeated as are faced today by an airport operating at capacity. The consequences for the local communities include encroaching into respite periods when the airport attempts to recover operationally from events such as adverse weather conditions. This must be avoided in any future scenarios and the airport movements capped to ensure that this occurs.

It would be helpful to clarify what levels of operational resilience have been built into the HAL and the Airports Commission assessments. Any associated reductions in capacity need to be featured in the economic appraisal of the option.

**10. Would the proposed third runway hasten or delay the date by which the air traffic noise levels at Heathrow would not exceed the World Health Organization's guideline values on community noise?**

Given that there will be new flight paths and hence communities newly exposed to aircraft noise, it can be assumed that the overall impact of the proposed third runway will worsen the impact of aviation noise on local populations and hence it can be inferred that this would delay any opportunity to meet the WHO guidelines for community noise.



In our opinion the third runway at Heathrow is also in conflict with the Aviation Policy Framework objective and the National Policy Statement for Noise which seeks "to avoid significant adverse impacts on health and quality of life".

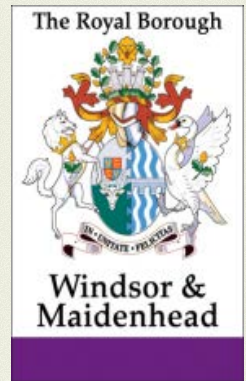
Once again we would like to thank you for the opportunity to submit evidence to this Inquiry. We would be happy to discuss our comments further if you feel that would be helpful. Should you have any queries on this, please do contact me.

Yours sincerely

A handwritten signature in black ink, reading "Ray Puddifoot". The signature is written in a cursive style with a long horizontal flourish at the bottom.

Cllr Ray Puddifoot MBE  
**Leader of the Council**

Please reply to: Cllr George Bathurst,  
Chairman of the Aviation Forum  
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Date: 15 August 2014



Zac Goldsmith MP  
MP for Richmond Park & North Kingston  
Chairman All Party Parliamentary Group on  
Heathrow and the Wider Economy  
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Dear Mr Goldsmith,

**Re: Response to the All Party Parliamentary Group (APPG) on Heathrow**

Following the inaugural meeting of the APPG on 10 June 2014 whereby a number of themes were highlighted by the group, I write to confirm these are supported by the Royal Borough as key considerations to be made regarding Heathrow including:

- overflights (number, flight paths and respite)
- road congestion (and associated air quality)
- new monopoly, transfer passengers, rebalancing regional economies and
- the political deliverability of future schemes.

The Royal Borough was also keen to see this discussion expanded through the APPG's recent initial enquiry into 'Heathrow's new flight paths & noise impact' which reflect key concerns of its residents.

The Royal Borough also concurs with the letter dated 8 August 2014 to the APPG from the London Borough of Hillingdon. Our further comments are included at the Annex to this letter.

Yours Sincerely

George Bathurst  
Cabinet Member for Corporate Services  
Chairman of the Aviation Forum

## Annex

**1. By what margin - in terms of the number of people affected - does the present noise from Heathrow's existing flight paths exceed the World Health Organisation's community noise guideline values in the day/evening period (0700-2300) and in the night period (2300-0700)? How does this compare with other airports within the UK and the EU?**

RBWM support the assertions put forward by the London Borough of Hillingdon (LBH), such that the noise guidance put forward by the World Health Organisation (WHO) should be seen as an absolute target, rather than a rough benchmark, in order to protect the vast number of residents affected by the noise from aircraft both to the east and particularly to the west of the airport (where background noise can be significantly lower).

**2. Does the Environmental Noise Directive enable the UK to meet fully the criticisms that were made in the Heathrow Terminal Five Public Inquiry Report that the 57 decibel noise contour was by itself an inadequate measure for assessing the full impact of air traffic noise?**

RBWM strongly support the factors raised by LBH; advocating the need for a revised study into aircraft noise annoyance (such as the ANASE study). This study should therefore underpin any conclusions made as to what constitutes as acceptable & applicable noise metric.

Furthermore, the manner in which the aircraft operates needs to be taken into consideration when assessing which metric to use; such that it may be considered inappropriate to apply a 16hr  $L_{eq}$  or  $L_{den}$  average noise level to a community that is being subjected to a period of 'intense' noise (due to alternation), thus failing to reflect the difference between quiet and intense periods of noise. As such, as an interim measure, RBWM would support the 55Lden proposal put forward by LBH as a more realistic measure of annoyance whilst reiterating the need for a further study as above.

**3. What are the prospects for significantly less noisy aircraft at Heathrow over the next ten years and are the prospects in any way dependent on the development of the proposed third runway? To what extent is there a conflict between the optimum reduction of aircraft noise and carbon emissions?**

RBWM would like to echo the concerns raised by LBH and the caution put forward by the Civil Aviation Authority (CAA) in their Managing Aviation Noise (CAP 1165) document – highlighting that “there has been little improvement since 2000”.

It is clear therefore that the claims being made by LHR, with regard to aviation noise projections, need to be independently verified – so that clearer conclusions can be made as to the anticipated noise climate ten years from now and into the future.

**4. Are there additional operational procedures for noise reduction and respite at Heathrow that could be introduced within the next ten years; or are any such noise improvements being held back for the development of a third runway?**

RBWM support the assertions put forward by LBH, but would advocate that one of the greatest operational procedures that could be implemented would be the abandonment of the Cranford Agreement at the earliest opportunity. This is an historic agreement currently prevents easterly departures from the northern runway; in effect, preventing respite alternation from landing aircraft (noisier than arrivals) on the northern runway approach – with all easterly departures having to take off from the southern runway.

**5. Over what areas will the arrival and departure flight paths for the proposed third runway be routed, and which of those areas are not currently overflowed by Heathrow air traffic, either at all or only occasionally?**

RBWM support the assertions put forward by LBH and would stress that clearer guidance needs to be put forward by HAL, so that the potential impact upon local communities affected by any 3<sup>rd</sup> runway is as clear as possible.

From the limited information available, it is apparent that aircraft approaching from the west on the proposed third runway will be approximately 300ft lower than those approaching on the existing runway, thus having a greater impact.

**6. Would the flight paths for the third runway cause any alteration to the present routing of the flight paths for the existing runways; and if so, to what extent?**

It is recommended that the Parliamentary Group consults with the National Air Traffic Services (NATS) on this matter as the relevant experts.

**7. How would the proposed segregated mode respite periods operate with three runways, compared with the existing runway alternation arrangements (between 0700-2300 and 2300-0700)?**

RBWM support the assertions put forward by LBH and would highlight that Heathrow's proposed new northern runway would be located at the minimal spacing accepted by international safety standards of 1035 metres north of the current one, which apart from reducing safety factors of one of the world's most congested airports to the very minimum, will concentrate noise over a narrower swathe of land than would have otherwise have been expected.

This impact would be particularly harmful for an educational community such as Windsor Castle, Eton College and other historical buildings around the Royal Borough, which would be exacerbated by the huge problem of how double glazing and sound attenuated artificial ventilation, as well as other noise mitigation measures, could be introduced into such historical halls and other buildings.

It is also worth noting that both new runway options - either the new NW runway or the double-length existing northern runway, would add up to 54% additional flights over the Windsor area. This exacerbation of activity would create an entirely new grossly intensified set of circumstances comprising closer frequency, lower altitude (due to a shift in either of the new runways to much closer to Windsor), and hence very much noisier than today's unacceptable situation.

**8. *Would the third runway enable Heathrow to operate without flights in the night period (2300-0700)?***

RBWM support the assertions put forward by LBH and continue to advocate the complete abolition of night flights (between 23:30 and 06:00) due to the enormous noise impact these movements have upon local residents when background noise levels are lower.

**9. *How quickly would Heathrow with the proposed third runway reach its stated capacity of 740 000 aircraft movements (ATMs) per year? In view of the resilience difficulties at Heathrow with 480 000 ATMs (a problem not identified at the Terminal Five Public Inquiry), how much resilience would there be with 740 000 ATMs?***

RBWM fully support the assertions put forward by LBH.

**10. *Would the proposed third runway hasten or delay the date by which the air traffic noise levels at Heathrow would not exceed the World Health Organization's guideline values on community noise?***

RBWM fully support the assertions put forward by LBH.