Mr Kenny Jacobs, CEO
daa plc
Head Office
Old Central Terminal Building
Dublin Airport
Co. Dublin

Copy to: Mr. Ultan McCloskey
         Mr. Ian Clarke

Our Reference: ANCA/DI 01/2025

07 February 2025

RE: Section 9 of the Aircraft Noise (Dublin Airport) Regulation Act 2019
NOTICE OF DIRECTION TO PROVIDE INFORMATION

Dear Mr Jacobs

The Aircraft Noise Competent Authority (ANCA) is carrying out an assessment of the noise situation at Dublin Airport. ANCA hereby exercises its power under Section 9(10) of the Aircraft Noise (Dublin Airport) Regulation Act 2019 (the Act of 2019) to direct daa to provide to ANCA the information specified in Schedule A of this direction.

The information required shall be submitted to ANCA to arrive no later than 31 March 2025.

Some information listed in Schedule A below is the same as that listed in the further information request dated 01 March 2024 related to application F23A/0781, also referred to as the Infrastructure Application. For the avoidance of doubt, this direction to provide information does not replace the request for further information related to application F23A/0781, the Infrastructure Application, sent to daa on 01 March 2024 and that request will not be satisfied until daa has provided all of information requested in it.

ANCA reserves the right to issue further directions seeking clarifications or additional information to discharge its obligations under Section 9 of the Act of 2019 and is available to assist with clarification of any queries daa may have in relation to the contents of this letter or information identified in Schedule A.

Sincerely,

_____
Ethna Felten
Aircraft Noise Competent Authority

Schedule A

Direction to Provide Information ref. ANCA/DI 01/2025

1.   Noise Forecasts

1.1   Forecast Scenarios

ANCA requires noise forecasts in line with the relevant years and associated 'rounds' of strategic noise mapping as defined by the European Communities (Environmental Noise) Regulations 2018 (the Regulations) as follows:

- Round 5 (R5) – 2026

- Round 6 (R6) – 2031

- Round 7 (R7) – 2036

- Round 8 (R8) – 2041

- Round 9 (R9) – 2046

Noise forecasts for Round 6 (2031) onwards shall have regard for each of the night-time operating constraints and runway operations scenarios set out in **Table A** and **Table B** respectively. For clarity, these scenarios are combinative and must have regard for the Dublin Airport's development plans in each relevant year with respect to growth and increasing airport capacity alongside the current passenger constraints.

Table A: Night-time Operating Constraint Scenarios

Night Constraint Index	Night-time Operating Constraint Description
N0	Adherence to Condition 5 of the North Runway Planning Permission
N1	Annual night-time movements restricted to 2023 levels (c33,500 movements annually during the 8-hour night-time period between 2300 and 0659 local time)
N2	Night-time aircraft restrictions in line with ANCA's North Runway Relevant Action (NRRA) Decision of 20 June 2022 relating to the introduction of a Noise Quota Scheme (NQS) with an annual limit of 16,260 between the hours of 23:00-06:59 (local time) with noise-related limits on the aircraft permitted to operate at night.
N3	Annual night-time movements restricted to 2016 levels (c25,000 movements annually during the 8-hour night-time period between 2300 and 0659 local time)
NU	Unconstrained i.e. no night-time operating restrictions either as a night-time movement limit or Noise Quota System (NQS).

Table B: Runway Operations Scenarios

Runway Operations Index	Description
R0	South-runway only between 23:00 and 06:59 (local time), otherwise Option 7b as per runway usage in 2023 plus cross runway exception use.
R1	South-runway only between 00:00 and 05:59 (local time) otherwise Option 7b as per runway usage in 2023 plus cross runway exception use.
R2	Option 7b as per runway usage in 2023 over a 24-hour period plus cross runway exception use.
R3	Reverse of Option 7b (as per runway usage in 2023) over a 24-hour period plus cross runway exception use.

All scenarios must be indexed as per the following example set out in **Table C**:

Table C: Example of Scenario Indexing

Relevant Year	Night Constraint Index	Runway Operations Index	Passenger Numbers (to the nearest mppa)	ScenarioID
Y31	NU	R0	P36	Y31P36NUR0

Whilst ANCA requires the above forecasts and associated scenarios with respect to night-time restrictions and runway operating scenarios for each relevant year, this does not preclude Dublin Airport bringing forward any further relevant scenarios. These can be provided incrementally using the indices provided in Tables A and B.

Noise forecasts for Round 5 (2026) are required but shall be limited to the night-time operating constraint scenarios set out in **Table A** alongside Scenarios R0 and R1 from **Table B**.

All noise forecasts must comply with the requirements set out in **Table D**. These requirements relate to the methodology, outputs, and information to be provided in support of each noise forecast. This information can be provided in the form of technical reports and completed ANCA reporting template: **Aircraft Noise Information Reporting Template - v4.0 Feb 2025.**

Table D: Forecast Requirements

Requirement	Description
Modal Split and Modelled Metrics	All noise forecasts must be provided for the following noise metric: • Annual average noise exposure metrics based on forecast operations from 1st January to 31st December of each relevant year, inclusive. · L_{den} · L_{day} · $L_{evening}$ · L_{night} All noise forecasts must be based on a 10-year 'standard' modal split as determined for 2023 as it applies to the time periods underpinning the above metrics.
Airspace	All noise forecasts must be based on Dublin Airport's existing airspace arrangements as in place in 2023. If there are foreseeable changes in airspace that planned, ANCA must be informed of these and such changes included in the forecasts required in Section 1.1.

Noise Modelling Software	All noise forecasts must be prepared using the Federal Aviation Authority (FAA) Aviation Environmental Design Tool (AEDT) version 3f or later.
Outputs	All noise forecasts must be provided to ANCA in the form of noise level grids for each noise metric. Each grid can be computed on a 50m x 50m grid and interpolated to 10m x 10m postings.
Assumed Route and Runway Use	All forecasts must indicate assumed runway use by operating direction, runway, and route for day (07:00 – 18:59), evening (19:00 – 22:59), and night-time (23:00 – 06:59) periods and provided in the updated ANCA reporting template. The derivation of assumed route and runway usage must be reported.
Model Validation	Vertical flight profiles and Noise-Power-Distance (NPD) data utilised within the noise model must be validated using local noise and track keeping performance data from Dublin Airport's systems. Details of the Noise Monitoring Terminals utilised in validating the model's NPD datasets must be reported and declared to clarify whether the validation is based on single or multiple NMTs. Post-validation average measured and modelled L_{ASmax} and SEL values for each validated aircraft type must be provided for all NMT locations used for noise model validation purposes.
Aircraft Substitutions	A detailed list of substitutions and assignments is required, particularly where a forecast included a new aircraft type not currently operating at Dublin Airport and/or a new entrant e.g. G3 aircraft types.
Forecast Ranges	Having regard for uncertainties in the forecasts, associated fleet modernisation, a statement regarding the valid range for each forecast for each relevant year is required. For example, the forecast may be representative of ±2 years of the relevant year. A description of the uncertainties that exist within the forecast is required. Where a range is provided, justification must be given.
Cargo Operations	Details of forecast cargo operations must be provided separately to the overall ATM forecasts provided within the updated ANCA reporting template. The timing and type of aircraft comprising the forecast cargo operations are to be clearly described.

Noise Event Information

ANCA requires L_{ASmax} and SEL noise grids and associated contours from 60 dB to 100 dB in 5 dB increments representative of aircraft arrivals and departures which are forecast to occur at least once per night on average in each of the required forecasts.

L_{ASmax} noise grids shall be provided for each aircraft type, runway and departure and arrival route.

No analysis of this data is necessary, other than the outputs of the noise modelling.

1.2 Round 5 Sensitivity Tests

For the 2026 (Round 5) scenarios set out in **Section 1.1**, sensitivity tests are required with respect to displaced landing thresholds and slightly steeper approaches. These sensitivity tests are required for ANCA to consider the feasibility of such measures in reducing arrival noise, particularly at night. Details of the sensitivity tests are required in **Table E**.

Table E: Sensitivity Tests

Sensitivity Test	Description
Displaced Landing Threshold	Modelling and consideration of displaced landing thresholds each of Dublin Airport's main parallel runways is required. Each displaced landing threshold modelled must be safe and feasible. Should Dublin Airport conclude that a displaced landing threshold is not feasible or safe in the context of its current and forecast operations this should be reported.
Slightly Steeper Approaches	Modelling and consideration of slightly steeper approach angles. Modelling of a slightly steeper approach Instrument Landing System (ILS) angle of 3.15 degrees is required for sensitivity purposes. Should Dublin Airport conclude that a slightly steeper approach of 3.15 degrees is not feasible or safe in the context of its current and forecast operations this should be reported.

2 Economic Information

2.1 Economic Information in Support of Forecast Scenarios

For each scenario and noise forecast required in **Section 1.1**, **Table D** sets out the required economic information required by ANCA to carry out cost-benefit analysis and cost-effectiveness assessment of the constraints associated with each forecast.

Table E: Economic Information Required in Support of Noise Forecasts set out in Section 1.1.

Impact Domain	Information Required
Impact on airlines, airport, customers from flights no longer able to fit in unconstrained schedule	· Flight schedule for each operating constraint scenario, highlighting flights that are no longer able to fit relative to unconstrained schedule – covering time, arrival/departure, aircraft type, runway used. If such information cannot be provided, then a description of how this information can be taken from the ANCA Reporting Template must be provided. · Demand per flight affected, i.e. passenger numbers and cargo volumes

	· To estimate economic cost of reduced supply
	  - Average ticket price and freight yields, differentiated by day / night flights (where possible)
	  - Estimates of price elasticity of demand (where possible)

	· Savings from lower airport operating costs - Marginal cost of running airport per flight
	· Wider economic impacts: · Gross Added Value (GVA) per flight having regard direct, indirect or catalytic employment and economic effects.
Impact on airlines, airports, customers from flights re-timed to accommodate constraint / restriction.	· Flight schedule for each operating constraint scenario, highlighting flights that are no longer able to fit relative to unconstrained schedule – covering time, arrival/departure, aircraft type, runway used. If such information cannot be provided, then a description of how this information can be taken from the ANCA Reporting Template must be provided. · Demand per flight affected, covering passenger numbers and freight volumes
	· Loss to consumers from less convenient timings - Average ticket prices, freight yields for different times of day
Impact on airlines, airports, customers from flights delayed and cancelled due to	· Flight schedule for each operating constraint scenario, highlighting flights that are re-timed relative to unconstrained schedule – covering time, arrival/departure, aircraft type, runway used · Demand per flight affected, i.e. passenger numbers and cargo volumes

movement constraint / restriction	
	· Loss to consumers from unplanned delays and cancellations - Average ticket prices, freight yields

	· Loss to airlines from unplanned delays and cancellations
	   - EU261[1] rates
	   - Diversion costs

2.2   <u>Economic Information in Support of Noise Measures</u>

ANCA requires the following information to establish the costs of the noise mitigation measures as outlined in **Table F**.

Table F: Economic Information in Support of Noise Measures

Mitigation Measure	Information Required

Noise Insulation Scheme	• Typical cost by property type / size based on a combination of the following measures:
	   - Primary / Secondary Glazing
	   - Passive / Mechanical Ventilation
	   - Insulation (loft)
	   - Rooflights
	   - Blinds / Solar Control
	• Average insulation costs by property type / size under the current Residential Noise Insulation Programme (RNIS) scheme.

	• Scheme set-up and administration costs
	• Expected Take-up Assumptions
Displaced Thresholds **See Section 1.2**	• Cost associated with designing and implementing a displaced arrival threshold on Runway 28L

Slightly Steeper Approaches
 	
See Section 1.2
	• Costs associated with designing and implementing Slightly Steeper Approaches to all runways.
	• Any other costs associated with the operation of Slightly Steeper Approaches e.g.
	   - Pilot Training
	   - ATC Training

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[1] Regulation (EC) No 261/2004 of the European Parliament and of the Council of 11 February 2004 establishing common rules on compensation and assistance to passengers in the event of denied boarding and of cancellation or long delay of flights, and repealing Regulation (EEC) No 295/91

3   Background Information

In support of the forecasts and economic information required in **Section 1** and **Section 2**, the following background information as set out in **Table G** is required.

Table G: Background Information Requirements

Information	Description
Forecast Reports	For all noise forecasts provided in response to **Section 1**, forecast reports are required which should describe basis for demand alongside the associated forecast passenger, cargo and aircraft movements figures.
Aviation Safety and Third-Party Risk	For all noise forecasts required in **Section 1**, any concerns in relation to aviation safety and third-party risks must be reported.
Effects on the European Aviation Network	Where a noise mitigation measure is expected to have an impact of access to and from European airports, or on flight times (e.g. through airspace congestion), a narrative description of such impacts is requested.
Environmental Charges	Evidence is required to demonstrate what effect Dublin Airport's environmental charging regime has had on the fleet and ATM forecasts since its inception and what behaviour it is likely to drive in the future. This should include details of the environmental scheme and conditions of use.
Insulated Dwellings	The location of each dwelling insulated under Dublin Airport's RNIS, Home Sound Insulation Scheme HSIP and any other scheme must be provided.
Effectiveness of Noise Insulation Measures	Demonstrating of the effectiveness of noise insulation measures installed as part of Dublin Airport's RNIS scheme in reducing indoor aircraft noise levels. Commentary is required describing the circumstances, combinations and specifications of measures which result in achieving a targeted reduction of 5 – 10 dB under RNIS.
Runway Operation Thresholds	Information is required to describe the hourly movement thresholds in terms of arrival and departure rates for when runway usage may change compared Option 7b as operated in 2023. Where any forecast provided in response to **Section 1** of this request leads to a change in runway operations compared to 2023 this should be clearly identified.
Bird Surveys	Bird survey data collected for European sites is required to inform Appropriate Assessment regarding the disturbance to birds caused overflying of these sites.

4 Carbon Emissions Estimates and Costs

ANCA may take due account of the interdependencies between noise and emissions. To allow this to be considered ANCA requires that carbon cost estimations be carried out for the forecasts and scenarios set out in **Section 1**.

ANCA proposes a high-level methodology for estimating carbon costs as set out in Section 4.1 and 4.2 respectively.

The aim of the analysis is to provide an indicative range of magnitude of carbon emissions impacts and costs for comparison between forecast scenarios.

4.1 Part 1: Section 9 Carbon Estimation Methodology

Chapter 13 of the Environmental Impact Assessment Report (EIAR) prepared in support of Dublin Airport's Infrastructure Application ref F23A/0781 includes a quantification of carbon emissions associated with Dublin Airport, categorised as emissions from Airport Activities, Aviation (flights) and Surface Access. The data indicates that aviation makes up over 80% of the airport's total carbon emissions.

To provide an estimate of the change in carbon emissions associated with each scenario, the data in Chapter 13 of the EIAR can be used to provide an average emission per ATM for Dublin Airport. This can then be applied to the increase in ATMs resulting from each scenario to estimate the change in carbon emissions. This can either be done using total airport emissions (i.e. Airport Operations + Aviation + Surface Access) or may be calculated just for aviation emissions and then uplifted by 20% to account for the Airport Operations and Surface Access emissions.

Part 2: Section 9 Carbon Cost Estimation

Once the change in carbon emissions for each scenario has been calculated, the resultant emissions can be monetised using shadow carbon prices published by the Department for Public Expenditure NDP Delivery and Reform[2].

Monetisation should be carried out following the guidance published by the Department of Public Expenditure NDP Delivery and Reform[1]. The appraisal period should be consistent with the relevant years outlined in Section 1.1 (i.e. 2026-2046).

End of Schedule A

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[2] Department of Public Expenditure NDP Delivery and Reform (2024) Infrastructure Guidelines Supplementary Guidance Measuring & Valuing Changes in Greenhouse Gas Emissions in Economic Appraisal: www.gov.ie/pdf/?file=https://assets.gov.ie/286767/89f0c763-708f-443e-8ccd-0fb2cb839f31.pdf#page=null (see Table 3 for shadow carbon prices).