



An tÚdarás Inniúil um
Thorann Aerárthaí

Aircraft Noise
Competent Authority

ANCA Public Consultation Report

23rd June 2022



Acknowledgements



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Thorann Aerárthaí**

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Competent Authority**

The services of Noise Consultants Ltd were retained by ANCA to support the work of the authority by undertaking technical assessments and providing expert advice in the areas of acoustics, aviation, and environmental assessments.



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GLOSSARY OF TERMS

Term	Definition
AA	Appropriate Assessment
ABP / An Bord Pleanála	Ireland's national independent planning body that decides appeals on planning decisions made by local authorities as well as direct applications
Act of 2019	The Aircraft Noise (Dublin Airport) Regulation Act of 2019 which ratifies the Aircraft Noise Regulation into Irish Law
Act of 2000	Planning and Development Act 2000
Aircraft Noise Regulation	Regulation (EU) No. 598/2014 of the European Parliament on the establishment of rules and procedures with regard to the introduction of noise-related operating restrictions at Union airports within a Balanced Approach and repealing Directive 2002/30/EC
ANCA	The Aircraft Noise Competent Authority – the Designated Competent Authority for the purposes of aircraft noise regulation at Dublin Airport
Applicant	The airport authority for Dublin Airport – who submitted planning application F20/0668
Application	Application for planning permission F20A/0668
ATM	Air Traffic Movement – the movement of an aircraft in or out of an airport
Balanced Approach	ICAO Balanced Approach – consists of identifying a noise problem at a specific airport and analysing various measures available to reduce noise. The Balanced Approach aims to address noise problems on an individual airport basis and identify the noise related measures that achieve maximum environmental benefit most cost effectively using objective and measurable criteria
daa	The airport authority for Dublin Airport
dB	Decibels – a common unit of measuring sound
DRD	A draft regulatory decision, for the purpose of public consultation, outlining the proposed noise mitigation measures and operating restrictions (if any) to be introduced in order to address any identified noise problem at the airport
EASA	The European Union Aviation Safety Agency
ECAC	The European Civil Aviation Conference – a European intergovernmental organisation that seeks to standardise civil aviation policies and practices amongst its member states

EMRA	The Eastern and Midlands Regional Assembly – part of the regional tier of governance in Ireland, primarily focused on strategic planning
ENG18	The World Health Organization Environmental Noise Guidelines for Europe 2018
END / Environmental Noise Directive	Directive (EC) 2002/49/EC of the European Parliament relating to the assessment and management of Environmental Noise
ENR/ Environmental Noise Regulations 2018	Statutory Instrument No. 549/2018 European Communities (Environmental Noise) Regulations 2018, as amended by Statutory Instrument No. 663/2021 European Communities (Environmental Noise) (Amendment) Regulations 2021 – gives effect to Directive (EC) 2002/49/EC relating to the assessment and management of Environmental Noise, as amended by Directive 2015/996 establishing common noise assessment methods and Directive 2020/367 establishing assessment methods for harmful effects of environmental noise
EPA	The Environmental Protection Agency
EPNdB	Effective Perceived Noise in Decibels
FCC	Fingal County Council.
HA	Highly Annoyed – Metric used to describe the number of people calculated to be Highly Annoyed by Aircraft Noise
HSD	Highly Sleep Disturbed – Metric used to describe the number of people calculated to be Highly Sleep Disturbed by Aircraft Noise
HSIP	Home Sound Insulation Programme – a home Insulation scheme for dwellings most impacted by current operations at Dublin Airport
IAA	Irish Aviation Authority – the body responsible for the management of Irish controlled airspace, the safety regulation of Irish civil aviation, and the oversight of civil aviation security in Ireland
ICAO	The International Civil Aviation Organization – a specialised division of the United Nations which works with member states and industry groups to agree on international civil aviation standards and recommended practices and policies in support of a safe, efficient, secure, economically sustainable, and environmentally responsible civil aviation sector
LAP	The Dublin Airport Local Area Plan
L_{night}	The long-term average sound level at night determined over all the night time periods of a year as defined by ENR.
L_{den}	The long-term average sound level determined across all of the day- evening- night (24-hour) periods of a year as defined by ENR
MPPA	Millions of Passengers per Annum that travel through an Airport

NAO	The Noise Abatement Objective – this is a policy objective for managing the long-term future of aircraft noise
NAP	The Noise Action Plan developed by Dublin Airport
NNG	The World Health Organization Night Noise Guidelines of 2009
NIS	Natura Impact Statement – a report required to be produced as part of the Appropriate Assessment of Plans and Projects
NTK	Noise and Track Keeping System – this is the system used by an airport to record aircraft noise
NQS	Noise Quota Scheme – a ‘Noise Budget’ for Dublin Airport that allocates a certain number of ‘points’ to be spent on the night time period across the year. Each aircraft carried a Quota Count (‘points’) depending on how noisy they are – the louder the plane the higher the points. Each flight takes points off the total noise quota for the year
Planning authority	The planning authority of Fingal County Council
RD	The regulatory decision - this is the set of conditions by ANCA for the planning authority in the making of their decision on planning application F20/0668. It also supports the implementation of the Noise Abatement Objective
Relevant Action	Application for planning permission F20A/0668 applied for under Section 34C of the Act of 2000
RNIS	Residential Noise Insulation Programme – an Insulation programme that applies to homes based on their location in relation to the planning permission granted for Dublin Airport’s north runway under current planning conditions
RSIGS	Residential Sound Insulation Grant Scheme – the sound Insulation grant scheme proposed for homes that will be affected by night time noise due to changes to the planning condition by ANCA through the RD
Runway 10L/28R	The Dublin Airport north runway
Runway 10R/28L	The Dublin Airport south runway
Runway 16/34	The Dublin Airport crosswind runway
SEA	Strategic Environmental Assessment
Section 34C	Section 34C of the Planning and Development Act 2000, as amended by the Aircraft Noise (Dublin Airport) Regulation Act of 2019
WHO	World Health Organization

1 ANCA PUBLIC CONSULTATION 11 NOVEMBER 2021 TO 28 FEBRUARY 2022

In November 2021 ANCA commenced a public consultation focused on the Noise Abatement Objective (NAO), draft regulatory decision (DRD) and related report, Draft Environmental Report for the purpose of Strategic Environmental Assessment (SEA), and Natura Impact Assessment (NIS) for the purpose of Appropriate Assessment (AA). The public consultation was undertaken in accordance with the Aircraft Noise (Dublin Airport) Regulation Act 2019 (the Act of 2019) and Section 34C of the Planning and Development Act 2000 (as amended), (the Act of 2000).

1.1 Background to Public Consultation

The public consultation was 14-weeks in duration in accordance with the Act of 2000. Public consultation opened on 11 November 2021 and accepted submissions until 28 February 2022. Additional time was allocated to the consultation to compensate for the Christmas period. As the end of the 14-week consultation period fell on a Saturday, the consultation was extended to close at the end of the next working day.

A large volume of promotion and engagement activity was undertaken by ANCA in order to raise widespread awareness and make the process open and accessible. In total, 1,382 submissions were received to the consultation from residents, businesses, elected representatives and community groups and organisations.

1.2 Consultation Channels

1.2.1 Fingal County Council Consultation Portal

A dedicated consultation page was launched on the Fingal County Council (FCC) Consultation Portal, consult.fingal.ie, to allow interested parties to make a submission online.

Consultation documents were available on the portal for the public to view and download. These documents included a copy of the NAO, DRD and related report, SEA - draft Environmental Report and AA – NIS, on which ANCA invited submissions or observations.

An informational video, detailing how to make a submission was included on the consultation portal (Figure 1-1).

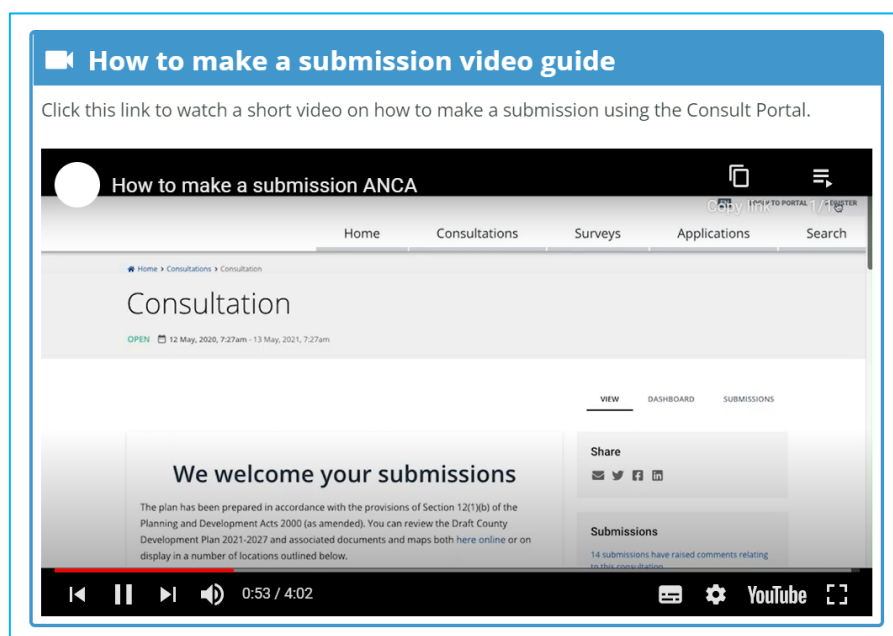


Figure 1-1 - 'How to make a submission video guide' featured on the consultation portal

As well as the consultation portal, submissions were also welcomed via post and email. A dedicated email address was established for the purpose of receiving consultation submissions to aircraftnoiseconsultation@fingal.ie. Submissions could also be sent by post to the Director of Services, Aircraft Noise Competent Authority, Fingal County Council, County Hall, Main Street, Swords, Co. Dublin K67 X8Y2.

The consultation portal allowed for submissions to be made by all – both stakeholders and the public. All submissions received, including those received by post and email, were uploaded to the consultation portal by ANCA, including the name of the individual or organisation who made it. Other identifying details, including addresses, were redacted in line with the privacy statement that was published with the consultation.

All submissions were acknowledged by ANCA in the same format as they were received.

1.2.2 Virtual Consultation Room

In addition to the information presented on the consultation portal, an interactive Virtual Consultation Room (VCR) was developed for the 14-week consultation. The VCR displayed all documents relevant to the public consultation. Figure 1-2 and Figure 1-3 below show the VCR, which was accessed at aircraftnoise.keepersolutions.com/.

The VCR included the consultation documentation and resources, which were also available on the dedicated consultation portal.

In addition to the consultation documentation, the VCR also included an introductory video from the Director of ANCA; an interactive map showing the detailed noise contours and extent of the residential insulation schemes; an instructional video which provided guidance to visitors on how to make a submission; and a link to the consultation portal.

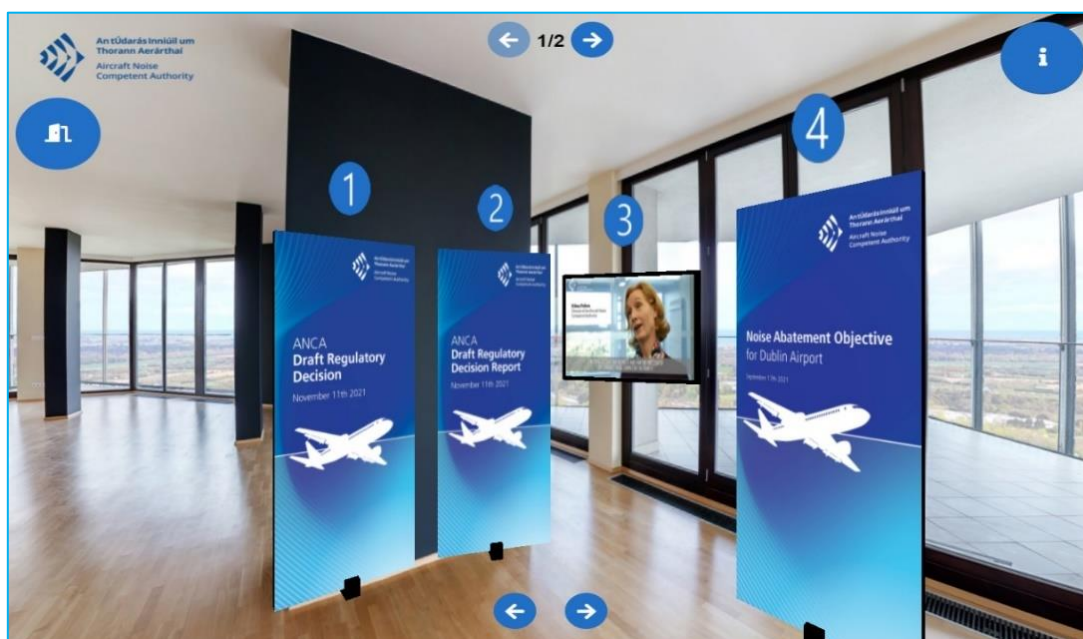


Figure 1-2 - Virtual Consultation Room

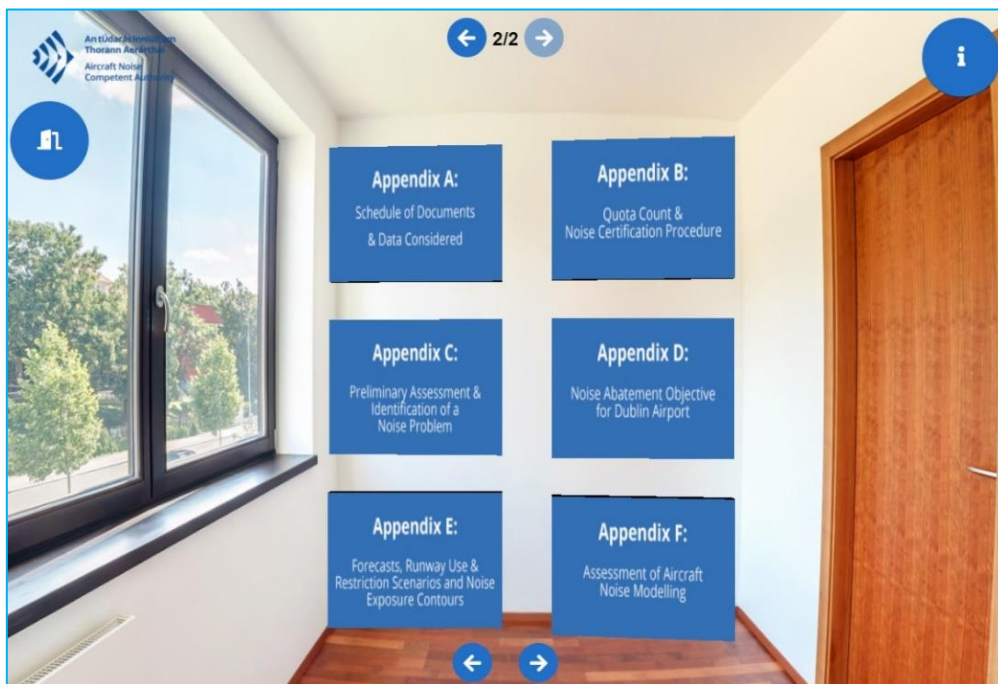


Figure 1-3 - Virtual Consultation Room – Appendix Documents

1.2.3 Interactive Map

An interactive map was made available in both the VCR and on the consultation portal. The map was developed in order to assist the public in understanding how future aircraft noise from Dublin Airport might be distributed, and how they may be affected.

The map showed the pre-COVID-19 and expected future noise situation at Dublin Airport, based on ANCA's DRD (Figure 1-4). In addition, the map enabled members of the public to determine whether their property would be affected by aircraft noise or eligible for the existing or proposed new noise insulation schemes (Figure 1-5). Users could search for an individual address or Eircode, to understand precisely how their property may be affected.

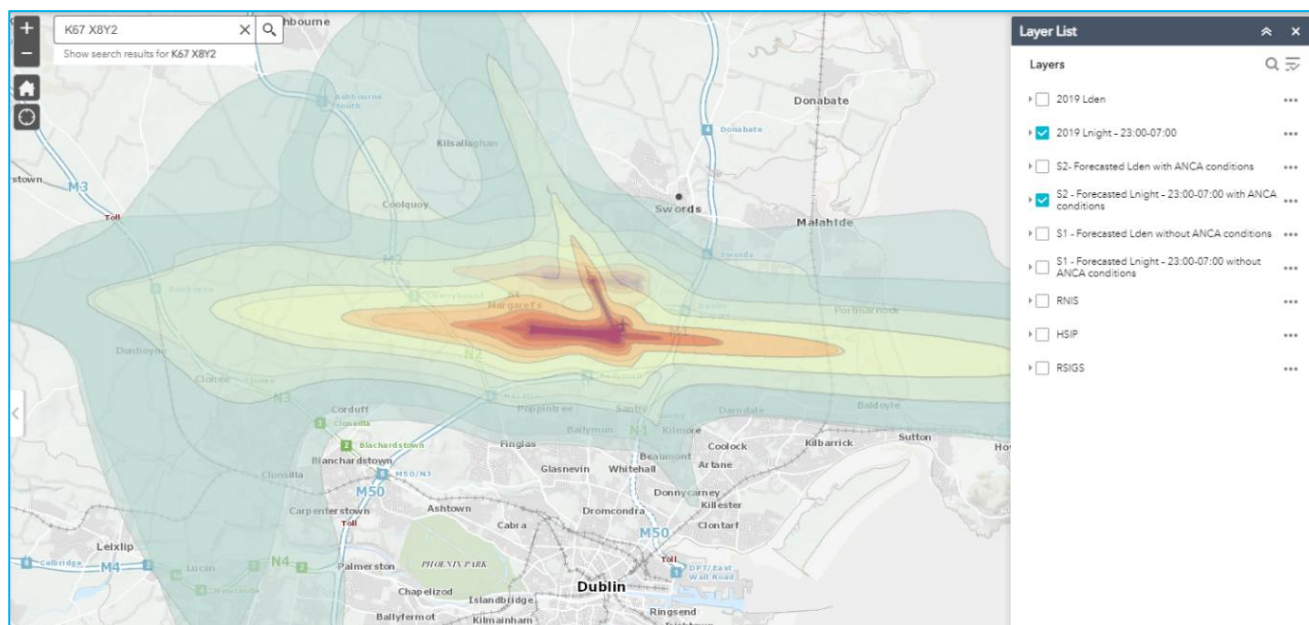


Figure 1-4 - Interactive map showing pre-COVID-19 and expected future night noise (L_{night})

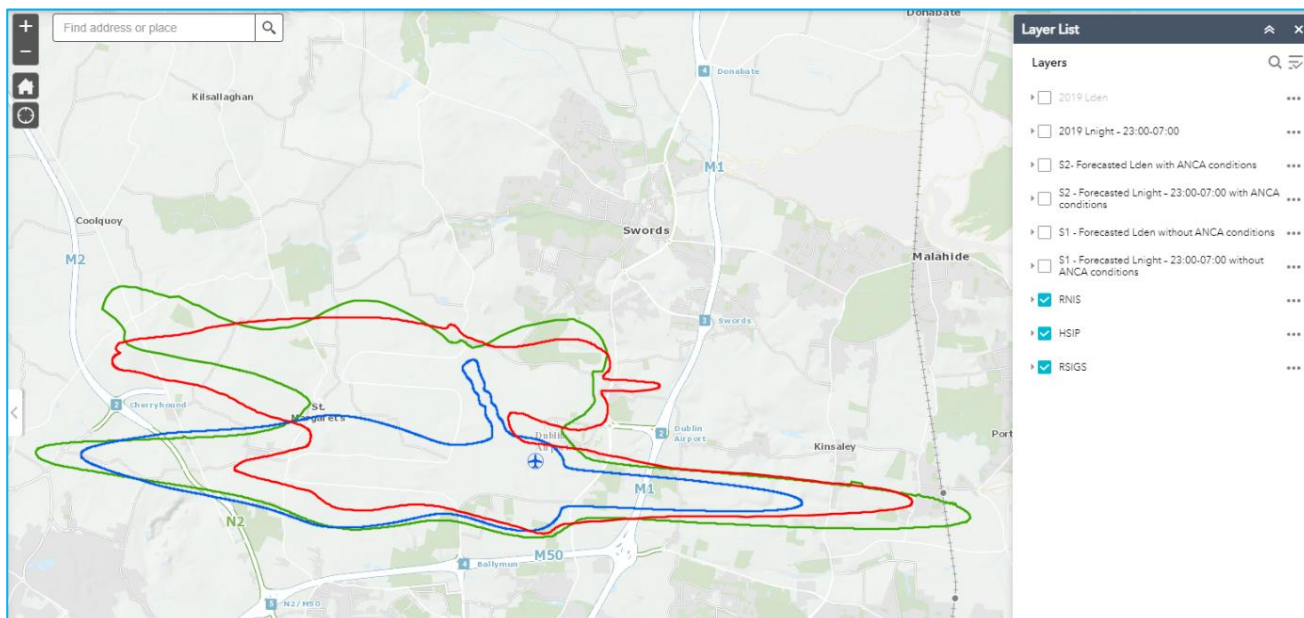


Figure 1-5 - Interactive map showing existing and proposed new noise insulation schemes

1.2.4 ANCA Website

In addition to the consultation portal, ANCA also has a permanent web presence at <https://www.fingal.ie/aircraftnoiseca>. This webpage is regularly updated with documentation, news, and updates from ANCA.

1.2.5 Elected Representatives Briefing

Interactive information sessions for elected officials (Councillors, TD's, Senators and MEP's) and the Chief Executives of Local Authorities were held on 11 November 2021 via Microsoft Teams. An invitation was issued to the elected representatives (nationally and locally) by email; and to all Local Authority Chief Executives through the Local Government Management Agency.

1.2.6 Stakeholder Community Briefings

Three public webinars were facilitated by ANCA during the consultation period. ANCA presented and explained the consultation documents at the webinars and provided interested stakeholders with an opportunity to pose questions to the ANCA team.

The webinars included a presentation from the ANCA team, led by Ethna Felten, Director of ANCA. A question-and-answer session followed the presentation which allowed attendees to submit questions to ANCA and its aviation noise and environmental experts. The webinars were approximately 1.5 hours in duration.

Details of the webinars held and the number of attendees who registered in advance are presented in

Table 1.1 below.

Table 1.1 - Public webinar details

Webinar date:	Attendees Registered:
17 November 2021	56
12 January 2022	64
9 February 2022	42

The public webinars were advertised on the ANCA Twitter account and across FCC social media channels (Figure 1-6). The webinars were recorded and posted to the ANCA website and FCC YouTube.



Figure 1-6 - Social media posts promoting public webinars

1.2.7 In-person Consultations

Meetings between ANCA and interested stakeholders were also promoted, facilitated, and hosted during the consultation process. These in-person information sessions were provided at County Hall, Swords by appointment through an online booking service. These meetings were facilitated to guide stakeholders through the consultation documents and to respond to queries. In order to accommodate this, the ANCA team was available throughout the consultation period.

During the consultation period engagement was held with individuals, resident associations, community groups, representatives from the business sector and elected representatives, including members of the Oireachtas and Councillors.

1.3 Promotion

1.3.1 Media Relations

Members of the national and local media were invited to a pre-launch press conference in the Gresham Hotel on Wednesday 10 November. Journalists were provided with a media briefing pack, which contained a news

release, along with copies of all consultation documents / videos and links to ANCA's online consultation resources.

The news release was issued to all national and local media early on Thursday 11 November 2021. The news release was also published in the news section of the FCC website.

The resulting media coverage is presented in Table 1.2 below.

Table 1.2 – Media coverage

Media Outlet	Headline / Radio and TV Programmes
Irish Times	Move to close Dublin Airport's new runway from 12am to 6am to limit noise
RTE.ie	Night flight curbs proposed ahead of new Dublin airport runway
98fm.com	Noise Budget Proposed for Night Time Flights At Dublin Airport
RTE Radio 1	Morning Ireland, News
RTÉ	RTÉ 6-1 and 9pm News
Flying In Ireland	Proposal to Limit New Runway Use at Night
Newstalk	Newstalk Breakfast – Interview with Councillor Joe Newman
Fingal Network Magazine – Fingal Chamber	Aircraft Noise Competent Authority: Public Consultation on Dublin Airport
Thejournal.ie	Recommendation to stop flights on new Dublin Airport Runway from midnight to 6am
Virgin Media	TV 5.30pm and 8pm news, Ireland AM
Irish Independent	Restriction on night time flights and noise quota system under proposals from new runway in Dublin Airport
Fingal Independent	New night time flights rules proposed for Dublin Airport as public asked for their views on controversial issue
Echolive.ie	Night flight ban and Dublin Airport's new runway suggested to cut noise

An article which outlined the work of ANCA, and details of the Public Consultation, featured in the December 2021 issue of the Fingal Chamber magazine, 'Fingal Network'.

Following the close of the public consultation, on 1 March 2022 another press release was issued to media advising the public consultation had concluded and thanking them for participating.

1.3.2 Advertising

ANCA placed a public notice in the Irish Independent for publication on Thursday 11 November 2021 (see Figure 1-7 below).

A reminder advertisement was again placed in the Irish Independent for publication on 10 February 2022 that encouraged the public to make their submissions ahead of the closing date.

18 News Thursday, November 11, 2021 IRISH INDEPENDENT

ANCA
An tÚdarás Inniúil um
Thorann Aerárthaí
Aircraft Noise
Competent Authority

**NOTICE UNDER SECTION 34C(12) OF THE
PLANNING AND DEVELOPMENT ACT 2000 OF
DRAFT REGULATORY DECISION MADE PURSUANT
TO SECTION 34C(10) RELATING TO AN AIRCRAFT
NOISE ASSESSMENT AT DUBLIN AIRPORT**

The Aircraft Noise Competent Authority (ANCA) has:

- made a draft regulatory decision under subsection 34C(10) of the Planning and Development Act 2000 (as amended) (the Act of 2000), and
- prepared a related report under Section 34C(11) of the Act of 2000.

The draft regulatory decision and related report contains an assessment of the aircraft noise implications arising from a planning application by the airport authority for Dublin Airport (F20A/0668) under Section 34C of the Act of 2000, seeking to amend prior planning conditions associated with night-time aircraft activity at the airport. ANCA's draft regulatory decision proposes to direct the Planning Authority to impose two new operating restrictions and one new noise mitigation measure on Dublin Airport, as part of any decision by the Planning Authority to grant planning permission for the airport authority's application.

Dublin Airport, Co. Dublin, is located in the townlands of Collinstown, Toberbunny, Commons, Cloghran, Corballis, Coultry, Portmellick, Harristown, Shanganhill, Sandyhill, Huntstown, Pickardstown, Dunbro, Millhead, Kingstown, Barberstown, Forrest Great, Forrest Little and Rock.

In undertaking this aircraft noise assessment, ANCA also set a noise abatement objective (NAO) for Dublin Airport, which seeks to limit and reduce the long-term adverse effects of aircraft noise on health and quality of life, particularly at night, as part of the sustainable development of Dublin Airport. As such, it will effect the aircraft noise environment in Counties Dublin, Meath, and Kildare.

ANCA also undertook an assessment of the potential environmental impacts of the implementation of the NAO and draft regulatory decision through:

- A Strategic Environmental Assessment Environmental Report on the likely significant effects on the environment of implementing the Regulatory Decision - pursuant to the (European Communities Environmental Assessment of Certain Plans and Programmes) Regulations 2004-2011 (as amended) and
- A Natura Impact Statement for the purposes of Appropriate Assessment, pursuant to Article 6 of the EU Habitats Directive (92/43/EEC) and the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended).

These documents may be viewed on the ANCA website: www.fingal.ie/aircraftnoiseconsultation/documents/20a0668. Hard copies are also available to view and purchase at a fee not exceeding the reasonable cost of making a copy at the ANCA office: County Hall, Main Street, Swords, Co Dublin K67 X8Y2 from Monday to Thursday 9am to 5pm and Friday 9am to 4.30pm (excluding bank holidays).

ANCA invites submissions or observations in writing on:

- The Noise Abatement Objective (NAO) for Dublin Airport.
- The Draft Regulatory Decision and related Report.
- Environmental Report for the purpose of Strategic Environmental Assessment.
- Natura Impact Statement for the purposes of Appropriate Assessment.

at:

- Online at <https://consult.fingal.ie/en/browse>
- E-mail to aircraftnoiseconsultation@fingal.ie
- In writing to Director of Services, Aircraft Noise Competent Authority, County Hall, Main Street, Swords, Co Dublin K67 X8Y2.

Submissions should be in **ONE** medium only. Submissions should include the full name and address of the person making the submission, details of organisation, community group or company represented where relevant.

Submissions or observations may be made between **11th November 2021 and 28th February 2022. Late submissions will not be accepted.**

A submissions policy is available at <https://consult.fingal.ie/en/consultation/aircraft-noise-consultation> setting out the requirements for making a submission and how your personal information will be managed.

Director of Services,
Aircraft Noise Competent Authority

Date: 11th November 2021.

Figure 1-7 - Public notice Irish Independent, 11 November 2021

1.3.3 Social Media and Online Promotion

Throughout the consultation period, social media was employed to promote the consultation to the public (Figure 1-8). Content included links to the news release and ANCA videos and focused on building awareness and understanding of the consultation process to drive participation.

In order to extend the reach of ANCA consultation messaging, an email notice was shared to the members of the Fingal Public Participation Network and the FCC customer care team were briefed on the content of the consultation.

Chambers Ireland also shared the ANCA call for consultation participation and submissions amongst their social media followers and members.

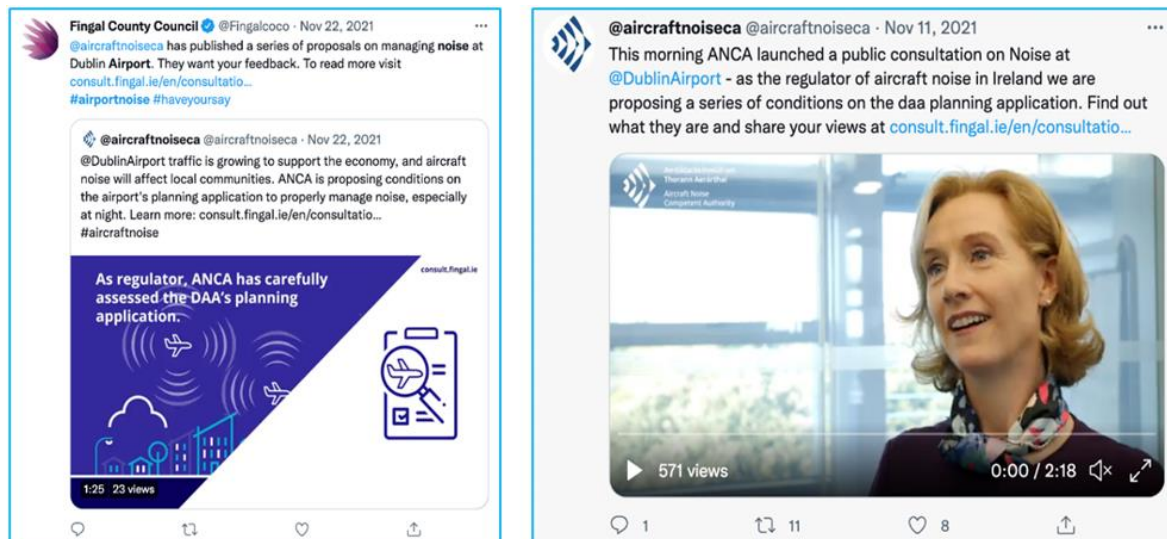


Figure 1-8 - Promotion of public consultation on social media

1.3.4 Informational Videos

In order to explain the purpose of the consultation in a meaningful and accessible way, ANCA produced two videos. Both videos were posted on the ANCA website and FCC YouTube channel; and shared on ANCA's Twitter page.

The first [information video](#) detailed the DRD, provided a brief explanation of the NAO and explained the consultation process. The second [video](#) featured the Director of ANCA outlining the key points of the consultation and encouraging participation.



Figure 1-9 - Animated videos outlining the DRD

2 OVERVIEW OF SUBMISSIONS MADE TO THE PLANNING AUTHORITY ON F20A/0668

2.1 Response to the Submissions to the Planning Authority – F20A/0668

2.1.1 Overview and Role in the Aircraft Noise Regulation Process

Submissions to the planning authority were made under article 29 of the Planning and Development Regulations by members of the public, organisations and bodies prescribed under article 28 of the Planning and Development Regulations, within a prescribed period of 5 weeks on receipt of the application (18 December 2020 – 1 February 2021) and also on receipt of significant additional information (21 September 2021 - 26 October 2021).

2.1.2 Submissions / Observations to the Planning Authority Relevant to the NAO, DRD and Report, Environmental Report and Natura Impact Statement

During two periods for submissions relating to planning application F20A/0668, 274 submissions were made to the planning authority (including from prescribed bodies and consultee requests). These periods were from 20 December 2020 to 01 February 2021 and from 21 September 2021 to 26 October 2021. All submissions were received prior to the ANCA public consultation from 11 November 2021 to 28 February 2022.

Although these submissions were made prior to ANCA making a DRD, and consequently in the absence of access to documentation relating to the aircraft noise assessment, they nonetheless raised matters relevant to the noise assessment by ANCA.

The issues raised during these periods for submissions to the planning authority are summarised in this section together with the responses of ANCA as relevant to the various documents. ANCA deemed that it was appropriate to have regard to these submissions as the noise assessment process progressed. The submissions were considered by ANCA and its consultants during the formulation of the NAO, the DRD and DRD Report, the Environmental Report, and the AA – NIS.

There were many themes extracted from the submissions which were considered as the noise assessment process was carried out. However, there were also submissions and observations which do not relate to the NAO or to the RD, the purpose of which is the management of aircraft noise at Dublin Airport. Environmental Impact Assessment is a function of the planning authority.

2.1.2.1 Submissions to the Planning Authority Relating to Aircraft Noise / Insulation Scheme

A significant proportion of the submissions made to the planning authority relate to the impact of aircraft noise on local communities. These include the impact on physical and mental health such as disruption to sleep, and the associated illnesses and disorders.

Submissions included views that the existing conditions had been agreed with consideration for community needs and that they should not be altered, suggesting that the situation has not changed enough to warrant the change in conditions. It was also suggested that any changes implemented should be conditional to the publication of regular noise reports.

The need for the application of the Balanced Approach to the assessment of the planning application was also highlighted in the submissions.

The adequacy of insulation schemes was raised in submissions which argued that the scheme proposed by the Applicant is less comprehensive than those which are currently available for homes impacted by aircraft

noise, and that sleep disturbance is already an issue for those living in insulated homes. The view was expressed that the proposed scheme does not reflect the reality of how many homes will require insulation should the relevant action be granted and that it is also hard to determine the efficacy of the scheme against the effects of the north runway before it is fully operational, suggesting that a decision should not be made until the runway is operational and its affects known. Submissions also highlighted schools and businesses which would not be included in the proposed scheme. An issue of concern was that homeowners would be unable to open windows at night without increasing their exposure to aircraft noise, affecting sleep and ventilation, particularly in the summer months.

Some submissions highlighted that single noise events may exceed the noise criteria for the proposed insulation scheme and raised the view that the effect of noise disturbance is subjective. Issues with the use of 2018 as a baseline by the Applicant was also raised.

Stakeholders who made submissions to the planning authority referenced the forecasts provided by the Applicant. It was suggested that forecasts provided show no increase in noise for homes between the north and south runway, with respondents expressing their view that noise will increase in these cases. Flight paths were another subject raised, with respondents saying that the original permission applied in the case of 'straight-out' flights and that boundary of the insulation scheme does not reflect divergent flight paths which it was said will affect new communities who require consultation.

Submissions and observations referred to properties built following the 2007 granting of planning permission for the north runway, and how they may now be affected by the application. It was suggested that the number of people that may be affected by the proposed relevant action is higher than that suggested by the Applicant, and that the projected impacts on the community for passenger numbers at 40 mppa has not been communicated.

2.1.2.2 Submissions to the Planning Authority Relating to Runway Use Times

In relation to the proposed change in runway-use hours, submissions suggested that the Applicant should consider the night time period as the hours designated through legislation and outlined by the World Health Organisation. Submissions also did not agree that the extended hours for use of the north runway are necessary to accommodate the development of the airport.

Submissions received expressed support for the proposal, with the view that the current permitted operating hours were undermining airport development and businesses, and that early morning flights will facilitate business flights. Alternative times were suggested as compromises e.g., 11:30-06:30.

2.1.2.3 Submissions to the Planning Authority Relating to The Noise Quota

Submissions were received in relation to the Applicant's proposed Noise Quota. Some expressed the view that the noise quota would fulfil the industry standard for airports. Other submissions received outlined areas of concern for stakeholders including objection to the removal of the current cap on flight numbers, the difficulty in understanding noise quotas, and concern that the noise quota may facilitate a larger number of flights than would otherwise take place during the night.

The view was expressed that a noise quota is difficult for the public to understand and that the public may not be able to measure the impact as they could with a numerical flight cap, and that the noise quota proposed was poorly explained and it was not clear how it was calculated.

ANCA Response

The foregoing themes within the submissions relating to the assessment of aircraft noise were considered during the development of the NAO and the DRD. The basis of many of these themes were incorporated into the ANCA documents and addressed in this consultation report in Section 3. The assessment of aircraft noise at Dublin Airport has led to the NAO and the RD.

The NAO and ANCA's assessment of aircraft noise are addressed in Chapter 7 and Appendix C of the DRD report. Any changes to the DRD following consultation are detailed in Chapter 14 of the RD report.

The Insulation Scheme is the third condition of the RD (with 24 detailed maps). The details are addressed in Chapter 10 of the RD Report and any changes to the DRD following consultation are detailed in Chapter 14 of the RD Report.

Runway use times is addressed in Chapter 10 and Appendix E of the RD Report and any changes to the DRD following consultation are detailed in Chapter 14 of the RD Report.

The Noise Quota is explained in detail in Chapter 10 and Appendix B of the RD Report, and any changes to the DRD following consultation are detailed in Chapter 14 of the RD Report.

2.1.2.4 Submissions to the Planning Authority Relating to Environmental Considerations

A number of matters relating to environmental considerations of the planning application were raised in submissions and observations on the planning application F20A/0668.

Submissions cited concern with the Environmental Impact Assessment Report (EIAR) submitted as part of the planning application. It was questioned whether the EIAR is fit for purpose and it was stated that it is overly dismissive of health and climate impacts of the planning application. Adherence to the requirements of EIAR legislation and the Local Area Plan were cited as necessary, as part of the planning process.

Some concern was raised as to whether the approach of the Applicant would constitute 'project splitting', suggesting that the proposed changes are significant enough to warrant an entirely new planning application rather than constituting a relevant action as per the Act of 2019. The Noise Zones and policies relating to development in Noise Zones are set out in Variation No. 1 to the Fingal Development Plan 2017 – 2023 were acknowledged to allow for more effective land use planning for development within airport noise zones.

Submissions referred to the potential for associated issues of noise pollution and increased air pollution, increased CO₂ and NO_x. It was also suggested that the introduction of quieter and more efficient planes may lead to a reduction in these emissions.

The view was also expressed that the potential for the planning application, and associated increases in flights and passenger numbers, to affect the carbon footprint of Dublin Airport. It was suggested that this would run contrary to obligations under national and international law and treaties such as the Paris Agreement and the Climate Action Plan. It was also suggested that increased flight numbers may lead to higher levels of road traffic and associated emissions.

The impact of costs to offset emissions including fuel price increases, carbon offsetting costs, international measures and the impact on air travel were also referenced in submissions. It was suggested that the EIAR did not adequately consider transport capacity constraints, and that the planning authority should consider official policy in relation to development on or affecting national roads as part of their assessment. Concerns were raised in relation to the impacts of flights and associated additional traffic, such as noise, congestion, and air pollution. The impact of storm water if existing drains and streams have insufficient capacity was submitted as a concern.

Responses included concern for the potential impact of the application on human quality of life, Natura 2000 sites, historic environmental features, disruption to wildlife and other biodiversity, impact on pets and livestock, and potential impact on future land use.

ANCA Response to Themes from Submissions to the Planning Authority Relating to Environmental Considerations

The foregoing themes raised in the submissions to the planning authority on environmental aspects have been considered in ANCA's SEA and AA where relevant to the assessment and management of noise.

Other submissions and observations relating to the Environmental Impact Assessment Report provided with the planning application and the EIA process to be carried out by the planning authority are outside the scope of the ANCA consultation process.

2.1.2.5 Other submissions to the Planning Authority

There were further submissions and observations made during the periods for submissions and observations to the planning authority.

ANCA Response to Themes from Submissions to the Planning Authority

Several submissions contained information which were outside the scope of the ANCA consultation, namely:

- Relating to the dual role of Fingal County Council (FCC) as the planning authority and aircraft noise competent authority;
- Relating to the planning application submitted by daa in December 2020 (Ref. F20A/0668);
- Relating to the EIA to be carried out by the planning authority;
- Relating to flight paths otherwise than in relation to their noise impacts;
- Relating to consultation matters generally;
- Relating to the role of the airport in the development of the local and national economy, citing its role as an employer, and in tourism, freight, and transport.

The submissions received by the planning authority are a matter for the planning authority under the Act of 2000.

3 ANCA CONSULTATION 11 NOVEMBER 2021 TO 28 FEBRUARY 2022 AND ANCA RESPONSE

The following section presents a summary of the submissions and observations received relating to the consultation documents and outlines the ANCA response to the matters raised in submissions and observations.

3.1 Introduction

A total of 1,382 submissions and observations were received to the ANCA public consultation via post, email and the online consultation portal. These submissions have been reviewed by ANCA and are available to view on the public consultation portal <https://consult.fingal.ie/en/consultation/aircraft-noise-consultation>. A full list of submissions received by submission number is available in Appendix 1.

The submissions listed in Appendix 1 have been reviewed and assessed and ANCA has had regard to all content within these submissions or observations in making the NAO, the RD and associated report, the Environmental Report and the NIS. ANCA has collated, inter alia, matters raised in all submissions or observations. For clarity, these matters have been categorised into themes and considered in terms of how they related to the documents presented for consultation.

Issues raised through the consultation process are outlined in the following chapter in terms of how they related to the NAO, DRD, and related report, the AA – NIS and the SEA.

Submissions which related to the effects of aircraft noise on sleep, health, and quality of life are addressed in the sections relating to the NAO and the SEA.

Submissions and observations relating to the NAO, including the baseline year and the target outcomes are detailed in Section 3.2 This section also addresses observations and submissions made in relation to the impact of aircraft noise on health, wellbeing, and quality of life, as well as matters relating to affected members of the public.

Submissions and observations received in relation to the conditions outlined in ANCA's DRD, including the Residential Sound Insulation Grant Scheme (RSIGS), the Noise Quota Scheme (NQS) and time of runway use are addressed in Section 0. Other comments relating to the DRD and to the associated report are also included in this section.

Submissions and observations which included views expressed on the environmental reports including SEA and NIS, are addressed in their relevant sections 0 and 3.5. Observations relating to the impact of the DRD and NAO on wildlife, habitats, climate change, climate action and pollution are also addressed in these sections.

Aspects of submissions and observations which are relevant to more than one theme, are addressed in the most appropriate section below in the interest of clarity and to prevent repetition.

A number of additional topics were raised through the public consultation process which fall outside the scope of the consultation as they were not directly relevant to the work of ANCA in the making of an NAO or a RD. Nonetheless these submissions and observations present useful and valid views which are addressed in this report under Section 3.6. Additional topics raised included commentary on the role of the planning function of FCC and on planning application F20A/0668, feedback on the public consultation process, communications, and engagement between the public and ANCA, the role of the airport in facilitating business, tourism and employment and its role in the national economy.

The information and views included in the feedback presented, represents the view of stakeholders who made submissions during consultation. Information is reported as it was provided by stakeholders in their submissions, some of which is subject to verification by the project team.

Table 3: Guide to where themes raised in submissions are addressed in Section 3

Section	Theme
3.2	Summary of and response to submissions and observations relating to the NAO
0	Submissions and observations relating to the DRD
3.3.1	Submissions and observations relating to the Runway Use Patterns, Flight Paths and Forecasts
0	Submissions and observations relating to the Noise Quota Scheme
3.3.3	Submissions and observations relating to the Residential Sound Insulation Grant Scheme (RSIGS)
3.3.4	Other submissions and observations raised relating to the DRD
0	Submissions and observations relating to the SEA - Draft Environmental Report
3.5	Submissions and observations relating to the AA – NIS

3.2 Submissions and Observations Related to the NAO

The **NAO** is a policy objective for managing the effects of aircraft noise emissions on the surrounding communities and environment at an airport.

ANCA's noise assessment determined that planning application F20A/0668 would result in a noise problem at Dublin Airport. Legislation requires an NAO to be developed to address an identified noise problem and assist in the identification of suitable mitigation measures.

The NAO for Dublin Airport, as set by ANCA, seeks to *"limit and reduce the long-term adverse effects of aircraft noise on health and quality of life, particularly at night, as part of the sustainable development of Dublin Airport"*.

Responses to the public consultation addressed the NAO, including its impact on health, quality of life, and the environment, and the future development of Dublin Airport.

Noise and Health

Many respondents outlined the impact of aircraft noise on the physical and mental health of affected persons. Impacts cited included disruption to sleep, cognitive functioning, stress, and other physical and mental health effects. The impact of aircraft noise on different demographics including children and the elderly was cited.

The NAO was welcomed in some submissions for setting ambitions for the reduction of adverse effects of noise on health and quality of life.

Concern was expressed that the development of the DRD and NAO did not include the input of medical professionals. Some respondents considered that the process did not address the public health issue adequately, and that health costs and costs to health services had not been factored into the cost effectiveness analysis.

Submissions stated that 40 decibels is the level sleep is disturbed at and that the DRD does not address this.

Respondents cited the NAO as being an overdue measure.

It was submitted that the NAO may provide incentives for airlines to introduce quieter and more fuel-efficient aircraft, supporting improvements in technology and reduction in emissions.

Several submissions stated that noise insulation does not protect the health of the residents with respect to single noise events (e.g. L_{Amax} or SEL) and therefore insulation cannot be justified as a solution for those dwellings which suffer greatest impact. It was also submitted that the DRD did not have regard to single noise events.

Submissions described the effect of aircraft noise related to high density buildings. The view expressed that the sound is amplified due to the close proximity of buildings to each other and without natural attenuation between them. Reference was made to the height of taller buildings and roof angle of buildings and the transfer of noise related to this.

Land Use Planning Impacts on the NAO

Representation from the Applicant and aviation sector cited other activities which could impact the outcome of the NAO, such as land use planning and population growth when used to quantify HA and HSD. It was submitted that factors such as these are beyond the control of the Applicant. It was put forward that if 2019 is to be used as a baseline for comparison, future calculations should be made against the 2019 population rather than the population for the year of assessment.

It was suggested that developments that were insulated through the planning process; consented, or future developments should not be included in future calculations for noise impact assessment. It was further suggested that if population growth and land use planning are to be considered as part of the NAO that they should not be the responsibility of the Applicant in terms of compliance.

Submissions expressed a view that all relevant authorities involved in land-use planning should also follow the NAO.

Selection of 2019 as the Reference Year in the NAO

A number of submissions suggested that the use of the year 2019 as the baseline for the NAO is unsatisfactory. These submissions stated that this year was one of the noisiest at the airport and that during 2019, the Airport exceeded the 32 million terminal passenger capacity limit. It was suggested that a lower baseline of an earlier year, or average of a number of years may be chosen instead against which to measure the success of the NAO, although the year 2018 was also identified in some submissions as unsuitable.

The use of 2017 as the baseline or reference year was put forward in a number of submissions, which cite 2017 as the baseline year for the European Commission Action Plan "*Towards zero pollution in air, water and soil*".

It is also submitted that the 30% reduction target proposed by ANCA, justified by reference to the European Commission's "*Pathway to a Healthy Planet for All*", infers a 30% reduction target across all transport noise, with aviation only accounting for a percentage of overall noise, and that this should be kept under review to ensure that it remains appropriate.

Timeline for Application and Monitoring of the NAO

Submissions and observations expressed a view that the proposed timelines for implementing the NAO are too lengthy, and that they should be brought forward to allow the benefits to be realised sooner, with respondents citing the need for short and long-term attainment of the NAO. It is also suggested that improvements to the noise situation should be made before any changes are put in place.

It was suggested in a submission that due to the long-term nature of the NAO, the targeted reduction should not apply until 2025 so as to allow time for the benefits of more modern aircraft to take effect.

Other respondents were of the opinion that the NAO should be put in place before the NQS and Annual Noise Quota (ANQ) are set.

Some respondents to the consultation asserted that regular reporting on the NAO should be open and transparent and that reports should be presented in plain language to directly affected residents. It was also suggested that accurate reporting will help to ensure that the noise management measures for Dublin Airport are working and will assist in the determination of eligibility for insulation schemes.

Noise Assessment

Some submissions and observations queried ANCA's use of the Applicant's data on which to base its decision, rather than using independently collected data stating that there is a need for independent data collection and noise monitoring to be conducted.

Submissions also stated that the metrics of 'highly annoyed' and 'highly sleep disturbed' could be challenging for the public to quantify. Concern was expressed with the method of equating a 3dB reduction with halving of annoyance, citing that for noise to sound half as loud, the noise level must be reduced by 10dB. A view was expressed in many responses that the concerns of residents have not been given adequate consideration by ANCA.

A response questioned whether atmospheric conditions had been considered in the making of the NAO, citing the potential for noise distribution to be affected by same.

ANCA Response to Submissions and Observations on the Noise Abatement Objective

Noise and Health

Consideration was given to the concerns of residents in setting the NAO. The NAO seeks to limit and reduce the number of people exposed to the highest levels of noise over time. In undertaking their noise assessment, ANCA had regard to the guiding principles of sustainable development which recognises the interdependence of environmental, social, and economic systems.

ANCA's assessment has been undertaken in line with the relevant regulatory framework, within which the harmful effects on health are included through the calculation of number of people Highly Annoyed (HA) and Highly Sleep Disturbed (HSD). The NAO describes the primary measurable criteria which relate to the number of people HA and HSD using the methodology described in Directive 2002/49/EC (as amended by Directive 2020/367), which is based on the WHO Environmental Noise Guidelines 2018 (ENG18).

The NAO, and ANCA's assessment work underpinning the DRD, had regard for the evidence and guidance presented in the WHO Night Noise Guidelines for Europe 2009 (NNG), and WHO ENG18. These guidelines specifically reference noise-related effects arising from aircraft noise exposure levels measured using the outdoor long-term noise exposure metrics L_{night} and L_{den} . These guidelines were drafted by a guidance development group including noise and medical professionals.

This evidence, with respect to the dose-response relationships linking aircraft noise exposure to harmful effects on health (namely annoyance and sleep disturbance) have been adopted in Directive

2020/367 which is to be used alongside Directive 2002/49/EC with respect to preparation of noise exposure maps, and as the means of assessment stipulated under Regulation 598/2014. Due to the aforementioned regulations encapsulating health, it was determined that further medical input was not required.

The ENG18 strongly recommends that average noise exposure from aircraft is kept below 45 dB L_{den} and 40 dB L_{night} . In the case of the 45 dB L_{den} recommendation, WHO states that aircraft noise exposure above this level is associated with adverse health effects. In the case of the night time recommendation, the WHO states that exposure above 40 dB L_{night} is the level associated with adverse effects on sleep. The WHO recommend to policymakers that suitable measures are implemented to reduce exposure from aircraft noise levels above the guideline values. This is the function of the NAO and RD.

Health aspects have been recognised and considered in relation to the identified noise problem. The NAO has regard to the health aspects as assessed in accordance with legislation on the evaluation of noise effects. ANCA has had regard to the WHO guidelines by:

1. Incorporating the methodologies, principles and metrics from across the regulatory framework and WHO guidelines into the NAO as the means of measuring the impact and effects of aircraft noise at Dublin Airport. The NAO requires aircraft noise exposure to be calculated from the WHO recommended values (i.e., 45 dB L_{den} and 40 dB L_{night}) to allow the number of people experiencing potentially adverse effects on health and sleep to be calculated.
2. Setting outcomes as part of the NAO which require reductions in the adverse effects on health and sleep to be achieved.

With respect to night time noise, whilst the ENG18 is the most recent WHO publication, it is also complementary to the NNG, with the ENG18 recognising that the NNG is comprehensive in nature.

The NNG makes recommendations that night time noise exposure should be reduced below 55 dB L_{night} as *“an ‘interim target’ for countries that could not follow the guidelines in the short term for various reasons or where policy-makers chose to adopt a stepwise approach”*. The NAO has followed this principle by setting an outcome which requires the number of people exposed to aircraft noise above 55 dB L_{night} to be reduced.

For those exposed to more than 55 dB L_{night} , ANCA’s requires the Applicant to make available a noise insulation grant scheme, which provides affected dwellings with the benefit of access to financial assistance towards sound insulation measures for night time aircraft noise.

Current technology does not make it possible for the NAO to require Dublin Airport to reduce noise exposure so that nobody is exposed to levels above the WHO recommended values of 45 dB L_{den} and 40 dB L_{night} . No forecast made available to ANCA shows that this could be achieved over the period to 2040, and to do so would likely require the airport to significantly decrease its operations. For example, since the draft decision, ANCA has received noise exposure data from Dublin Airport for 2020. Operations in 2020 were significantly impacted by the Covid-19 pandemic with aircraft operations declining by nearly 70%. Despite this reduction, noise exposure data for 2020 shows that many communities were still exposed to levels above the WHO guideline values.

The proposed modes of operation seek to reduce the overall number people exposed to the highest levels of night time noise. However, some residents will be subjected to significant adverse effects and the RSIGS is designed to mitigate these effects. This is discussed further in Section 3.3.4

The assessments prepared by ANCA utilised evidence prepared by WHO to describe the impact of aircraft night noise on sleep. This evidence, as described in the NNG, and ENG18, provides dose-response relationships which equate the impact of aircraft noise on sleep in terms of the annual average L_{night} metric and the number of people HSD. This metric is incorporated within the relevant legislation ANCA is required to adopt for the purposes of its assessment. This includes Directive 2002/49/EC, and Directive 2020/367 which adopts the WHO dose-response relationships.

The L_{night} metric is a long-term outdoor noise exposure indicator. Most of the studies that have informed the WHO dose-response relationship between aircraft noise and sleep are based on large-scale epidemiological studies, and socio-acoustic surveys on self-reported sleep disturbance are linked and referenced to outdoor noise exposure data.

The sound insulation properties of a building will affect the noise level which occurs indoors from an aircraft noise event. This can also be influenced depending upon how often windows are opened. This means that for a given level of aircraft noise outdoors, indoor noise levels could vary across a range of buildings. Such considerations are some of the practical reasons why the WHO have not recommended any guideline values for indoor noise levels within its ENG.

There is research which has used alternative metrics to describe the potential impacts of aircraft noise events on sleep, such as indoor and outdoor L_{Amax} levels, their distribution and occurrence. Whilst recognising that such metrics can be used to describe effects such as awakenings and physiological reaction, ENG18 states that: *“the relationship between different types of single-event noise indicators and long-term health outcomes at the population level remains tentative”*. As such the ENG18 made no recommendations for single-event noise indicators.

As noisier aircraft have a higher impact on the NQS than quieter ones, the NAO incentivises the operation of quieter aircraft at night if more flights are to be accommodated. Incentives by the Applicant that encourage the adoption of the latest generation of aircraft and latest technologies will be an important aspect of achieving the NAO.

Under the Act of 2019 ANCA is to ensure that the noise situation at the airport is assessed in accordance with the ENR and the END. This requires the noise assessment to be undertaken using the methodology described in Annex II of the END as established by Directive 2015/996, and amended by Delegated Directive 2021/1226 which confirms that *“for aircraft noise where the calculation is performed without considering the presence of buildings”*. The NAO requires the noise model to be prepared in accordance with this methodology, and shall be validated using local noise and track keeping performance data from Dublin Airport’s systems. The calculated noise levels may not include for specific localised effects between buildings; however, they do enable noise levels to be assessed on a consistent basis across time, and provide a basis for assessment against the NAO.

Land Use Planning Impacts on NAO

Aircraft noise management through the ICAO Balanced Approach requires multi-stakeholder participation. In developing the inventory of noise measures for the Airport as presented in Section 7.3 of the DRD Report, ANCA has identified the stakeholders that hold responsibility.

Land use planning is an important aspect of the Balanced Approach, and requires the participation of stakeholders external to airports, airlines and air navigation service providers. In undertaking a noise assessment, ANCA had regard to the existing population and properties consented or likely to be consented arising from approved land use zoning, and the impact this may have on the population.

Legislation provides for the assessment of populations exposed to environmental noise regardless of the party responsible for managing this aspect of the Balanced Approach. Airport operators can participate in the public participation processes associated with the preparation of land zoning policies to influence the development of land around an airport in a manner appropriate to intended use and exposure to current and forecast aircraft noise.

Under the ENR, the process of preparing strategic noise maps requires the population in the relevant year to be considered rather than an assessment against a population at given point in time. In the context of the Environmental Impact Assessment, the impact on future populations is also required with guidance in other jurisdictions, such as CAP1616 in the United Kingdom requiring assessment to be undertaken having regard for future populations.

The reporting requirements of the END provide for the reporting of the numbers of people exposed to aircraft noise in terms of dwellings and population. This should be broken down into the overall

numbers exposed, with the numbers exposed and receiving special insulation measures as a result of noise control programmes, presented separately.

The NAO was therefore developed to ensure that assessments take future population growth into consideration but also requires assessment to be made against the population in 2019. The NAO Report explains that for the NAO:

“The measures shall be calculated using population estimates representative of the current year or year of interest as well as against a baseline population representative of the year 2019. This shall be undertaken having regard for guidance published by the Environmental Protection Agency (EPA).

For example, when measuring the NAO in 2030, a population dataset should be used which is representative of the population in 2030. If the current year is 2030 then the population dataset for the current year shall be adopted.

If a forecast is being prepared for the year 2030, then a forecast population dataset for 2030 shall be adopted when measuring the NAO”

This is to ensure that the measurement of the NAO takes into account population growth and can be used to determine whether land-use planning is effective in limiting population exposure to aircraft noise.

Selection of 2019 as the Reference Year in the NAO

ANCA has selected achievable but challenging reductions in aircraft noise exposure as part of the NAO, taking into account the wider principles of sustainable development.

With respect to the number of people HA and HSD, the NAO has set a target to reduce these numbers by 30% in 2030, by 40% in 2035, and 50% in 2040 compared to 2019 levels. The reduction outcomes have had regard for both the noise forecasts provided with the Application and the selection of 2019 as the reference point for these outcomes.

ANCA adopted 2019 as the reference point for the NAO outcomes as it represents:

- The latest data available to ANCA for the Airport at the time the NAO was developed; and
- The year in which noise outcomes from the Airport were at their peak with respect to the population exposed to aircraft noise.

In preparing the NAO for Dublin Airport, ANCA considered setting the NAO having regard for noise exposure data provided and representative of the years 2016 and 2018. These reference points were considered by ANCA in its preliminary assessment and identification of a noise problem. The preliminary assessment and comparisons to 2016, 2018 and 2019 were presented in Appendix C of the DRD Report and were originally published by ANCA in February 2021.

With regard to the use of 2016 as the reference year when setting the NAO, ANCA's analysis indicated that to limit and reduce the long-term adverse effects of aircraft night time noise (while allowing the sustainable development of the airport), setting the NAO with reference to the 2016 situation may be overly restrictive with regard to wider local, regional and national policy relating to the growth of the airport and the forecasts provided with the Application.

The document EU Action Plan: "Towards a Zero Pollution for Air, Water and Soil" references 2017 as the baseline year. The information cited in the document was based on 2016 data. 2016, as a reference year, was considered by ANCA in its preliminary assessment and identification of a noise problem.

The use of 2018 as a reference point for the NAO was also considered by ANCA. The Applicant submitted a candidate NAO (cNAO) as part of the Application which used 2018 as a reference point.

ANCA has had regard for this cNAO which stated that: *“long-term noise exposure, particularly at night, does not exceed the situation in 2018”*.

The cNAO did not include any form of noise reduction targets or associated outcomes however. ANCA determined that reduction targets should form part of the NAO while also having regard for the wider national, regional and local policy and the intention of the Aircraft Noise Regulation. These considerations are set out in the NAO Report. For this reason, ANCA determined that further development of the cNAO was required in order to specify an order of magnitude for a reduction aspect of the NAO.

The NAO is designed to manage the noise of increasing aircraft activity in a sustainable manner. ANCA assessed the noise situation using 2019 as the reference year. The use of 2019 recognises the level of noise that occurred at its peak and sets a strategy for how that would be limited and reduced as part of a larger, longer-term strategy that would be in accordance with policy related to growth, climate action and health protection.

The percentage reduction outcomes set by the NAO for 2030, 2035 and 2040 will require the Airport to reduce noise outcomes well below those observed in 2018 and 2019 by 2030. This is more stringent than the cNAO submitted by the Airport. The noise assessment by ANCA determined these reductions to be the optimum balance between noise reduction and the sustainable development of the Airport.

Different reference points could have been selected in developing the NAO, however the percentage reductions set by ANCA would need to be reconsidered to reflect what is achievable. For example, the percentage reduction outcomes stated in the NAO (i.e., to reduce the number of people HA and HSD by 30% in 2030, by 40% in 2035, and 50% in 2040), cannot be achieved by using the reference year of 2018 by many of the runway use and restriction scenarios considered by ANCA.

Likewise, setting the fourth outcome required by the NAO (i.e., to reduce the number of people exposed to levels of noise above 55 dB L_{night} and 65 dB L_{den} compared to 2019), if changed to reference against 2018, would also limit detailed consideration of many of the runway use and restriction scenarios considered by ANCA in its analysis.

ANCA has determined that the NAO, which has been developed against the 2019 reference situation, will enable the airport to ensure future decreases in noise exposure and associated health outcomes whilst providing operational flexibility.

In the *“Pathway to a Healthy Planet for All”*, the reduction target is stated to be 30% of people chronically disturbed by transport noise. Against the selected baseline, the NAO provides for noise reduction outcomes of 30%, 40% and 50% over the period 2030 to 2040 with respect to the numbers of people HA and HSD.

The NAO will be defined and published following the consultation period, having had regard to submissions and observations and provides that: *“The number of people exposed to aircraft noise above 55 dB L_{night} and 65 dB L_{den} shall be reduced compared to 2019”*. A deferred implementation of this requirement of the NAO would contravene the ‘limit’ provision of the Policy Objective aspect of the NAO.

The mitigation measures contained within the regulatory are designed to ensure that the outcomes required by the NAO are achieved. For this reason, the setting of and NAO and making of a RD are an integrated parts of a noise assessment and are not established in isolation. Monitoring of the implementation of the NAO will be informed by the reporting requirements of the RD together with the monitoring provisions of the Act of 2019. The reports will be available for public inspection.

Noise Assessment

The Applicant is the designated noise mapping body, with responsibility for gathering data and formulating noise maps, for the purposes of the European Communities (Environmental Noise)

Regulations 2018 (the Regulations of 2018). The assessment of regular noise reports is managed through other regulatory functions of ANCA under the Act of 2019.

The Aircraft Noise Regulation states that “health aspects shall be assessed in accordance with Environmental Noise Directive and the European Communities (Environmental Noise) Regulations 2018 (S.I. No. 549 of 2018)” through the calculation of number of people Highly Annoyed (HA) and Highly Sleep Disturbed (HSD).549 of 2018”.

The Environmental Noise Directive (the END, Directive 2002/49/EC) defines “‘harmful effects’ as meaning negative effects on human health”. Annex III of the END defines assessment methods for ‘harmful effects’ which have been introduced by amendment through Directive 2020/367.

Directive 2020/367 adopts dose-response relationships published by the WHO in ENG18. For aircraft noise, ‘dose-response relationships’ are provided to calculate the population HA and HSD. All assessments undertaken by ANCA have utilised these measures which are implicit measures of the NAO.

The modelling methodology required as part of the measurable criteria of the NAO (ECAC Doc.29 4th Edition) require the input of annual average meteorological and associated atmospheric conditions.

The decibel scale is logarithmic and an increase or decrease of 3dB is equated with a halving or doubling of the equivalent sound energy. A 3dB change does not necessarily equate to a doubling or halving of sleep disturbance or annoyance as this is dependent on the dose response function.

3.3 Submissions and Observations Related to the Draft Regulatory Decision and Related Report

The **regulatory decision (RD)** contains the set of conditions developed by ANCA for the planning authority to incorporate into their decision on planning application F20A/0668.

The RD supports the implementation of the NAO.

The RD was consulted on in *draft* format as the DRD, with the results of the public consultation informing the RD.

The DRD proposed three conditions to be incorporated in the planning authority's decision on planning application F20A/0668. These draft conditions proposed:

1. 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.
2. That runway 10L/28R [the north parallel runway] **shall not be used for take-off or landing between 00:00 and 05:59 (local time)** except in cases of safety, maintenance considerations, exceptional air traffic conditions, adverse weather, technical faults in air traffic control systems or declared emergencies at other airports or where Runway 10L/28R length is required for a specific aircraft type.
3. That a voluntary **residential sound insulation grant scheme (RSIGS)** for residential dwellings shall be provided as detailed in Schedule B, for all homes forecast in 2025 to be exposed to aircraft noise at or above 55dB L_{night} contour and experience a 'very significant' effect. Dwellings exposed to levels at or above 55 dB L_{night} shall be reviewed every two years commencing in 2027 and if applicable become eligible for the scheme. This scheme shall not apply to properties where works were undertaken under the existing Residential Noise Insulation Scheme (RNIS) or Home Sound Insulation Programme (HSIP) or to properties where a planning application was lodged after 9 December 2019, the date being the adoption of Variation No. 1 to the Fingal Development Plan 2017 –2023 incorporating policies relating to development within Aircraft Noise Zones.

The technical information relating to the implementation of the proposed noise mitigation measure and operating restrictions was set out in the schedules of the DRD. The DRD also specified details of reporting metrics and frequencies to be followed by the Applicant. In the RD, the schedules referred to in the DRD are incorporated into the conditions and are not separated into schedules.

The DRD was welcomed by both business stakeholders and some residents, citing its potential role in increasing the operational flexibility of the Airport, promoting development, connectivity, and growth, while balancing community concerns. It was cited as representing a pragmatic and responsible approach to managing aviation activities at Dublin Airport into the longer term.

Responses highlighted that the greater operational flexibility would support economic recovery from the impact of Covid-19, as well as adapting to market changes post-Brexit. Submissions included recognition that ANCA used the ICAO Balanced Approach in formulating the DRD. However, other respondents regarded the draft

decision as not in keeping with the Balanced Approach, in either that it fails to adequately recognise the impact on health and quality of life, or conversely, fails to recognise the value of the aviation industry at Dublin Airport.

However, many respondents maintained that the existing planning conditions should be upheld, and that the DRD should not replace them, suggesting that there was not adequate consideration of the impact of the DRD on health, wellbeing, and quality of life. They suggested that the conditions 3(d) and 5 were put in place by An Bord Pleanála in the interest of protecting the amenity of the surrounding area.

It was also observed that the DRD being underpinned by SEA and AA is positive, allowing for the continued development of the Airport, whilst protecting the local environment.

Submissions and observations relevant to each of the conditions of the DRD were received regarding their impact and the practicality of their implementation. These responses have been summarised and are set out in the following sections.

3.3.1 Runway Use Patterns, Flight Paths and Forecasts

A number of submissions considered the condition of the DRD relating to runway use times for the north parallel runway. Respondents also considered the forecasts used in making the DRD, and the impact of flight paths on aircraft noise.

Runway Use Patterns and Time of Runway Use

Some respondents expressed their belief that the restrictions that are currently in place on night flights on the south runway are not effective, and that there are already flights regularly in the night time hours in excess of what is permitted.

The draft decision to allow the use of the north parallel runway between the hours of 23:00-23:59 and 06:00-07:00 within the 8-hour night time period, while prohibiting its use between 00:00-05:59 was welcomed by a number of stakeholders, in that it would allow for greater flexibility in flight scheduling. This condition was observed by respondents as allowing for demand at Dublin Airport to be accommodated more effectively, whilst taking community concerns into consideration.

Other respondents maintained that there should not be any flights on the north runway between 23:00-07:00, and that allowing night time flights on the north runway may have a negative impact on sleep, health and quality of life for those living near the airport. The impact of the proposed runway operating hours (both negative and positive) was also raised in a number of submissions.

Forecasts and Modelling

With regard to the DRD report, submissions suggested that ANCA's Forecast Without New Measures (FWNM) is flawed and that the cost-effectiveness analysis should be recomputed. The reliability of forecasts was also questioned, with some respondents of the understanding that the Irish Aviation Authority (IAA) will be responsible for the flight paths once the north runway is operational.

A view was expressed that COVID-19 has reduced demand for business travel and that reduced demand should be considered as part of ANCA's decision.

Submissions included suggestions that the Applicant's forecasts illustrate the ability of the airport to reach targets without the need for extended runway hours. The view was also expressed that there are currently enough slots to meet the existing schedule, and that the north runway could alleviate this without the need for additional night-flights. Respondents also cited the Applicant's submission, saying it suggested that growth to 42 mppa by 2040 is still possible with the existing planning conditions, without the DRD.

Some respondents highlighted their concern that the DRD does not take the concerns of residents into consideration in terms of the impact on health and welfare, and does not take account of the impact of those who will be affected by the cumulative impact of flights throughout the day.

Submissions highlighted a need to include longitudinal noise data in the noise mapping.

It was submitted by resident groups that the year 2025 is not significant, and that instead comparison should be made to exposure levels before and after the opening of the north runway. There was also some concern expressed that the reduction in noise levels proposed by the NAO might not be achievable.

Submissions raised queries in relation to the adequacy of the documentation provided by the Applicant through the planning application, and suggested that they are lacking information. This included comments on the cost-effectiveness analysis provided by the Applicant, with the view expressed that it does not meet the requirements of Regulation 598/2014 (the Aircraft Noise Regulation) and does not take the cost of carbon emissions or the costs of meeting requirements of the Climate Action and Low Carbon (Amendment) Act 2021 into consideration.

Monitoring and Oversight

Reference was also made to the adequacy of existing noise monitoring programmes and the noise monitoring terminal network. The view was expressed that more field-based monitoring should be carried out, that the network of noise monitors should be expanded, and that other initiatives such as citizen science should be considered.

Submissions suggested that the basing of the DRD on projections, assumptions and computer produced statistics is not adequate, without the use of field data.

Responses included representation from the aviation sector, including viewpoints that not changing the condition may limit the competitiveness of the Airport or the flexibility of airlines to implement operational or schedule changes. Freight carriers expressed concern that they might be disproportionately impacted by this condition.

It was submitted that ANCA should have a role in the monitoring of noise complaints. It was also stated that there is no noise complaints process in ANCA's draft decision and that ANCA should examine complaints.

How the conditions of the RD will be enforced, was queried in submissions and observations.

Flight Paths

Submissions raised concerns regarding differences between the divergent flight paths incorporated into the details of the Application and those of the existing planning permission for the north runway.

Several responses refer to the changes in flight arrival and departure routes from the airport and how they will affect aircraft noise. Views were also expressed that they should be subject to a planning application.

Respondents also referred to dual departures, citing the view they are not allowed under the current planning conditions. One submission suggested that in its final determination, ANCA should make it explicitly clear that it is made on the basis of straight-out departures.

Submissions received also included suggestions on the use of the runways for inbound and outbound flights.

ANCA Response to Submissions and Observations Relating to Runway Use Patterns, Flight Paths and Forecasts

Runway Use Patterns and Time of Runway Use

There are currently no restrictions on the number of aircraft movements at Dublin Airport or the hours of operation. A wide range of night time runway use patterns have been considered by ANCA in

making the RD. These are presented in Appendix E of the RD Report and show that consideration has been given to different usage of the north and south runways.

Condition 3(d) of the north runway Planning Permission represents a form of a partial curfew by removing access to the north runway at night; this is one of the conditions which the Applicant has applied to change. A curfew represents an operating restriction, Section 7.6.6 of the DRD Report set out ANCA's assessment of such a measure. A full night time curfew of aircraft would be highly effective at reducing night time noise exposure and associated effects. However, it would also be extremely costly and could result in economic damage to Ireland's economy.

Appendix G of the DRD Report provided the opinion of ANCA's experts with regards to a night time curfew. It is the opinion of ANCA that an overly restrictive curfew has the potential to significantly impact airline operators and the competitiveness of Dublin Airport as a hub airport and the viability of some long-haul routes to North America. For these reasons, any curfew introduced would need to be partial.

A partial curfew has been adopted by ANCA, with scheduled activity from the north runway restricted between the hours of 00:00 and 05:59. The runway use modes and restriction scenarios considered by ANCA are set out in Appendix E of the RD Report, illustrating that other forms of partial restrictions have also been considered.

ANCA recognises that the RD means that there will be higher levels of night time noise exposure when compared to the situation that would otherwise pertain through the planning conditions set down by the North Runway permission. Allowing scheduled flights to use the north runway during the period 23:00 to 23:59, and 06:00 to 07:00 will result in significant increases in night time noise at some locations. No scenario considered by ANCA was found to result in the same outcome as Condition 3(d) and 5 with respect to health.

The impact of these changes means that there is a forecast increase in sleep disturbance. ANCA's approach to quantifying impacts and effects of the proposals has followed the relevant dose-response relationships as defined by the WHO and adopted by the European Commission through Directive 2020/367. In making an RD, ANCA has had regard for how the impact on sleep compares to the impacts which occurred in 2019, and how these can reduce over the period to 2040 in line with the NAO.

Sleep disturbance has been used as a measure to inform the cost-effectiveness assessment which has been used to assist ANCA in coming to its draft decision. ANCA recognises that for communities experiencing the highest levels of night time noise exposure i.e., above the night time priority of 55 dB L_{night}, noise insulation is required to help mitigate the effects of the proposals. A noise insulation grant scheme has therefore formed part of the RD with targets sets for the performance of the insulation provided through the scheme, which is discussed further in Section 3.3.3.

Forecasts and Modelling

ANCA has undertaken a comprehensive cost-effectiveness analysis in support of its decision making. The Forecast Without New Measures (FWNM) scenario relied on in the analysis has assumed that Conditions 3(d) and 5 were completely removed. This approach was taken to allow the cost-effectiveness of both Conditions 3(d) and 5 to be assessed alongside their alternatives. This is considered best practice.

The forecasts provided with the Application have been independently reviewed by ANCA. All forecasts include uncertainties. These uncertainties include the aviation industry recovery from the Covid-19 related reductions in flight activity particularly in the context of whether the max noise year occurs in the forecast year of 2025, earlier or later. Regardless of these uncertainties, the noise quota restriction within the RD coupled with the reduction outcomes of the NAO addresses these uncertainties by setting required outcomes. The assessment had regard to the administrative cross-boundary nature of noise exposure and insulation scheme contours arising from land use plans and objectives, through county development plans, taking into account current and permitted developments.

The noise modelling which has been undertaken to support the assessment work makes assumptions with respect to the use of the flight paths, taking into account the runway use and restriction scenario, and the schedules underpinning the Applicant's forecast. For departure routes, destination is used as a means of allocating aircraft movements to the flight path.

Whilst the Applicant's forecast indicates that the Airport can return to an airport throughput of 32mppa and onwards to 42mppa by 2040 with Conditions 3(d) and 5 of the North Runway planning permission in place, these conditions are not cost-effective when compared to the alternative combination of measures considered. These findings have formed the basis of the RD, following the process described in legislation, as detailed in the RD report.

In making the RD, ANCA has had regard to submissions that reference the cumulative effect of aircraft noise along with ground noise and determined that the overall population exposure upon which ANCA has based its decisions is dominated by air noise.

Legislation requires noise assessments to be undertaken using standardised average noise models. This facilitates comparisons between different operating scenarios and years. Although noise is not experienced in an 'averaged' way, tables are provided within the RD to relate QC of individual aircraft to noise levels.

The regulatory framework under which ANCA is required to carry out its assessments specifies the use of annual-averaged noise exposure metrics. These take into account the level of individual aircraft noise events, such as those reported in a submitted 2018 'longitudinal analysis' along with the frequency of their occurrence. The objective of the regulatory framework is to limit and reduce the harmful effect of environmental noise. This relies on dose-response relationships taken from the ENG18. ENG18 considered single-event noise indicators, such as Sound Exposure Level (SEL) and L_{Amax} , however only found tentative evidence associated with these and long-term health outcomes.

An assessment of the aircraft noise modelling undertaken as by the Applicant part of planning application F20A/0668 is presented in Appendix F of the RD report.

ANCA was satisfied that the cost-effectiveness information provided by the Applicant was sufficient to allow ANCA to carry out ANCA's cost-effectiveness analysis in compliance with the requirements of Annex II of Regulation 598/2014. ANCA considered that it was appropriate to deal with indirect impacts in the Strategic Environmental Assessment rather than the Cost-Effectiveness analysis.

Monitoring and Oversight

The RD makes provision for the preparation and publishing of quarterly and annual reports relating to the NQS and noise exposure outcomes relating to the provisions of the NAO. These provisions complement the monitoring aspects of the Act of 2019.

Noise models prepared for the purposes of examining the impacts of actual noise exposure levels will be validated using data from noise measuring terminals. The ongoing development of noise monitoring terminal capacity is managed through other regulatory functions of ANCA under the Act of 2019.

The RD which includes the NQS will be incorporated into the planning decision relating to planning application F20A/0668. The NQS will be subject to the enforcement provisions of the Act of 2000. The Act of 2019 makes provision for regular noise assessments and amendments to the NAO where necessary arising from these assessments.

ANCA does not have a role in managing individual noise complaints but has regard to the issues that cause community annoyance through the implementation of legislative provisions.

Fingal County Council planning authority is responsible for the enforcement of planning conditions. The NQS is designed to operate on an annual basis for the twelve-month period from 1 April to 31 March inclusive each year. If the Applicant fails to adhere to the RD conditions included in the planning permission, enforcement of the conditions will take place.

Flight Paths

The noise assessment informing the making of the RD incorporated the future flight paths of the air navigation service provider as contained within the Application. ANCA does not have a role in establishing flight paths, including matters relating to straight out or divergent routes.

3.3.2 Noise Quota Scheme

Setting the Noise Quota Scheme

It was suggested in submissions and observations that the calculation of the increase in night time flights should include the impact of cargo and other non-passenger operations.

Respondents raised a number of queries related to the Noise Quota Scheme (NQS) proposed by ANCA in the DRD, including the definition of the night time period, the setting, monitoring and enforcement of the NQS, restrictions on certain aircraft, and the economic impact and impact on freights of the NQS.

The NQS as set out in the DRD was regarded in some submissions as bringing the Airport in line with international aviation standards. Responses remarked that the NQS could balance the requirements for operational flexibility at the airport whilst taking community concerns into consideration.

ANCA's recognition of the full night time period of 8-hours for the application of the NQS was welcomed in responses. The view was expressed that this quota period is adequate for the needs of the airport and that it offers a workable balance and sufficient flexibility for airlines. Other suggestions included that the NQS should be applied over 6 or 6.5 hours, submitting that this would be in line with some other European airports.

Concerns surrounding the implementation of the NQS were identified in submissions. The NQS was cited as confusing for stakeholders, suggesting that it would be difficult for the general public to equate to real-life noise events and that the public cannot measure compliance with the NQS. Submissions also suggested that there is a lack of understanding of how the NQS was decided, and how it would benefit the community. Other submissions expressed the view that the noise quota would fulfil the industry standard for airports.

A submission stated that there needs to be a clear rationale for the revocation of Condition 5 provided, and not just a rationale for the NQS. Views were expressed that it is premature to alter planning conditions, as the impact of the north runway will not be known until it is operational.

The NQS proposed by ANCA was regarded by some as going too far beyond what was requested by the Applicant. However, the opinion was also expressed that the existing numerical flight-cap does not take account of technological improvements made to aircraft which reduce noise.

Submissions conveyed the view of some respondents that the NQS may be a poor way of reducing noise. It is suggested that the allocation of Quota Counts (QC) assigned at manufacturing stage might not adequately reflect actual measured noise. Responses also claim that the NQS fails to consider individual noise events.

A Submission stated that as the RD is being made in order to revoke or amend existing conditions, that there needs to be clear rationale and evidence that the mitigation measures proposed will ensure that there is not a diminishing of health protection that is compliant with the existing operating restrictions.

Limits on Night Flights vs NQS

Submissions and observations were received from those advocating for the retention of the current planning condition, which limits the number of night time flights at 65 ATMs at night. Some respondents referenced other airports using a combination of an NQS and a numerical movement limit on night time flights.

Comparisons with Other Airports

Submissions outlined different approaches taken in other airports including differing noise quotas, different runway use times (e.g., shorter night time periods, shorter noise quota periods), those which have blackout periods for local respite and restrictions on night time flights.

Enforcement

Respondents queried how the NQS will be enforced, who will be responsible for ensuring its implementation, and what penalties or mitigation actions would be applied in the case that the NQS is exceeded. It was submitted that an auditable and transparent penalty system should be put in place for operators who do not adhere to restrictions. Submissions also included requests for openness and transparency regarding data and computation methodologies.

Restrictions on Certain Aircraft at Night

Some respondents considered that achieving the NQS may depend on the introduction of newer, quieter aircraft. The view was expressed that this is not proven and might not counter growing numbers of ATMs. Submissions included assertions that QC values are not representative of ground conditions, and that planes with a lower QC could still cause significant noise. The opinion was also expressed that the idea of fleet modernisation leading to less noise is flawed, citing the view that there is little perceptible difference between the noise emitted from older vs newer planes.

It was submitted that the NQS could serve to disqualify a number of aircraft types from operating at night, and that further engagement will be needed with the industry to establish how they can work within the limits of the NAO, stating concerns about the timeframe for implementation. Representation from cargo and freight carriers in particular, cited the need for review of the NAO with the industry, and the development of a more robust and realistic roadmap to support the introduction of quieter aircraft.

Representation from the aviation sector highlighted that the NQS should take fleet replacement cycles for airlines into consideration to allow for noise reduction initiatives by manufacturers and airlines to come on stream. It is also suggested that the application of the NQS should reflect the flight scheduling season, and variation between summer and winter schedules. It was suggested that a 'local rule' could be applied to coordinate this.

In relation to its economic impact, the DRD was welcomed in terms of how it relates to passenger aircraft, however stakeholders from the freight and transport sectors highlighted their concerns as to how the DRD may impact cargo carriers specifically, such as the movement of time-sensitive goods including pharmaceuticals and exports from the agri-food sector.

Representation from the freight industry cited the opinion that they may be disproportionately impacted by the NQS, with their need to regularly operate at night, as well as the proposed restriction on QC1 landings at Dublin Airport. These submissions considered that there should be the ability to offer dispensation for what is termed "reasonable operation" outside the NQS.

ANCA Response to Submissions and Observations Relating to the Noise Quota Scheme

Setting the NQS

The night time noise quota is designed to limit the amount of noise produced by aircraft at night. ANCA has set an annual noise quota of 16,260, which applies to the twelve-month period between April and March each year, and covers flights which take off and land between 23:00 to 06:59. The noise quota applies to the Airport's operation as a whole i.e., all take-off and landings which occur on all of its runways. These dates are aligned with the worldwide airport slot scheduling calendar.

The definition of night time applied by ANCA is in accordance with the definition set down by the European Communities (Environmental Noise) Regulations 2018 (the ENR) where the start of the day, evening and night have default values of 07:00 19:00 and 23:00 local time.

The noise classification level of an aircraft as determined at manufacture, is assigned a quota count through the RD. The impacts of actual (real-life) noise exposure levels will be validated using data from noise measuring terminals.

The noise quota set by ANCA differs to that proposed by the Applicant in that it covers the full eight-hour night period of 23:00 to 06:59 as defined in legislation, rather than the 6.5-hour period (23:30 to 06:00) proposed by the Applicant.

The noise quota is therefore higher than that proposed by the Applicant as it covers a further 1.5 hours, usually the busiest at the airport during the night time period, particularly the hour from 06:00 to 06:59. The setting of the noise quota had regard for two aspects: the fleet mix of the various aircraft forecast to operate during the night; and their forecasted occurrence.

The setting of the noise quota has taken into consideration the Applicant's forecasts as submitted with the application, which are available in the reporting template provided with the Application. The number of aircraft movements at night over an annual period, and during the summer months for the various scenarios were considered.

With the airport continuing to operate with a passenger restriction of 32mppa, forecasts indicate the following number of night time movements in the table below. To provide context, the night time movements in 2018 and 2019 are also presented:

Year / Forecast	Annual Night Time Movements	Summer Night Time Movements
2018	27,896	8,755
2019	29,320	9,445
2025 and beyond with Condition 5 in place i.e., without relevant action	19,521	5,410
2025 and beyond with noise quota i.e., with relevant action	31,885	8,836

This table shows that with the relevant action, and through the introduction of the noise quota, the Applicant's forecasts would result in a similar number of summer night time movements in 2025 than what occurred in 2018/2019. The annual number of night time flights would however be higher than what occurred in 2019.

As outlined above, the Airport would need to operate within the noise quota and would also need to meet the outcomes set by the NAO.

The reasons for the new and amended conditions are given in the RD. The rational for amending and replacing the original conditions is detailed within the report accompanying the RD.

Limits on Night Flights vs NQS

In Section 7.6.6 of the draft RD Report, ANCA reviewed different approaches to limiting aircraft night time noise through operating restrictions. This section sets out ANCA's findings on caps on aircraft movements alongside noise quotas.

Maintaining the movement restriction of 65 movements per night was considered by ANCA as part of the cost-effectiveness analysis reported in Section 9.3 of the RD report.

Retaining this restriction, whilst being highly effective at reducing sleep disturbance effects, was also found to be costly. ANCA's conclusion was that the existing restrictions are not cost-effective when compared to alternatives. Replacing the 65 movements per night restriction with a NQS was found to be a much more cost-effective means of managing and limiting aircraft noise impacts.

Whilst a cap on night time aircraft movements is a straightforward and transparent way of restricting aircraft operations, it does not consider the noise and associated effects of aircraft operation. Furthermore, the noise assessment determined that a simple cap on aircraft movements does not align with wider sustainability aspects of the NAO (i.e., allowing the airport flexibility to grow whilst managing the impact of noise). For this reason, the noise quota does not include a movement limit.

If a movement cap is included as an operating restriction in addition to a noise quota count, there may not be an incentive for the use of quieter aircraft as the movement cap might be achieved before the noise quota count has been used. Conversely, if the noise quota count is reached before the movement cap is achieved, there is no benefit gained, from a noise reduction perspective, of having a movement cap.

The noise assessment determined that a restriction should take the form of a noise-related limit which works alongside the wider objectives and outcomes of the NAO. A noise quota is considered to be best approach to meeting this requirement. Section 3.5.1 of the RD report provides an overview of the operation of noise quota schemes.

The NQS is designed to restrict the total amount of aircraft noise by setting a 'noise budget'. Reduction of noise at source through fleet modernisation is an important pillar of the Balanced Approach.

Aircraft noise emissions are managed through ICAO certification that seeks to ensure that the latest available noise reduction technology is incorporated into aircraft design, with outcomes that are relevant to day-to-day operations. This aims to ensure that noise reductions offered by technology are reflected in noise exposure reductions around airports.

As noisier aircraft have a higher impact on the NQS than quieter ones, the NQS incentivises the operation of quieter aircraft at night if more flights are to be accommodated. Incentives by the Applicant that encourage the adoption of the latest generation of aircraft and latest technologies will be an important aspect of achieving the NAO.

The regulatory framework requires that aircraft noise restrictions which relate to individual aircraft noise performance are set using certified noise levels as determined at manufacture rather than aircraft noise levels measured on the ground.

Comparisons with Other Airports

Both the Aircraft Noise Regulation and ICAO guidance require the identification and application of noise control measures on an airport-specific basis. Fleet mixes and operating patterns will differ between airports and the proximity and composition of communities around an airport will also be location specific. Some cities may be served by a number of airports and, in those instances, noise control measures can be distributed across the airports in a manner that can be tailored to best address community and economic requirements. This approach does not prevent the transfer of best practice from other airports to the location undergoing a noise assessment but recognises that, depending on the particular circumstances, there may be activity which may not be problematic at one location but requires intervention at another and vice versa.

There are a number of other airports in the UK and Europe which operate night time noise quota schemes. Many of those schemes (particularly in the UK), are designed to cover a 6.5-hour period from 23:30 to 06:00. They are also designed with split quotas for summer and winter seasons.

The quota scheme proposed for Dublin Airport covers a full 8-hour period and aligned with the legal of the night time period. As the first and last hour of the night time period are amongst the busiest hours at Dublin Airport, a full-night quota scheme ensures that aircraft activity during these busy periods are managed within the quota count. This activity would not be captured by quotas which only cover a 6.5-hour period.

As the noise quota proposed for Dublin Airport is an annual quota, it is not designed with split quotas and will cover both the summer and winter flying seasons.

These two factors may make the quota count appear more generous than similar schemes when comparing only the quota values. It is important to note that for quota schemes which cover a 6.5-hour period, the number and type of aircraft movements outside these periods are often not subject to any restrictions.

Furthermore, at other airports, there is no overarching noise abatement objective in place that requires the reduction of noise-related outcomes in parallel with the restrictions themselves. Under the combination of measures determined by ANCA in the RD, with the noise quota restriction in place, the Applicant will also need to reduce the effects of noise in line with the reduction outcomes set by the NAO.

This noise reduction will be measured using modelling validated using the Applicant's noise and track keeping systems. ANCA cannot set restrictions on aircraft movements using locally gathered noise measurement data as European and Irish law requires ANCA to set restrictions exclusively by reference to the rated noise performance of the aircraft. However, the NAO defines the overall aims of noise regulation by reference to locally gathered noise measurement data. ANCA can adapt the restrictions through future noise assessments if the monitoring results demonstrate that they are not achieving the NAO.

Enforcement

Monitoring of the implementation of the NQS will be informed by the reporting requirements of the RD together with the monitoring provisions of the Act of 2019. The reports produced will be available for public inspection to ensure transparency. The NQS will be subject to the enforcement provisions of the Act of 2000.

Restrictions on Certain Aircraft at Night

Under the Aircraft Noise Regulation and the 2019 Act, decisions on noise-related operating restrictions, using on the noise performance of an aircraft, must be based on the certification procedure. Therefore, restrictions must be based on noise levels as measured through aircraft certification procedures rather than through local measurements.

ANCA had regard to submissions made by air freight carriers and carried out a review of the potential impact of the DRD on this sector such as such as the movement of time-sensitive goods including pharmaceuticals and exports from the agri-food sector. Chapter 14 of the RD report sets out the findings of this review and associated changes made to the DRD.

In regard to submissions and observations suggesting that the duration of the RD should be aligned with 'fleet refreshment cycles' and allow for noise reduction initiatives by manufacturers and airlines to come on stream. ANCA's RD applies until there is a need for ANCA to execute the process of aircraft noise regulation and modify the RD. This can occur through several ways, including ANCA monitoring of the airport against the NAO and determining a noise problem through non-compliance; along with any noise problem deemed to occur from any planning application; or a planning application seeking

to change an operating restriction. The NAO has taken a long-term view and has set noise outcomes which consider fleet refreshment cycles.

The NQS has been designed to include a number of dispensations. These are listed in the RD.

3.3.3 Residential Sound Insulation Grant Scheme (RSIGS)

A number of the submissions received related to insulation schemes including the proposed RSIGS. Topics submitted include the adequacy of home insulation as mitigation against aircraft noise and the eligibility terms of the RSIGS.

Adequacy of Insulation Schemes

Submissions recognised that the making of the RD will result in areas and households being newly affected by aircraft noise. The proposed RSIGS was welcomed by some as a means of achieving the balance between the growth of the airport and providing benefit to communities who stand to be affected by the change in runway operations.

Several respondents made observations in relation to the adequacy of the RSIGS.

Respondents questioned the rationale for the scheme only extending to bedrooms, asserting that the RSIGS offers less protection than existing insulation schemes.

Representation was received from residents who have already availed of existing insulation schemes, citing independent noise validation carried out in their homes, and concern that the RSIGS may not achieve WHO targets. Several submissions cited reports of studies of the effect of aircraft noise on human health.

The opinion was expressed that the RSIGS may not achieve WHO target noise levels and may not adequately mitigate the negative effects of aircraft noise. Respondents also raised issues relating to ventilation, and that insulation schemes will not be effective when households wish to open windows for ventilation, particularly in the summer.

Concerns were expressed through submissions regarding the ventilation of bedrooms at night time, particularly during the summer months and related to the requirement for well ventilated space during the COVID-19 pandemic, and how this may affect the performance of any insulation installed. RSIGS allows for measures including passive and mechanical ventilators.

Some submissions received stated that the RSIGS contravenes the Fingal Development Plan in not adhering to 'Noise Zone Identifying Areas'. Several submissions cited that the DRD makes no mention of exposure to >40dB L_{night} for Malahide during the 2016 consultation.

Respondents referenced a number of areas that have the potential to be newly impacted by night time noise as a result of the RD such as Malahide.

Eligibility and Review of the Residential Sound Insulation Grant Scheme (RSIGS)

Submissions highlighted that the extent of the RSIGS proposed by ANCA differs from that proposed by the Applicant in their application, resulting in fewer properties being eligible for the scheme. It was suggested that consideration should be given towards expanding the area covered by the RSIGS. Feedback included questions as to why properties closest to the runway were to be offered the same level of protection as those further away which are also eligible for the scheme.

The need for the scheme to be regularly reviewed is highlighted, as well as the potential for the scheme to be means based. Some respondents were of the belief that the RSIGS should not be capped at €20,000 and that the baseline of 55dB L_{night} is too high. Suggestions that the RSIGS should be means tested were also received to the consultation.

It was also suggested that ANCA should have a role in house design and building standards for new developments around the airport as part of noise mitigation.

Buy-out of Affected Properties

A number of submissions referred to existing insulation schemes and the Voluntary Dwelling Purchase Scheme (VDPS) arising from the grant of permission for the new runway. Some respondents expressed dissatisfaction with the current scheme, suggesting that there had not been adequate consultation with those affected who would avail of the scheme, and that the schemes are not proposed to change despite the changes in conditions.

ANCA Response to Submissions and Observations Relating to the Residential Sound Insulation Grant Scheme

Adequacy of Noise Insulation Schemes

Noise insulation schemes are a common means of mitigating aircraft noise impacts. The RD includes a residential sound insulation grant scheme (RSIGS) which is available to residential dwellings forecast to be exposed to aircraft noise above 55 dB L_{night} , and 50 dB L_{night} with a change of 9 dB or more. As such the scheme focuses on residential dwellings and population experiencing particularly harmful effects.

The performance of any noise insulation is dependent upon the measures which are installed and the structure of the dwelling itself. In reviewing and developing the scheme, the noise assessment had regard to the combination of various insulation measures which can be afforded under the €20,000 grant attached to the scheme. Review of the data provided by the Applicant in response to a direction to provide further information, indicated that the RSIGS scheme can provide a similar level of bedroom insulation performance to that available under the existing RNIS scheme. The requirement to address bedroom levels of insulation in this RSIGS scheme aligns with the night time aspect of this application.

To ensure that the best combination of insulation measures is identified, the scheme includes provision for a 'statement of need' which will identify the most effective package of measures for bedrooms within the dwelling. This will be based on a technical assessment of the noise insulation required for the eligible dwellings.

For some residential dwellings, insulation will improve night time internal noise levels. However, for others, particularly those most affected by night time use of the north runway, noise insulation will mitigate increases in noise but may be unable to nullify the full increase. The RSIGS has been designed so that a target performance of at least a 5 dB improvement in the insulation of bedrooms is achieved, and where possible, internal ambient noise guidelines levels within British Standard BS8233:2014 "Guidance on sound insulation and noise reduction for buildings" are achieved.

Such guidelines are already used by FCC in planning conditions for the sound insulation requirements for new residential developments. The RD includes provision to increase the grant assistance sum in line with the Consumer Price Index maintained by the Central Statistics Office in the form of a grant in the sum of €20,000 towards the costs of noise insulation measures to bedrooms in eligible dwellings.

Having had regard to submissions received during the public consultation relating to limitations in the proposed scheme the RD has made provision for an extension of the RSIGS with provision for additional properties to become eligible for assistance in the form of a grant in the sum of €20,000.

WHO guidelines are based on outdoor exposure levels. The RSIGS provides noise exposure mitigation within bedrooms, and this will be in line with WHO guidance – see also Section 3.3.3 above.

Noise contours reported from 45 dB L_{den} and 40 dB L_{night} have not previously been produced for Dublin Airport prior to the Application and this RD. Noise assessments by ANCA however require the reporting of noise exposure to the levels recommended by the WHO. This has resulted in noise exposure from Dublin Airport now being presented in locations which have not previously been shown to experience

aircraft noise. This includes the presentation of locations within Malahide being exposed to night time noise exposure above 40 dB L_{night} . The assessment work undertaken by ANCA has had regard for all population within the reported contours irrespective of where that population resides.

Under the proposed scheme, where ventilators are provided, a ventilation strategy must be created for bedrooms in each eligible dwelling under the scheme, to be prepared in accordance with Part F of the Building Regulations. The aim of the ventilator is to supply fresh air into bedrooms from the outside, minimising the requirement to open windows therefore maintaining the sound insulation performance. The RSIGS also provides the flexibility for emerging technologies, such as solar blinds, to be applied to a property through alternative measures identified and completed by the property owner.

The purpose of the Fingal Development Plan is to define the objectives for land use management. It contains policies relating to aircraft noise in the context of managing new noise sensitive development. The RSIGS has been developed to provide mitigation at existing residential receptors which are forecast to experience some of the highest levels and greatest increases in new night time aircraft noise as a result of the relevant action.

Eligibility and Review of the Residential Sound Insulation Grant Scheme (RSIGS)

The Application proposed a third scheme for the insulation of properties with eligibility for dwellings forecasted to be exposed to:

- Night time noise levels of at least 55 dB L_{night} in 2025; or
- Noise levels greater than 50 dB L_{night} in 2022 arising from a change of least 9dB when compared with 2018. This criterion was proposed by the Applicant and extends the insulation scheme eligibility to locations which would experience a 'very significant' increase in night time noise exposure. ANCA agrees that this approach helps to address the impact of the noise problem caused by the relevant action.

The RSIGS is in addition to the two pre-existing home insulation schemes in place for the areas surrounding Dublin Airport. This scheme is provided to mitigate the impact of night time noise for homes which were not eligible or did not benefit from measures under previous schemes. As the Application is related to changes to night time aircraft operations at the airport, the RSIGS makes provision for bedroom insulation only.

The 55 dB L_{night} criteria was selected as this aligns with levels of night time noise exposure which WHO describes as a situation which is considered increasingly dangerous and a clear risk to public health. A noise insulation scheme focussing on residential dwellings which are exposed to noise above this threshold was therefore considered appropriate. The 55 dB L_{night} metric has been adopted within the NAO given the likelihood of harmful effects.

The DRD proposed a forecast year of 2025 for the second eligibility aspect (the maximum forecasted noise year). Having regard to submissions relating to the areas covered by the home insulation grant scheme, ANCA has reviewed the forecasts for 2022 and 2025. This review suggests that noise exposure from the north runway is higher in 2022 forecast than in the 2025 forecast. However, overall noise exposure from the airport remains at its highest in 2025. In light of the submissions received during the consultation period, ANCA has amended the initial eligibility boundary to reflect the 'very significant' effect determined from the 2022 forecast. This change will make additional properties eligible for the grant scheme.

ANCA's approach to setting the eligibility criteria for the noise insulation scheme has been to align this to where evidence links noise exposure to harmful effects. All properties within the eligibility area will be entitled to receive grant assistance of €20,000 in accordance with the terms of the scheme.

ANCA does not have a role in developing building standards but supports the requirements for noise assessments for new developments in areas affected by aircraft noise. The RD provides for insulation measures for qualifying properties up to the date of these requirements becoming operable.

The RD makes provision for an initial eligibility contour area for inclusion within the RSIGS in addition to regular eligibility reviews every two years after 2027. Similar provision is contained within the existing home insulation schemes at the Airport.

Home insulation as a noise mitigation measure is generally reviewed in the context of new noise assessments arising from proposed development or significant changes to the noise climate around an airport. The RSIGS is a financial grant scheme for the cost of sound insulation measures. ANCA did not identify comparable schemes with a means testing aspect and did not include this measure as an eligibility provision.

ANCA had regard to submissions relating to the geographic extent, eligibility criteria and extent of the grant payment. The home insulation scheme contained within the RD has been modified from that consulted upon.

Buyout of Affected Properties

ANCA has addressed consideration of property buyout and relocation assistance in Section 7.6.5 of the RD Report. In doing so ANCA identified that existing provisions are already in place through Condition 9 of the north runway planning permission (Fingal County Council Reg. Ref. No. F04A/1755; ABP Ref. No. PL06F.217429). This makes provision for a scheme for the voluntary purchase of dwellings that are contained within the 69 dB $L_{Aeq,16hr}$ noise contour from the Airport. The Local Area Plan 2020 also cites exposure at and above 69 dB $L_{Aeq,16hr}$ as a threshold above which “*under no circumstances shall any dwelling be permitted*”. The scheme which has been set up under Condition 9 remains relevant with respect to the Local Area Plan policy.

ANCA supports the continued review of eligibility for properties located within the 69 dB $L_{Aeq,16hr}$ noise exposure contour as noise exposure changes over time. As an existing policy is already in place, ANCA determined that a new policy and associated threshold was not required in the RD.

3.3.4 Other Comments Raised Regarding the DRD and Related Report

Environmental Concerns

Respondents, including the Environmental Protection Agency (EPA), highlighted the merit in considering climate adaptation measures and resilience to climate change in the preparation of the RD. The EPA also referred to the monitoring programme which is required within the RD, in that it should be flexible in order to take account of specific environmental and unforeseen adverse impacts, and that the programme should monitor both positive and negative effects, and set out the data sources, monitoring frequencies and responsibilities.

Economic Aspects

Submissions cited the role of the airport in the development of the local and national economies, its role as an employer, also in the tourism, freight, and transport sectors. The role of the Airport in Ireland's transport infrastructure and in maintaining international connectivity to ensure competitiveness and trading performance was acknowledged. A submission received from Enterprise Ireland highlighted the need for consideration of Global Ireland, Enterprise 2025 and the National Development Plan.

Submissions and observations from local residents cited that in their view economic development and the commercial interest of the airport are prioritised over their concerns, and that this is not an adequate reason for changing the planning conditions. The view was raised that it is a missed opportunity for more ambitious conditions into the medium and long-term.

Submissions also claimed that the DRD is contrary to the National Aviation Policy, which proposes the development of the Airport as a hub.

The issue of the impact of the NAO and RD on property values was raised.

ANCA response to other comments raised regarding the DRD and Related Report

Environmental Considerations

ANCA's role is to assess and regulate for the management of aircraft noise at Dublin Airport. Whilst ANCA accepts that other environmental considerations and interdependencies other than noise are important in the context of airport operations, ANCA has no authority to incorporate climate change resilience or food production measures into its decision. Under the regulatory framework, ANCA's decision can only relate to noise mitigation measures or operating restrictions. Addressing other specific environmental and unforeseen adverse impacts is beyond the scope of this consultation.

Economic Aspects

Aspects related to tourism and employment are not within the scope of the aircraft noise assessment.

As well as recognising that aircraft noise associated with Dublin Airport has an impact on the health and quality of life of those who live around it, ANCA must also recognise the role Dublin Airport plays in both the national and local economies. Under the Aircraft Noise Regulation, ANCA has a role in overseeing the balance of these two considerations with respect to noise-related operating restrictions.

In making an NAO and RD, ANCA had regard to key relevant national, regional, sectoral and environmental plans in addition to the prescribed legislative requirements.

ANCA recognises that there is evidence to suggest that aircraft noise can have a negative impact on house values. Much of this evidence focuses on overall noise exposure levels more than changes in noise exposure with research showing large variation between studies. The opening of the north runway will introduce significant changes in aircraft noise around Dublin Airport. The RD will introduce further change for over a period of 2 hours during the night. ANCA has been unable to identify any robust evidence that would allow the specific change aspects of the RD to be separated from the impact of the existing consent.

3.4 Submissions and Observations Related to the Strategic Environmental Assessment Draft Environmental Report

The **Strategic Environmental Assessment (SEA)** is the process for the formal, systematic evaluation of the likely environmental effects of implementing a plan or programme, before a decision is made to adopt the plan or programme.

The **NAO** and the **RD** set a framework for future applications for planning permission at Dublin Airport and as such can be considered a plan in accordance with the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations (2004).

The SEA Draft Environmental Report addressed the NAO – focused on noise outcomes – and the RD – focused on noise mitigation measures and operating restrictions which seek to secure the noise outcomes set by the NAO.

On 15 April 2021, ANCA determined that the defining of the NAO and making of the RD required SEA and commenced the process with consultation with the prescribed environmental authorities.

Submissions from Environmental Authorities

A submission from the Environmental Protection Agency (EPA) raised a number of queries relating to the SEA. The EPA stated in its submission that following the making of the RD and NAO, that an SEA statement should be prepared summarising how environmental considerations have been integrated; how the environmental report, submissions, observations and consultations have been taken into account; the reasons for choosing the RD and NAO in light of other reasonable alternatives identified and; the significant environmental effects of the implementation of the RD and NAO.

Consideration of Other Relevant Plans and Policies

It was highlighted in the submissions that the RD and NAO should align with key relevant higher-level plans and programmes, such as the European Union's biodiversity policies, the Dublin Regional Air Quality Management Plan 2009-2012, the National Biodiversity Plan, those within the National Planning Framework, and the Eastern and Midlands Regional Spatial and Economic Strategy. It was highlighted that relevant sections of the Environmental Report and the RD should acknowledge the Meath County Development Plan in the making of the NAO and RD.

One submission remarks that the Aircraft Noise Regulation is an integrated approach to ensuring the functioning of EU transport systems and the protection of the environment.

It was submitted that the NAO does not conform with the European Commission Action plan "*Towards zero pollution in air, water and soil*", adopted in May 2021, which uses the year 2017 as a baseline. It was submitted that ANCA chose to use 2019, rather than 2017, as it was the noisiest year on record.

It was also submitted that the NAO is contrary to the SEA and does not meet the requirements of the Environmental Noise Directive (2002/49/EC), and that the assessment of population and human health is not enough to meet the requirements of the SEA directive.

It was submitted that the FCC Noise Action Plans show growth in noise levels and also it was submitted that this is in contravention of the Environmental Noise Directive (END).

Reference to the Climate Action Plan 2019 in the SEA is cited as requiring updating to the Climate Action Plan 2021.

The NAO

It was suggested that the NAO be amended to include “Noise from Dublin Airport should be limited and reduced in line with principles of environmentally sustainable development”

Concern was expressed that the SEA has not sufficiently analysed the NAO, and that it is inadequate to meet the requirements of the SEA directive, and that a more robust assessment is required.

Monitoring Requirements

The key findings of the SEA (and AA), including significant effects, mitigation, monitoring and other recommendations should be integrated into the NAO and RD

The Environmental Report should propose monitoring of positive, negative and cumulative effects, specifying the frequency, responsibilities and reporting requirements of the monitoring.

The NAO and RD should include a commitment to implement the environmental monitoring programme and associated reporting.

It was suggested in responses that monitoring the effectiveness of the measures proposed in the DRD (including the effectiveness of noise and other environmental criteria considered in the SEA) should be looked at over the lifetime of the DRD and feed into annual reviews and reporting where possible.

The EPA in their submission suggest the inclusion of a table which demonstrated how the monitoring programme takes the wider environmental impacts into account. It is also submitted that monitoring programmes should set out the relevant data sources, monitoring frequencies and responsibilities.

Noise Measurement Data

Concerns were expressed that the predicted noise measurements are still being calculated by computer generated programmes, and no actual field measurements or monitoring was initiated or conducted by the Applicant. It was submitted that the Applicant’s noise measurement methodology is severely flawed and not fit for purpose, compared to noise monitoring carried out at residents’ homes. The view was also expressed that there should be additional monitors positioned under flight paths.

Noise Quota Units

It was submitted that where the SEA refers to the NQS, particularly the noise quota of 16,260, it would help to have a reference guide, for example setting out some of the standard aircraft values which are currently in operation at the Airport.

Impact of Noise on Human Health

Although the impact of aircraft noise on human health is also discussed in the context of the NAO and the RD, a number of the issues raised in submissions and observations are relevant to the SEA. The view was expressed that the SEA does not sufficiently address the physical and mental health impacts of night time noise on local residents. It is acknowledged that the SEA states that the likelihood of compliance with WHO guidelines will improve with the adoption of the NAO, there is concern that the guidelines will not be achieved. It was noted by the EPA that compliance with noise guidelines should be supported by effective relevant monitoring and reporting to ensure that the measures are being implemented.

Regarding the impact of noise and vibration, the EPA recommended that adjoining local authority noise action plans may require review, in the context of changes arising from the implementation of the RD and NAO. Reference was also made to the development plans of neighbouring administrations and how the consideration of same should be reflected in the SEA and RD.

Impact on Climate Change

Submissions and observations referred to the value of considering climate adaptation measures and resilience to climate change in the SEA. It was submitted that the anticipated increase in flights would contradict climate policies and international agreements (such as the Paris Agreement and COP26 targets), with concern that the Relevant Action is in conflict with climate policy measures, and that organisations should be considering ways of reducing the impact of aviation on the climate and the number of flights from the Airport should be reduced. It was also suggested that the plan to use more energy efficient aircraft is premature until new engine technology is in place and all night time flights are using more efficient aircraft.

It was also recommended that decreases in fuel tourism referenced should be further outlined in terms of how it fits within the context of the plan.

The impact of atmospheric pressure and time of day on the climate impact of flights and noise distribution was also referenced in submissions.

Impact of the NAO and RD on Air Quality, Noise Impacts on Wildlife, Biodiversity, and Landscapes

Submissions and observations were made related to the effects on air pollution of aircraft fumes and particulate matter with regard to air quality in areas such as Boroimhe, Ridgewood, Rivervalley, St. Marnock's Bay, Malahide and Portmarnock. It was considered in responses that the impact that this would have on human health, biodiversity and on livestock and food production should have been given greater consideration in the context of the DRD and NAO. It was suggested that consideration should be given towards natural noise attenuation measures such as tree planting to offset aircraft noise and carbon emissions, and improve visual amenity and biodiversity.

Submissions expressed that the increase in flights might make it difficult to achieve WHO air quality guidelines. It was submitted that the SEA should include information to support the likelihood of compliance with WHO guidelines with the adoption of the NAO, by including effective and relevant monitoring and reporting to ensure the mitigation measures set out are being implemented. It was suggested that monitoring measures should be considered over the lifetime of the project and that the SEA should set out the data sources, monitoring frequencies, and responsibilities. It was also questioned as to whether tests regarding the impact of 'fuel-dumping' have been carried out.

Submissions raised queries as to the impact of noise pollution on biodiversity including in protected sites, as well as those in gardens and hedgerows in the vicinity of Dublin Airport, and how the SEA addresses this. The impact of increased aircraft noise on the enjoyment of recreational facilities such as parks was also referenced.

Concern was expressed in submissions and observations regarding the impact of aviation on farming land in proximity to the airport relating to the effect of pollution and disturbance on food production or quality. It was suggested that there had been no discussion of rural communities and the impact of the DRD and NAO on them.

Concerns regarding the environmental implications, of fuel dumping, the impact on our air quality and on our soil quality, were raised.

Ban on Night Flights

Submissions said that the SEA had not considered a total ban on night time flights, where there was a legal obligation to do so.

Process Points Raised by the EPA

In addition to the substantive technical matters raised above, the EPA also raised a number of process points relating to the SEA and the implementation of the NAO and RD, along with future amendments. These

submissions did not impact on the substantive SEA process, but are set out below, and addressed in the responses section, for completeness:

- ANCA should screen any future amendments to the RD and the NAO for likely significant effects, using the same method of assessment applied in the “environmental assessment” of the RD and the NAO.
- Under the SEA Regulations, ANCA should consult with the Environmental Protection Agency, the Minister for Housing, Local Government and Heritage, the Minister for Environment, Climate and Communications, and the Minister for Agriculture, Food and the Marine.
- With regards to Dublin’s Regional Air Quality Management Plan 2009-2012 (yet to be updated), when updating, the requirements of the SEA and Habitats directives should be considered, as appropriate and relevant.
- Where the potential for likely significant effects has been identified, clear commitments to implement the mitigation measures should be provided.
- The Monitoring Programme should be flexible to take account of specific environmental issues and unforeseen adverse impacts should they arise. It should consider and deal with the possibility of cumulative effects. Monitoring of both positive and negative effects should be considered. The monitoring programme should set out the various data sources, monitoring frequencies and responsibilities.
- Regarding Chapter 8 of the DRD Report, ANCA summarises the environmental assessments undertaken alongside the NAO and provides an overview of the processes carried out. There is merit in also summarising the key findings of these assessments to further link the two processes.

ANCA Response to Submissions and Observations Related to the Strategic Environmental Assessment

Submissions from the Environmental Authorities

An SEA Statement has been prepared, summarising how environmental considerations have been integrated into the NAO and RD, including how the environmental report, submissions, observations and consultations have been considered. Other reasonable alternatives to the RD and NAO were identified and considered and the reason for the choice of the preferred alternatives. The environmental assessment of the NAO and RD has shown that there would be no significant environmental effects of the implementation of the RD and NAO.

In addition to the responses below, the full submissions from the Environmental Authorities are provided in Appendices 3 (EPA) and 4 (DAFM) of the SEA Final Environmental Report and have been addressed in the SEA Final Environmental Report.

Relevant aspects of submissions relating to the SEA from other stakeholders, and how these have been addressed through the SEA, are set out by submission in Appendix 5 to the SEA Final Environmental Report.

Consideration of Other Relevant Plans and Policies

The NAO and RD had regard to key relevant national, regional, sectoral and environmental plans. The Environmental Report has been updated to refer to the updated Climate Action Plan published in 2021. ANCA has considered the Climate Action Plan 2021 in line with the EPA’s submission, but did not consider that it required any changes to the NAO or RD.

The findings of the SEA and AA that have been undertaken to consider the environmental effects of the RD and NAO, have considered European, national, regional and local policy and legislation as was deemed to be appropriate.

ANCA considered that protection of the environment and ensuring the functioning of EU transport systems was an important factor in the development of the RD and NAO.

ANCA has no statutory role on noise action planning. The NAO, RD and supporting material will be available for local authorities to review and take into account when preparing future noise action plans.

References to the Climate Action Plan 2019 in the ER have been updated to the 2021 version where appropriate.

Reference within submissions to the baseline year of 2017 in the EU Action Plan: "Towards a Zero Pollution for Air, Water and Soil", is addressed in detail in section 3.2.

ANCA has taken the Meath County Development Plan 2021-2027 into account in the making of the NAO and RD. ANCA has concluded that the NAO and RD are consistent with the Meath County Development Plan, for the reasons set out in Section 3.3.1 of this report. Accordingly, ANCA considers that no changes to the NAO or RD are required to better align them with the Meath County Development Plan. Reference to the Fingal Development Plan in the description of the Third Condition of the RD is in relation to a cut off point for eligibility for the RSIGS rather than a link to the policy in the plan itself. Therefore, the RD does not need to be amended to include reference to the Meath County Development Plan.

The NAO

The UN definition of sustainability includes the environment, and is specifically referred to in section 4.1 of the NAO report. ANCA therefore considers that this aspect does not need to be stated expressly in the description of the NAO.

The NAO sets out a policy objective to limit and reduce the long-term adverse effects of aircraft noise from Dublin Airport, which ANCA considers supportive of the objectives of Directive 2002/49/EC (END) to *"avoid, prevent or reduce on a prioritised basis the harmful effects, including annoyance, due to exposure to environmental noise"*. The NAO sets measurable criteria based on the noise indicators required under the END namely L_{den} and L_{night} . It requires the noise assessment to be undertaken using the methodology described in Annex II of the END as established by Directive 2015/996 and amended by Delegated Directive 2021/1226. It is also required that the assessment of harmful effects is to be undertaken using the methodology set out in Annex III of the END as amended by Directive 2020/367.

ANCA considers the information contained in the NAO to be sufficient to inform an appropriate level of assessment with regard population and human health which has been undertaken as part of the SEA. SEA is generally a strategic form of assessment with Environmental Impact Assessment tending to require a more detailed form of assessment. In carrying out the assessment it was not determined that the NAO is in anyway contrary to the SEA and in fact meets the requirements of the SEA Directive.

Monitoring Requirements

The NAO includes the requirement for monitoring through the measures prescribed by the RD for monitoring the impacts of noise.

The RD makes provision for the preparation and publishing of quarterly and annual reports relating to the NQS and noise exposure outcomes relating to the provisions of the NAO. These provisions complement the monitoring aspects of the Act of 2019.

ANCA does not have a role in managing individual noise complaints but has regard to the issues that cause community annoyance through the implementation of legislative provisions.

The RD which includes the NQS will be incorporated into the planning decision relating to planning application F20A/0668. The NQS will be subject to the enforcement provisions of the Act of 2000. The Act of 2019 makes provision for regular noise assessments and amendments to the NAO where necessary arising from these assessments.

ANCA has considered monitoring measures relating to air quality, carbon emissions and designated nature conservation sites. However, these matters are not within ANCA's remit to require or enforce. ANCA will make the relevant sections of Fingal County Council aware of submissions relating to proposed additional monitoring stations. However, such monitoring is outside of ANCA's remit to require or enforce.

Noise Measurement Data

Noise models prepared for the purposes of examining the impacts of forecasted noise exposure levels will be validated using data from noise measuring terminals. The ongoing development of noise monitoring terminal capacity is managed through other regulatory functions of ANCA under the Act of 2019.

Noise Quota Units

Appendix B of the RD report describes the quota count classification as based on certified effective perceived noise levels (EPNdB). New text has been added to the Environmental Report in Chapter 2 to explain this (see paragraph 2.16 and new Table 2.2). Table 2.3 of the Environmental Report is a direct quote from the RD itself, and the units are simply noise quota units.

Impact of Noise on Human Health

The SEA states that the likelihood of compliance with WHO guidelines will improve with the adoption of the NAO, which seeks to reduce the number of people 'highly sleep disturbed' and 'highly annoyed' in accordance with the approach recommended by the WHO's Environmental Noise Guidelines (WHO, 2018). Part 5 of the NAO deals specifically with monitoring of noise measures and associated health effects.

ANCA considers that the risk of vibration effects arising from runway operations is very low. At other airports such effects have been found to be limited to buildings located within 500m of the runway ends with vibration induced from low frequency noise from aircraft start of roll. Vibration effects tend to be limited to light-weight constructions such as conservatories.

Impact on Climate Change

The future growth of Dublin Airport is set out in published policy at a national and local level (as discussed in paragraphs 2.19-2.24 of the SEA Final Environmental Report), and only the proportional increase in flights at night time is relevant to the SEA of the NAO and RD.

It is stated in paragraph 6.35 of the Environmental Report that the additional passengers associated with the NAO and RD may have an overall adverse effect on carbon and climate change when compared with the future baseline. However, compliance with the NAO is expected to result in a more efficient fleet mix. As such, growth in carbon emissions can be managed to the extent it is likely to be

insignificant, and so the likelihood of meeting aviation carbon emission reduction targets is largely unaffected by implementation of the NAO and RD. Furthermore, it should be noted that the NAO and RD will not cut across the ability of other competent authorities to take action to address climate impacts that might arise from aviation more generally.

As stated in paragraph 4.49 of the Environmental Report, the Department of Transport predicted an 82% increase in passenger traffic between 2010 and 2040, however with an expected 24% improvement in fuel efficiency, this would result in an overall 8.5% reduction of fuel consumption and CO₂ emissions over the period.

In terms of the potentially higher climate impact of night flights, aircraft arriving in Dublin during 23:00-00:00 and departing during 06:00-07:00 are unlikely to be airborne only at night, given that the whole of their journey must be considered. This is therefore an issue that should be addressed internationally rather than at the level of individual airports. Furthermore, the scientific community has not yet reached a consensus on how to account for the impacts of climate forcing when calculating aviation emissions due to a large number of uncertainties in the current understanding of the science, therefore it is not yet included in guidance provided by the UK Committee on Climate Change or the International Civil Aviation Organization (ICAO). Furthermore, airlines do not wish to use more fuel than necessary, making efficiency a primary objective. Additional text has been added to paragraph 6.33 of the Environmental Report on this point.

It is in the remit of ANCA is to ensure that noise is managed appropriately at the Airport. ANCA does not have the remit to mandate growth and therefore the RD and NAO does not permit such. As a result, the relevant action cannot be in conflict with climate policy.

Technology is some way ahead of the fleets that are currently operating, therefore it is known with some certainty what will be coming into operation. In order to be able to achieve the betterment required by the NAO, there will need to an introduction of newer more efficient aircraft.

The NAO requires that aircraft noise is reduced over time, driven by technological advancement at least in part. However, as the RD and NAO do not mandate growth, carbon emissions will not increase as a result of their implementation only.

Text explaining what fuel tourism is has been added to paragraph 4.45 of the Environmental Report notes that this relates to vehicle fuel, not aviation fuel, so is relevant to transport as a whole but not specifically to the Plan. ANCA is not the designated authority for the FCC Noise Action Plan under the Environmental Noise Regulations.

The modelling methodology required as part of the measurable criteria of the NAO (ECAC Doc.29 4th Edition) require the input of annual average meteorological and associated atmospheric conditions.

Impact of the NAO and RD on Air Quality, Noise Impacts on Wildlife, Biodiversity, and Landscapes

A high level, strategic assessment of air quality has been undertaken for the SEA, separate to the more detailed air quality assessment presented in the EIAR required to support the Applicant's planning application. The air quality assessment undertaken for the SEA relates only to aircraft and associated outcomes (e.g., from overflying).

Airborne emissions from aircraft are assessed in paragraphs 6.8-6.13 of the SEA Final Environmental Report, and health effects of this in paragraphs 6.53-6.54. Beyond 2km from the Airport, where most residents are located, no impacts are likely to be felt with regards to air quality. For residents of settlements located directly under the north runway flightpath within 2km of the Airport, air quality may deteriorate slightly from the additional flights, however, this is likely to be mitigated through the NAO necessitating a more efficient fleet mix, reducing the level of fuel that is burnt, and therefore also the level of emissions to the air.

Under the south runway flightpath, the effect on air quality is likely to be negligible or positive as some flights move to the north runway. Furthermore, it should be noted that the NAO and RD will not cut

across the ability of other competent authorities to take action to address any air quality impacts that might arise from aviation more generally.

The air quality at present in the area is generally good. The Applicant's published monitoring data show that emissions of NO₂ and PM10 are well within both the legal limit values and the WHO guidelines at all sites within 2km of the Airport, with the exception of the Airport bus depot, which is close to the applicable limits. Compliance with air quality legislation and WHO guidelines will not be adversely affected by implementation of the NAO and RD.

ANCA has no remit in respect of air quality monitoring. Noise monitoring stations are within the broader scope of ANCA and are considered in parallel to this application.

The AA NIS discusses the impact of air pollution on habitats, repeated in paragraphs 6.25-6.26 of the SEA Final Environmental Report. Beyond ~2km from the Airport, airborne pollutants tend to dissipate to such an extent before they reach the ground, that changes in air quality have limited effects on ecological receptors, including sensitive habitats such as saltmarsh, shingle and heath.

Even within 2km, the modest increase in air traffic is expected to be mitigated by the fact that aircraft will likely produce a reduced level of emissions due to the modernisation of the aircraft fleet required by the NAO. It should also be noted that the NAO and RD will not cut across the ability of other competent authorities to take action to address any biodiversity impacts that might arise from aviation more generally.

The impact of emergency fuel dumping is discussed in para 6.28 of the Environmental Report and within the NIS. Any dumping would still occur very infrequently, and in a controlled manner away from sensitive locations and/or at a sufficient altitude to allow for vaporisation and dispersion before reaching ground level.

As discussed in the AA NIS and repeated in paragraphs 6.14-6.24 of the SEA Final Environmental Report, many studies have reported habituation/tolerance to aircraft noise by a range of wildlife including birds and marine mammals. In particular, as stated in paragraph 6.16 of the Environmental Report, a total of 228 hours of vantage point survey were carried out within Baldoyle Bay in relation to the Applicant's planning application, and at no time was a reaction by any wetland bird(s) to passing aircraft recorded.

Furthermore, though the runway use pattern (P02) associated with the RD will cause an increase in noise in some locations, over Baldoyle Bay there is expected to be a decrease in noise (see paragraph 6.82 of the Environmental Report). Furthermore, the increased number of overflying aircraft will likely be mitigated by the fact that a more efficient and less noisy fleet mix will be operating from the Airport, thereby meaning that any changes in noise experienced will be very small, if such occurs at all.

Nevertheless, it is recommended in paragraph 7.10 that the Applicant monitors and reports annually on the aircraft movements (number and frequency by type of aircraft, including associated noise quota count) passing over designated biodiversity sites. However, as this is outside of ANCA's remit, such mitigation and monitoring can only be enforced at the level of a planning application for growth of the Airport should such come forward, with that application being subject to EIA screening, AA screening and EIA and AA if required.

As stated in paragraph 6.43 of the SEA Final Environmental Report, the additional flights associated with the NAO and RD will be at night (predominantly in the hours of 23:00-00:00 and 06:00-07:00), accordingly the impact on the enjoyment of parkland will be negligible.

Agriculture and food growing has not been considered as a sensitive receptor in this SEA, and for the same reasons as stated above in relation to wildlife and habitats, noise-related disturbance to livestock and air quality impacts to crops associated with the NAO and RD is extremely unlikely.

It is not feasible to create a vegetative noise barrier to noise emanating from the sky. For this reason, noise insulation scheme is the most appropriate approach to aircraft noise mitigation. Such nature-based mitigation measures for ground noise may be appropriate at the level of individual planning applications for changes at the Airport should such come forward, as these may require mitigation of

associated ground-based development and transport impacts (impacts which are outside of ANCA's remit).

Ban on Night Flights

As stated in paragraphs 3.10-3.13 of the SEA Final Environmental Report, the Guidance on Alternatives in SEA (EPA, 2015) recognises that it is not for the SEA to decide on the options to be considered. Instead, the SEA should focus only on the realistic and reasonable alternative delivery options actually considered in the preparation of the NAO and RD by ANCA.

A complete ban on night flights was deemed by ANCA not to be a realistic and reasonable alternative. As a matter of EU and Irish legislation a complete ban on night flights, like any other operating restriction, cannot be imposed by ANCA if it is more restrictive than necessary to achieve the NAO. Since the NAO can be achieved with less restrictive measures, ANCA cannot lawfully adopt these measures. Additional text has been added at paragraph 3.24 of the Environmental Report to explain this.

There is no legal obligation for the SEA to include an assessment of a complete ban on night flights. Instead, there is a requirement that there must be a consideration of realistic and reasonable alternatives as is defined by the SEA Directive and the SEA Regulations.

Process Points Raised by the EPA

ANCA confirms that future amendments to the RD and NAO will undergo environmental assessments as required. Such assessments will be informed by the original assessment of the RD and NAO, but the applicable methods may need to be updated in line with contemporary legislation and best practice.

As outlined above, ANCA undertook consultation with the prescribed Environmental Authorities in accordance with the SEA Regulations.

The Dublin Regional Air Quality Management Plan is prepared by Dublin City Council, South Dublin County Council, Fingal County Council and Dún Laoghaire-Rathdown County Council. Accordingly, ANCA has no remit in terms of updates to this plan.

As outlined in more detail in Section 7 of the SEA Environmental Report, the assessment of the NAO and RD revealed that there would be no significant adverse environmental effects as a result of implementing the preferred alternatives, i.e., Alternative (1) for the NAO and Alternatives (iv), (vi) and (x) for the RD. ANCA will monitor the effectiveness of these measures with regard noise through the requirements of the NAO.

Regardless, by its very nature, implementation of the NAO is to ensure that any growth or other changes at Dublin Airport that have the potential to affect the noise environment (specifically by causing a noise problem) do so in a managed way and in line with specific limits that have been set. By its very nature, this will mean that there will be a drive toward having both a most efficient fleet and efficient operations at the Airport.

This will, of course, help reduce noise but will have the positive knock-on effect of having the potential to trigger other environmental improvements.

Regarding monitoring, again as noted in Section 7 of the SEA Environmental Report, no significant adverse environmental effects have been identified for the NAO and RD. Nevertheless, within the NAO appropriate monitoring requirements are set out. Annual monitoring of the Airport's performance against the NAO will be undertaken as detailed in Schedule A (Part 4) of the RD.

ANCA has updated [Chapter 8] of the RD Report to summarise the outcome of the environmental assessments undertaken alongside the NAO and RD.

3.5 Submissions and Observations Related to the Appropriate Assessment – Natura Impact Statement

Statutory Instrument (S.I.) No. 477/2011 European Communities (Birds and Natural Habitats) Regulations (2011), transposes the EU Habitats Directive (92/43/EEC) into Irish law and requires that AA be carried out where a plan or project is likely to have a significant impact on a European site.

On August 18th 2021, ANCA determined that there was the potential for impacts on European sites to occur as a result of implementing the NAO and RD. Accordingly, data and information on the project and on the site and analysis of potential effects on the site was obtained and presented in a NIS to inform ANCA's determination on AA. The NIS was published for consultation on 11 November 2021 along with the DRD, in line with applicable regulatory requirements. ANCA took into account all submissions relating to the NIS and AA in making its determination on AA, as set out below.

Appropriate Assessment Process

Submissions raised concerns that ANCA had not come to an AA determination before making the DRD and that the impact in terms of the Habitats and Birds Directives was not made available ahead of the RD being made.

Submissions received in relation to the AA – NIS published by ANCA suggested that the NIS did not fully assess expected noise levels at Special Protection Areas (SPA) or Special Areas of Conservation (SAC), and it was submitted that it could not be relied upon to rule out negative impacts on sites in proximity to the Airport. It was submitted that no individual assessment of bird species of Special Conservation Interest (SCI) in SPAs was carried out, nor any assessment of the effects of noise increases in bird behaviour, such as the impact on the dawn chorus, and the potential for increased bird strikes as a result of the RD. It was suggested that there is data available to the Applicant (i.e., noise monitoring stations in proximity to protected sites) that should have been considered by ANCA in completing the NIS.

Respondents submitted that the NIS refers only to night time flight conditions, rather than to screening of the overall development but that despite this, no surveys were carried out at night.

Assessment of the planning application for the North Runway (FCC F04A/1755, ABP PL06F.217429).

Lacunae, Omissions, Lack of Cumulative Impacts

Concern was expressed by respondents that the NIS does not list the likely significant impact of all impacts, and should assess all impacts, not just increased flights, including the cumulative impact of all disturbance sources.

Submissions listed impacts requiring consideration under the NIS, including the increase in the number of planes refuelling at Dublin Airport, increase in use of chemical de-icers, and the increase in service vehicles and associated carbon emissions. It is also submitted that the calculations for increased night flights should also consider the impact of cargo planes and other non-passenger operations, and the impact of Brexit. It was suggested that the conclusions drawn in the NIS should be revised in light of additional information. Concerns were raised that no surveys/individual assessments were carried out at night or in relation to specific SCIs (e.g., Lapwing and Golden Plover) and that no evidence was provided to support the conclusion that there would be no impacts that birds are unlikely to be any more disturbed by aircraft at night when compared with the day.

Monitoring

It is also claimed that the ANCA NIS has underestimated noise levels in comparison to results from monitoring stations, and that ANCA has not factored in the noise impact from new routes resulting from the operation of the north runway.

Respondents submitted that calculation of noise impacts must be based on the factual data that the DAA hold in relation to actual recorded noise levels at monitoring stations and that this information must be made available as part of any application for ANCA, FCC and the public concerned to analyse and make informed decisions on.

Scientific Papers Submitted

As part of submissions and observations received, several academic papers were referenced by respondents as detailing impacts on birds and habitats.

ANCA Response to Submissions and Observations Related to the Appropriate Assessment – Natura Impact Statement

AA Process

The DRD was, as with the NIS itself, published in draft for consultation in line with applicable legislative requirements. No RD had been made at the time of consultation and therefore no AA determination needed to be (or could have been) made at that stage. All documentation published was for consultation purposes and was provided to give interested parties the opportunity to make submissions and observations as part of the decision-making process. This process is in accordance with applicable regulations, which require ANCA to publish (among other things) "the possible decisions, and where there is a draft decision, the draft decision" for public consultation.

Aligning with legal requirements, the AA determination will be made before the RD is made, and ANCA shall not adopt the RD unless the determination is that the plan would not adversely affect the integrity of any European site. No AA determination was required, or could have been made, before this point. For example, ANCA could not have made its AA determination at the point where the DRD and NIS were published for consultation, as the RD was in draft only status at this stage. Both the RD and the NIS were updated in response to public consultation, as envisaged by the applicable regulations.

The NAO and RD do not amend any grant of planning permission. The NAO and the RD are strategic level plans for the management of the aircraft noise. In particular, the RD determines the noise mitigation measures and operating restrictions which must be included in any planning decision related to this relevant action application. As such any consideration of impacts on European sites is limited to the impacts, direct or indirect, of the NAO and RD.

Decibel information from daa's monitoring stations was considered as part of the analysis of the existing environment. In any event, the key data for impacts is forecasted rather than existing noise.

Bird strike, causing death or injury to birds is not considered, as the majority of bird strikes occur under 500ft. The ICAO Bird Strike Information System (EB2017/25) reports 96% of strikes occur on or very near to the aerodrome. As there are no Natura 2000 sites within close proximity to the aerodrome the potential for bird strike can be excluded as a source of significant effects on European sites. This conclusion has been recorded in the updated NIS.

Potential impacts of the NAO and RD on bird behaviours are comprehensively addressed in the updated NIS, which has been based on best available scientific information as appropriate for a plan-level assessment.

Contrary to the submissions received, the NAO and regulatory decision do not amend any grant of planning permission. The NAO and the regulatory decision are strategic level plans for the management of airport that sit above any grant of planning permission. Together, they establish the framework within which the planning authority must determine the planning application. In particular, the regulatory decision determines

the noise mitigation measures and operating restrictions that the planning authority must include in any planning permission that it decides to grant. As such any consideration of impacts on European sites is limited to the impacts, direct or indirect, of the NAO and regulatory decision.

The NIS fully considers the in-combination effects of all existing plans and projects in light of best scientific knowledge. The North Runway Permission in particular is an integral part of the assessment. The NIS also proceed on the basis that future plans and projects carried out or authorised by other competent authorities will be subject to Appropriate Assessment.

The scientific information has been referred has been considered and is either irrelevant or does not affect the conclusions of the NIS. The draft NIS has been updated with further information from the scientific literature and the assessment text clarified in order to address the points raised in submissions. The conclusions remain unchanged, with no adverse effects on the integrity of any Natura 2000 sites predicted.

The assessment of impacts raised in submissions and observations is addressed in chapter 5 of the NIS.

Additional information as was raised during consultation was considered in the production of the final NIS. This is outlined in the final NIS published. In producing this and following a review of the literature sources referenced in submissions and observations, it is evident that the general conclusions drawn within the NIS scientific literature describing the conditions around when aircraft overflight can cause disturbance to birds is consistent with the additional references raised in submissions and observations.

For these reasons, although the additions have been useful for the NIS in terms of clarifying the approach and giving further weight to the conclusions drawn, it has not altered the outcome of the assessment, with no adverse effects on the integrity of any Natura 2000 sites predicted.

Therefore, the conclusions drawn in the NIS remain unchanged, with no adverse effects on the integrity of any Natura 2000 sites predicted.

Lacunae, Omissions, Lack of Cumulative Impacts

The NIS fully considers the cumulative effects of all existing plans and projects in light of best scientific knowledge, and to the extent relevant to the impacts of the NAO and RD as outlined above. The north runway permission in particular is an integral part of the baseline upon which the assessment is made. The NIS also proceeds on the basis that future plans and projects carried out or authorised by other competent authorities will be subject to AA.

The assessment that was scoped was clear in that it was only dealing with changes in air traffic. Section 3 of the NIS states:

While the NAO and RD will provide for a noise management regime that will allow the airport to grow, they only provide for a noise management framework and are neutral on whether that growth actually occurs. Therefore, they do not constrain the planning authority or An Bord Pleanála in any way in making whatever decision they consider appropriate on any application for that further development necessary to deliver growth. Therefore, any such development (e.g., relating to a new terminal or road/rail development) will have to be subject to EIA and AA (or screening for EIA and AA) and planning scrutiny on its own terms and its impacts will be fully assessed and considered at that stage.

For these reasons the NIS did not consider on the ground impacts associated with growth such as increased re-fuelling or additional service vehicle traffic.

Existing disturbance sources are taken into account in determining the baseline environment for the purposes of AA. The AA has also considered potential in-combination effects arising as a result of plans and projects determined to be relevant for this purpose.

In line with the strategic nature of the NAO and RD, the assessment was carried out on a desktop basis. A specific survey campaign was not carried out.

The analysis in 5.4 to 5.9 of the NIS sets out the extensive evidence to show that the combined effect of separation distances from the aircraft and habituation to existing night and day flights meant that impacts within SPAs would not give rise to significant effects on the integrity of those sites.

Section 5.16 of the NIS sets out the evidence for the conclusion that SCIs were unlikely to be any more disturbed by aircraft at night than during the day.

For the specific SCIs reference (Lapwing and Golden Plover) the nocturnal foraging behaviours occur in agricultural land which is not within the SPA and is not protected because of its abundance. Where those SCIs are foraging in agricultural land closer to the airport they may be disturbed, but will simply move to other similar habitat that is not affected by aircraft noise.

With regard to increased cargo flights, the NIS is based on an assessment of the noise that may occur as a result of implementation of the RD and NAO regardless of which type of flying activity it is generated by. Therefore, consideration is paid to any changes in flying that might occur.

Monitoring

Decibel information from daa's monitoring stations was considered as part of the analysis of the existing environment. In any event, the key data for impacts is forecasted rather than existing noise.

Scientific Papers Submitted

Particular scientific references provided by respondents have been reviewed and included within the analysis where relevant. These references are described below:

1. Hoang, T. (2013) *A literature review of the effects of aircraft disturbances on seabirds, shorebirds and marine mammals. Presented to NOAA, Greater Farallones National Marine Sanctuary and The Seabird Protection Network.* This review of the scientific literature has been reviewed and referenced within the NIS
2. Kempf, N. & O. Hüppop. (1998). "Wie wirken Flugzeuge auf Vögel? - Eine bewertende Übersicht", "How do airplanes affect birds? - An evaluative overview", in *Naturschutz und Landschaftsplanung (Nature Conservation and Landscape Planning)* 30, (I), pp. 17 – 28 (English translation of unknown date published with updates to original). This review was referenced within the draft NIS.
3. Smit, C.J. & Visser, J.M. (1993) *Effects of disturbance on shorebirds: a summary of existing knowledge from the Dutch Wadden Sea and Delta area.* Wader Study Group Bulletin 68: 6-19. This paper has been reviewed and referenced within the NIS
4. Van der Kolk, H., Allen, A.M., Ens, B.J., Oosterbeek, K., Jongejans, E. & van de Pol, M. (2020) *Spatiotemporal variation in disturbance impacts derived from simultaneous tracking of aircraft and shorebirds.* *Journal of Applied Ecology* 57: 2,406-2,418. This paper has been reviewed and referenced within the NIS
5. Whitfield, J. (2002) *Fly-by night birds confound conservation.* *Nature* (<https://doi.org/10.1038/news020708-6>). This paper has been reviewed and referenced within the NIS
6. Wolfden, A.D., Slabbekoorn, H., Kluk, K. & de Kort, S.R. (2019) *Aircraft sound exposure leads to song frequency decline and elevated aggression in wild chiffchaffs.* *Journal of Animal Ecology* 88: 1,720-1,731. This research is not referenced in the NIS. This is because it focuses on songbirds present within close proximity to the airfield (up to 2.1km from the airfield) and focus on a passerine species. Planes approaching Dublin Airport and overflying the closest SPA (Baldoye Bay) are still over 7km from landing and crossing an area designated for its range of wildfowl and waders, as opposed to passerines. The only SPA within 15km of the airport (North Bull Island) with explicit mention of passerines is not crossed directly by the flight lines shown within the NIS. Given the distance of the SPAs from the airfield (measured by both flight distance and straight line distance),

the altitude at which they will be crossed and the different type of bird community in question this paper was not considered to be relevant.

7. Zollinger, S.A., Dorado-Correa, A., Goymann, W., Forstmeier, W., Knief, U., BastridasUrrutia, A.M. & Brumm, H. (2019) *Traffic noise exposure depresses plasma corticosterone and delays offspring growth in breeding zebra finches*. Conservation Physiology 7, coz56. This research is not referenced in the NIS. This is because it consists of road traffic noise recorded at source played to captive zebra finches across a breeding period. This is not analogous to the situation in question given the types of birds in question and the type of disturbance.

The NIS was updated by reference to all relevant scientific sources provided where the weblink provided worked or if the source could be identified from the information provided. Several sources were however, considered not to provide any further useful evidence than the references already considered, e.g. the paper 'Aircraft sound exposure leads to song frequency decline and elevated aggression in wild chiffchaffs' which was referred to in a consultation response was deemed not to be relevant given the nature of habitats and species in question.

3.6 Submissions and Observations not within the Regulatory Remit of ANCA

While the public consultation asked for submissions and observations on the DRD, NAO, AA – NIS and the SEA, many submissions contained additional information which respondents wished to bring to the attention of ANCA through the public consultation process.

Several submissions contained information which were outside the scope of the consultation, namely:

- Relating to the dual role of Fingal County Council (FCC) as the planning authority and aircraft noise competent authority;
- Relating to the planning application submitted by daa in December 2020 (Ref. F20A/0668);
- Relating to the EIA to be carried out by the planning authority;
- Relating to flight paths otherwise than in relation to their noise impacts;
- Relating to consultation matters generally;
- Relating to the role of the airport in the development of the local and national economy, citing its role as an employer, and in tourism, freight, and transport.

Submissions related to the planning application made by the Applicant in December 2020 (F20A/0668), rather than to the documents published for consultation. While these submissions are outside the scope of the regulatory remit of ANCA, they have been considered.

The public consultation relates to the DRD, DRD Report, NAO, AA-NIS and the SEA-ER. Several submissions contained information which were outside the scope of the consultation, namely:

- Relating to the dual role of Fingal County Council (FCC) as the planning authority and aircraft noise competent authority;
- Relating to the planning application submitted by daa in December 2020 (Ref. F20A/0668);
- Relating to the EIA to be carried out by the planning authority;
- Relating to flight paths otherwise than in relation to their noise impacts;
- Relating to consultation matters generally;
- Relating to the role of the airport in the development of the local and national economy, citing its role as an employer, and in tourism, freight, and transport.

3.7 Statutory Consultees

Statutory Consultees under Article 6(d) of Regulation (EU) 598/2014 of the European Parliament and of the Council of 16 April 2014 on the establishment of rules and procedures with regard to the introduction of noise related operating restrictions at Union Airports within a Balanced Approach and repealing Directive 2002/30/EC

Article 6(d) the process of consultation with interested parties, which may take the form of a mediation process, is organised in a timely and substantive manner, ensuring openness and transparency as regards data and computation methodologies. Interested parties shall have at least three months prior to the adoption of the new operating restrictions to submit comments. The interested parties shall include at least:

- (i) Local residents living in the vicinity of the airport and affected by air traffic noise, or their representatives, and the relevant local authorities;
- (ii) Representatives of local businesses based in the vicinity of the airport, whose activities are affected by air traffic and the operation of the airport;
- (iii) Relevant airport operators;
- (iv) Representative of those aircraft operations which may be affected by noise-related actions;
- (v) The relevant air navigation service providers;
- (vi) The Network Manager, as defined in the Commission Regulation (EU) No 667/2011;
- (vii) Where applicable, the designated slots coordinator.

Stakeholders (i) to (v) have been consulted with through the consultation process as outlined in section 1 of this report.

Stakeholders (vi) and (vii) were sent individual invitations to submit observations during the consultation period.

4 CONCLUSION

This consultation report has been prepared to document ANCA's responses to the issues raised in the 14-week public consultation period. The DRD is presented in Chapter 10 of the RD Report.

Having regard to the submissions made in the public consultation, amendments have been made to the DRD. Chapter 14 of RD Report details the changes that were made to the DRD in making the RD.

ANCA has updated the NIS and SEA Environmental Report in response to submissions and observations received through public consultation. However, ANCA considered that no changes were required to the NAO and RD as a result of submissions and observations relevant to appropriate assessment and strategic environmental assessment. Further, the overall conclusions of the NIS and SEA Environmental Report regarding the impacts of the NAO and RD remained the same.

Having updated the Natura Impact Statement and SEA Environmental Report to take into account relevant matters raised in submissions and observations received during the public consultation period, ANCA proceeded to:

- adopt the final Natura Impact Statement and make a determination on appropriate assessment and
- adopt the final SEA Environmental Report and SEA Statement, prior to making the RD.

ANCA will issue the SEA Statement setting out its findings on strategic environmental assessment, as required under the applicable regulations.

A copy of the RD will be sent to everyone that made a submission and will also be published at www.fingal.ie/aircraftnoiseca.

The RD will be sent by ANCA to the planning authority to include in their decision on planning application F20A/0668. The planning authority will make the decision on whether to grant or refuse planning permission. It must include the conditions prescribed by the RD for the management of aircraft noise and reasons for the RD in its decision.

For the purposes of an appeal, An Bord Pleanála is the appeals body in relation to a decision of the planning authority containing the RD. Any person who made a submission or observation in writing in relation to the DRD, may on payment of the appropriate fee, at any time before the expiration of the appropriate period, appeal to An Bord Pleanála against the decision of the planning authority on the planning application containing the RD.

More information on ANCA and the aircraft noise regulation process can be found at www.fingal.ie/aircraftnoiseca.

Aircraft Noise Regulation Process

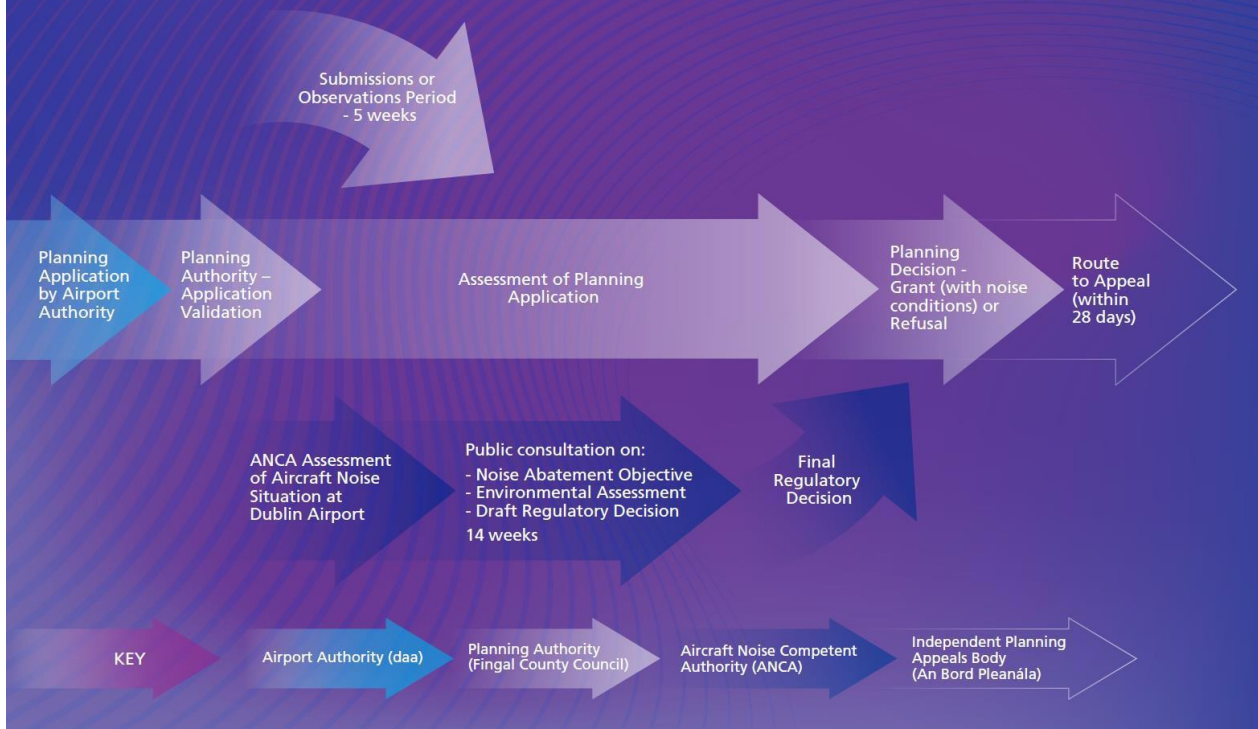


Figure 4-1 - Aircraft Noise Regulation Process

APPENDIX 1 – SUBMISSIONS AND OBSERVATIONS TO ANCA PUBLIC CONSULTATION

In order to ensure that all submissions and observations were addressed, ANCA reviewed and categorised each one. High level themes were identified, and it was determined to which document or documents the submission related. Submissions and observations have been considered and responded to in the most appropriate section of this report, depending upon the document the submission relates to, regardless of the sub-section of the consultation where submissions were entered. The table below sets out the submissions and observations received as they relate to each of the consultation documents.

Prevalent themes identified in submissions and observations related to impacts of aircraft noise to health, wellbeing, and quality of life. The NAO and the SEA addressed many of these submissions. The detail and extent of the sound insulation scheme(s) was a theme that occurred in many submissions, and this is addressed in the RD and the related report. Submissions also expressed concerns about the extent to which residents would be affected by the application, these aspects have been addressed in the NAO, the RD and associated report and the SEA.

Submissions and observations made related to the NQS have been addressed in the RD and associated report. Submissions regarding aircraft noise management at other airports were considered but have not resulted in changes to the RD.

Climate change, air pollution and the impacts of this application and ANCA's draft decision on plants, animals, habitats and on Natura 2000 sites have been addressed in the SEA Final Environmental Report and the AA NIS.

There were submissions and observations made regarding the consultation process itself and the communication and engagement of the Applicant with the residents. Additionally, submissions related to the positive aspect of local employment, business interests, tourism and the importance of the airport as a key piece of infrastructure, to the national economy. While these topics are outside the immediate scope of the consultation, they have been considered by ANCA.

Submissions and observations relating to the NAO
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FIN-C338-ANCA-1; FIN-C338-ANCA-2; FIN-C338-ANCA-5; FIN-C338-ANCA-6; FIN-C338-ANCA-7; FIN-C338-ANCA-8; FIN-C338-ANCA-9; FIN-C338-ANCA-10; FIN-C338-ANCA-13; FIN-C338-ANCA-14; FIN-C338-ANCA-16; FIN-C338-ANCA-17; FIN-C338-ANCA-18; FIN-C338-ANCA-19; FIN-C338-ANCA-20; FIN-C338-ANCA-21; FIN-C338-ANCA-22; FIN-C338-ANCA-23; FIN-C338-ANCA-24; FIN-C338-ANCA-28; FIN-C338-ANCA-29; FIN-C338-ANCA-30; FIN-C338-ANCA-31; FIN-C338-ANCA-32; FIN-C338-ANCA-33; FIN-C338-ANCA-34; FIN-C338-ANCA-35; FIN-C338-ANCA-36; FIN-C338-ANCA-37; FIN-C338-ANCA-38; FIN-C338-ANCA-40; FIN-C338-ANCA-41; FIN-C338-ANCA-42; FIN-C338-ANCA-43; FIN-C338-ANCA-45; FIN-C338-ANCA-46; FIN-C338-ANCA-47; FIN-C338-ANCA-49; FIN-C338-ANCA-50; FIN-C338-ANCA-51; FIN-C338-ANCA-52; FIN-C338-ANCA-53; FIN-C338-ANCA-55; FIN-C338-ANCA-56; FIN-C338-ANCA-58; FIN-C338-ANCA-62; FIN-C338-ANCA-63; FIN-C338-ANCA-64; FIN-C338-ANCA-65; FIN-C338-ANCA-66; FIN-C338-ANCA-67; FIN-C338-ANCA-68; FIN-C338-ANCA-69; FIN-C338-ANCA-70; FIN-C338-ANCA-71; FIN-C338-ANCA-72; FIN-C338-ANCA-73; FIN-C338-ANCA-74; FIN-C338-ANCA-75; FIN-C338-ANCA-76; FIN-C338-ANCA-77; FIN-C338-ANCA-78; FIN-C338-ANCA-79; FIN-C338-ANCA-80; FIN-C338-ANCA-81; FIN-C338-ANCA-82; FIN-C338-ANCA-84; FIN-C338-ANCA-86; FIN-C338-ANCA-87; FIN-C338-ANCA-88; FIN-C338-ANCA-89; FIN-C338-ANCA-91; FIN-C338-ANCA-92; FIN-C338-ANCA-93; FIN-C338-ANCA-94; FIN-C338-ANCA-95; FIN-C338-ANCA-98; FIN-C338-ANCA-99; FIN-C338-ANCA-100; FIN-C338-ANCA-102; FIN-C338-ANCA-103; FIN-C338-ANCA-104; FIN-C338-ANCA-106; FIN-C338-ANCA-107; FIN-C338-ANCA-108; FIN-C338-ANCA-109; FIN-C338-ANCA-111; FIN-C338-ANCA-113; FIN-C338-ANCA-114; FIN-C338-ANCA-116; FIN-C338-ANCA-117; FIN-C338-ANCA-119; FIN-C338-ANCA-121; FIN-C338-ANCA-122; FIN-C338-ANCA-126; FIN-C338-ANCA-128; FIN-C338-ANCA-130; FIN-C338-ANCA-132; FIN-C338-ANCA-133; FIN-C338-ANCA-134; FIN-C338-ANCA-136; FIN-C338-ANCA-137; FIN-C338-ANCA-138; FIN-C338-ANCA-139; FIN-C338-ANCA-140; FIN-C338-ANCA-141; FIN-C338-
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Submissions and observations relating to the DRD and Related Report

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Submissions and observations relating to the SEA

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Submissions and observations relating to the AA – NIS

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ANCA-70; FIN-C338-ANCA-74; FIN-C338-ANCA-76; FIN-C338-ANCA-79; FIN-C338-ANCA-87; FIN-C338-ANCA-89; FIN-C338-ANCA-90; FIN-C338-ANCA-91; FIN-C338-ANCA-92; FIN-C338-ANCA-95; FIN-C338-ANCA-97; FIN-C338-ANCA-100; FIN-C338-ANCA-106; FIN-C338-ANCA-115; FIN-C338-ANCA-119; FIN-C338-ANCA-121; FIN-C338-ANCA-128; FIN-C338-ANCA-139; FIN-C338-ANCA-140; FIN-C338-ANCA-145; FIN-C338-ANCA-146; FIN-C338-ANCA-147; FIN-C338-ANCA-151; FIN-C338-ANCA-152; FIN-C338-ANCA-153; FIN-C338-ANCA-154; FIN-C338-ANCA-156; FIN-C338-ANCA-159; FIN-C338-ANCA-161; FIN-C338-ANCA-163; FIN-C338-ANCA-164; FIN-C338-ANCA-165; FIN-C338-ANCA-166; FIN-C338-ANCA-167; FIN-C338-ANCA-169; FIN-C338-ANCA-170; FIN-C338-ANCA-171; FIN-C338-ANCA-174; FIN-C338-ANCA-177; FIN-C338-ANCA-180; FIN-C338-ANCA-182; FIN-C338-ANCA-183; FIN-C338-ANCA-184; FIN-C338-ANCA-185; FIN-C338-ANCA-186; FIN-C338-ANCA-190; FIN-C338-ANCA-199; FIN-C338-ANCA-202; FIN-C338-ANCA-203; FIN-C338-ANCA-204; FIN-C338-ANCA-207; FIN-C338-ANCA-209; FIN-C338-ANCA-210; FIN-C338-ANCA-211; FIN-C338-ANCA-214; FIN-C338-ANCA-216; FIN-C338-ANCA-220; FIN-C338-ANCA-233; FIN-C338-ANCA-243; FIN-C338-ANCA-246; FIN-C338-ANCA-258; FIN-C338-ANCA-265; FIN-C338-ANCA-266; FIN-C338-ANCA-268; FIN-C338-ANCA-269; FIN-C338-ANCA-270; FIN-C338-ANCA-275; FIN-C338-ANCA-303; FIN-C338-ANCA-308; FIN-C338-ANCA-312; FIN-C338-ANCA-315; FIN-C338-ANCA-316; FIN-C338-ANCA-318; FIN-C338-ANCA-320; FIN-C338-ANCA-324; FIN-C338-ANCA-326; FIN-C338-ANCA-339; FIN-C338-ANCA-341; FIN-C338-ANCA-345; FIN-C338-ANCA-347; FIN-C338-ANCA-350; FIN-C338-ANCA-357; FIN-C338-ANCA-358; FIN-C338-ANCA-365; FIN-C338-ANCA-368; FIN-C338-ANCA-372; FIN-C338-ANCA-390; FIN-C338-ANCA-392; FIN-C338-ANCA-396; FIN-C338-ANCA-400; FIN-C338-ANCA-401; FIN-C338-ANCA-402; FIN-C338-ANCA-403; FIN-C338-ANCA-404; FIN-C338-ANCA-405; FIN-C338-ANCA-406; FIN-C338-ANCA-407; FIN-C338-ANCA-408; FIN-C338-ANCA-409; FIN-C338-ANCA-410; FIN-C338-ANCA-411; FIN-C338-ANCA-412; FIN-C338-ANCA-413; FIN-C338-ANCA-414; FIN-C338-ANCA-415; FIN-C338-ANCA-421; FIN-C338-ANCA-422; FIN-C338-ANCA-426; FIN-C338-ANCA-431; FIN-C338-ANCA-432; FIN-C338-ANCA-440; FIN-C338-ANCA-445; FIN-C338-ANCA-446; FIN-C338-ANCA-454; FIN-C338-ANCA-457; FIN-C338-ANCA-458; FIN-C338-ANCA-465; FIN-C338-ANCA-474; FIN-C338-ANCA-481; FIN-C338-ANCA-482; FIN-C338-ANCA-494; FIN-C338-ANCA-511; FIN-C338-ANCA-513; FIN-C338-ANCA-520; FIN-C338-ANCA-521; FIN-C338-ANCA-536; FIN-C338-ANCA-560; FIN-C338-ANCA-562; FIN-C338-ANCA-577; FIN-C338-ANCA-584; FIN-C338-ANCA-596; FIN-C338-ANCA-620; FIN-C338-ANCA-629; FIN-C338-ANCA-658; FIN-C338-ANCA-659; FIN-C338-ANCA-662; FIN-C338-ANCA-686; FIN-C338-ANCA-690; FIN-C338-ANCA-698; FIN-C338-ANCA-729; FIN-C338-ANCA-731; FIN-C338-ANCA-733; FIN-C338-ANCA-737; FIN-C338-ANCA-748; FIN-C338-ANCA-749; FIN-C338-ANCA-772; FIN-C338-ANCA-775; FIN-C338-ANCA-776; FIN-C338-ANCA-801; FIN-C338-ANCA-814; FIN-C338-ANCA-816; FIN-C338-ANCA-823; FIN-C338-ANCA-827; FIN-C338-ANCA-838; FIN-C338-ANCA-846; FIN-C338-ANCA-848; FIN-C338-ANCA-852; FIN-C338-ANCA-853; FIN-C338-ANCA-867; FIN-C338-ANCA-868; FIN-C338-ANCA-881; FIN-C338-ANCA-910; FIN-C338-ANCA-925; FIN-C338-ANCA-941; FIN-C338-ANCA-945; FIN-C338-ANCA-946; FIN-C338-ANCA-947; FIN-C338-ANCA-956; FIN-C338-ANCA-961; FIN-C338-ANCA-965; FIN-C338-ANCA-994; FIN-C338-ANCA-1002; FIN-C338-ANCA-1007; FIN-C338-ANCA-1009; FIN-C338-ANCA-1011; FIN-C338-ANCA-1020; FIN-C338-ANCA-1046; FIN-C338-ANCA-1062; FIN-C338-ANCA-1064; FIN-C338-ANCA-1080; FIN-C338-ANCA-1106; FIN-C338-ANCA-1110; FIN-C338-ANCA-1117; FIN-C338-ANCA-1127; FIN-C338-ANCA-1147; FIN-C338-ANCA-1221; FIN-C338-ANCA-1222; FIN-C338-ANCA-1223; FIN-C338-ANCA-1224; FIN-C338-ANCA-1225; FIN-C338-ANCA-1226; FIN-C338-ANCA-1227; FIN-C338-ANCA-1228; FIN-C338-ANCA-1229; FIN-C338-ANCA-1230; FIN-C338-ANCA-1231; FIN-C338-ANCA-1232; FIN-C338-ANCA-1233; FIN-C338-ANCA-1234; FIN-C338-ANCA-1235; FIN-C338-ANCA-1236; FIN-C338-ANCA-1237; FIN-C338-ANCA-1238; FIN-C338-ANCA-1239; FIN-C338-ANCA-1240; FIN-C338-ANCA-1241; FIN-C338-ANCA-1242; FIN-C338-ANCA-1243; FIN-C338-ANCA-1244; FIN-C338-ANCA-1245; FIN-C338-ANCA-1246; FIN-C338-ANCA-1247; FIN-C338-ANCA-1248; FIN-C338-ANCA-1249; FIN-C338-ANCA-1250; FIN-C338-ANCA-1251; FIN-C338-ANCA-1252; FIN-C338-ANCA-1253; FIN-C338-ANCA-1254; FIN-C338-ANCA-1255; FIN-C338-ANCA-1256; FIN-C338-ANCA-1257; FIN-C338-ANCA-1258; FIN-C338-ANCA-1259; FIN-C338-ANCA-1260; FIN-C338-ANCA-1261; FIN-C338-ANCA-1262; FIN-C338-ANCA-1263; FIN-C338-ANCA-1264; FIN-C338-ANCA-1265; FIN-C338-ANCA-1266; FIN-C338-ANCA-1267; FIN-C338-ANCA-1268; FIN-C338-ANCA-1269; FIN-C338-ANCA-1270; FIN-C338-ANCA-1271; FIN-C338-ANCA-1272; FIN-C338-ANCA-1273; FIN-C338-ANCA-1274; FIN-C338-ANCA-1275; FIN-C338-

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Submissions and observations relating to matters outside the scope of the consultation

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An tÚdarás Inniúil um
Thorann Aerárthaí

Aircraft Noise
Competent Authority

Comhairle Contae
Fhine Gall
Fingal County
Council

