

## **Draft PCAA response to the Proposed Bristol Airport Draft Noise Action Plan 2019 – 2024**

The Parish Councils Airport Association (PCAA) is a body consisting of representatives of 20 parish councils which are concerned about the impact, or future impact, of the activities of Bristol Airport (BA). The purpose of the PCAA is to advise and represent its member councils on matters affecting them which are connected with Bristol Airport and its operations. Noise remains a constant concern to PCAA members throughout both North Somerset and Bath and N.E. Somerset districts. We welcome the opportunity to comment on the *draft BA Noise Action Plan 2019–2024*.

The PCAA's comments in respect of the sections in the document are shown below:

### **Section 4: Airport Use**

This section neglects to provide information on the average number of flights per day in the summer and winter of 2017 and yearly air transport movements (atm's). In 2012 there were a 190 flights per day in the summer which equates to over 12 an hour within a 16 hour day and in the winter there were 140 flights per day which equates to almost 9 an hour. (Ref: Noise Action Plan 2013 -2018).

No comparison of flight numbers is given for anticipated future growth although the document covers the period from 2019 to 2024. A level of 10mppa is expected as soon as 2021 with a flight expected approximately every three minutes in a 16 hr day. There is no mention of the peak periods within a day. For instance 06.00 – 08.00 hrs is near capacity. Peak for arrivals is 11.00 – 13.00 hrs and departures 12.00 – 14.00 and again there is peak in the early evening period for both arrivals and departures. Our concern is that as the frequency of flights increases, the few quiet periods are taken away as flights will spill over into the only periods with little airborne noise.

This document limits itself only to a possible expansion from the present (ca. 8 mppa) to 10 mppa (section 2). It is candid in making clear the owners' aspirations to seek permission to expand to 12 mppa and onward to 20 mppa. Certainly growth of the airport, if granted consent, will be beyond 10 mppa and the implications of this should be considered within this document. It is important that the local community realises that noise nuisance will be massively greater should these aspirations ultimately be allowed. The PCAA believes that from 10 mppa there will be a transformative change to the noise in environment in which there will be no respite from noise during the day and potentially further disturbance from noise at night and it is for this reason that atm's must be provided hourly. It is disappointing that this document has not referred to the PCAA response to 'Your Airport: Your Views' consultation in which you asked the question '*What information would you like to see presented at the next more detailed consultation stage?.*' We consider that this is a detailed consultation and covering the period of the Master Plan as growth to 12 mppa is phase 1 of growth to 20 mppa. In our response to 'Your Airport: Your Views' we requested information on hours of respite from ground and air noise each day for residents, the number of flights predicted per hour and ground noise assessments, including aircraft taxiing,

revving of engines before take off, engine and braking noise on landing (including the use of reverse thrust). It is disappointing that little of this information has been given.

## **Section 5: Regulations, Guidance and Reports**

Although the Noise Policy Statement for England (2010), the National Planning Policy Framework 2012 and the Aviation Policy Statement 2013 recognise that noise gives rise to significant adverse impacts on health and quality of life, there has been no discussion of these impacts in this document. There is growing bank of evidence on health related illness due to noise disturbance, particularly at night. A Green Paper is expected this autumn following the 'Beyond the Horizon' consultation of April 2018 in which the Government is expected to state how environmental issues such as noise will be resolved in the future. The Government stresses that it leaves the issue of noise and the mitigation of noise as a local matter to be considered by the Local Authority, North Somerset Council (NSC). The airport and NSC should both commit to implementing any new, recommended safeguards at the earliest opportunity and this should be identified in this plan.

North Somerset Council sets the conditions on noise. Current conditions are ineffective at resolving the issues surrounding an increase of air transport movements for 10 mppa and beyond. Conditions are set to stop the adverse impacts of airport activities on residents but too often, as the airport reaches the limit of these conditions, they are then removed or subject to change. For example application 17/P/1273/F 'Proposed use of on-board auxiliary power units between 06:00 and 23:00 hours in aircraft on stands nos. 34 to 37'. A further, worrying example is the potential revision of planning condition 38 concerning the number of take-off and landings between the hours of 23.30 and 06.00 which were limited in the summer season to 3000 and, in the winter, 1000. Bristol Airport expresses a need to join the summer and winter movements together as an annual limit allowing more aircraft movements in the summer period because the winter flights fall below the limit - in 2017 there were 2,991 summer air transport movements against a the limit of 3,000 and x in winter (limit 1000). Combining the two limits will allow the airport to increase summer movements during a time of the year when residents spend more time outside and wish to sleep with the window open.

Planning condition 39 limits the take-off and landings in the shoulder periods (part of the officially-defined night period) of 06.00 – 07.00 and 23.00 – 23.30 and sets a limit of 10,500 in any calendar year which equates to one approximately every three minutes (19 per hour). In 2016 there was an average of 12.4 movements per hour in 06.00 – 07.00 slot so considerable growth is already available to the airport. The PCAA argues that this condition, like most conditions, were set in the interests of Bristol Airport rather than residents surrounding the airport as this level of airport activity is clearly not conducive to sleep. Conditions need to be set which have noticeable benefits to the community. Geneva airport has no night flights and the airports within Germany are more strictly controlled.

## **Section 6: Noise Management Framework**

It is worth pointing out that the BA Master Plan 2006 – 2030 states *‘that growth beyond 9 mppa will be associated with an increase in the number of people adversely affected by noise. Houses bordering Felton Common may suffer a higher level of noise by 2030 .... might need voluntary house purchase’*. The Master Plan then goes on to state *‘with the emphasis on development expected to shift to the south side , it would be reasonable to assume that the noise climate in the Lulsgate and Downside area would not deteriorate post 9 mppa’*. It is obvious that the noise climate post 9 mppa is to deteriorate and residents are to be affected, perhaps as early as 2019. We question why development is now to the North side and believe that there will be severe impacts from ground and air noise for communities surrounding the airport. There has been no mention in this consultation of why development beyond 10 mppa is to be on the North side and no consideration of the noise impacts this will produce.

To date the Eastern Apron is not operational and impacts from the use of these aircraft stands have been neglected in this document. These stands will take growth beyond 9 mppa and, as suggested in the 2006 Master Plan, this will have severe noise implications for residents close to Downside, Felton Common and beyond such as Dundry, Felton and Winford. In addition to air transport movements it is anticipated that ground noise will increase from both the Western and Eastern Apron from the running of engines, taxiing to the runway and waiting for take-off. The PCAA note that this document is informed by the most recent strategic noise maps which were prepared in 2017 but reflect the noise climate in 2016. Since 2016 the air transport movements have increased by 3 per cent. This document assesses the noise climate of the past, not the present or the future which is what parishes wish to know and they should at least be provided with provisional information for the period up to 2024 in order to make an informed comment.

## **Section 6.1: Ground Noise/Background Noise**

Ground noise and background noise is on the increase. This can be seen from complaints of background noise, when there is an easterly wind, from communities in the south west since the development of the western apron. There are days in which communities impacted by easterly winds have no respite from noise as there is ground noise alongside arrivals occurring almost continually. The eastern apron will be developed to accommodate growth to 10 mppa and the PCAA expect that ground noise/background noise will worsen not only for residents close by, at Lulsgate and Downside, but also in Felton, Winford and Dundry. The removal of the administration building to the south side will also add to the deterioration of noise as the acoustic fence will be less effective in protecting residents from the adverse impacts of noise.

The Operations Monitoring Report 2017 on p18 states *‘as noted in section11 there was no specific complaint about ground noise in 2017’* but the PCAA would argue that background noise complaints were many and growing and that there was an increase from 2016 to 2017. A definition needs to be given of what is considered background noise and what is considered ground noise. In our view the running of engines, taxiing and noise from Auxiliary Power Units etc should be considered as background noise as well as ground noise. This point needs clarification.

Ground noise, when finally measured, should take account of inverse temperature gradients and downwinds as these can heavily affect the noise residents will hear in reality.

## **6.2: Airborne Noise**

The PCAA has strong reservations on the use of noise envelopes as this will concentrate the noise over the same residents and allows no dispersal of noise. No account of the air transport movements has been provided. The Operations Monitoring report 2017 shows, from the noise monitor at Congresbury, that the noise climate has deteriorated in several months by over 3dB(A). We also note that the area of the 57dB(A) Leq 16 hr noise contour for summer months is growing even though it remains within the limit of the permitted noise envelope of 12.42 sq km. The area predicted for 2018 is 10.9 sq km whilst in 2015 it was predicted to be 9.6 sq km.

### **6.2.3: Helicopters**

There is little attention given to improving the noise environment from movements of helicopters other than Downside Road being protected from flights below 500 ft above ground level. The PCAA requests that this is widened to all areas outside the airport boundary.

### **6.2.4: Encouraging the use of quieter planes**

From discussions held on quieter planes within the Bristol Airport Consultative Committee in July 2018, it is apparent that Bristol Airport is powerless to incentivise the introduction of new planes such as the A320 neo and the Boeing 737 Max. It is the decision of the airline when new aircraft are introduced. Bristol Airport states that most aircraft are using the latest technology to reduce noise and are modern aircraft. This is reflected in that no noise penalties have been served on airlines at Bristol Airport. Secondly, limits set for penalties such as the day time noise limit of 90 dB(A) and the 85 dB(A) night noise limit for departing aircraft are out dated for modern aircraft and the limit should be lowered. Any increase in frequency of air transport movements negates any saving to the noise climate from quieter aircraft. Thus the PCAA are not confident that modern technology will reduce the noise climate in the next decade.

### **6.2.5: Night Flying**

The recent BA Operations Monitoring Report on the Noise Quota system showed that for 2012 the night air transport movements *were at their lowest since 1997/1998*. This shows it is feasible for Bristol Airport to operate avoiding the hours of 11.30 pm – 6.00 am. In 2013 the PCAA requested that Bristol Airport work towards *lowering the number of flights at night further and steadily reducing the night flight quota points, moving towards a ban on night time flying*. Unfortunately since 2012 there has been a *considerable increase, with summer night flights up by over 60%. The summer quota count usage has increased by almost the same proportion showing that the aircraft are (on average) no less noisy*. This appears to show that the airport's

aspirations expressed in the previous Noise Action Plan to "*reduce the effects of noise from airborne aircraft*" *have not been successful in this respect.*

The PCAA also made the modest and reasonable suggestion that the airport recognise the WHO Night Noise Guidelines for Europe: we are disappointed that the new *Draft Noise Action Plan* makes no mention whatever of the World Health Organisation's important work in this area.

### **6.3: Measures to mitigate the effects of aircraft noise/manage and reduce the effects of noise from airborne aircraft.**

#### **The controversy over representing aircraft noise.**

Increasing evidence has been published in recent years showing the adverse effects on human health and well-being of aircraft noise by day and especially night.

Consequently, for a document which is supposed to set out plans to reduce the noise nuisance caused by aircraft, there are some important weaknesses. These relate to

- the noise criteria used,
- the use of modelling, untested by independent measurement,
- absence of any attempt to test the conclusions reached.

#### **Noise criteria**

Only average noise levels (equivalent continuous sound levels  $L_{Aeq}$ ) are considered here. It is well known that such average noise levels alone are inadequate as criteria to judge damaging effects of aircraft noise. Large numbers of seriously intrusive aircraft can pass over before the  $L_{Aeq}$  levels discussed in the consultation document are reached. Such supplementary noise indicators as  $L_{Amax}$ , and SEL, are seen by the European Union Noise Directive as particularly appropriate for use at night, in relatively quiet areas and for passing aircraft. A similar approach is supported by the World Health Organisation and the British Government's ANASE study and Policy Planning Guidance PPG24. Together with  $L_{Aeq}$  contours these should be *independently* measured and reported so as to help give a more complete picture of how noise is changing over time. Measurements reported should be sufficiently comprehensive to enable progress to be judged against WHO criteria.

#### **Noise levels**

The WHO recommends that: "For the primary prevention of subclinical adverse health effects related to night noise in the population, it is recommended that the population should not be exposed to night noise levels greater than 40 dB of  $L_{night, outside}$  during the part of the night when most people are in bed. The low adverse effect level of night noise, 40 dB  $L_{night, outside}$ , can be considered a health-based limit value of the night noise guidelines necessary to protect the public, including most of the vulnerable groups such as children, the chronically ill and the elderly, from the adverse health effects of night noise." The airport's consultation document does not even consider  $L_{night}$  levels below 48dB.

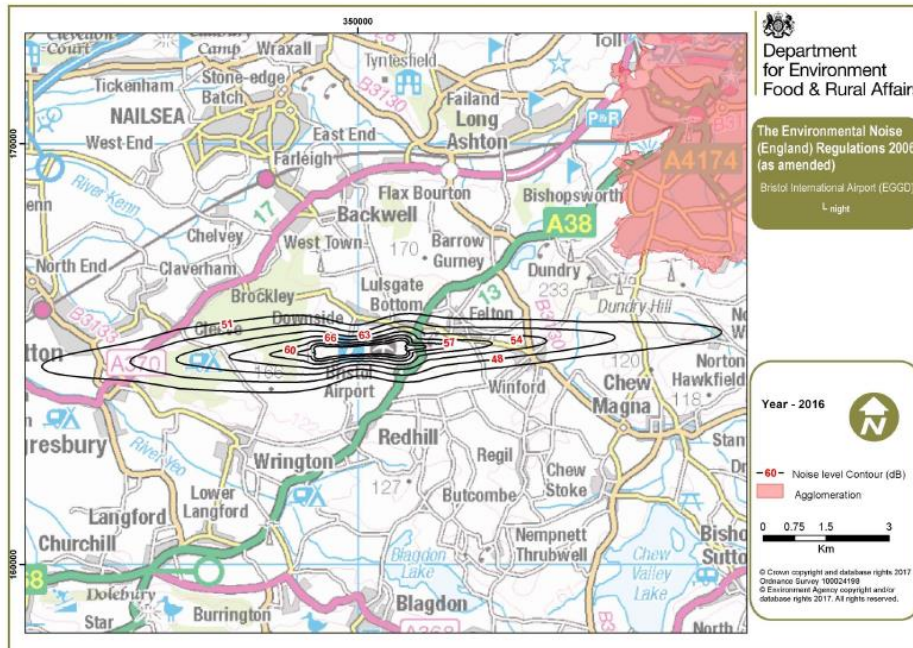
#### **Lack of independence**

Computer-generated noise maps are given separately in a "Data pack":

R3\_Airport\_Datapack\_2017\_Bristol International\_EGGD\_V3.pdf

These only acknowledge problems close to the airport concentrated within areas which approximate to an ellipse of high eccentricity, with long axis roughly east-west.

and short axis north-south. For example the figure below shows  $L_{night}$  contours for 44, 48, 51, 57, 60, 63 & 66 dB(A).



It is essential to remember that  $L_{night}$  is defined as

*"the  $L_{Aeq}$  over the period 2300 to 0700 local time"*

Thus it is the *average sound level over an 8 hour period*. As WHO pointed out many disruptive episodes between quiet times can be "hidden" in a modest-looking value of  $L_{night}$ . They will give very much lower dB values than *readings* of single event levels or of  $L_{max}$ . Moreover they are averaged over the *whole year*: noisy July and August are diluted by quiet January and February, as if being woken several times a night during the summer could be compensated by the assurance that 6 months later uninterrupted sleep might be expected!

On this basis the actual disruption of night noise can be hidden by publishing reassuring-looking tables like the "Table 5", taken from the Data Pack.

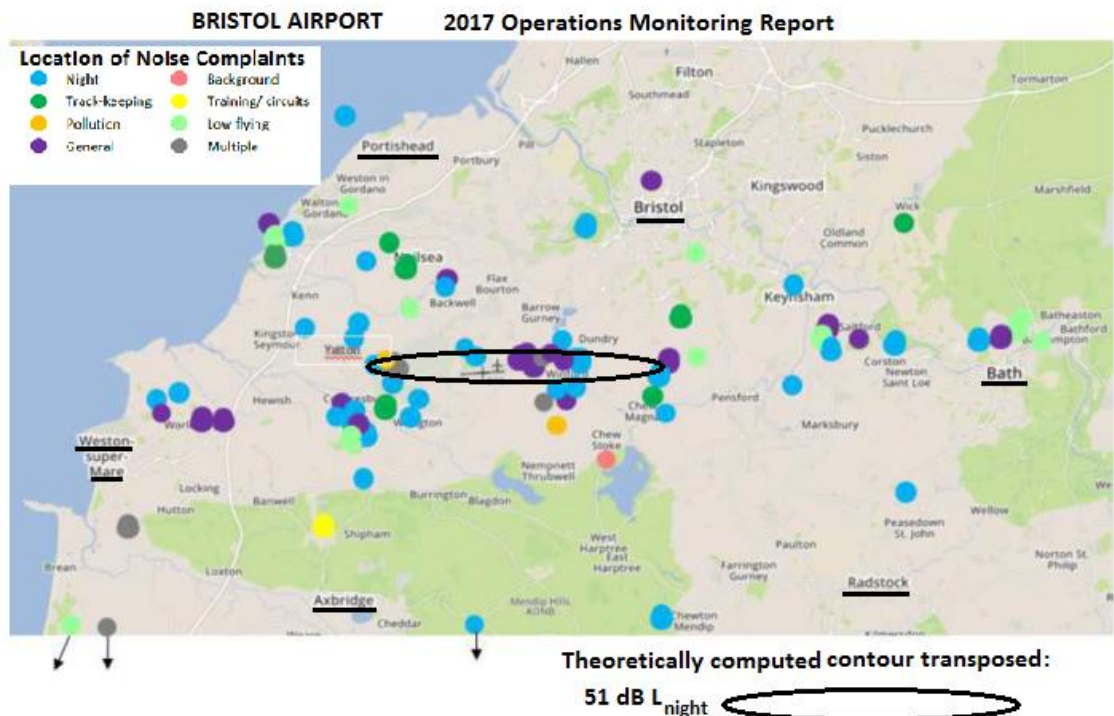
**Table 5: Estimated total number of people and dwellings above various noise levels,  $L_{night}$**

Noise Level (dB)	Number of Dwellings	Number of People
≥ 48	1,050	2,300
≥ 51	550	1200
≥ 54	250	500
≥ 57	<50	<100
≥ 60	<50	<100
≥ 63	0	0
≥ 66	0	0

The conclusions the airport draws from such tables and contour maps are incredible to many who reside in the wide area subject to intrusive aircraft noise. To its credit Bristol Airport has published information which gives a more realistic indication of the actual noise pollution. In contrast the 2017 *Operations Monitoring Report* gives a map showing that noise complaints, including night noise complaints, came from a wide geographical area overflowed by Bristol aircraft. This is reproduced below with a (slightly simplified) 51dB L<sub>night</sub> contour (from the Data Pack) pasted into it.

This stark contrast between "theory" (computer-generated contours) and "practice" (human response to the actual phenomenon) highlight the "important weaknesses" in the airport's *Draft Noise Action Plan 2019 – 2024* relating to

- the noise criteria used,
- the use of modelling, untested by independent measurement,
- absence of any attempt to test the conclusions reached.



The experience of the PCAA is that most local residents are reluctant to use the airport's "noise complaints" service for a variety of reasons, "it's a bother", "I'd much rather try to get back to sleep than to log the time and flight details of the aircraft which has now flown away", "no notice is taken of complaints", ..... The noise complaints recorded in the airport's *Operations Monitoring Reports* must reflect a small fraction of the "noise annoyance events" experienced by residents over a large area under the flight paths.

The claim that 'No notice is taken of complaints' should be investigated further. The PCAA acknowledge that complaints are reported to the Bristol Airport Consultative Committee - it is at this point they are noted but no action is taken. For instance the early departing flights between 04.00 and 06.00 hrs caused a spike of night noise complaints and they were discussed at the Committee in 2016. There was recognition that there was a noise problem but, after discussion with airlines, no action was taken.



This reflects that monitoring noise complaints has no beneficial effect without action which in this case would require operational change. It also suggests that the airport is only, at best, managing noise not reducing noise.

The PCAA are thus extremely nervous at the implications for night flying of the airport's recently-revealed aspirations to increase in size to 12 mppa and on to 20 mppa. The Noise Action Plan should be working towards a total ban on night flights by a steady reduction in the quota for night noise points and night flight movements. At the Airport Consultative Committee July 2018, it was indicated that the use of quieter planes at night would be incentivised with a change in the quota system. The present quota system allows room for substantial growth in night flights. The only effective limit on night flights is currently the movement limit of 4,000 which is split between 3,000 movement in the summer and 1,000 in the winter. The PCAA will object to any change in night time planning conditions which allows more flights at night, particularly in the summer when residents like to sleep with their windows open. As the consultation document says:

*"This is the main purpose of an airport's Noise Action Plan, to effectively plan, manage and where possible reduce the adverse effects of aviation noise associated to our operations."*

From the statement above and the contents of this document the airport is only at best planning the effects of noise and certainly not reducing it.

### **Noise Insulation Grants**

Although the noise insulation grant is welcome it does not compensate for the loss of tranquillity in the use of one's garden, enjoyment of the local area and being able to sleep at night with the window open.

The noise insulation grant is £5,000 funding for 63dB and £2,500 for 60 dB and 57dB which is a tiny amount to pay a household for a substantial damage to their noise environment. In many cases it is simply insufficient funding for noise insulation with the householder having to pay a substantial amount of the costs.

The onset of community annoyance of noise extends beyond the 57 LAeq and funding for insulation should be widened.

### **Section 8: Action Plan**

#### **Actions to manage and reduce the effects of noise from aircraft on the ground:**

The use of the word 'review' is ever-present within this section but it does not actually state the planned reduction in noise levels from these actions.

1.2 The PCAA would like to see the aircraft stand allocation published in order to comment and help prevent ground noise impacting on residents.

There is no mention of one of the consequences of the airport now being 'partially level 3 slot co-ordinated' for the summer season which is a cluster of flights arriving



in the shoulder period between 23.00 - 23.30 hrs. This bunching of arrivals obviously has an impact on residents' ability to sleep.

There should also be monitoring and reporting of the number of flights delayed from the planned day-time arrivals into the shoulder period and into the night movement limit period after 23.30 hrs.

1.3 The PCAA welcomes electric vehicles on site and would like to see a timetable of all vehicles being electric to ensure progress continues.

1.4 It is disappointing that a feasibility study for the further installation of fixed electrical ground power (FEGP) will not be completed before December 2020. There is no fast action here to reduce the noise climate from mobile ground power units (MGPU).

1.5 It is disappointing that only in 2019 is a review being undertaken of the BA Ground Noise Management Strategy when there are so many complaints on background noise. Mapping of ground noise needs to be carried out and mitigation for residents considered at the earliest opportunity.

#### **Actions to manage and reduce the effects of noise from airborne aircraft:**

2.1. Page 38, says "*Still no Chapter 3 high aircraft are currently operating at Bristol Airport. In addition, the Bristol Airport Fees and Charges also include a 200% surcharge for aircraft not meeting Chapter 3, and those operating at night.*" This is shaded green indicating that the airport is satisfied with what it has done to "incentivise airlines to use the **most modern and quiet aircraft**". There appears to be no published information about numbers of aircraft of different noise classifications using Bristol. Such information is available for other airports. We suggest that too unexacting a target has been set by Bristol where "a surcharge is applied to 'Chapter 3 high' aircraft". We urge that differential surcharges favouring quieter aircraft should be set on other noise classifications such as Chapter 3 base, Chapter 4 high, Chapter 4 base, Chapter 4 minus, as is done at other airports. This would be a more serious attempt to "incentivise airlines to use the **most modern and quiet aircraft**" such as the new A320e and Boeing 737Max

2.4. An explanation needs to be given of '*a goal of 50% reduction in perceived external noise by 2020 based on new aircraft relative to equivalent aircraft of 2000*'. Unless frequency of increased air transport movements is included it will be meaningless. Residents hear an event not a perceived noise.

2.5 Is an interesting point highlighted in green which means that the action is completed? The PCAA question whether this system is working as there was an incident in May 2015 when a flight arriving from Glasgow made serious errors on the arrival route. Although requests were made to the Airport Consultative Committee on what action had been taken, no fines or penalties were given. It is our view that Bristol Airport will not fine or penalise an airline as it is not in their commercial interest to do so.

2.6 This section is the first and only time the word ‘respite’ is used in this document. *‘We will begin looking at alternative flight paths for respite purposes with a view for implementation by 2026/27’*. First of all the PCAA would like a definition of respite from Bristol Airport. To the PCAA it means a period of relief from noise each day. Secondly, this statement is an acknowledgement that there has been a change in the noise environment from one where there is respite to one where there is none. There is a suggestion that from 2027 respite may be considered for residents. The PCAA request that this is brought forward to when residents are receiving a flight approximately every three minutes, at 10 mppa. An explanation is required of whether respite is for all residents situated close to the airport such as the parishes of Brockley, Cleeve, Congresbury, Dundry, Felton, Winford and Wrington or is it just for parishes on the outer edge of the flight paths such Timsbury, Pensford, Kingston Seymour etc?

2.7 The PCAA are extremely wary of any change to the quota point system unless it is considerably reduced. In answer to a query raised by a member of the Airport Consultative Committee on the new A320 neo, this aircraft could be classified as exempt from night noise quota count under the civil aviation authority categorisation. This is because it may fall below the threshold of the current noise level bands. The only thing that will then hold back another noise event at night (even if slightly quieter than other aircraft) is the night movement limit. The night movement limit must be retained at the current limit of 3000 movements in the summer and 1000 in winter or, preferably, each season’s limit should be reduced moving towards a goal for residents of a night time ban. Night time flying during summer 2012/13 was at an all time low but in 2017 it was at an all time high for the summer season with 2,991 movements. The consultation document has omitted this piece of information.

The airport’s publication ‘Your Airport’ issue 16 claims that the A320neo aircraft has a reduced noise footprint of 50% on take-off and landing. This figures is hard for the public to understand and can be misleading as sound is measured in decibels (using a logarithmic scale). The noise contours are all reported in decibel levels and this should be used when claiming reductions in noise footprint. As stated above, the WHO recommend a max of 40dB  $L_{\text{night, outside}}$  although the airport's consultation document does not even consider  $L_{\text{night}}$  levels below 48dB. For the claim concerning the A320neo to be understandable, the noise figures need to be compared with other aircraft in dB and compared with the WHO recommended maximum levels.

2.11 The PCAA are acutely aware that potential changes to airspace in 2026/27 may bring new communities under flight paths and thus subject to noise. If this comment is correct these communities should be made aware now so as to be able to respond to the draft Master Consultation. The PCAA have strong reservations on the use of noise envelopes as this will further concentrate the noise over the same residents and allows no dispersal of noise.

### **Measures to mitigate the effects of aircraft noise:**

3.1 The PCAA disagree that the noise climate has not altered significantly. This statement reflects a lack of concern for residents under the flight paths. As previously stated, the area of the 57 dB(A)  $L_{\text{eq}}$  16 hr noise contour for the summer is growing, the summer night time limit is very nearly full at 2,991 out of a 3,000 movement

limit. Flights on average are roughly every five minutes which is anticipated to become every 3 minutes at 10 mppa. Complaints have risen on noise and background noise from the area and some parishes, during periods of Easterly winds, have background noise all day alongside a continuous stream of arrivals.

3.4 The new action of allowing two opportunities per annum to apply for funding for noise insulation instead once per annum is not adequate. Residents should be able to apply for funding whenever. Funding of noise insulation should cover the whole cost of noise insulation with no requirement for the homeowner to contribute to something that is caused entirely by the airport.

4.1 The PCAA welcome improvements to the tracker system. This document does not comment on the telephone noise complaint line available to residents. The PCAA wishes a commitment in this Noise Action Plan to the retention of this service.