

# **Airports Commission *Discussion Paper 05: Aviation Noise***

## **Response from Belfast City Airport Watch**

### **About Belfast City Airport Watch**

Belfast City Airport Watch (BCAW) is an umbrella organisation which represents 20 affiliated organisations, 18 of which are residents' associations and community groups in areas affected by aircraft noise linked to the operations of George Best Belfast City Airport (see Appendix 1). BCAW also has 585 individual associate members.

We have no staff members and rely on the services of volunteers. This has limited our ability to provide a comprehensive response to Discussion Paper 05. However, we hope the Commission will take due cognisance of the points we make, given the relatively large number of people which we represent directly and via our affiliated organisations.

### **Overall comments**

BCAW warmly welcomes this very useful discussion paper which provides a very useful and comprehensive overview of the issues and evidence regarding aviation noise and its impacts. We welcome especially the following commitment by the Commission:

Noise will be a central issue for the Airports Commission, both in its assessment of options to make better use of existing airport capacity and in considering proposals for new infrastructure, should the Commission identify a need to expand capacity in the longer term.<sup>1</sup>

This commitment is of prime importance to the tens of thousands of residents affected by aircraft noise linked to the operations of Belfast City Airport. We urge the Commission to ensure that the issue of aviation noise is given the full consideration which it deserves in the advice which it offers the government.

We agree with the following key point made by the Aviation Environmental Federation (AEF):

Current levels of aviation noise are in many cases unacceptable. It would be a mistake for the Commission to consider noise only in terms of which of the various expansion options is the least bad. Instead, it should seek to develop an intellectually robust approach to noise management including setting out appropriate limits. Short, medium and long-term proposals under consideration by the Commission should be tested against how well they can tackle the current noise problem.<sup>2</sup>

We wish to express our support for all the policy and technical points made in the excellent submission on Discussion Paper 05 which has been made by the AEF. It would not make sense to duplicate them here, but we wish the Commission to consider the views of the AEF, as expressed in

its submission, to be the views of BCAW also. Below we make some specific points which we would like the Commission to consider alongside and in addition to the points made by the AEF.

## **The impact of noise**

We believe that it is wrong to state that, relative to other risk factors such as smoking and lack of exercise, noise has relatively small impact on hypertension (para. 2.24). The risk is actually approximately half that of both smoking and physical activity/obesity – which is relatively quite high. Moreover, while someone can choose whether or not to smoke or take exercise, they have no choice about the amount of aircraft noise to which they are subjected.

In addition, while further work with regard to the link between aircraft noise and hypertension would be useful, it is wrong to suggest that no firm conclusion can be drawn from existing studies about this link (para. 2.26). Given that this link has been established, policy on aircraft noise should be taking this correlation fully into account. At present, this is not happening in the UK.

We have carried out our own research on the impact of aircraft noise resulting from the operations of Belfast City Airport. We include summaries of the results of this research in Appendices 2 and 3. This survey data fully supports other evidence which shows that aircraft noise creates considerable sleep disruption, as well as impacting on the quality of life and well-being of ordinary people. It should be noted that the data shows that Belfast City Airport's operations lead to significant sleep disruption, even though the airport's operating hours are 6.30am to 9.30pm. (Flights up to midnight are permitted in "exceptional circumstances", although they occur much more frequently than this).

We would strongly disagree with the conclusion of the Discussion Paper that aircraft noise has a lesser impact on children's sleep. In our community survey, while one in five adults said they weren't getting enough sleep as a result of aircraft noise, nearly half (46%) of the respondents who had children said that at least one of their children wasn't getting enough sleep for the same reason. Circumstantially, it would appear that the problem of interrupted sleep is more pronounced among younger children and tends to be less of a problem as children become teenagers. However, many parents have told us that they believe that disrupted sleep arising from aircraft noise is affecting their child's educational performance. Indeed, three of the schools which responded to our schools survey believed that this was a factor. We would also be concerned about the potential adverse developmental impact of disrupted sleep on children of pre-school age.

## **Noise footprint data**

Our prime concern with Discussion Paper 05 is the omission of the Northern Ireland airports from the tables which provide data on the noise footprints of UK airports (Tables 2.1 and 3.5). Given that Belfast City Airport is one of just three European airports to be designated as a "city" airport by the EU, due to its urban location and significant noise impact, this is an unfortunate and important omission. We would like it rectified in all subsequent Commission documentation which deals with the noise footprints of UK airports.

We are further concerned that the data used to show the noise footprints of UK airports is very out of date; it relates to 2006 and is, therefore, seven years old. Obviously, the noise footprints of a number of UK airports could have changed considerably in that time. In addition, it is of very limited value and quite unrepresentative to pick only data relating to one year. It would be of much greater value if data covering each of the most recent three years was considered, along with the trend(s) in noise contour impacts over the past ten years.

## **Measuring aircraft noise**

We believe it is imperative that the Government maps noise exposure at all commercial airports in the UK, and monitors noise exposure closely on an ongoing and annual basis. It is completely unsatisfactory that airports are permitted to carry out their own noise monitoring. We welcome the Commission's suggestions with regard to improving the value of noise footprint data.

However, in the light of very robust and comprehensive evidence on the adverse impact of aircraft noise on children's educations, we believe that any such measurements must reflect that impact specifically, including the specific World Health Organisation guidance on aircraft noise and night-time noise.

Noise mapping should include:

- noise contours, with maps and details of the affected populations, at the following noise levels: >50 LAeq 16h, >54 LAeq 16h, >57 LAeq 16h, >60 LAeq 16h, >63 LAeq 16h and >72 LAeq 16h— and which also includes measurements which allow for and properly reflect the greater annoyance, disruption and health risk experienced by residents in the evening, night-time and early morning, and measures which reflect noise pollution caused by particularly noisy individual aircraft events (using Lden, LAeq 8h and LAMax Fast measurements) [with appropriate adjustments to the 16h metric where airports, like George Best Belfast City Airport, are not fully operational for 16 hours]
- details of all schools within the >54 LAeq 16h contours, and/or which experience noise events at >35 LAeq during class time [with appropriate adjustments to the 16 hour metric as above]

We believe that a comprehensive survey or surveys should be carried out by the Commission to establish the content and “mix” of noise measures which reflect most accurately the actual impact of aircraft noise on ordinary people. However, it is also vital to take into account the findings of research on the way in which aircraft noise impacts on health and education. For example, individual noise events are particularly important in terms of sleep disruption and children's education.

## **Noise efficiency**

While we believe that this is a potentially useful concept, it is too simplistic to measure the “noise efficiency” of an airport in terms of the number of annual traffic movements or passengers using that airport. The concept should factor in the actual economic value of the airport, rather than simply how busy it is. This should take into account:

- The number of people directly employed by an airport

- The number of people indirectly employed by an airport, where there is robust evidence that their employment is due wholly to the existence of that airport's operations
- The net contribution of the routes operated by the airport to the local economy, particularly in terms of consumer spending and tourism revenue

In order to inform the Commission's more general strategic work as well as arriving at a useful measure of "noise efficiency", we believe it is vital that the Commission collates and publishes trip data (inbound/outbound and purpose of trip) which will help it to determine the economic value of the routes operated by each airport.

The least valuable routes which should be seen as having much lower priority and a negative net worth are as follows:

- routes to those destinations (largely seaside and skiing resorts) which attract large numbers of holidaymakers from the UK/Northern Ireland, and which offer little reciprocal traffic for the UK
- routes to those destinations which are generating largely outbound leisure traffic for weekend breaks

We further believe that long haul routes, which use larger noisier planes, should not be permitted to operate from regional airports close to built-up urban areas where their operation impacts negatively on a significant number of people. Preference should be given to locating such routes at airports in lightly populated rural areas with good surface transport links and the absolute minimum impact in terms of the size of population affected by aircraft noise.

Other international routes should not generally be located at regional airports which are close to large built-up areas and which cause significant noise pollution for a large number of people; in general, planes flying international routes require larger amounts of fuel and, in order to make them commercially viable, a higher proportion of filled seats than aircraft flying domestic UK/Ireland routes. They are thus likely to be heavier and noisier than aircraft on domestic routes.

We further believe that any measurement of "noise efficiency" must take into a much more sophisticated and comprehensive noise footprint measure than the 57 LAeq 16h contour alone. In particular, it must take into account the number of and noise created by night flights which have a particularly detrimental impact, and the number and size of schools impacted by noise associated with the operations of a particular airport.

## **Better use of existing airport capacity**

One important issue which is not considered in Discussion Paper 05 is the extent to which airports close to each other currently duplicate each other's operations. There are many airports in the UK which are situated less than one hour's drive from each other and which offer similar routes. It surely makes strategic sense to focus any future airport expansion, if deemed desirable, at those airports with the lowest noise footprints and which have flight paths which do not have the potential to impact on significant populations.

In the context of Northern Ireland, there is clearly considerable underused capacity at Belfast International Airport which has a very small noise footprint compared with Belfast City Airport. Indeed, only one of Belfast International's two runways is currently used on a regular basis at

present. Yet, Belfast City Airport is currently planning for a significant expansion of its operations and is proposing a massive increase in the noise footprint which it is permitted.

Belfast City Airport's proposals are due to be considered by a public inquiry. However, it seems quite ludicrous that Belfast City Airport might be allowed to expand further, with the concomitant detrimental negative effects which this would have on tens of thousands of people, when there is plenty of spare capacity at Belfast International Airport, which is located in a lightly populated rural area, just 30 minutes' drive from the centre of Belfast, and which causes relatively little disturbance for local residents.

## Noise mitigation measures

We believe that airports will only begin to significantly reduce their noise footprints if they are required to do so by the Government. It is completely unacceptable that airports are permitted to self-monitor and self-regulate their own noise pollution levels, with only the absolute minimum of any real external regulation. This is entirely different from the situation which pertains to other forms of pollution, such as water and air pollution, as well as other forms of noise pollution. It is notable that, while airports are judged the "competent authorities" to devise and implement their own 'noise action plans' under the EU's Environmental Noise Directive, the Government (in Northern Ireland, the Northern Ireland Executive) has this responsibility as regards noise pollution from both roads and rail.

We believe the Commission should give serious consideration to the results of the EU-sponsored MIME study which developed **a model of tradeable noise permits for airports**.<sup>3</sup> If this was implemented by the UK, it would have the potential to act as a real incentive for airlines to take mitigation measures which would minimise or reduce the degree of noise exposure for residents. The permit scheme could also take into account the type of traffic generated by a particular route; for example, flights on 'bucket and spade' routes to 'sunshine' destinations outside the UK, which merely suck tourist revenue out of the local and national economy, could be subject to a higher 'price' under this scheme.

We would strongly oppose the use of a **noise envelope** as a device to permit any increase in the amount, level or frequency of aircraft noise where a significant number of people are currently affected or will be affected at a level which is likely to have adverse health, education and/or quality of life impacts. The impact on schools must also be taken into account in this regard.

We would support the use of a noise envelope as a device to ensure that the level and frequency of noise pollution did not get worse and/or was reduced over time.

We believe that a noise envelope must include a mixture of both maximum noise levels and noise event thresholds, and restrictions on the number of flights and passengers (or, as with George Best Belfast City Airport) seats offered for sale. We believe it is totally unsatisfactory that airports are currently permitted to monitor and report on their own noise levels. However, while this system of self-monitoring pertains, it is essential to have in place tangible restrictions on the scale of airport operations which can be easily monitored and regulated externally.

It is also vital that any noise envelope contains additional restrictions on flight numbers, average noise levels and noise event thresholds for early morning, evening and night-time which properly reflect the additional negative impact on health and quality of life.

## **Appendix 1 – list of groups affiliated to BCAW**

1. Carew II Family and Training Centre
2. Connswater Community Centre/Connswater Community Group
3. Cultra Residents' Association
4. Dee Street Community Centre/The Klub
5. Dee Street Computer Group
6. Dee Street Mums and Tots Group
7. East Belfast Healthy Living Project
8. East Belfast Toddler Group
9. GMB Trade Union Branch 252
10. Hampton Park Residents' Association
11. Holywood Airport Action Group
12. Lagan Valley Group Residents' Association
13. Marlborough Park Residents' Association
14. Newtownards Road Women's Group Ltd.
15. Old Stranmillis Residents' Association
16. Park Road and District Residents' Association
17. Short Strand Community Forum
18. Titanic Schools Project
19. Ulidia Residents' Group
20. Wise Men of the East Network (network of nine affiliated east Belfast mens' groups)

## **Appendix 2 – BCAW community survey**

The survey was carried out by BCAW between March and June 2009. 412 respondents were questioned in a door-to-door survey. Each respondent was from a different household.

Of the 412 respondents, 281 lived in east Belfast, 99 respondents were from south Belfast, while 32 were from Holywood. All respondents lived in areas which are either under or close to flight paths in and out of George Best Belfast City Airport. 23% were aged 18-34 years, 42% were aged 35-54 years, and 34% were aged 55 or over. 38% of respondents (157) had dependent children, aged 17 or under, living in the house with them.

The results for the sample as a whole are outlined first, followed overleaf by breakdowns for each of the east Belfast, south Belfast and Holywood samples.

The key overall results were as follows:

- 89% of respondents said that aircraft noise was a problem for them, with 61% describing it as a serious problem

- More than three-quarters (78%) said that aircraft noise affected their sleep, with almost 1 in 5 (19%) saying the problem was so bad they weren't getting enough sleep
- Three-quarters of respondents (75%) said they often had to stop talking when a plane flew over because they couldn't be heard
- 71% said aircraft noise made their gardens less pleasant to be in
- More than two-thirds (68%) said they often couldn't hear the TV and/or radio when a plane flew over
- 66% said aircraft noise made their homes less pleasant places to be
- Nearly half (49%) said aircraft noise made their lives more stressful
- 91% said they were concerned about the proposed runway extension, with 75% saying they were very concerned about it and were opposed to the plan
- Of the 157 respondents who had children:
  - Nearly half (46%) said their child or children weren't getting enough sleep because of aircraft noise
  - More than a third (34%) said their child or children found aircraft noise frightening

### **Appendix 3 – schools survey**

35 nursery, primary, post-primary and special schools responded to the survey. All were situated under or close to City Airport flight paths. The survey was carried out in June 2008. 45 schools were sent postal survey forms. Non-respondents were followed up by telephone.

- 12 schools said aircraft noise adversely affected pupils' concentration.<sup>4</sup>
- 11 schools said aircraft noise made outdoor activities in the school grounds less pleasant.
- 9 schools said teaching and/or classes were interrupted by aircraft noise.
- 8 schools said aircraft noise made their school a less pleasant place to work in.
- 5 schools said that exams and/or tests were interrupted by aircraft noise.
- 4 schools said that aircraft noise affected pupils' academic performance.
- 3 schools said they thought that aircraft noise over pupils' homes led to at least some pupils getting inadequate sleep.
- 18 schools said they were concerned about the impact of aircraft noise on their school, with 6 schools saying they were "very concerned" and 12 saying they were "slightly concerned".
- 16 schools said that aircraft noise was a problem for their school, with four describing it as a "serious problem" and 12 as a "slight problem".
- 14 schools would like flight paths redrawn so they do not go over or near their school.
- 14 schools would like a reduction in the number of aircraft flying over or near their school.



- 12 schools would like a ban on the noisiest aircraft.
- 7 schools would like a ban on aircraft flying over or near schools during important exams and/or tests.
- 6 schools would like the current 9.30pm to 6.30am curfew on flights properly enforced, while 4 schools would like the hours of the current curfew extended.
- 30 schools say they would be concerned if the proposed extension of the existing runway at the City Airport resulted in more air traffic and/or noisier aircraft flying over or close to their school. Of these, 14 schools say they would be “very concerned” while 16 schools would be “slightly concerned”.
- Schools in east Belfast are the worst affected by aircraft noise and most of those worst affected are primary schools:
  - all the schools which said they were “very concerned” about aircraft noise were in east Belfast and almost all (5 out of 6) were primary schools
  - all schools reporting that pupils’ academic performance was affected by aircraft noise were primary schools in east Belfast
  - four of the five schools reporting that exams and/or tests were interrupted by aircraft noise were in east Belfast

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<sup>1</sup> Airports Commission (july 2013) *Discussion Paper 05: Aviation Noise*, para. 1.4.

<sup>2</sup> Aviation Environment Federation(September 2013) *Evidence to the Airports Commission from the Aviation Environment Federation. Comments on Discussion Paper 05: Aviation Noise*, para. 1.1.

<sup>3</sup> Gühnemann, A., Nellthorp, J. and Connors, R. ‘Designing a market model to analyse tradable noise permit schemes for airports’. Institute for Transport Studies, University of Leeds. 2010 conference paper. Available at: <http://intranet.imet.gr/Portals/0/UsefulDocuments/documents/02815.pdf>

<sup>4</sup> It should be noted that, in relation to questions regarding specific impacts of aircraft noise at a school, schools were asked to state whether aircraft noise had each particular type of impact at least some of the time and/or in relation to at least some of their pupils or classes.