



Community Noise Metrics

Project Report

LONDON GATWICK NOISE MANAGEMENT BOARD | Programme Steering Group

April 2026

The information provided in these slides specifically refers to the London Gatwick NMB, and should strictly not be re-purposed, taken out of context, or misused.



LONDON GATWICK

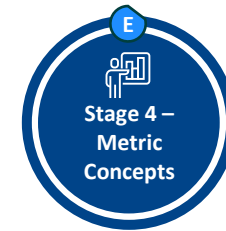
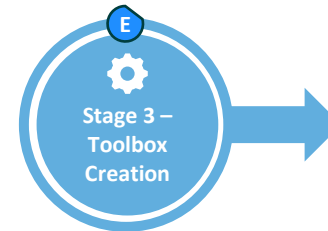
The Community Noise Metrics project has focused on identifying ways to improve noise information for communities

Project context

- Noise information is often complex and there are many different metrics that are used to measure the impact of noise.
- Noise management initiatives are not always clear in the process behind which metrics are selected to measure success.
- Existing noise metrics are beneficial for historical reporting however they do not always relate to, or represent, the community lived experience of aviation noise.
- This project was identified through community requests and through research of other airport noise management initiatives.

Project approach

E = Engagement Activity



Assess:

- Current noise metrics suite
- Use cases for different metrics
- Links and gaps of the existing metrics

Outcome: Framing and scope for engagement with communities

Assess:

- Satisfaction with noise information and metrics
- Requirements for a metrics selection process

Outcome: View on concern areas for noise and relevant metrics, including prioritisation

Assess:

- Views on the proposed process
- Requirements for using and governance of metrics in projects

Outcome: Agreed process for noise metrics selection in future NMB work

Assess:

- Views on existing noise information (at London Gatwick)
- Preferences from external examples

Outcome: Requirements for a community noise tool

Project objectives

- 1 Engage with communities to identify key areas of concern and noise measurement that should be further considered.
- 2 Develop a community noise impact index that incorporates community centred metrics.
- 3 Support future noise management initiatives by providing actionable insights to stakeholders within the NMB.
- 4 Identify opportunities to enhance the existing noise information suite.

The Community Noise Metrics Project will serve as a baseline for future projects, with insights into how best to select, use and present noise metrics for communities

Summary: Key Outcomes of the Project

Provision of Information

- Current noise information is often viewed as too technical, and community members value transparency and accountability.
- Community members prioritise noise information that reflects their lived experiences as closely as possible.

Selecting the Right Metric

- There is a strong interest in mode, route and location-specific reporting.
- Clear, structured processes for selecting metrics help buy-in and trust in the development of projects.
- Trends over time and understanding benefits/disbenefits are areas to consider for noise metric selection.

Explaining Noise Information

- Visualisation is key to communicating noise impacts and trade-offs.
- There is a wide array of existing resources, but understanding the local-level noise picture can be challenging.

To build on these findings, the NMB will integrate a metrics selection process into its project development process and will look to develop a publicly available dashboard tool to provide additional noise information.

Metric Review



There are numerous noise metrics, each used for a different purpose. These can be classified based on the information they provide to different audiences

Purpose of noise metrics

Noise metrics have been developed to serve a range of purposes, which is why there are so many examples.



Specification & design

e.g. EPNdB (used for aircraft noise certification purposes)

Criteria and target setting



Typically for regulatory or monitoring purposes.

e.g. $L_{A(eq)}$ (used to summarise and compare a dynamic sound environment in one number)



Performance analysis

Metrics comparing different scenarios

e.g. height of aircraft, single event histograms

Communication



e.g. number above events (N60/65/70) – the complexity depends on stakeholder requirements

Classification of metrics

Noise metrics have been developed to serve a range of purposes, which is why there are so many examples.

Operational Indicators

*Describe the movement of aircraft around an airport
e.g. lists of operations, flight tracks*

Single Event Metrics

*Noise on the ground at a defined receiver point
e.g. L_{Amax} (maximum or peak loudness), SEL, histograms*

Time Averaged Metrics

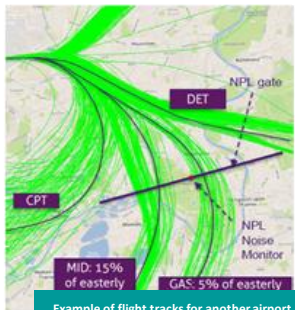
*Overall average noise exposure at a defined receiver point
e.g. $L_{Aeq,T}$ (sound level equivalent to a sequence of events)*

Spatial averaging and aggregation

*Overview across a range of receiver points
e.g. L_{Aeq} (daytime and night-time, or different times of day)*

The aviation industry has been using various sets of metrics to monitor airport noise. The following are the most common metrics in use at UK airports

Operational Indicators



Focus on aircraft movement relative to a defined location

- Lists of aircraft operations by time of day, aircraft type, weight, and route.
- Gate analyses, showing aircraft height and position as they pass a fixed point.
- Flight track maps, illustrating individual paths and aggregated traffic patterns across the ground in relation to communities.

Time-averaged Metrics

Focus on the overall average noise exposure

L_{eq}/L_{Aeq} Hypothetical constant sound level, which contains the same sound energy as the actual variable sound over a defined measurement period. The UK government considers $L_{eq,16hr} > 57\text{dBA}$ as the noise level of significant community annoyance.

L_{xxx} The L metric can be expressed as a *day* (0700-1900), *den* (day evening night), *dn/DNL* (24hr), *evening* (1900-2300), and *night* (2300-0700)

NEF/ANEF The Noise Exposure Forecast (NEF) descriptor combines sounds levels expressed in EPNL with the number of events over a certain EPNL level. Trade-off factors are applied to night-time and daytime traffic respectively.

Single Event Metrics

Focus on the noise on the ground at a defined receiver point

$L_{max}/L_{A(max)}$ Maximum sound level of an event (e.g. overflight).

SEL Sound Exposure Level is the energy of sound delivered by a single event compressed into a 1-second reference period. $SEL > 90\text{dBA}$ leads to sleep disturbances (UK CAA – ERCD 0905).

PNL Perceived Noise Level defines the unwanted, objectionable, disturbing and/or unpleasant element of a noise event (different frequencies).

EPNL Effective Perceived Noise Level is developed to better reflect the human perception of noise by accounting for tonal characteristics and duration.

Supplementary Metrics

Provide additional information in support of other metrics

N_{above} Number of events above a stated noise level, often N_{70} , N_{65} and N_{60} , corresponding to different dBA levels

L_{90}/L_{10} Statistical noise metrics commonly used to assess environmental noise exposure over extended periods, capturing the variability of noise events that may be repetitive or isolated in nature. These *show the A-weighted sound level exceeded for n% of the measurement time*.

- L_{90} often represents the background noise level
- L_{10} typically is used for peak noise levels (i.e. 10% of the time)

Community Priorities



Community members were presented with a range of metrics to discuss, which provided an understanding of what is needed most from supplementary metrics

Community priorities from the engagement

Single mode metrics

- Showing noise exposure from different runway ends
- Illustrating the variation in operations and noise exposure

Dispersal measurement for Arrivals and Departures

- Measuring dispersal and changes
- Anticipated changes to traffic and related 'fairness factors'

Improving transparency

- Illustration of London Gatwick acknowledging key issues and proactively acting on them
- Noise Action Plan progress and updates

Maximise data from existing monitoring

- Understanding what insights can be found from existing sources

Conducting Gate Analysis

- Show heights of aircraft, variability and trend identification at different locations

Key insights

There is a focus and interest in mode and location specific reporting

Requests for "single mode metrics" and "runway-end" views show that blended metrics do not always give communities the information they are after. Seeing how easterly vs. westerly operations (and which runway end) change the experience of noise is of interest. Seasonal and similar trends affecting the sound heard is also a key area to explore.

Current metrics can be too complex to understand, reducing their effectiveness for comprehension/information sharing

Feedback shows that technical terminology can often be a barrier to understanding. Reducing the technicality of noise information, i.e. answering 'what does this mean?' would improve the understanding of noise issues. Illustrating, in clear terms, the progress in the Noise Action Plan could help in this also. This reflects a broader desire for communications that explain, rather than just present data.

Track dispersion and the 'fairness' of these tracks are priorities for the NMB's communities

There is high interest in understanding how aircraft tracks disperse across routes and how this may change under PBN or other route modifications. Participants highlighted that dispersion is central to perceptions of 'fairness', and a clear representation of how operational changes may shift who is most affected, would benefit communities.

There is interest in better explaining the factors that affect noise on the ground

Communities want greater clarity on the environmental and operational factors – such as weather conditions – that influence how noise is perceived. This is linked to a desire to better understand natural variability as well as the drivers behind changes in noise levels.

Wider NMB findings also show there are a number of key priorities for communities

Night Flights

Quotas vs Events,
Planned vs Unplanned,
Delays, Noise Events

Go Arounds

Frequency, prevention, noise
impacts

Operations

How aircraft operate, impact
of operational factors on noise,
pilot operation

Land Use Planning

Distribution of
noise information,
planning decisions,
mitigation

Engagement

Best practices to
engage with
communities

Technological Design

A220 'Whale' Noise,
improvements by design, noise
source improvement

Airlines

Specific airlines
causing noise issues,
airline-specific
analysis/engagement

Noise Monitoring

Location of noise monitors,
complaints vs noise
enquiries

Tracks

Operations and trends, height of
aircraft on tracks, on vs off track
aircraft

Noise Measurements and Metrics

Making data understandable,
visualisation, demonstrating impacts
and trade-offs, dashboarding and
data sources/repositories




Landing Gear

Wheels down early,
noise impacts, trends

Operational Context at LGW

Advanced Mixed Mode, Time-
Based Separation, ATC operations

Based on outcomes of engagement exploring community member priorities for metric criteria, the NMB identified some existing operational measures and metrics, which could be used to explain the impact of noise

	Operational measures	Noise metrics
<p>One location One flight</p> 	<p>Overflights Height (altitude) Aircraft type (and QC or certification EPNdb) Arrival or departure (mode) Time</p>	<p>Loudness (L_{Amax}, SEL) Loudness above a threshold (eg 70dB L_{Amax}) 'Impacts':</p> <ul style="list-style-type: none"> • Could interfere with speech outside <ul style="list-style-type: none"> • Might wake you up • As loud as...
<p>One location Many flights</p> 	<p>Number of days with/without flights * Number of flights per hour/day Number of quiet nights Average/min height (altitude) Earliest/latest flight times</p>	<p>Max/average loudness (L_{Amax}, SEL) Number above counts (N70, N65, N60 or "impacts") PEI</p>
<p>Area</p> 	<p>Heatmaps Rugby post charts</p>	<p>Contours: L_{eq16hr}, $L_{eqnight}$, L_{DEN}, N70, N65, N60 or 'impacts' Personal Event Index</p>

* Due to easterly/westerly alternation

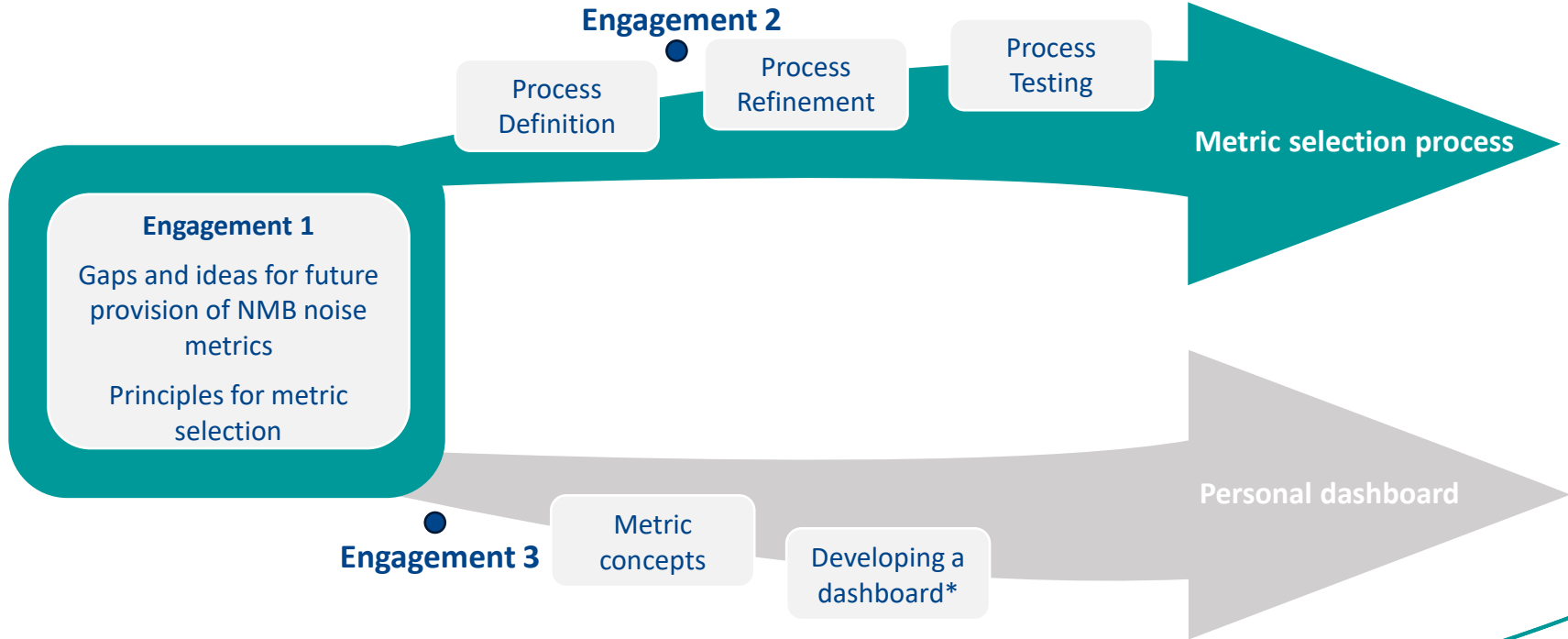
Comparing these metrics can be used to illustrate:

Trends over time
(% change)

Changes in different
periods
(Summer v Winter,
Weekend v Weekday)

Community member priorities have guided the development of two key solutions: a metric selection process and a new personal dashboard concept

Community engagement highlighted the need for more transparent evaluation metrics more relatable noise information, which has directed the development of the two outcomes below.



**To be developed in future work*

Toolbox Creation

Metric Selection Process



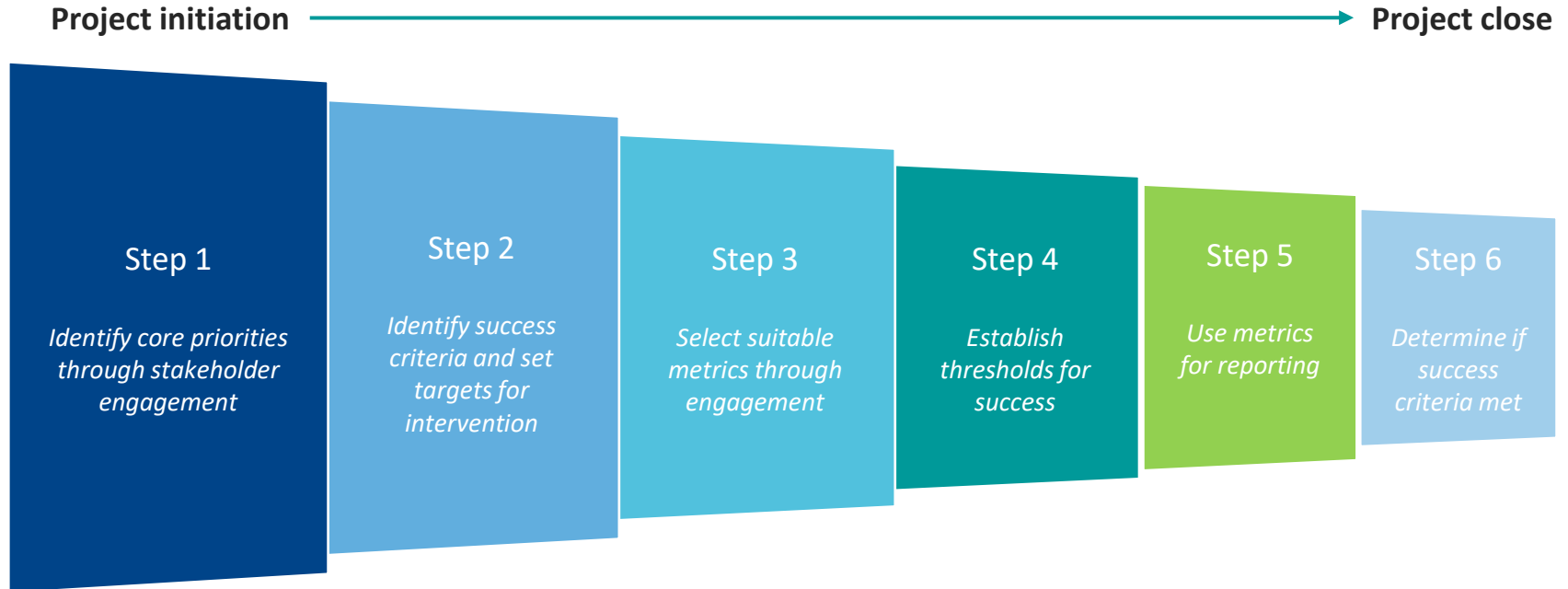
A toolbox of metrics to support the identification and selection of metrics has been proposed, helping stakeholders to agree success criteria

Categorising metrics by function

Increasing aggregation 

	Movements	Noise at defined receiver points			Time profiles/averaged at defined receiver points		Time-averaged spatially-aggregated footprints (+population)	
Purpose	Operational indicators	Single event metrics	Single event with population	Multiple point measurements	Single event histograms. N_{above} for defined periods	Time averaged level equivalent	N_{above} footprints	Leq footprints
Specifications for design				EPNdB for certification				
Setting targets/thresholds	Gate analysis height limits	L_{max} limit	PEI limit for noise threshold	QCs as limit	N60/65/70 count limits	L_{eqT} limit	N60/65/70 contours	L_{eq16hr} $L_{eqnight}$ L_{DEN} contours
Comparing 'what if' scenarios	% aircraft on routes, days without movements	Change in L_{max}/SEL	Change in PEI	Specified relevant measurement points to validate modelled outcomes	N_{above} profiles N60/65/70 count	Change in L_{eqT} at relevant receiver points	Change in footprints and associated PEI	Change in L_{eqT} footprint and associated population
Communicating noise issues/concerns	Movement histograms and heat maps. Changes over time	Changes in L_{max} over time	Fly-over L_{max} PEI	Specified relevant measurement points to address specific issues	Changes in L_{max} profiles	L_{eqT} for different time periods to highlight impacts/issues	Use of appropriate L_{max} thresholds to footprint noise	L_{eqT} for different time periods to highlight footprint impacts/issues

The criteria will be used within the NMB's project scoping process to track the progress of initiatives from the outset



Example project utilising this process

Step 1 Plan	Step 2 Agree targets	Step 3 Select metrics	Step 4 Set thresholds	Step 5 Report	Step 6 Conclude
<p>NMB with stakeholder agreement identifies an opportunity to fly an optimised departure profile on a specified route.</p> <p>The aim is to increase the average height of aircraft at a targeted location by 250 feet, thereby achieving noticeable >3dB L_{max} noise reduction on the ground.</p> <p>Modelling of the existing fleet suggests this is possible.</p> <p>Airlines approached and agree to pilot new profile. Historic flight track data is used to establish baseline of single noise events (L_{max}) from current operations.</p>	<p>NMB, through discussion with stakeholders, agrees that intervention is successful if >60% flights achieve the targeted average height increase.</p> <p>Modelled noise on the ground from actual NMT data demonstrates that these flights will achieve an average >3db L_{max} decrease on the ground.</p>	<p>Technical team identifies operational and acoustic measures of meeting the thresholds through:</p> <ol style="list-style-type: none"> 1. Gate analysis at targeted location(s) 2. L_{max} event histograms to allow comparison with baseline event profiles 3. Proportion of flights achieving >250 ft height increase 4. Calculation of modelled L_{max} and difference in L_{max} from actual RFTs for qualifying flights. <p>Due to 'natural' variation in noise on the ground, it is agreed that ground monitoring via NMTs would not assist in validating modelled data.</p>	<p>Threshold for 60% of flights achieving 250 feet increase in altitude as measured through gate analysis is confirmed.</p> <p>Stakeholders agree that it is unreasonable to expect all these flights to achieve >3db reduction and set a threshold of 90% of qualifying flights.</p>	<p>2x3-month trial period agreed, along with data capture.</p> <p>Monthly reporting of performance to NMB technical group with remedial actions as required.</p> <p>Quarterly reporting to Community Assembly and Oversight Board to examine data from each month of trial.</p> <p>Depending on performance, trial stopped or extended to validate positive findings.</p>	<p>Trial identifies that 75% of flights achieved the targeted increase in altitude resulting in modelled noise on the ground reducing by >3dB for 85% of those flights.</p> <p>NMB agree that the targeted noise reduction was greater than the threshold.</p> <p>The intervention has been a success and roll-out of the new procedure is recommended.</p>

Communities agreed with the proposed process and would like to see this used in 'active' projects going forward

Community feedback on the process

Stakeholder engagement

- The process is key to involving stakeholders and gaining buy-in
- It is clear for communities to explain how metrics are being selected

Discretion and selecting the 'right' metric

- The process should allow for local issues to be identified
- Issue-driven concerns can use the toolbox to identify the range of possibilities for selection

Metric Use

- Averages are not always useful without support from local area data
- The metrics used may need to be applied to specific areas / operational conditions (e.g. stages in a flight's operation)

Governance

- Evidence of the process being used needs to be shown
- Flexibility to adapt the selection based on outcomes should be enabled

Lived Experience

- Metrics used need to effectively capture the lived experience – visualisation and aggregation can help with this
- Projects may need to illustrate benefits/disbenefits

Key insights

Stakeholders value a clear, inclusive process for selecting metrics

Feedback shows strong support for the proposed metric-selection process, with communities emphasising that it helps build understanding and buy-in. Participants highlighted that being able to see how and why metrics are chosen is important for trust and engagement.

Flexibility is needed to ensure metric selection reflects local issues and project outcomes

While the process itself was welcomed, community members stressed the importance of retaining discretion. Communities want space for local conditions, trade-offs and issue-driven concerns to shape the choice of metrics for each project, rather than applying a rigid framework.

Selecting the 'right' metric must be linked to the issue being addressed

There was clear agreement that metrics need to relate directly to the outcome a project is trying to achieve. Communities want assurance that chosen metrics meaningfully reflect the noise issue under discussion, and that the full 'toolbox' is considered when identifying the best fit.

Presentation of metrics must make impacts and trade-offs visible

There is strong interest in how noise impacts shift between different communities. The findings from the FED study reinforce this, and changes may improve the situation for one area while worsening it for another. Communities want these benefits and disbenefits to be clearly shown in the way metrics are presented.

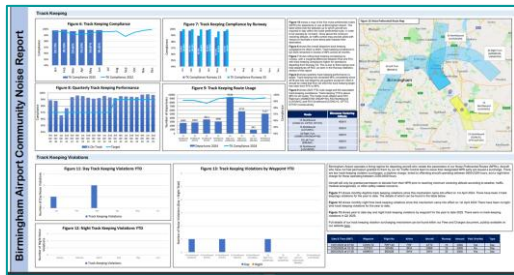
Outcome: The defined process will be integrated into the project control sheets.

Metric Concepts



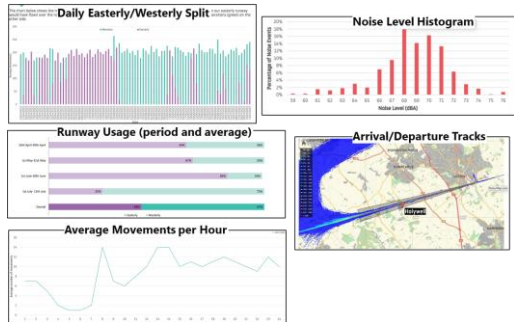
Not every airport in the UK, and/or globally, present noise information the same way; each look to address the local context and need

External Tools and Information for Noise



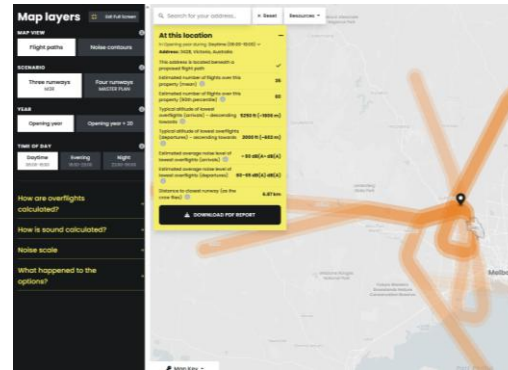
Birmingham Airport Community Noise Report

- Example of complex information sharing for most purposes and the idea behind a tool for the NMB.
- Information is focused more on operational factors, and less on direct noise impacts.



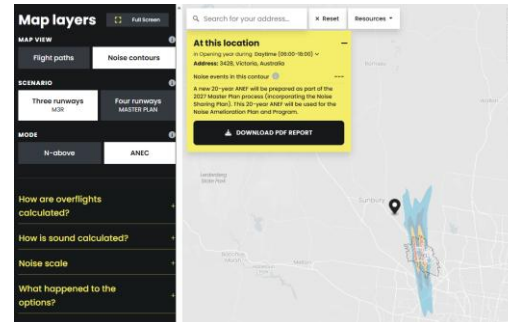
London Luton Airport Community Noise Reports

- A wide range of noise information (both operational and measured).
- Produced per monitor in a cycle.



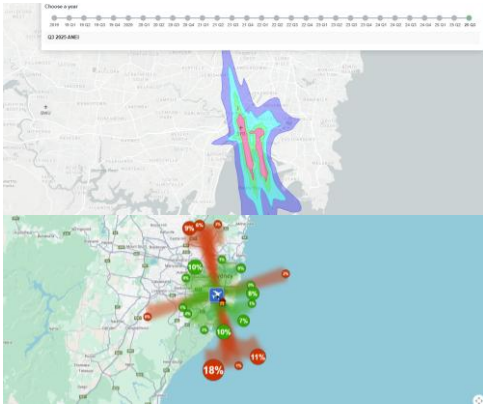
Melbourne Airport Flight Path and Noise Map

- Local context can be shown by selecting an area, i.e., map only shows overflying tracks.
- Illustrates noise impact of proposed development.
- Noise scale included for comparison.
- Uses N-above and ANEC metrics (Australian Noise Exposure Contours).



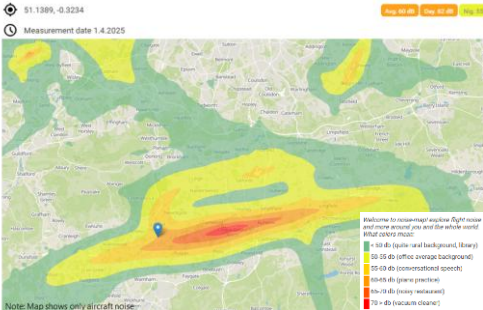
Not every airport in the UK, and/or globally, present noise information the same way, each look to address the local context and need (cont.)

External Tools and Information for Noise



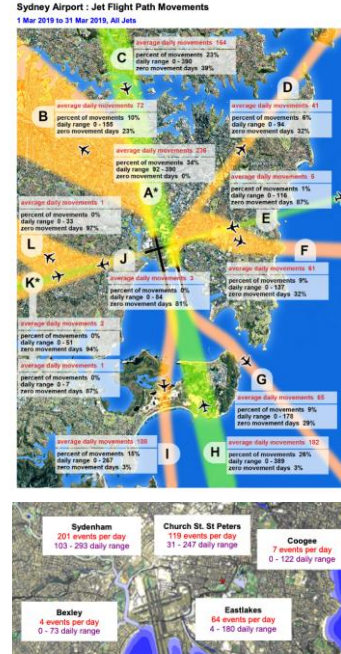
Sydney Airport Noise Information

- Noise information hosted by Airservices Australia (ANSP).
- Uses ANEP contours (Australian Noise Exposure Contours).
- Can split between day/night, weekend/weekday, and has Quarter averages (historical).



Noise-Map.com

- Illustrates aviation and road noise if requested (map on left shows only aviation).
- Shows cumulative impact of noise using L_{eq} metrics.
- Understandable scale to illustrate noise.



Sydney Airport Noise Information Reports

- Reports produced show a range of operational/event data from which noise information can be inferred.
- Flight paths show the average movements and the range, also indicating days with no movements on this route for a given period.
- Local data also given (below) to understand the variation of aircraft movements in a given area.



Community members want clearer, more intuitive noise information with flexible layers of detail that allows users to explore data in ways that suit their needs

Indicated requirements based on community feedback

Clarity

- Data and visualisations need to be clear and should avoid potential misinterpretation, i.e., ensure iconography and colour usage matches the message.

Event analysis

- Separating between noise events and general trends is important.
- Communities want to understand expected vs unexpected events.

Data

- Timeframes on data capture need to be clearly stated.
- Choice on when to show data from is useful for independent analysis.

Disaggregation

- Different types of analysis and information is better suited to be more or less granular.

Key insights

Communities want clear and intuitive noise information

Feedback shows that certain colour schemes and icons, e.g., red/amber/green in WebTrak can create misleading impressions about 'good' or 'bad' noise. Communities emphasised that future tools must present data in ways that avoid misinterpretation and ensure that iconography and colour use match the intended message.

There is a desire for more granular and locally relevant data

People highlighted that high-level reports and contours are useful for broad patterns but often miss important local detail. Communities expressed interest in more granular information, e.g., by monitor, parish, or specific flight path sections, where this adds clarity, while also recognising that some analyses may be better shown on a wider scale.

Interactivity and layered detail are valued features

Examples from other airports showed that tools offering clickable or expandable layers of detail resonate with users. Community members appreciate being able to move between summary graphics and more detailed data depending on their interest and understanding.

Communities want help understanding the relevance of different noise levels

Noise affects people differently, and some expressed that it can be difficult to know what given noise levels mean in practice. Having visual cues or indicators showing where certain thresholds sit (in relatable or contextualised terms) would support wider understanding.

Different types of analysis require different levels of disaggregation

Feedback shows that noise information is not 'one size fits all'. Some views are better communicated through simple airport-wide metrics, while others require highly local analysis. The ability to scale between these levels is seen as important for a successful tool.

Outcome: Following recommendations, a dashboard tool will be developed to provide additional noise information

Engagement 3

Based on the engagement through the project, several community interests have been identified that will inform a dashboard tool

Community interests in a dashboarding tool

Runway mode filter to show 1-runway operations and mode analysis

Show variations (eg summer/winter, day/night)

Height/gate analysis, track analysis

Night flights

'Relatable' noise levels

Time/location comparisons

Weather impacts on natural variation in noise levels



The NMB has recommended that a dashboard tool should be created to present additional noise information to community members, based on the findings of this project

As far as reasonably possible, the community interests indicated will look to be addressed in this tool

A mock dashboard will be created during 2026 with a view to feed into a final dashboard when feasible

Annex: Engagement Summaries





LONDON GATWICK NOISE MANAGEMENT BOARD COMMUNITY NOISE METRICS | FIRST ROUND ENGAGEMENT

30 May 2025 | 10:00 – 11:30

Provision of information and metrics in relation to experience of noise

- How satisfied are you with the current provision of noise information by Gatwick Airport?
- In terms of regular reporting of noise exposure, are there specific issues/topics/concerns that you would like to see addressed?
 - might these need to be tailored to individual locations? (i.e. height of aircraft might be an issue at some locations but not others)

Gaps and ideas for the future provision of NMB noise metrics:

- **Single mode metrics:** share visuals showing impacts under different runway modes for east and west operations, particularly for busy periods like summer – conveying noise exposure from arrivals/departures/per route for each mode and showing the frequency of different modal operations (east/west). A key point here is to illustrate the variation in operations and consequent noise experienced across different operational modes.
- **Dispersion measurement for arrivals and departures:** measure aircraft dispersion on routes and capture the change of dispersion due to PBN, any anticipated change in distribution of traffic resulting from route change and fairness factors relating to this.
- **Reducing technicality in communications:** this would improve understanding of noise issues. Answering the question ‘what does this number mean?’ through reporting, e.g. using examples of common sources of noise to explain aircraft noise.
- **Speech interference level:** One of the most noticeable disruptions in the community is when outdoor conversations are overrun by aircraft noise. Compare aircraft noise to this real-world impact.
- **Trends over time** need to be addressed explicitly where possible to show if the situation at different locations is improving, staying the same or getting worse. Existing noise monitor data and that from WebTrak could provide a useful source of information.
- **Different locations have different experiences,** eg on the final approach, every aircraft passes over the same location but further out the situation is much more dispersed. Be clear in communicating negative and positive impacts of initiatives and **changes by location.**
- **Improve communications** on factors that affect how noise is received on the ground – this is linked to the NMB initiative “Factors affecting aircraft noise”. This should help in awareness of the ‘natural’ variation in noise levels due to environmental factors (eg weather)
- **Improve transparency:** it would be well received by the community for the airport to acknowledge known issues and act on them proactively, e.g. communicating on the noise action plan and progress against identified actions.
- **Conduct gate analysis** to show heights of aircraft, variability and trend identification for gates at different locations.
- Show areas on the ground anticipated to be impacted by given parts of the operation, e.g. visual aids.
- **Investigate existing monitoring to maximise information output:** to see if there are further insights that can be provided from existing data, e.g. trends at individual noise monitors.

Process for metrics selection

- Acknowledging that the selection of metrics for the evaluation of success (or otherwise) of NMB actions will vary depending on the nature of the action – how should we go about selecting appropriate metrics at the start of new initiatives?



- this is related to the process for metrics selection to track NMB projects and how we can build consensus

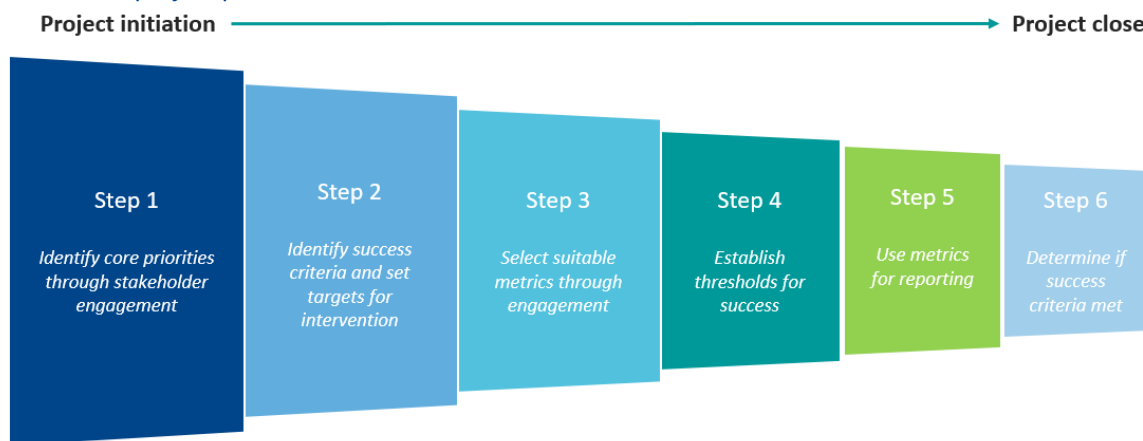
- Agreeing on measurement and metrics from the outset of NMB initiatives to evaluate progress and judge success is a sensible approach and complements the ambition of using appropriate objective metrics to represent subjective experience.

LONDON GATWICK NOISE MANAGEMENT BOARD COMMUNITY NOISE METRICS | SECOND ROUND ENGAGEMENT

4 November 2025 | 17:00–18:30

Process for Selecting Metrics

- Attendees were shown the following process identified for the selection of metrics as a part of the project process



- An example was given to illustrate this process for a concept project
- The purpose of the process is to directly relate metrics to the outcome of a project

Community feedback on the process:

- Stakeholders:** The process is key to involving stakeholders and gathering buy-in, particularly from communities.
- Use of the process:** There was broad agreement on the process and the benefits of employing it. The process is intended to link project outcomes to a demonstratable and definable improvement for noise. The metrics identified for use within a project need to be robustly linked to the outcomes.
- Governance:** Opinion was that evidence of the process being used needs to be shown, but flexibility is needed to respond to project outcomes.
- Discretion:** The process should allow for local issues to be identified within it (e.g. trade-offs and localised impacts).
- Identifying the 'right' metric(s):** Issue-driven concerns need to be reflected in metric selection. The *toolbox* can be used to recognise the range of possibilities for selection.
- Metric use:** Averages are not as useful without support from data at specific locations as well. Metrics/analysis may be best applied to specific areas, e.g. monitor location/parish, or by stages in a flight's operation.
- Explanation:** The process must be clear to explain to local groups on how the impacts of projects are determined.



<ul style="list-style-type: none">- Issues of concern outside the NMB: Issue driven questions from the community also require the identification of appropriate metrics. Within the process, the metrics selection and their relevance to how the issues will be addressed needs to be led by communities.
<p>Presentation of Metrics</p> <ul style="list-style-type: none">• How metrics are displayed and explained was a key topic for discussion following the presentation of the process
<ul style="list-style-type: none">- Lived experience: Capturing the key aspects of lived experience is important, and the metrics need to reflect this. This can be a benefit of visualisation and aggregation of metrics.- Impact Demonstration: Findings of the Fair and Equitable Distribution (FED) study and community feedback is that moving noise can be beneficial, but can also result in worsened situations. Project outcomes need to identify those who receive a benefit or disbenefit due to changes to the noise environment.

DRAFT



LONDON GATWICK NOISE MANAGEMENT BOARD COMMUNITY NOISE METRICS | THIRD ROUND ENGAGEMENT

6 February 2026 | 10:00-11:30

Existing tools for noise information

- Attendees were presented with the existing suite of tools London Gatwick provides for noise information; these were:
 - **WebTrak** ([link](#))
 - **Airspace Office Reports** ([link](#))
 - **Airline Noise Performance Table** ([link](#))
 - **ERCD Contour Reports** ([link](#))
- **Note:** Further information on noise is available on InsightFull ([link](#)), and a factsheet on the available information can be found [here](#).

WebTrak

- WebTrak is a near real-time system to display noise and track information for flights arriving and departing aircraft.
- The use of red/amber/green colour-coding for the level of noise can be misinterpreted for indicating if noise is 'good' or 'bad' (the RAG coding instead illustrates a scale from louder to quieter, compared to a baseline).
- **Indicated requirement:** Data and visualisations should be clear to avoid misinterpretation.
- **Indicated requirement:** Communities are interested in expected vs unexpected noise events.
- WebTrak has a minor delay between a flight flying over and it being displayed on to the tool. This is to ensure that tracks are accurately verified before being published on the system. Complaints can still be submitted in real-time on WebTrak.
- **Indicated requirement:** A tool by the NMB should explain the timeframe in which the data is sourced from and state if validation is taking place.

Noise Reports

- There is a regulatory requirement for the airport to provide information on noise and track keeping. These are published by NatMAG on London Gatwick's website.
- These provide general trends by focus less on the daily impact of specific aircraft flights.

ERCD Contour Reports

- Each year the Environmental Research and Consultancy Department (ERCD) of the Civil Aviation Authority (CAA) calculates the noise exposure around London Gatwick Airport.
- Noise exposure is shown as noise contours (i.e. lines joining places of constant L_{Aeq}).
- Day and night contours use the supplementary noise metrics N65 16-hour and N60 8-hour. N65 and N60 contours indicate the number of aircraft noise events exceeding a maximum sound level (L_{Amax}) of 65 and 60 dB respectively at a given location.



- Communities highlighted that, at times, the published routes appear different to where aircraft actually fly. Radar flight tracks were indicated as a tool in which to show this over short periods of time.
- The level of disaggregation of data is key, it may be that a more granular approach provides the most information in specific regions, however a wider trend may be suited in others.
- **Indicated requirement:** illustrations showing where aircraft are actually flying versus the published routes would be useful to understand.

Examples from other airports

- To support the existing suite of information, attendees were presented with examples of noise information external to London Gatwick, these were:
 - **Birmingham Airport Community Noise Reports** ([link](#))
 - **London Luton Airport Community Noise Reports** ([link](#))
 - **Noise-Map.com** ([link](#))
 - **Melbourne Airport Flight Path and Noise Map** ([link](#))
 - **Sydney Airport Noise Information – WebTrak My Neighbourhood** ([link](#))

- Histograms shown were found to be useful to communities, however providing more granular details (e.g. by monitor) was suggested as an improvement
- Where tools have clickable/ expandable detail, this is seen as a good feature. Communities look for varying levels of information, and having the option to tailor the information being provided is an aspect for and NMB tool to consider.
- Different levels of noise are more annoying to some than others and indicating where these levels can be challenging. Having indications on a map/visualisation may help in understanding where the ‘bar’ is for a wider audience.
- Land Use Planning, and developments, were raised. A tool with additional noise information could be used by land planners and developers to support in decision making around new developments.
- Health impacts from noise is difficult to quantify, particularly as a single metric/visualisation, however communities were interested to see this depicted in a tool.



Community Noise Metrics

Noise Management Board

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Professor Paul Hooper | Expert Advisor
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