

**AIRSPACE AND FUTURE OPERATIONS  
&  
MAKING BETTER USE OF OUR EXISTING RUNWAYS**

**Heathrow Consultation  
Response From Richmond Heathrow Campaign (RHC)  
4 March 2019**

**INTRODUCTION**

This is the written response of the Richmond Heathrow Campaign (RHC) to the Heathrow Airport Limited (Heathrow) consultation contained in two documents titled **Airspace and Future Operations** and **Making Better Use of Our Existing Runways** plus supporting documents.

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.

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. We believe the evidence produced by the Airports Commission's Final Report 2015 and by the government in the Airports National Policy Statement June 2019 (ANPS) supports this position, even though Heathrow's Northwest runway (NWR) expansion option was recommended in both cases. Annex 1 summarises key DfT evidence from the ANPS, which we believe demolishes the case for a 3<sup>rd</sup> runway and disproves the promotion of Heathrow's expansion in the Forward and Section 1 of the consultation.

The questions for the most part seek binary choice - yes/no. In the absence of full information and because Heathrow has the discretion to interpret the binary responses in a variety of ways, we have responded in the boxes requesting reasons and comments following each question.

Our response tends to focus on the Kew and Richmond area but we realise there are wider societal issues in the sharing of noise. In the absence of details on aircraft fleet, flight paths, traffic volumes, flight patterns, population exposed and noise impact, et alia, our response has to be without prejudice and subject to change.

We would welcome the opportunity of exploring the issues further with Heathrow and the government.

Peter Willan, Chair, Richmond Heathrow Campaign,  
4 March 2019  
[www.richmondheathrowcampaign.org](http://www.richmondheathrowcampaign.org)

Annex 1: Heathrow expansion - Impact on the UK as an Aviation Hub  
Annex 2: Night Flying Restrictions at Heathrow

## QUESTIONS 1A, 1B AND 1C (SECTION 2 OF THE CONSULTATION) - MANAGING NOISE FOR AN EXPANDED HEATHROW

### Noise Objective proposed by Heathrow

*To limit and, where possible, reduce the effects of noise on health and quality of life and deliver regular breaks from scheduled flights for our communities during the day and night. We need to do this whilst making sure the measures we put in place are proportionate and cost effective.*

- 1a. Do you support our proposals for a noise objective? Yes, No, Don't Know?  
1b. Please provide any comments you have on our proposals for a noise objective?

### **RHC Response:**

RHC supports a reduction in noise to reduce health impacts but not Heathrow's objective without qualification.

- 1b. Please provide any comments you have on our proposals for a noise objective?

### **RHC Response:**

**1. National noise objective.** We are unclear as to why Heathrow seeks to promote a noise objective that differs from the objective set out in the ANPS June 2018, paragraph 5.68:

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

Heathrow's local noise objective is similar to the national aviation noise objective as far as the impact on health and quality of life is concerned but this is no reason to give unqualified support to either.

**2. Ambiguity and interpretation of Heathrow's proposed noise objective:**

We support 'reducing the effects of noise on health and quality of life', but -

- a. '**Where possible**' is ambiguous. What evidence and criteria are required to decide whether reduction is possible?
- b. '**To limit**' is ambiguous. Is the limit relative to some point in time or a trend and can it result in a noise increase even if only for a period of time? Heathrow suggests the 2013 noise level be a limit but how this is defined and if and when noise will be reduced is pure speculation.

It is essential the 2013 levels of impact are defined. For example, are they based on Total noise impact across Heathrow's communities and hence concentration or on the average impact per person or household and hence dispersion? Concentration over a few people would reduce the Total noise impact but would not be fair and equitable and an objective we and others would wholly oppose. The Consultation's technical document 'Developing Our Approach to Noise Management' paragraph 2.1.6 applies the 54 LAeq 16hr metric as the comparator, which in our view is too high.

RHC is opposed to a 3<sup>rd</sup> runway for a variety of reasons, as set out on RHC's website. We seek a reduction in noise from a two runway airport and merely limiting noise in a three runway airport to 2013 levels is insufficient and unacceptable.

- c. **'Regular breaks'** is open to wide interpretation and in the case of the Richmond area, the current 8 hour respite each day will be reduced to 4 hours. We generally support 'regular breaks from scheduled flights during the day and night'. Respite provides relief from noise and is a form of flight and noise dispersion, which we support. But the benefit of respite for one community is usually offset by a cost to another community and also the two may not be equal and opposite in value. Therefore, our support only applies when the allocation of noise by way of respite is fairly shared across Heathrow's communities and fairness requires an additional noise objective, which is discussed below under point 3.
- d. **'Proportionate and cost effective'** could give preference to growth and aviation profits over environmental cost and ignores the "polluter should pay" principle. The issue is to what extent should the rate of reduction in noise be lessened by sharing benefits with the aviation industry and economic growth. The Noise Policy Statement for England's vision is to "*Promote good health and a good quality of life through the effective management of noise within the context of government policy on sustainable development.*" What is meant by 'sustainable development' in Heathrow's case?

We believe that in the UK aviation context it may be possible to balance economic benefit with environmental cost by sharing out the environmental cost across the UK. This we understand is a key topic of the current consultation on the Green Paper on Aviation Strategy, December 2018/19. We have consistently made the case that growth should be spread across the UK and not concentrated at Heathrow.

The current noise levels around Heathrow are excessive and we seek a reduction towards World Health Organisation (WHO) Guideline levels. Any increase in noise is not acceptable. Heathrow is by far the noisiest airport in Europe and has by far the highest noise impact on people's health. Under these circumstances, we believe Heathrow's communities should not be expected to accept a slower rate of noise reduction so as to allow for wider commercial and economic benefit from expansion.

Not only is the concentration of airport capacity in the southeast at the disadvantage of the regions but it also stifles competition.

- 3. **Additional Local Noise Objective**, RHC on a number of occasions, including those at HCNF meetings during the last year, has proposed an additional local noise objective:

*Where there is a reduction in overall noise the benefits 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.*

The RHC objective results in dispersion of noise and minimization of the average noise per individual. In the absence of such an objective Heathrow seemingly has convinced the Civil Aviation Authority (CAA) that additional noise from expansion should be focussed on those already experiencing noise while minimizing the noise over those not already effected. RHC

regards this as unfair and inequitable and we continue to challenge Heathrow, the CAA and government on the issue of concentration versus dispersion of flight paths and noise. In our view those already exposed to noise should not be additionally exposed by Heathrow's expansion. The consequences of our proposed objective are:

- The impact on those already exposed to noise should not be increased by additional flights or loss of respite, and
- Additional noise should be distributed over areas not already affected.

For completeness, we add that the consequences in a two runway scenario, where the introduction of less noisy aircraft over time reduces the noise impact, are that airspace modernisation would not involve re-allocating existing noise levels across Heathrow's communities.

This is not the time and place to expand on the monetisation of noise impact on health and quality of life (e.g. using the government's WebTAG tool), but in our view it is important that WebTAG minimises the average cost per individual or household rather than minimising the total societal cost. The former tends to result in noise dispersion, whereas the latter tends to result in concentration.

Last August Heathrow submitted its proposed airspace design principles to the CAA as part of Stage 1 on the airspace design change under the CAA's CAP 1616 process for CAA approval. Heathrow has rejected RHC's proposed new local noise objective and in doing so proposed a set of airspace design principles to which we and other communities substantially disagree. Heathrow's airspace design principles give priority to concentrating noise over those already affected by aircraft noise and they minimise noise over those newly affected.

Admittedly, Heathrow's airspace design principles seek to disperse the noise over those already affected, mainly by respite but as discussed in our response to Section 3 of the consultation, flight path separation is likely to be so constrained that respite is only partial. As it stands, we believe the airspace design principles are unfair and irrational and that Heathrow's arguments for its chosen design principles are groundless, we believe the airspace change process has been a serious failure on this occasion.

Heathrow's support of concentrated noise is to its advantage because the number of people potentially opposing expansion are reduced and because the lack of airspace is less of a limiting factor on expansion.

The Development Consent Order (DCO) process, involving the planning inspectorate, runs in parallel with the CAA's airspace change process, and we see no reason why the DCO process cannot include an additional local noise objective, such as we propose, while still recognising the national noise objectives incorporated into the ANPS approved by parliament in June 2018.

### **Monitoring Progress Against the Proposed Noise Objective**

Little is offered as a proposal. We believe it is essential that Heathrow's noise objective is used to prepare medium and long term plans for targeted reductions in noise; the government's Green Paper on Aviation Strategy may provide some assistance. The plans need to take account of, inter alia, Heathrow's aircraft fleet, trends in reductions in noise from engines and airframes, the increasing

size and mass of aircraft, volumes of traffic, longer routes, population density and growth and operational improvements. It is essential that the plans and outturns are used to monitor progress against proposed noise objectives.

These plans need to include a decision framework that includes the several stakeholders including the communities, Heathrow and airlines - an approach we have formerly proposed to Heathrow at HCNF meetings.

### **Managing Noise At An Expanded Heathrow**

1c. Please provide any other comments or suggestions you have on our proposed approach to developing a package of noise measures for an expanded Heathrow?

#### **RHC Response:**

##### **1. Noise Action Plans**

Noise Policy stems in part from EU Directive 2002/49/EC and in turn the Environmental Noise (England) Regulations 2006 and these are central to 5 year Noise Action Plans required by Defra from Heathrow and other airports. We appreciate the efforts that Heathrow expends in compiling its Noise Action Plans. But we are not convinced that noise is being reduced fast enough and urge Heathrow and Defra to be more ambitious in reducing noise. We urge the Government to apply policy that is more effective in reducing noise. It is important that the EU noise objectives, as applied in the UK, should not be watered down on the occasion of the UK leaving the EU.

##### **2. Balanced Approach to management of aviation noise**

Heathrow supports the international approach to management of aviation noise called the ICAO Balanced Approach. This requires priority be given to:

- reducing noise at source (i.e. the aircraft),
- land use planning whereby local authorities avoid noise sensitive developments being exposed to flights paths near airports, and
- operational mitigation (e.g. steeper descents and ascents).

Failing these priorities, then restrictions can be considered in proportion to the harm caused (e.g. a night noise ban). In RHC's opinion the use of the Balanced Approach has been ineffective.

The reduction of noise at source is critical to improved noise climate but there is uncertainty with the rate of technological change to aircraft and the rate of replacement of Heathrow's aircraft fleet. In the past, Heathrow assumed a much faster rate of replacement than did the Airports Commission and the current assumptions are uncertain. Notwithstanding the recent announcement on cessation of A380 production, the average number of passengers per flight is forecast by Heathrow to increase from around 170 today to nearly 200 passengers by 2050. Larger aircraft and associated mass and longer route distances and hence additional fuel on take-off will increase the noise at source - a factor that tends to be ignored and places doubt on claims for reducing noise at source.

Land use planning in a densely populated London with substantial population growth is ineffective.

The evidence historically suggests that the reduction in noise from individual improved operations, such as steeper descents, is relatively small. We welcome all operational improvements because in aggregate they can be of benefit but overall we find the aggregate impact has been and is likely to

remain small. We realise modernisation of airspace is intended to provide benefits but we believe any benefits will be more than offset by the increased number of flights.

Therefore, restrictions such as a night flight ban and a cap on the number of flights and passengers are essential if there is to be a reduction in noise towards WHO Guideline values.

Currently Heathrow has a planning restriction of a maximum 480,000 flights a year, which we believe should not be lifted. Annex 1 and the RHC website explains that the evidence produced for the Airports Commission and for the ANPS does not support expansion at Heathrow. We are opposed to any increase, including the 25,000 extra flights being considered before a 3<sup>rd</sup> runway begins operations. The ANPS requires an additional 260,000 flights a year, which would result in 740,000 flights a year from a three runway Heathrow.

However, from time to time the use is expressed at 'at least' 740,000 flights a year. A Jacobs report for the Airports Commission in 2015 and a York Aviation report for the DFT's ANPS in 2018 estimated a potential for 900,000 flights a year. The difference is achieved by mixed mode where planes depart and arrive using the same runway. The two existing runways each serve 240,000 flights a year but only one runway is operated at any one time and the runways are alternated with 16 hours of respite shared between the two. A three runway Heathrow will logically require one runway always operating in mixed mode at any point in time while one other runways operates in segregated mode and the other provides respite, as at present.

In theory, a three runway Heathrow has runway capacity of 960,000 flights a year (double the number today assuming the 480,000 is also a practical limit) but in practice mixed mode results in a slower flow rate for safety and taxiing reasons. For safety reasons, the middle of three runways can only operate in segregated mode so the current southern runway and the new 3<sup>rd</sup> runway have to provide for the extra mixed mode flights. The southern runway and new third runway end up with 50% of a 16 hour day in mixed mode, 25% in segregated mode and 25% respite. This could amount to 300,000 flights a year or a 25% increase compared to today in the case of the southern runway. The total Heathrow flights under these circumstances could amount to 840,000 flights a year (300k+240K+300k) or a 75% increase compared to today. This excludes any increase in the busy 6am to 7am hour, which Heathrow is also promoting.

We believe the Balanced Approach should operate to restrict any increase in total Heathrow flights to 740,000 or less a year and only one runway in mixed mode at any point in time.

Should the NWR expansion not proceed for any reason we believe the throughput of the ongoing two runway Heathrow should not be increased above 480,000 flights a year. In other words the introduction of mixed mode and an increase in capacity should not be assumed in the event of no 3<sup>rd</sup> runway.

### **3. Noise Envelopes**

These are not the airspace design envelopes included in the consultation. We are told that in due course Heathrow will develop noise envelopes that have a suite of noise constraints and that they will include constraints imposed by the ANPS approved by parliament in June 2018 in support of Heathrow's expansion. They are mentioned in the consultation but without more detail there is not much that can be said, other than that effectively managed noise controls are essential. It is not clear how Heathrow intend to consult the public on its proposed noise envelopes before they are submitted

as part of the DCO process. Not to consult we believe would be a significant failure in the engagement process.

We do believe it is essential to include **WHO Guidelines** in the controls and to base controls on the impacts rather than just the numbers of people affected. The WHO recognises environmental noise as the second largest environmental health risk in Western Europe behind air quality and the WHO has established Noise Guidelines (most recent update being in 2018). We believe the WHO Guidelines need to be adopted as targets, notwithstanding the higher thresholds estimated by the government's SoNA noise study. The targets need to be legally binding with use restricted when targets are missed.

The use and choice of **Noise Metrics** for control are important, although sometimes it seems too much emphasis is spent on trying to choose a metric and establish precision when in practice several metrics lead to similar conclusions. It is important to focus on flight path impacts and not just broad contours of noise. Also, we believe attention should be given to all people exposed so that those fewer in number but severely impacted are not ignored. RHC tends to use four metric - single event, hourly, daily and annual. The hourly reflects the volume of traffic and the daily metric reflects respite. Easterly and westerly and landings and take-offs are also useful segments of analysis and control.

We believe controls on noise should be developed to better match the legal approach to air quality. The health and quality of life impacts are sizable in both cases. Not only should noise levels be compliant with legally binding standards established to protect communities but a condition of any development should be a reduction in noise impact as required by planning legislation.

**The notion that noise envelopes will be sufficient control and a planning cap on Heathrow's use should not be necessary, we believe would be a serious mistake. We seek a cap on the overall number of flights and number of passengers as well as noise envelopes applied to flight paths.**

#### **4. Managing Heathrow's Growth within Environmental Limits**

We have referred to this topic when discussing noise objectives. The consultation refers to commitments Heathrow has previously proposed on aircraft noise, air quality, carbon and surface access but it fails to detail these meaningfully, which is a significant omission when communities are being asked to comment on Airspace Design and noise control. Not only are the noise restrictions important in themselves but the trade-off between noise, air quality and carbon are material. We are especially concerned that the altitude limit (i.e. 7,000 feet) up to which noise control is given priority is only applicable in design of airspace and not in its operation. This means airlines can ignore giving noise the priority up to 7,000 feet, which we find unacceptable.

As we have pointed out, the noise objectives should refer to environmental cost and benefit of growth in number of flights. We are deeply concerned that Defra, Dft and others tasked with examining the recent WHO update, will not report their findings until at least 2021, which is after the DCO decision. The comparison of benefits from economic growth with the environmental cost applying WHO Guidelines has not been made we understand and needs urgent attention.

#### **5. Day and Night noise objectives and management**

RHC contends that the noise objectives and noise management should apply to the night period

(11:00 pm to 7am). However, the criteria and values change. Noise impacts communities in different ways at night compared to day and with different health outcomes and there are different volumes of air traffic and different economics in play. We respond to the night noise in Section 3.3. We seek a ban on scheduled and unscheduled flights between 11pm and 7am.

## **6. Development and Operations**

We believe the noise objectives should be applied when designing airspace and its use and during subsequent Heathrow operations.

## **QUESTIONS 2A, 2B AND 2C (SECTION 3.1) - RESPITE THROUGH RUNWAY AND AIRSPACE ALTERNATION**

*With three runways we plan to revise our approach to runway alternation to make sure that all communities get respite from noise. We are also proposing to provide respite for communities further away from the airport by using airspace alternation. Respite = predictable relief from aircraft noise for a period of time.*

2a. Would you prefer to have longer periods of respite less frequently (all day on some days but no relief on other days) or a shorter period of respite (e.g. for 4-5 hours) every day?

### **RHC Response:**

RHC seeks respite every day but not shorter respite than at present as a consequence, i.e. there should be 8 hours of uninterrupted respite for residents in the Kew and Richmond area as at present and not reduced to 4 hours as proposed for the southern runway approach. With the limited information provided it is impossible to assess the noise impact of airspace alternation and the impact of respite.

2b. Please tell us the reasons for your preference

### **RHC Response:**

**1. Existing exposure in Kew and Richmond area to aircraft noise.** Highest exposure is directly under the approaches to the southern and northern runways. Many people in the area hear noise from both runway approaches on westerly arrivals (i.e. towards the west over around 70% of the year). At an arrivals rate of 41 aircraft an hour, noise on the ground directly underneath averages over the hour around 67 dBA with an Lmax of around 85 dBA set against background noise levels of around 45 dBA. These levels are excessive and far higher than World Health Organisation recommended Guidelines.

Residents are also exposed to night noise, which we respond to in question 4. Residents in the Kew and Richmond area are exposed to noise from both runways (the two runways are about 0.9 miles apart (1,414 metres)) and therefore relief from aircraft noise during respite is only partial.

Also, residents to the north of the area are exposed on easterlies (around 30% of the time) to noise from departing aircraft on the Buzzard and Brookmans Park routes and residents in the south to departures on the Detling route.

The rate of noise reduction over the years has been slow.

Runway alternation provides respite for 8 of the 16 hours of arrivals but this may only be partial when noise is heard from multiple flight paths. Currently, there is no runway alternation on easterlies, as explained by the consultation.

**2. Runway alternation with a 3<sup>rd</sup> runway.** The consultation explains four feasible operating modes using runway alternation. A three runway airport logically has to always operate one

runway in mixed mode (i.e. arrivals and departures at the same time) but for safety reasons the middle runway (current northern runway) cannot be operated in mixed mode.

Modes. Using letters M for mixed mode, L for landing and D for departure and applying them in the order of 3<sup>rd</sup>, middle and southern runway, then a typical mode sequence might be MDL, MLD, LDM, DLM. In this example, assuming the sequence runs over 16 hours, people under the middle runway will experience the following 4 hourly sequence - respite, arrivals, respite, arrivals. Those under the southern runway will experience – arrivals, respite, and 8 hours of mixed mode arrivals. Mixed mode may be at a slower flow rate. The 3<sup>rd</sup> runway sequence would be similar to the southern runway but in a different order - in this example: 8 hours mixed mode, 4 hr arrivals and then 4 hr respite.

Mode Sequence. The consultation also seeks a response on the sequence of modes. RHC suggests 8 hour continuous respite is preferable to respite hours being interrupted by 4 or 8 hours of flights, which is a particular issue for the middle runway. Currently, the two mode change at 3pm is reversed every week. We suggest the four mode cycle be varied every week so communities do not always have the same mode at particular times of the day.

The consultation provides insufficient information on health and quality of life to enable objective response to the mode patterns except in a general way and with some red lines. Respite is essential and certainty in meeting noise pattern expectations is important as are people's life styles in relation to the noise patterns. The impact will vary from person to person making it difficult to be fair and equitable across Heathrow's communities.

- 3. Respite.** The consultation focuses on runway alternation but does refer to airspace alternation, where blocks of airspace are shut-on and -off to aircraft and to flight path alternation within these blocks. Any type of alternation can provide respite but often this is only partial due to multiple flight paths. Respite is a form of noise dispersion and respite for one community means noise for another; sometimes the effect is not equal and opposite for different communities. The consultation provides incomplete evidence on the health impact of respite and its variations in timing and length and integration within the patterns of noise.

Heathrow are promoting the expansion of Heathrow by claiming that designing respite into the system will avoid additional noise for communities. However, as we have explained in our response to Section 2 on objectives, we oppose increasing the noise exposure of those already affected. This means that the cost of respite should not be borne by those already affected. Also, respite that already benefits communities should not be reduced.

RHC is very concerned that its members in the Richmond and Kew area, who are exposed to noise from the southern runway, will lose 4 out of the current 8 hours a day of respite. This is wholly unacceptable, even taking into account that there will be 8 hours of mixed mode with a slightly lower flow rate than in segregated mode.

As mentioned previously, the inability to adequately separate flight paths means that respite is often partial and communities are disturbed from multiple flight paths.

Respite is especially important outdoors e.g. in gardens and in public open spaces such as the Royal Botanic Gardens, Kew and Richmond Park, about which we comment in Section 4.2

The question is whether to cycle the four modes daily or over say four days. RHC recommends a single day cycle. We believe that three 16 hour days of continuous aircraft noise and just one day of respite would be more intolerable than cycling over a single 16 hour day. Residents exposed to the middle runway are unlikely to want to change from the current daily cycle. Four day cycles confuse the pattern of flights and relief. A four day cycle is more at risk of being disrupted by a shift between easterlies and westerlies and the forward pattern becoming increasingly uncertain.

2c. Please provide any other comments or suggestions you have on runway and airspace alternation?

**RHC Response:**

**1. Volume of traffic and runway allocation.** There are issues of the total volume of traffic and how it is shared between the three runways. This is illustrated in Figures 1, 2 and 3. We have already commented in Section 2 on Heathrow’s potential capacity being much higher than the 740,000 flights a year considered by parliament.

Figure 1 illustrates the current two runway modal operation totalling 480,000 flights a year. For simplicity we have assumed 100% westerlies and have not excluded the 5,840 night flights or approximately 24,000 flights in the early morning shoulder period, 6am to 7am. The flow rates are based on a maximum 41.1 flights per hour in segregated mode for arrivals and similarly for departures (around 82 flights an hour for the airport as a whole). In practice departure rates can be higher. The 41.1 flights is calculated by dividing the annual traffic of 480,000 by 385 days and 16 hours a day and halving for each of arrivals and departures. Figure 1 reconciles with ACL’s scheduling of slots.

**Figure 1**

Seg mode	hrly rate ATM/hr	max	actual	actual	Two Runway Heathrow													
					Hourly Flights				Daily Flights				Annual Flights					
		41.1	100.0%	41.1														
Mode 1	Arrivals		R	41.1														
	Departures	41.1	R															
Mode 2	Arrivals		R	41.1														
	Departures	R		41.1														
Arrivals																		
Departures																		
Total flights																		

Figure 2 illustrates the four modes of operation for a three runway Heathrow. In this example a maximum flow rate of 41.1 flights per hour is assumed for both segregated and mixed mode so that the total Heathrow flights per year equals 960,000, which is a doubling of the two runway traffic.

It can be seen from Figure 2 that volume of traffic on the middle runway is the same as in the two runway case, i.e. 240,000 flights a year. But the flow rate for the southern runway increases by 50% to 360,000 flight a year and the respite on arrivals is reduced to 4 hours. The 3<sup>rd</sup> runway matches the southern runway’s traffic volume.

**Figure 2**

		max	actual	actual	Three Runway Heathrow									
Seg mode hrly rate ATM/hr		41.1	100.0%	41.1	Max. 100% Segregated and Mixed Mode Flow Rates									
Mixed mode hrly rate ATM/hr			100%	41.1										
		Hourly Flights				Daily Flights				Annual Flights				
		Southern	Middle	3rd	Total	Southern	Middle	3rd	Total	Southern	Middle	3rd	Total	
MLD	Arrivals	R	41.1	41.1	82.2	R	164.4	164.4	328.8	R	60,000	60,000	120,000	
	Departures	41.1	R	41.1	82.2	164.4	R	164.4	328.8	60,000	R	60,000	120,000	
MDL	Arrivals	41.1	R	41.1	82.2	164.4	R	164.4	328.8	60,000	R	60,000	120,000	
	Departures	R	41.1	41.1	82.2	R	164.4	164.4	328.8	R	60,000	60,000	120,000	
LDM	Arrivals	41.1	R	41.1	82.2	164.4	R	164.4	328.8	60,000	R	60,000	120,000	
	Departures	41.1	41.1	R	82.2	164.4	164.4	R	328.8	60,000	60,000	R	120,000	
DLM	Arrivals	41.1	41.1	R	82.2	164.4	164.4	R	328.8	60,000	60,000	R	120,000	
	Departures	41.1	R	41.1	82.2	164.4	R	164.4	328.8	60,000	R	60,000	120,000	
Arrivals						493.2	328.8	493.2	1315.1	180,000	120,000	180,000	480,000	
Departures						493.2	328.8	493.2	1315.1	180,000	120,000	180,000	480,000	
Total flights						986.3	657.5	986.3	2630.1	360,000	240,000	360,000	960,000	

In practice, the flow rate in mixed mode is reduced from the segregated flow rate and in Figure 3 we assume the rate is 80% by way of example. We have also assumed 740,000 flights a year as proposed by the ANPS. To achieve this traffic volume, the flow rate in segregated mode has been reduced to 35.2 flights an hour or 85.6% of the maximum rate. This is just one of many permutations of flow rates in segregated and mixed mode. The mixed mode flow rate has been reduced to 80% of the segregated rate of 35.2 flights an hour.

**Figure 3**

		max	actual	actual	Three Runway Heathrow									
Seg mode hrly rate ATM/hr		41.1	85.6%	35.2	85% of Segregated capacity flow rate and mixed mode 85% of Segregated flow rate									
Mixed mode hrly rate ATM/hr			80%	28.2										
Modes over 16hr day		Hourly Flights				Daily Flights				Annual Flights				
		Southern	Middle	3rd	Total	Southern	Middle	3rd	Total	Southern	Middle	3rd	Total	
MLD 4 hours	Arrivals	R	35.2	28.2	63.4	R	140.8	112.6	253.4	R	51,389	41,111	92,500	
	Departures	35.2	R	28.2	63.4	140.8	R	112.6	253.4	51,389	R	41,111	92,500	
MDL 4 hours	Arrivals	35.2	R	28.2	63.4	140.8	R	112.6	253.4	51,389	R	41,111	92,500	
	Departures	R	35.2	28.2	63.4	R	140.8	112.6	253.4	R	51,389	41,111	92,500	
LDM 4 hours	Arrivals	28.2	R	35.2	63.4	112.6	R	140.8	253.4	41,111	R	51,389	92,500	
	Departures	28.2	35.2	R	63.4	112.6	140.8	R	253.4	41,111	51,389	R	92,500	
DLM 4 hours	Arrivals	28.2	35.2	R	63.4	112.6	140.8	R	253.4	41,111	51,389	R	92,500	
	Departures	28.2	R	35.2	63.4	112.6	R	140.8	253.4	41,111	R	51,389	92,500	
Arrivals						366.1	281.6	366.1	1013.7	133,611	102,778	133,611	370,000	
Departures						366.1	281.6	366.1	1013.7	133,611	102,778	133,611	370,000	
Total flights						732.1	563.2	732.1	2027.4	267,222	205,556	267,222	740,000	

The consultation provided none of this detail but it is important because it demonstrates Heathrow's capacity could be much greater than is generally recognised - somewhere between 740,000 and 960,000. But also the allocation of use between the three runways can vary considerably. A range of segregated and mixed mode flow rates can and should be considered. The ones we have used are for illustration only. RHC seeks no increase in use of the southern or middle runway (i.e. both should remain at 240,000 flights a year). In Figure 3 some of the throughput of the middle runway is transferred to the southern and new 3<sup>rd</sup> runway, an outturn we believe should be avoided. Any increase in total throughput above 720,000 will need to be allocated to the southern runway and 3<sup>rd</sup> runway, since in segregated mode the throughput of the middle runway is limited by its capacity of 240,000 flights a year.

This analysis is not intended to be conclusive but an attempt to highlight issues of capacity and allocation between runways with further consultation required. It is essential the noise impacts are evaluated.

## 2. Airspace Alternation

The consultation explains switching -on an -off the design envelopes so as to provide respite, especially further away from the airport. To date the arriving aircraft cover large swathes of airspace between the holding stacks and the start of the final ILS approach. On departures the flight paths from separate runways merge within a couple of miles from the airport. Respite under these circumstances some distance from the airport is understandably minimal. So the introduction of airspace alternation is broadly welcomed. But we advance this opinion without prejudice because we need to see the noise impact from the flight paths themselves, which information has not been provided by the consultation. If concentration were the outcome, then communities would probably not welcome airspace alternation.

2c. Please provide any other comments or suggestions you have on runway and airspace alternation?

### **RHC Response:**

#### **Making better Use of our Two Existing Runways - Pre-3rd Runway IPA and PBN**

Heathrow proposes to operate two streams of arrivals simultaneously between 2022 and first flight from a 3rd runway in 2026. To do so, requires a new procedure called Independent Parallel Approaches (IPA) that curves in flights onto the final approach between 4 to 8 nautical miles from Heathrow - from the south onto the southern runway and from the north onto the northern runway. Kew and Richmond are around 6.5 nautical miles from Heathrow. It also requires Performance Based Navigation (PBN), which very accurately concentrates flights paths and noise.

1. Where there is no increase in permitted capacity but the introduction of Independent Parallel Approaches (IPA), Performance Based Navigation (PBN) will allow aircraft to fly accurately planned paths vertically and horizontally. Several such flight paths could be alternated, which the consultation refers to as airspace alternation. IPA means re-allocation of noise over Kew and Richmond.
2. An additional 25,000 flights a year (+5%) are being proposed by Heathrow, which is said to be feasible with the introduction of IPA from 2022 to 2026. The consultation sees these arrivals and departures as being mostly between 6am and 7am.

The current runway alternation would continue meaning that IPA would also alternate over each 8 hour period.

There is no evidence presented in the consultation that supports IPA's claimed benefits. We wholly oppose IPA and any pre-3rd runway expansion and the negative noise impact, especially in the early morning shoulder period, 6am to 7am.

## QUESTIONS 3A, 3B, 3C, 3D AND 3E (SECTION 3.2) - DIRECTIONAL PREFERENCE

*With expansion, we want to use directional preference to manage noise. We have been testing whether this means we should change the 'westerly preference' that is in place at Heathrow during the day today. Our current thinking is that we should adopt a managed preference which can adapt to circumstances over time.*

3a. Should we prefer westerly operations during the day and easterly operations at night to reduce the total number of people affected by noise? Yes, No, Don't Know?

### **RHC Response:**

RHC supports westerly preference during the day between 7am and 11pm and easterly preference at night but without prejudice since our view may change when Heathrow proposes flight paths and noise impacts.

3b. Please tell us the reasons for your answer?

### **RHC Response:**

Aircraft need to land and take-off into the wind and winds tend to be from the southwest. Westerly preference requires aircraft to approach from the east, even when the wind is to the west, providing the wind speed is below 5 knots, which occurs around 20% of the time. The westerly preference was established to reduce the number of noisier take-offs over densely populated areas to the east of the airport. We believe take-offs are still relatively noisy compared to landings and London's population density is growing and that therefore the westerly preference should continue.

Our reasoning is based on reducing the health impact and not just reducing the population numbers exposed to noise as proposed by Heathrow, contrary to its own proposed noise objective, which is based on health impact rather than just population numbers. There is no health impact assessment or even population numbers in the consultation, but we believe our conclusion is valid based on the existing information available. At the moment there is no directional preference between 11pm and 6am. Currently, the shoulder period between 6am and 7am is treated as daytime for the purposes of directional preference; we reserve comment because we do not know what traffic volumes are being planned for this period.

3c. Should we sometimes intervene to change the direction of arriving and departing aircraft to provide relief from prolonged periods of operating in one direction - even if that means slightly increasing the number of people affected by noise? Yes, No, Don't Know?

### **RHC Response:**

RHC does not support Heathrow intervention to change the direction of arriving and departing aircraft. We do not support Heathrow's proposal for managed preference.

3d. Please tell us the reasons for your answer?

### **RHC Response:**

Heathrow should not attempt to manage the effects of trends in wind direction over the long term or over the medium term of one year by use of directional preference. Over the short term, intervention could affect communities across London in unexpected ways and would lead to many

complaints and disputes as to fairness.

3e. Please provide any other comments or suggestions you have on directional preference?

**RHC Response:**

At the moment there is no alternation on easterlies and understandably communities to the west of the airport are upset at all day exposure to noise. With a 3rd runway, alternation will be introduced to the benefit generally of communities west of Heathrow as a result of greater dispersion of noise. The pressure to replace westerly preference may recede.

RHC's suggested response is without prejudice and in the context of a vacuum of information about flight paths. At this stage we cannot give a firm response to the question on directional preference.

We continue to support rotation at night between easterly and westerly directions and the spread between three runways should bring benefits from greater dispersion of noise. However, the outcome of a ban on night flights and the consequences could change our view.

## QUESTIONS 4A, 4B, 4C, 5A AND 5B (SECTION 3.3) - NIGHT FLIGHTS

*With today's two runway operation, Heathrow's early morning arrivals land on one runway between 0430-0600. For an expanded Heathrow with three runways, we are looking at opportunities to schedule these early morning arrivals later, to provide a longer time without flights at night. We still need to maintain the same number of pre-6am arrivals as we currently have, but our aim is to start our operation later than today. This will mean we need to narrow the window within which these flights land.*

4a. To help inform our consideration of the options, we want to know whether you would prefer us to:

1. Option 1 - Use one runway for scheduled arrivals from 5.30am (runway time 5.15am)
2. Option 2 - Use two runways for scheduled arrivals from 5.45am (runway time 5.30am)
3. I don't know?

### **RHC Response:**

*RHC suggests using 'runway times' in any response rather than 'scheduled times' at terminal stands because the former are 15 minutes nearer the time communities experience overflight.*

RHC seeks an 8 hour ban on all flights between 11pm and 7am. The Airports Commission recommended a 6½ hour ban from 11:30pm to 6am and the ANPS proposed a 6½ hour ban with the timing to be determined in the period 11pm and 6pm. Were the ban to be for 6½ hours, we would propose it should run from 11:30pm to 6am and that Heathrow should commit to extending the ban from 11pm to 7am at a future date or dates.

We oppose runway start times of 5:15am and 5:30am for the two options proposed by Heathrow and therefore both options are unacceptable.

4b. Please tell us the reasons for your preference?

### **RHC Response:**

Night flight noise affects a large number of people - over 400,000 people around Heathrow and only a 10% reduction is forecast over the next 35 years and this is 50 years after restrictions were introduced.

There is no end in sight for those suffering from the noise. Government proposals for restrictions over the last 10 years have had little or no impact on night time noise and the current proposals will have little impact.

There is minimal loss of benefit from shifting night flights to the daytime after 7am and Heathrow's daytime capacity is sufficient to absorb all Night Flights from 11pm to 7am. The Balanced Approach fails to reduce noise to acceptable levels and the ban between 11pm and 7am is a proportionate restriction in the context of health impacts. The WHO recommends 8 hours sleep. We discuss these reasons below.

We believe a night time ban is justified irrespective of a 3<sup>rd</sup> runway and we object to Heathrow proposing a ban as a trade-off with a 3<sup>rd</sup> runway, not least because the net benefit of expansion (we

believe it is a net cost) is over-valued as a result.

RHC examined substantive evidence on all Heathrow's night flights in its 2017 response to the DfT on the current night flight regime (see RHC's website - Night Flights). Comparing the details of flights and originating airports in Figures 7 and 8 of the current consultation with our more detailed analysis in 2017, based on 2011 and 2013 flights, demonstrates similar patterns of flights although the number of flights from individual airports has changed and some airports have been replaced.

Our response, as in 2017, was based on the following:

- A. Minimal loss from shifting Heathrow's night flights to the daytime,
- B. Heathrow's daytime capacity is sufficient to absorb All Night Flights from 23:00 to 07:00
- C. Failure of the Balanced Approach to sufficiently reduce Heathrow's night noise,
- D. Environmental Imperative for a Night time Ban at Heathrow from 23:00 to 07:00.

#### **A. Minimal Loss to the UK from Shifting Heathrow's Night Flights to the daytime**

The evidence demonstrates that shifting to the day around 16 flights arriving at Heathrow between 23:30 and 06:00 and around 25 departures and 40 arrivals between 06:00 and 07:00 can be achieved with minimal net commercial or economic cost. We believe the Airports Commission supports this assessment, at least for the period 23:00 to 06:00. There should be no loss in connectivity as the ban re-times the flights to the day and in most cases there are already flights from the displaced night time airports. Examination of the 13 arrivals in the night quota period 11:30pm to 6am in 2011 and 2013 raises the following questions:

1. What is so special about the 13 routes that they require night flight arrivals in the 65 minutes between 04:50 and 05:55 whereas 179 routes are without night flights?
2. What makes the 13 routes operate up to 4 flights a night while 179 routes are served by no flights at night?
3. 11 of the 13 routes operated direct flights to Heathrow but Melbourne's night flight are via Singapore. One of Sydney's night flights are via Singapore and the other two are via Hong Kong. Of the 13 night time routes, 6 are in the Far East, 4 in Africa, 2 in America and 1 in the Near East.
  - a. To arrive in the morning after 07:00 at Heathrow broadly requires local time departures after midnight in the Far East and Africa. So are curfews at departure airports the reason for arrivals before 7am at Heathrow. Surely this is no good reason to impact the health of nearly half a million people in London. Curfews apart, Heathrow is served by 30 airports in the far east so why do only 6 need access to Heathrow pre 6am?
  - b. Night time arrivals from America are not due to curfews, given the time difference, so why do Boston and Chicago require pre-6am arrivals when other dense routes such as New York and Los Angeles require none.
4. 12 of the 13 routes have additional flights after 6am most days of the week (Melbourne is the exception). So why do not 12 overseas airports rely on alternative flights in the daytime?

5. Why have some routes ceased and been replaced since 2013 when they were claimed to be so necessary?

**In answer to the above questions, there does not seem to be any reason why specific services should operate at night other than that the Department for Transport allows them to.**

The Airports Commission appears to come to the same conclusion with the following comments in its Final Report 2015:

1. *'A review of existing schedules at Heathrow suggests that there would be no insurmountable demand or supply-side barriers to providing alternative overnight services to arrive after 6:00am:*
2. *Of 13 arrival routes in the core night period with a scheduled capacity of more than 10,000 seats in 2014, 11 were also served by an arrival between 6:00am and 8:00am.*
3. *Of the two remaining routes (Lagos and Kuala Lumpur) there is currently no operating curfew at the originating airport that would prevent a later departure and arrival.*
4. *The majority of passengers on arrivals in the core night period are origin and destination passengers for whom a slightly later arrival would be unlikely to be a cause not to travel. Travelling via a rival European hub would remain a longer and less attractive option.*
5. *Transfer passengers (those arriving at Heathrow to transfer to another flight) make up on average around 37% of passengers on core night arrivals. For some of these passengers there may be a quicker option via an alternative hub airport, but this will only be relevant to the most time-sensitive customers within a relatively small transfer window for whom arrival at Heathrow before 6:00am is necessary to achieve their final arrival time.'*

We understand that at the Terminal Five Public Inquiry, British Airways claimed that it could eliminate all but one of its flights in the night quota period due to larger terminal and aircraft capacity but this promise has not been delivered.

Contrary to the claims in the consultation, Heathrow has little value as a hub airport. The Airports Commission says international-to-international transfers provide little economic value to the UK. They do not leave the airport. Moreover, unlike passengers terminating in the UK they are exempt from Air Passenger Duty. The idea that Heathrow is a hub airport that needs transfers to make routes viable is fiction. Evidence from the CAA and DfT demonstrates that in 2011 and 2016, for example, only 2% of transfers were on Heathrow's thin long-haul routes and only 7 out of 44 thin long haul routes had any international-to-international transfers. For the most part the transfers are on popular routes. RHC's extensive appraisal of transfers is contained in our response to the DfT on the draft ANPS and can be found on RHC's website. The imminent cessation of production of the largest commercial aircraft, the A380, is indicative of the point-to-point network winning over the hub concept - an outcome predicted by Boeing. The notion that early arrivals are needed to support international-to-international transfer and in turn thin routes is fiction.

It is claimed that belly-hold freight is economically important and we do not doubt this claim. But we do doubt the claim that freight has to arrive at Heathrow before 6am. All night flights other than

from Melbourne have alternative flights in the day and 'just-in-time' processes can be rescheduled to day time arrivals. The Airports Commission did not raise freight as a reason not to ban night flights.

We conclude there is minimal loss to the UK from shifting Heathrow's night flights to the day time.

### **B. Heathrow's daytime capacity is sufficient to absorb All Night Flights from 23:00 to 07:00**

Lack of day and evening capacity into which to shift the night flights is often stated as preventing there being a night time ban.

Heathrow is currently limited to 5,800 flights in the night quota period – 3,250 in the summer season and 2,550 in the winter season. This equates to around 16 arrival flights a night. In the evening shoulder period (23:00 to 23:30) there are no flights scheduled. In the morning shoulder period (06:00-07:00) there are around 40 arrivals and 25 departures scheduled (we do not have the latest exact figures). On average there are approximately 2 unscheduled late running flights a night after 23:30.

We have previously examined Heathrow's daily runway scheduling limits for movements per hour for each winter season from 2000-01 to 2011-12 and each summer season from 2001 to 2012 . The largest scheduling limit in any hour was 90 movements in the winter season and 88 in the summer season. Averaging 90 movements over 16 hours (07:00-23:00) and 365 days a year results in a theoretical scheduled capacity of 526,000 movements. Deducting the legal limit of 480,000 air transport movements and 6,000 non-ATMs a year leaves contingency capacity of 40,000 per year (110 flights a day) or 7.6% of the theoretical scheduled capacity.

The maximum of 90 scheduled movements an hour already makes allowance for unscheduled contingencies across the day and therefore underestimates the peak capacity in any single hour. Furthermore, Heathrow has been working over recent years along with the South East Task Force (SETF) to reduce delays and improve punctuality and resilience. We understand that improvements are being made successfully and that the calculation of contingency capacity referred to above is now an under-estimate.

In September 2016 Heathrow said it would like to unlock the 480,000 ATM legal limit and add 25,000 flights a year before a 3rd runway is opened. It said that 'Overall flight numbers will rise by 25,000 a year with four million more passengers. The airport says new technology will allow this without causing more delays for existing flights.' This plan has since been developed as is commented on in the current consultation.

On the basis of our analysis above and the fact that Heathrow itself has published indicative plans to handle another 25,000 flights a year in the day time without increasing delays, we submit that Heathrow has the capacity to enable movements that are currently scheduled between 23:00-07:00 (16 in the night quota period and 65 in the early morning shoulder period) to be re-scheduled between 07:00-23:00. This amounts to 30,000 flights a year which exceeds the spare capacity Heathrow has admitted by 5,000 flights but not the capacity we believe is available and more the case in the event of a 3<sup>rd</sup> runway.

Our proposed ban on movements (23:00-07:00) would therefore mean that Heathrow would still be able to handle its legal maximum of 480,000 movements per year, albeit only in the day and evening

periods (07:00-23:00); that the airlines holding slots between 23:00-07:00 would retain those slots, albeit re-distributed between 07:00 and 23:00; and that passengers who currently use scheduled services between 23:00 and 07:00 would be able to access Heathrow services from 07:00 to 23:00, along with other passengers.

While we believe a night flight ban is justified even without a 3<sup>rd</sup> runway, it surely is the case that a relatively small proportion of the additional capacity could be used to shift night flight demand to capacity in the day time after 7am.

**C. Failure of the Balanced Approach to sufficiently reduce Heathrow’s night noise.**

We do not believe the results of the ICAO Balanced Approach and available restrictions are sufficient to reduce the already excessively high level of aircraft night time noise and in a timely manner. Our conclusion is that there is a strong case for the only remaining remedy, which is a ban on night flights. In our Section 2 response we provide further comment on the failure of the Balanced Approach to adequately reduce the harm on people’s health thus leaving a ban as the only option.

**D. Environmental Imperative for a Night time Ban at Heathrow from 23:00 to 07:00**

In our opinion the environmental harm from night flights is sufficiently great that even were there to be some commercial or economic benefit from night flights, which we have argued there is not, a ban on night flights would still be justified. Our overall assessment on night flight noise, as supported by the evidence in this response, is that the negative community impact is far too high with damaging consequences to health, productivity and children’s learning. Furthermore, the noise impact, as experienced by each individual and in relation to the WHO Guidelines, has and will continue to reduce too slowly.

Despite a succession of government restrictions on night flights at Heathrow over the last fifty years, more people around Heathrow than around any other European Union airport are exposed to levels of aircraft noise at night that exceed the WHO’s Guideline limit values on community noise. Other airports such as Frankfurt have a ban on night flights. In 2013 the number of people exposed to aircraft noise above 48 decibels (LAeq 8 hour) in the night period (23:00-07:00) was 11,600 people at Gatwick compared to 421,300 people at Heathrow. We argue that the government should take the WHO Guidelines much more seriously and not only introduce a night time ban but reduce the noise in the shoulder periods.

We very much support the concept of a period of uninterrupted silence as being of key importance to residents sleeping under flight paths. The first flight to break that silence and wake people up has a high social cost. We believe the period of uninterrupted silence during the night should be eight hours (2300-0700). The number of interruptions is also important to health.

4c. Please provide any other comments or suggestions you might have on early morning arrivals?
--

**RHC Response:**

There continues to be an increase in the number of flights in the 6am to 7am shoulder period. The information on the introduction of IPA suggests that a high proportion of the flights arising would be in the early morning shoulder, which we wholly oppose.

We recommend that the number of flights in this period should be capped as was suggested by the Inspector at the T5 Public Inquiry.

5a. Please provide any comments or suggestions on how we should encourage the use of the quietest type of aircraft at night (outside the proposed scheduled night flight ban)?

**RHC Response:**

Annex 2 shows the current night flying restriction. We recommend the ban of scheduled QC/4 aircraft in the Late evening shoulder (11pm to 11:30pm) should be extended to all QC/4 flights and similarly in the early morning shoulder period (6am to 7am). Furthermore, we believe that QC/2 and QC/1 scheduled aircraft should be banned in the two shoulder periods, while for the time being still allowing operational aircraft with these classifications.

We support the use of penalties and incentives to encourage less noisy aircraft at night. But policy requires the two to net to zero. We believe penalties should be much higher than currently is the case.

5b. Please provide any other comments you have on night flights and restrictions?

**RHC Response:**

No further comment at this time.

## QUESTIONS 6 AND 7 (SECTION 4.2) AIRSPACE - LOCAL FACTORS

*To help us design new flight paths we want to know whether there are any sites or locations that you think require special consideration by us in determining where future flight paths should be. The following questions ask you to describe the special characteristics of these locations, stating why they would be sensitive to flights overhead. For example, this could be because they would be sensitive to noise or visual impacts associated with overhead flights.*

6. To answer this question, please look at the design envelopes for expansion online using the postcode checker or look at them in our document Heathrow's airspace design principles for expansion. What sites or local factors should we be aware of in your area (or other area of interest to you), when designing flight paths for an expanded three-runway Heathrow? Please give enough information (e.g. postcode, address or place name) for us to identify the site(s) or local factor(s) you are referring to and tell us why you think it is important?

### **RHC Response:**

RHC's specific area of concern is the Kew and Richmond area including Richmond Hill and Richmond town. Airspace design envelopes are provided in a consultation document at: <https://afo.heathrowconsultation.com/wp-content/uploads/sites/4/2019/01/3649-HRW-3R-A3-maps-booklet-AW-update-2-V1.pdf>

Heathrow has 30 flight departure and arrival paths or swathes (6 are not used at present). The consultation provides 18 design envelopes within which it is planned to locate the flight paths - up to three in each envelope. The paths will be very accurately positioned using satellite PBN resulting in concentrated noise, unlike the randomly distributed paths today. Kew and Richmond residents will continue to be overflown from the middle and southern runway approaches. Curved flight paths could impact people under the southern runway approach but the envelopes do not provide for this. The Kew and Richmond area also has a departure envelope from the middle runway on easterlies (30% of the year). It is impossible to gauge the noise impact from the design envelopes. We oppose any increase in noise.

The Richmond borough's parks and open spaces are important places for recreation and relaxation for many. Heathrow may be tempted to direct flights over these spaces in the absence of population. At present the DfT attaches no cost to the impact of noise on users of open spaces. The temptation to direct flights over open spaces may mean that the dense populations surrounding the open spaces will be disproportionately exposed to noise. Airspace design is required to take account of Quiet Areas and Areas of Outstanding National Beauty. The Royal Botanic Gardens Kew is a UNESCO World Heritage site with around 1.5 million visitors a year, coming from all over the world. It is one of London's major tourist attractions. The noise from arriving aircraft greatly disturbs the peace and tranquillity and is a frequent complaint of visitors. World Heritage sites have their status reviewed periodically by UNESCO and this status could be endangered by more noise from an expanded Heathrow. Richmond Park is, potentially, another haven of peace and tranquillity.

It should not be forgotten that the noise levels in a large area around Heathrow are already too high and that adding more noise will be intolerable at the margin for many and especially the more vulnerable. Trying to thread flight paths over such densely populated areas might avoid some of those identified but end up by exposing others equally at risk.

7. To answer this question, please look at the design envelopes for Independent Parallel Approaches (IPA) online using the postcode checker or look at them in our document Making better use of our existing runways. What sites or local factors should we be aware of in your area (or other area of interest to you), when designing new arrival flight paths to make better use of our existing two runways? Please give enough information (e.g. postcode, address or place name) for us to identify the site(s) or local factor(s) you are referring to and tell us why you think this local factor is important?

**RHC Response:**

RHC opposes any increase in noise by use of IPA.

## QUESTIONS 8, 9 AND 10

8. Please provide any other comments you have relating to the airspace elements of the consultation?

### **RHC Response:**

- a. The consultation is deficient in not considering the design above 7,000feet. Noise impacts communities adversely when aircraft are above 7,000 feet and RHC has on many occasions sought a higher cut-off for airspace design. NATS has prime responsibility for design above 7,000 feet.
- b. The entry and exit to Heathrow terminal airspace (see point (a) above) is key to airspace design but it is not mentioned in the consultation. A replacement for holding stacks is hardly discussed. The consultation is deficient in these respects.
- c. The absence of detailed flight paths makes it very difficult for people to understand or imagine what the noise impact Heathrow's proposals might have and therefore it is very difficult to provide a definitive response to the consultation.
- d. The integration and cumulative impact of the design envelopes is impossible to conjecture in a meaningful sense. It is impossible to judge what will be the noise impact of arrival and departure flight paths overlapping.
- e. The issue of concentration versus dispersion of noise remains a major unresolved issue, notwithstanding the consultation's reference to respite, alternation etc. RHC is opposed to concentration either by way of PBN, loss of respite or other means.
- f. The formal Airspace Change Process so far has been significantly deficient due to Heathrow's failure to engage properly with its communities. This matter in respect of Gateway 1 of the process and the future process remains unresolved between Heathrow and its communities.
- g. Notwithstanding Heathrow's efforts through the HCNF and other means to improve trust from the communities, the recent experiences with the airspace change process, noise objectives and concentration versus dispersion have negatively impacted trust.

9. General comments. Having considered everything within the consultation, do you have any other comments?

### **RHC Response:**

No further comment

10. Please give us your feedback on this consultation (such as the documents, website or events)?

### **RHC Response:**

The structure of the consultation is not that easy to follow. Question numbers do not relate to

consultation section numbers. Topics could be answered across several sections and it is not obvious which section is appropriate. It is not clear to what extent Heathrow seeks each individual's preference or a societal solution, which is important because much of the debate is about allocating noise across many people and one person's gain is another's loss. The consultation tends to be divisive.

End

Annexes 1 and 2 are attached

**3<sup>RD</sup> RUNWAY IMPACT ON UK AS AN AVIATION HUB  
THE FOLLOWING IS DFT EVIDENCE**

**Without a 3<sup>rd</sup> runway:**

- The number of passengers terminating their journey at Heathrow grows by 60% by 2050 *Heathrow is not full.*
- UK spare capacity is equivalent to 6 runways in 2050. *UK capacity is well able to satisfy demand through to 2050.*

**With a 3<sup>rd</sup> runway:**

- No additional long-haul or domestic business passenger are served at the UK level. *Economic benefit from additional business travel is non-existent.*
- The 43 million additional passengers a year comprise - 17 million cannibalised growth from other UK airports and 16 million international-to-international transfers of no value to the UK. Only 10 million additional mostly short-haul terminating passengers are served. *A 3<sup>rd</sup> runway harms the UK regional economic balance and is inefficient use of capacity.*
- There are no additional destinations from the UK and frequency of flights at other UK airports is reduced. *UK connectivity is impaired.*
- International-to-international transfers use 37% of additional runway capacity and 94% of the UK's additional long-haul capacity. Only 300,000 out of 24 million annual transfers are on thin routes and are insufficient to support otherwise unviable thin routes. *Heathrow's international transfers provide no UK value and should be replaced by passengers terminating their journeys in the UK.*
- **There is a substantial dis-benefit to the UK aviation market**

## ANNEX 2

### NIGHT FLYING RESTRICTIONS AT HEATHROW

The Night Period from 23:00 to 7:00 is divided into three periods: late evening Shoulder, a Night Quota Period and early morning Shoulder. Table 1 describes the restrictions currently applied in these periods:

TABLE 1	Late Evening Shoulder		Night Quota Period		Early Morning Shoulder	
	23:00-23:30		23:30-6:00		6:00–7:00	
Movement Limits ATMs	None		Winter 2011/12: 2,550 Summer 2012: 3,250 Unchanged during regime		None	
Noise Quota Points- Limit	None		Winter 2011/12: 4,080 Summer 2012: 5,100 Gradual decrease during current regime		None	
Carry-over between seasons - Movements			Yes			
Carry-over between seasons - NQ Points			Yes			
Ban on Noisiest Aircraft:	Scheduled	Operational	Scheduled	Operational	Scheduled	Operational
QC/16 & QC/8	Ban	Ban	Ban	Ban	Ban	Ban
QC/4	Ban	No Ban	Ban	No Ban	Ban	No ban
QC/2, QC/1, QC/0.5 & QC/0.25	No Ban	No Ban	No Ban	No Ban	No Ban	No Ban
QC less than 0.25	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt
Dispensations	Yes		Yes		Yes	
Runway preference	Westerly		No preference		Westerly	
Runway Rotation	Yes		Yes		No (TEAM)	

Prepared by Richmond Heathrow Campaign