

# Noise metrics

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## Aims of this session

- To provide an update on the noise metrics project
- To seek from the Board:
  - agreement on the project direction
  - guidance on some remaining issues (including ICCAN's long-term strategy for noise metrics).



# Recap: project objectives and stakeholders

This project aims to:

1. review the different metrics used for measuring and providing guidance on the management of aviation noise, and consistency in the use of these metrics
2. consider whether there are ways to ensure better public understanding of these issues

Key stakeholders include:

- CAA
- Airports
- Local communities
- Data publishers
- Government (DfT and DEFRA)
- National Physical Laboratory

# Recap: project timelines

The project is working to these high-level timelines:

	2019				2020			
	July	Summer	Autumn	Dec	Jan	Feb	Mar	April
Research	█	█	█					
Draft report				█	█			
Internal review					█	█		
External QA						█	█	
Report finalisation							█	█
Publication								█



## High level methodology

We have used desktop research and stakeholder engagement to identify the main issues around the production, publication and use of noise metrics.

From this, we have developed some areas of focus for the project:

1. key noise metrics
2. standardisation of noise recording
3. availability and transparency of noise data publications
4. presentation of noise data.



# Key findings

## Key noise metrics

- Unlikely that one metric alone accurately captures noise annoyance
- Lack of public understanding around the construction and interpretation of noise metrics
- Legislation uses a wide range of noise metrics, as does existing health research – makes it difficult to deliver significant changes to noise metrics in the short term.

## Standardisation of noise recording

- Lack of standardised method or best practice for noise data recording, with most recent guidelines published in 2005
- Requirements for monitoring and data submission may need to be proportionate to airport size
- Some airports provide a temporary noise monitor for local communities but this is not a universal offer.



## Key findings (cont.)

### Availability and transparency of noise data publications

- UK airports with more than 50,000 ATM/year only submit noise data every five years (except for designated airports, which submit annually).

### Presentation of noise data

- Models to produce noise contour maps (NCMs) use averaged data from the main ANCON database (based on London airports or Noise Certificates)
- Current NCMs may not be appropriate for people with a visual disability (approx. 7% of population).



# Emerging opinions

## Key noise metrics

- Existing  $L_{Aeq}$  based metrics should continue to be used for the measurement and management of aviation noise.
- The Nx metric (the number of events that exceed a pre-determined noise level, x) should be used as a complementary noise metric to capture the frequency of noise events.

## Standardisation of noise recording

- All airports should implement a program to provide communities with temporary access to noise monitors.





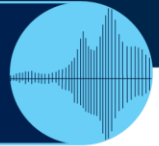
## Emerging opinions (cont.)

### Availability and transparency of noise data publications

- All airports should update and publish NCMs at least once a year. This should include NCMs based on the Nx metric and provide a yearly comparison of forecast NCM with actual NCM based on noise recording data.
- Airports with more than 50,000 ATM/year should submit annual noise recording data to validate the ANCON model outputs.

### Presentation of noise data

- Minimum standards should be introduced for the quality of NCMs, covering: resolution, background detail, labelling and annotations.
- Flight path movement charts (FPMCs) should be produced by all airports to illustrate how flights are shared between flight corridors and overfly communities.



## Remaining issues requiring advice

- What is ICCAN's future role in the production, publication and use of aviation noise metrics?
- Do we need any further input on providing minimum requirements or best practice guidance for noise recording?
- What data can we reasonably expect airports to collect, given the costs and administrative burden of doing this?
- Who should be responsible for publishing and presenting noise data, and in what form and how frequently?
- Should we seek to get data from other airports to validate the outputs of the ANCONA model?

