



# Edinburgh Airport Noise Advisory Board

Annual Report 2020

May 2021

## Chair's Report

While the Edinburgh Airport Noise Advisory Board, EANAB, is now in its fourth year of operation, this last year has proved to be the most problematic and possibly the most difficult of its existence. Nonetheless, we have witnessed real improvements in our working relationship with the airport alongside a generally optimistic outlook for the year ahead.

As you will read in the following detailed sections of the report, the Covid pandemic has impacted aviation at Edinburgh Airport to a substantial extent. While posing an economically disastrous threat to the airport, it certainly reduced noise levels to an unprecedented degree but for all the wrong reasons.

From an organisational point of view, EANAB's work is broken down into sub-groups, each with its own area of expertise and responsibility. Notwithstanding the lack of flights during the last 12 months, there has been a tremendous amount of individual and sub-group effort put into tackling the central issues of noise, its impact on the public and how this may be mitigated against, for everyone's benefit. This is particularly the case as we find ourselves slowly coming out of national lockdown and flights recommence.

These sub-groups have developed over EANAB's three-year existence and feature a strategy group looking at future direction, an aviation group dedicated to the wider context of airport noise, its regulation and its development, a health group looking at the impact of noise on our health and attempting to ensure we operate in keeping with acceptable UK standards. Lastly, there is the ICCAN subgroup who liaise with the Department for Transport's fairly recently founded Independent Commission on Civil Aircraft Noise. This is a national commission set up expressly to examine and question airport noise. Whilst we do not currently have a direct representation on ICCAN they none the less regularly seek our opinions which does influence the views taken by their board.

The next main event on the airport / EANAB calendar, following the lifting of some Covid restrictions is the un-pausing of the 2019-20 Airspace Change Programme by the CAA. This will once again begin to assess the various requirements for, and use of, airspace around Edinburgh Airport. This is a crucial development that EANAB are already involved in and will attempt to ensure that all beneficial options for routes into and out of Edinburgh airspace are considered, keeping community noise disturbance to a minimum.

Much of the Covid year of 2020-21 had to be conducted, as a matter of necessity, remote from each other and entirely on-line. It is perhaps this that has contributed to the visible rise in tension between board members. This has led to differences of opinion which seem to have surfaced increasingly as the year has progressed and tended to focus on internal matters such as funding, membership eligibility, governance and how the board should be run in the future. Generally speaking, EANAB works well together and I would continue to urge everyone to keep the bigger picture and the greater purpose in mind. The significant differences need to be addressed and a more tolerant approach should be developed so that a more unified approach is taken.

One notable result of this over the last six months has been the opening of a review of EANAB structure and purpose conducted by the Edinburgh Airport Noise Review Panel, a small, largely independent group which has sought EANAB representation. This body has conducted a widespread evaluation of opinions and perceptions from across the stakeholder spectrum. The result of this will be presented in the next few months in a report to Edinburgh Airport Ltd and EANAB. It aims to outline the future style, scope, structure and consequent renewal of effectiveness available from a rejuvenated noise board. The format of the new board is still under consideration but should continue to represent our communities at large. It could equally suggest a wider stakeholder involvement and remit while continuing to advise Edinburgh Airport on noise management activities which can then be brought into effect.

The future is bright.

Kind regards,

Lindsay Cole

Chair, EANAB

## **Introduction.**

At the beginning of 2020 EANAB started its work as business as usual, despite reports of a new virus starting to spread in China. This 'Covid' virus subsequently spread worldwide, was recognised as a pandemic, and restrictions imposed to reduce its spread eventually caused most passenger flights to be withdrawn. With most income lost, the airport furloughed many staff, and made others redundant. This left Edinburgh Airport Limited (EAL) effectively unable to support the work of EANAB, and to be unable to answer its questions. In common with other airports with a 'live' Air Change Programme (ACP), this was paused. It had been anticipated that the flight profiling per section 1b of the current Noise Action Plan (NAP), and input to the ACP process would be major components of EANAB's 2020 work.

Despite the ban on physical meetings, and withdrawal of funding for secretarial services to produce minutes, EANAB chose to meet by internet link and to seek to continue its work. It was clearly correct to do this as the work of other organizations, such as NATS, ANS, CAA, WHO and ICCAN did continue, albeit generally at a reduced pace. Several relevant public consultations were responded to. As well as being unable to respond to many EANAB enquiries, EAL was also unable to produce its annual update on its implementation of the provisions of the 2018-23 NAP.

The airport did choose to launch a review of the structure and functioning of EANAB, and that review was underway at the end of the year, with no indication of what proposals may be made.

The dearth of progress during 2020 has had the result that the issues described more extensively in the 2019 report are substantially still extant. Similarly, it is also the case that the future workplan and objectives are little changed. It is however very encouraging that EAL's recent much more co-operative working with EANAB on ACP development bodes well for the future once current restrictions are lifted and airport staff are able to return to work.

The move to internet meetings and production of minutes without external help was maintained through the enthusiasm and dedication of members freely giving their time to this task. However, this was not without its difficulties, particularly when time-consuming disagreements arose. Anticipated future resumption of 'in person' meetings will hopefully enable internal difficulties to be overcome. Future re-creation of a 'Governance' sub-group may help with this.

Over 2020 as a whole, probably the most positive EANAB achievements were made by its sub-groups, as itemised below.

## **Health and Aircraft Noise**

Communities have represented concerns on the impact on their health and wellbeing as a result of Aviation Noise from operations at Edinburgh. EANAB recognises that it does not have the resources and skills to investigate these aspects directly, so its Health sub-group remains dependent on the work of others. In particular we have drawn upon reports issued by The Independent Commission on Civil Aviation Noise (ICCAN), such as the Report on the future of aviation noise management (March 2021) which includes a quote from the World

Health Organisation: “There is good evidence to suggest that those who experience regular aviation noise are at higher risk of health issues such as hypertension, annoyance, sleep disturbance, obesity, cognitive impairment for children and lost productivity (World Health Organization, 2018). “

The quality of evidence itself has recently been the subject of a further report by ICCAN which has as a result recommended additional studies to fill information gaps and increase confidence in the current view. This report entitled "Aircraft Noise and Public Health" was produced by ICCAN in July 2020. Some information about, and extracts from this report are appended as Annex 1 of this review.

Some EANAB members also participated in (virtual) workshops arranged by ICCAN as a consultative exercise.

For EANAB, in particular the links between measured health impacts, possible impacts and noise measures which currently inform the UK Govt recommendations to airports to consider mitigation measures below the Lowest Observable Adverse Effect Level (LOAEL) is under review by ICCAN. EAL currently offer mitigation to households that experience modelled noise at levels of 63dB LAeq or above. UK LOAEL was previously set at 57 dB LAeq 16hr summer and the present recommendation is for that level to be set at 51 dB LAeq. The European level is set at 45 dB as is the WHO recommendation.

At Edinburgh (EDI), EANAB has worked with EAL to produce new more accurate maps as the basis for Noise Management. (See Aviation Report below)

## **Aviation**

Given the overlap between the work of the Aviation Consultancy and the Outer Airways Sub-Groups, they have been combined in a new SG named simply the Aviation SG. Largely due to the efforts of the Outer Airways SG, both EAL and NATS are looking to progress the use of the Firth of Forth for many Runway 06 departures, i.e. those aircraft that fly eastwards as they depart. The SG have worked constructively with EAL to open discussions with these other stakeholders to ensure that options to utilise airspace over the Forth Estuary can be managed to minimise the impact of aircraft noise from easterly departures and westerly approaches to Edinburgh.

The SG's other achievements in following up the success of the previous studies looking at arrival and departure operations and consequent new noise modelling were severely curtailed by the impact of Covid 19 and with EAL's consequent decision to pause allocation of finance and adequate staff resource to support planned EANAB work.

EANAB had completed work with aviation consultancy, To70 in 2018 and 2019, that led to new noise contour maps being commissioned, to show the true picture of the noise to be expected around Edinburgh Airport. These maps were delivered to EAL in late 2019, shown to EANAB in early 2020 and made available for analysis to EANAB in August 2020. Those maps confirmed that the previous maps issued by EAL in 2016, were based on two flawed assumptions – firstly that Gatwick profiles were flown at EDI and secondly that departure flight paths were accurately followed, resulting in significantly underestimating the noise levels.

The corollary of this is that if take-off profiles similar to those at Gatwick were adopted at EDI, then the noise levels being experienced by residents on the ground should drop. If successful,

this approach would have the major advantage of achieving significant noise mitigation without the need for an ACP. This was therefore intended to be the main focus for the SG's work.

Consequently, a proposal to progress this work was made to EAL in August 2020. It was initially well received with in-principal funding agreed for To70 to carry out a short exercise to independently confirm the premise. Unfortunately, it progressed no further due to the ongoing impact of the pandemic.

Importantly also, analysis of those more accurate maps can now be utilised as a basis for informed discussion of planning issues, and mitigation measures. These issues will form a significant part of forward work along with progression of the flight profiles optimisation study.

### **Air Change Programme (ACP)**

In January, a Board letter was sent to EAL and copied to the CAA and ICCAN, confirming the Board's view that EAL's claim that greater runway capacity was required, was not supported by the data EAL had provided. Concerns over the consultation methods used for the Design Principles workshops were also expressed by EANAB. In February the CAA confirmed EAL's ACP had not passed the stage 2 Define Gateway Stage. In May, lack of staff support due to Covid – 19 resulted in the ACP being suspended for the rest of the year.

### **Complaints and Noise Reporting**

EAL was able to produce 3 quarterly noise reports based on a revised template developed and agreed with EANAB. The report for Q4 2020 was not yet available at time of writing this report. The additional information provided through the revised template was warmly welcomed by EANAB, and an information summary on the Q1-Q3 reports was produced and circulated. For this period, the airport issued no fines for aircraft exceeding their noise standards. Some of the worst noise peaks arose from events which would be exempt from fining on safety grounds ('go-arounds'), or military aircraft. The number of noise complaints received by the airport correlated significantly with the number of aircraft movements, which varied substantially across the year.

EANAB will continue to negotiate with EAL to increase transparency on the impact of the noise complaint system and reporting on changes to operations.

EANAB will continue to press for more accountability from EAL by negotiating a more responsive incentive scheme for minimising noise.

Having reduced resources to manage costs during the Covid 19 pandemic the airport was unable to carry out any more 'mobile' monitoring, or to produce further reports on the monitoring which it has done. A report on Noise monitoring work previously carried out in the community north of the Forth has been put on hold.

Work by EAL on a planned 'fourth fixed fining monitor' under the departure flight path on the Dalmeny Estate was also stalled. There is therefore still no accurate noise monitoring under Runway 06 departures, which would enable fining if noise thresholds were exceeded.

## **Planning and Noise**

In 2020 a planning SG was formed to utilise the new noise maps resulting from the study by the Aviation SG.

When those maps were received in August 2020, they were applied to a series of planning applications. Several of those applications were informed by localised short-term noise monitoring of variable standards, rather than the more accurate new noise maps now available from EAL. EANAB have sought that the new maps be made available to planning decision makers and will continue to work towards their utilisation as standard procedure.

## **Independent Commission on Civil Aviation Noise (ICCAN)**

The ICCAN Sub Group of EANAB was formed in 2020 following a request to the Chief Commissioner to attend an EANAB meeting when he was able to update the Board on the progress made by the Commission since its inception in February 2019.

ICCAN is a non-statutory, advisory body created to provide independent, impartial advice to government, regulators and the UK aviation industry. The ICCAN website <https://iccan.gov.uk/> is used to provide updates on the work of the Commission, publish ICCAN guidance and reports, and provide simple, easy-to-understand information about how aviation noise can be measured, mitigated and managed.

The Board continues to liaise with ICCAN as much as possible, and contributes to the work of the Commission in various ways.

## **Annex 1: Health and Aircraft Noise - ICCAN Report**

The Noise Board needs to consider all aspects of the impact of noise. One area that is of increasing importance and is becoming critical is the impact on health. EANAB members are aware through feedback from their local communities that aircraft noise does impact the health and quality of life of those living under the flight paths of aircraft from Edinburgh Airport.

The impact that aviation noise has on people has been looked at and results published for a number of years. These vary from sleep disturbance to critical impacts on for example the cardiovascular system.

It has become very clear that noise disturbance at night cause physiological effects. The loss of sleep damages more than just concentration. Sleep deprivation is a recognised tool in interrogation and while aircraft noise is not in this class it does produce damage. A recent study has linked sleep disturbance to increases in arterial deposits and the threats that they bring, especially in women.

There are reports of the type of damage, but there are issues with determining the critical levels and duration. The Board does not have the expertise required to analyse the data from such reports and publications and therefore defers to other organisations that might provide

professional analysis/conclusions and which might have or gain statutory or legislative authority.

In its role as an independent and impartial voice on civil aviation noise and how it impacts communities, the Independent Commission on Civil Aviation Noise (ICCAN) commissioned an expert study report which is attached (published July 2020). It is labelled as a rapid evidence assessment\* (REA) and has been carried out by qualified professionals. The report provides details of the methodology used to generate the findings and recognises the problems, including both under and overstatement of the problem and the risks and expresses caution when drawing conclusions from preliminary studies. It looks at where there are evidence gaps and the potential ways forward for future research on the links between aviation noise and health.

Key findings from the ICCAN assessment report are listed below:

- *The new evidence primarily focuses on health outcomes for sleep, quality of life, mental health and wellbeing, and cardiovascular and metabolic disorders. Several recent studies had small sample sizes – some were feasibility studies – and therefore can only give indicative findings.*
- *We made and collated ratings of the quality of evidence as ‘high’, ‘moderate’, ‘low’ or ‘very low’ for given health outcomes, using the GRADE approach (described in Appendix A). For a small number of outcomes, primarily in the areas of sleep and cognition, there is moderate quality evidence on the links between aviation noise and public health. Typically, it is difficult to achieve high quality evidence in environmental studies, and moderate quality evidence is therefore considered sufficiently robust to support strong policy recommendations.*
- *For most health outcomes, the evidence on the effects of aviation noise is low or very low quality. This low quality is primarily driven by the fact that most studies use a cross-sectional design and many have small sample sizes which limits their power.*
- *For some areas of health, including dementia and other neurodegenerative outcomes, cancer, and birth and reproductive outcomes, there is little or no evidence at all relating to aviation noise.*
- *There are therefore evidence gaps for the areas with limited or no evidence and those with low or very low-quality evidence. These areas present ICCAN and other stakeholders with opportunities for further research.*
- *Where evidence is of moderate quality, there is a need to quantify how interventions or operational changes impact health outcomes.*
- *ICCAN has a range of stakeholders, who are likely to have different priorities regarding areas for future aviation noise research. There has been relatively little data from the UK, despite having a large noise-exposed population including the busiest airport in Europe. It is welcome that two large research projects (ANCO and RISTANCO) are currently ongoing.*
- *In weighing up the areas for further research, ICCAN may take into account current priority areas in wider public health, including air pollution, mental health, and reducing health inequalities, as well as longer term ambitions.*
- *There are also opportunities for ICCAN to investigate the potential of retrospective cohorts combining noise maps with the wealth of data available in various UK cohort studies, as a*

*means of obtaining high quality evidence without the costs and delay inherent in prospective longitudinal research.*

- Collaboration among academic and other interested parties could support wider use of consistent research methods, such that even studies of lower individual quality could be combined robustly in support of stronger evidence.*
- High quality evidence requires investment in longitudinal research. Whilst this is expensive, it would be an opportunity to gain insight into exposures beyond aviation noise, such as air pollution, that will be of interest to a broad range of public bodies.*

It is important that any information and advice the board may promote is soundly based and will withstand scrutiny. Therefore, EANAB will monitor any further reviews issued by ICCAN and endeavour to update advice as new validated information becomes available.

\*The ICCAN review took the form of a REA – a tool for systematically finding and synthesising available research as comprehensively as possible within a reduced timeframe. This REA was designed to build on existing systematic reviews conducted for the World Health Organisation (WHO) and the UK Department for Environment, Food and Rural Affairs (Defra). ICCAN searched academic databases and conference proceedings for findings published in the year since those reviews were conducted, in addition to the websites of relevant organisations. The findings of 12 new studies were combined with those of the WHO and Defra reviews, and the quality of evidence summarised across 58 health outcomes using a systematic approach.

**A list of represented Community Councils and other similar bodies are noted on the EANAB website [www.eanab.org.uk](http://www.eanab.org.uk)**

Signed: Lindsay Cole, Chair

Date: