An tÚdarás Inniúil um Thorann Aerárthaí

Aircraft Noise Competent Authority

Regulatory Decision Report Appendix G



An tÚdarás Inniúil um Thorann Aerárthaí

Aircraft Noise Competent Authority

Identification of a noise problem arising from planning application F23A/0781

22 January 2026



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Overview

01



Overview

Introduction

ANCA is the competent authority for the purposes of the implementation of Regulation EU 598/2014 (**the Aircraft Noise Regulation**) and the Aircraft Noise (Dublin Airport) Regulation Act 2019 (**the Act of 2019**) and the application of the Balanced Approach to aircraft noise management of the International Civil Aviation Organization where a noise problem or potential noise problem at the Airport is identified.

The airport authority for Dublin Airport (daa) submitted a planning application to Fingal County Council, as Planning Authority for the area encompassing the airport, on 15 December 2023 (FCC ref. F23A/0781 – **the Application**). The Application relates to proposed development through the provisions of Section 34B of the Planning and Development Act 2000, as amended (**the Act of 2000**), at Dublin Airport, Co. Dublin and seeks planning permission for development that consists of:

01 An increase in passenger numbers per annum

- a. An increase in the capacity of the airport from the permitted combined capacity of Terminal 1 together with Terminal 2 of 32 million passengers per annum (32mppa) (as referenced by condition no. 3 of An Bord Pleanála (**ABP**) Ref. No. PL06F.220670 (F06A/1248) and condition no. 2 under ABP Ref No. PL06F.223469 (F06A/1843)) to 40 million passengers per annum (40mppa).
- b. The increase to the capacity will include all attendant airport operations at Dublin Airport. The proposed increase in passenger numbers will supersede and replace condition no. 3 of ABP Ref. No. PL06F.220670 (F06A/1248) and condition no. 2 under ABP Ref. No. PL06F.223469 (F06A/1843).

02 The provision of airport infrastructure to include the following Project Elements, namely:

Project Element 1: North Apron

Project Element 2: South Apron

Project Element 3: Terminal 1 Central Search

Project Element 4: New Apron 7

Project Element 5: Underpass beneath Runway 16/34 (Underpass)

Project Element 6: Airfield Drainage Project

Project Element 7: Ground Transportation Centre

Project Element 8: Terminal 2 MSCP Extension

Project Element 9: Long Term Car Park (Red)

Project Element 10: Staff Car Park North

Project Element 11: Junction Improvements

North Runway Planning History

- Planning consent was granted for Dublin Airport's north runway (10L/28R) by An Bord Pleanála in August 2007 (FCC Ref: F04A/1755; ABP Ref: PL06.217429). Permission was granted for 10 years from the date of the grant of permission. An Extension of Duration of Permission was granted by Fingal County Council until 28th August 2022 (FCC ref. F04A/1755/E1).
- daa applied for planning permission to amend specified runway structural details in July 2019 (F19A/0023) and permission was granted by An Bord Pleanála in March 2020 (ABP-305289-19).

Planning Permission FCC ref: F04A/1755; ABP ref: PL06.217429 as extended by the Extension of Duration of Permission (FCC ref: F04A/1755/E1) and as amended by planning permission FCC Ref: F19A/0023; ABP ref: 305289/19 (the North Runway Planning Permission).

- On 18 December 2020, daa made an application (F20A/0668) pursuant to Section 34C of the Planning and Development Act 2000 (the Act of 2000) for planning permission for the taking of a "Relevant Action" only involving the amendment of the operating restriction set out in condition no. 3(d) and the replacement of the operating restriction in condition no. 5 of the North Runway Planning Permission (Fingal County Council Reg. Ref. No. F04A/1755; ABP Ref. No. PL06F.217429 as amended by Fingal County Council F19A/0023, ABP Ref. No. ABP-305289-19) (the North Runway Relevant Action, as well as proposing new noise mitigation measures. Permission was granted by An Coimisiún Pleanála (ACP) on 16 July 2025 (ABP-314485-2).

Assessment Overview

The assessment for the identification of a noise problem undertakes a comparative analysis between the 32mppa and 40mppa scenarios derived from the information provided within the Application. These two scenarios have been selected as they represent:

i. The forecast situation without the proposed development which adopts an operational baseline of 32mppa, and
ii. The forecast situation with the proposed development which adopts an operational throughput of 40mppa.

The Application provided noise forecasts for 2027, 2031 and 2046 that present the impact of increasing the airport's permitted passenger capacity up to 40 mppa under different night-time operating conditions.

The 2027 forecasts represent the first assessment year for the proposed development, providing an early indication of how airport operations and noise exposure are expected to change in the near term. Forecasts are presented for four scenarios, reflecting the presence or absence of development and potential operating restriction scenarios. The Application identifies 2027 as the Likely Worst-Case Interim Year.

The 2031 forecasts represent the medium-term scenario, assessing how operations and noise exposure change as passenger demand reaches 40 million per annum.

By 2031, the proposed development may result in increased aircraft activity, leading to a higher population exposed to noise across all key indicators.

The 2046 forecasts represent the long-term operational scenarios both with and without the development as proposed. By 2046, the proposed development enables additional growth in overall aircraft activity, leading to increased noise exposure across all key indicators compared with the without-development baseline.

Application Assessment

02



Application Assessment

International, EU, and national context

International Civil Aviation Organization

The International Civil Aviation Organization (ICAO) introduced the Balanced Approach to noise management which consists of analysing the various measures available to reduce aircraft noise in the most cost-effective manner through the exploration of four principal elements where a noise problem is identified at an airport using objective and measurable criteria. To determine whether there is a noise problem at a particular airport that needs to be addressed, it is necessary to assess the evolution of the noise climate at that airport and the surrounding community. To the extent a noise problem is identified, characterization of the problem should assist in determining what measure or measures might mitigate or solve the problem. (See ICAO guidance on the Balanced Approach to Aircraft Noise, second edition, 2008).

European Legislation

The Environmental Noise Directive (**the END**) 2002/49/EC, as amended, relates to the assessment and management of environmental noise and establishes common assessment methods for the major sources of environmental noise, including that emitted by aircraft.

The Aircraft Noise Regulation establishes a regulatory basis for the identification of additional noise abatement measures in accordance with the Balanced Approach methodology for airports where a noise problem has been identified. The Aircraft Noise Regulation, in recognizing that sustainable development is a key objective of the common transport policy, sets out an integrated approach to balance the effective functioning of Union transport systems with the protection of the environment. Sustainable development of air transport requires the introduction of measures aimed at reducing the noise impact from aircraft at Union airports to improve the noise environment around Union airports, to maintain or increase the quality of life of neighbouring citizens and foster compatibility between aviation activities and residential areas, particularly where night flights are concerned. The ICAO Balanced Approach is established as the mechanism for the regulation of aviation noise.

Irish Legislation

The European Communities (Environmental Noise) Regulations 2018, as amended, (**The Regulations of 2018**) provide for the implementation in Ireland of the END and in particular the common approach within the European Union to avoid, prevent or reduce on a prioritized basis the harmful effects, including annoyance, due to exposure to environmental noise.

The Act of 2019 gives further effect to the Aircraft Noise Regulation and defines, inter alia, the process to be followed to address any noise problem that would arise from the carrying out of a proposed development or from taking a relevant action in relation to an operating restriction at Dublin Airport.

Defining a noise problem

Method of assessment

The Act of 2019 and the Aircraft Noise Regulation require ANCA to have regard for the effect of noise exposure on human health using common assessment methods. In doing so, the overall number of people exposed to specific levels of aircraft noise at different levels must be understood and presented with respect to health outcomes. To ascertain whether a noise problem may arise, it is appropriate to consider the evolution of the noise climate at the airport and the surrounding community to examine trends in human noise exposure.

Dublin Airport Noise Action Plan 2024 – 2028

The Noise Action Plan for Dublin Airport 2024 – 2028 (**the NAP**) was prepared in accordance with the provisions of the END. The noise mapping outputs of the action plan assessments are presented alongside noise exposure levels from previous years. The NAP indicated the existence of problems and/or situations that need to be improved at the airport having regard to the noise situation reported under the Regulations of 2018. The NAP identified actions that should be implemented over the duration of the plan to address problems and/or situations that need to be improved at Dublin Airport. These include:

01 Implement all noise mitigation measures at Dublin Airport unless and until updated, replaced or omitted through relevant processes.

02 Carry out the process of Aircraft Noise Regulation at Dublin Airport in accordance with the relevant provisions of the Act of 2019, the Act of 2000 and/or the Aircraft Noise Regulation as appropriate.

03 Carry out a review of the Noise Abatement Objective for Dublin Airport to support sustainable community and airport development in accordance with relevant plans and policies.

04 Undertake an encroachment analysis to ensure that relevant plans and objectives remain effective to ensure that land use planning is an effective component of the ICAO balanced approach at Dublin Airport.

The NAP referenced the noise mitigation measures in place at Dublin Airport and recognises that these measures may change through other processes.

Identification of a Noise Problem

The identification of a noise problem is not universally prescribed by legislation as there is a need to have regard to the unique operating and physical circumstances of each airport in the context of the geographic proximity to the surrounding communities. Consideration should also be given to the evolution of the noise climate through historical and future forecast trends. To facilitate the identification of a noise problem in a consistent and transparent manner, guidance is provided by ICAO[1].

ANCA adopts the principles of identifying a noise problem using objective and measurable criteria that consider the harmful effects on human health derived through the L_{den} and L_{night} indicators as defined by the Environmental Noise Directive.

1 ICAO Guidance on the Balanced Approach to Aircraft Noise, Second Edition 2008

Review of the Application for development at Dublin Airport

By Chief Executive Order on 17 January 2024, ANCA determined through the provisions of Section 34B(1)(a) of the Act of 2000 that the proposed development, the subject of the Application contained a proposal requiring the assessment for the need for a noise-related action, and issued a notice to the planning authority to this effect pursuant to 34B(2) of the Act of 2000. On 01 March 2024, the applicant was directed to provide additional information to facilitate a detailed assessment of the potential aircraft noise impact of the development as proposed. The information specified in the Direction was received during November 2025.

ANCA commissioned Noise Consultants Ltd (NCL) to undertake a technical review of the potential aircraft noise impact of planning application F23A/0781, if granted. This work[2] has examined and detailed the potential aircraft noise implications of the proposed development in the context of legislation and ICAO guidance documents. The assessment concluded that forecasts indicate that there will be an incremental increase in population exposure to aircraft noise, and consequently of the population highly annoyed (HA) and highly sleep disturbed (HSD), compared with the current 32mppa operational baseline. These are the indicators used to describe the health impacts from annoyance and sleep disturbance from aircraft noise using the methodology prescribed by the END. The NCL report also details the increased number of aircraft movements that may arise through the proposed development, the predicted evolution of the fleet mix and the noise exposure implications of the proposed activity.

The Application has been reviewed in the context of the evolution of the noise climate at Dublin Airport. In this context, the Application proposes an intensification of use (as expressed in passenger capacity) without providing mitigation measures for any noise impact arising from the development.

A permitted increase in airport capacity through the development, as proposed, will lead to a corresponding rise in aircraft operations, including during night-time hours. The Application does not provide for any new aircraft noise mitigation measures to mitigate the impact of this increase in activity. An absence of measures does not in itself present a noise problem however where it is evidenced that existing measures are appropriate to address the potential impact of a development.

The existing property insulation schemes as identified in the NAP are based on the assessment of aircraft noise that is averaged over the day and evening periods ($L_{Aeq.16}$). This metric was historically used in Ireland to assess the impact of aircraft activity during the busy summer 92-day period between16 June and 15 September. Since those schemes were developed, there has been an increase in the body of evidence that supports the use of the L_{den} and L_{night} indicators for the assessment of the health impacts of environmental noise. The Application does not evidence the continuation of the existing property insulation schemes as suitable mitigation for the daytime and night-time impact of the proposed development, the subject of the Application.

2 Review and Assessment of a Potential Noise Problem associated with Planning Application F23A/0781 12 January 2026.

Identification of a Noise Problem

03



Identification of a Noise Problem

The Application to increase passenger capacity will lead to a corresponding rise in aircraft operations, as higher passenger numbers are accommodated through additional flights and/or a shift in the fleet mix towards bigger aircraft able to carry more passengers. An increase in passenger numbers and flight movements does not necessarily result in a noise problem, as overall health impacts depend on a range of factors, including fleet mix, runway use, and operating procedures. However, a review of potential operating scenarios associated with the proposed development indicate higher levels of aircraft activity across all assessment periods and higher levels of population exposure to aircraft noise. The Application includes provision for an intensification of night-time aircraft activity without mitigating the impact of this activity or evidencing how existing measures are sufficient mitigation.

Latest generation aircraft are quieter than the older models they replace and the average noise per aircraft movement is expected to decrease over time as fleet modernisation occurs in parallel with forecasted growth. Accordingly, the projected increase in ATMs may not translate into a proportionate increase in noise exposure over the full term of the proposed development. An examination of the Application evidences a view that the proposed development potentially enables a modest increase in noise exposure due to higher overall activity. The proposed development enables additional growth in overall aircraft activity, leading to increased noise exposure across key indicators[3], as expressed through objective and measurable health impact indicators, for which, there is not appropriate mitigation by way of operational or passive measures.

Consideration of the data submitted in support of the Application, together with the technical analysis undertaken by Noise Consultants Ltd, support a determination that the proposed development, if approved, has the potential to have a negative impact on the noise climate at Dublin Airport to an extent that creates a noise problem requiring consideration for the need for a noise-related action.

Further consideration should therefore be given to the Application through the provisions of the Balanced Approach to identify whether the noise impacts of the development as presented may require a noise related action.

Accordingly, I find that, in the context of the Act of 2019 and the Aircraft Noise Regulation, a noise problem would arise from the carrying out of the development as proposed through the Application. I make this finding having regard to:

01 the information provided within the Application taking into account the absence of any noise mitigation measures or operating restrictions in the Application;

02 the further information subsequently sought and provided by the applicant;

03 the technical analysis report by Noise Consultants Limited dated 12 January 2026 and attached as Appendix A to this report.

Joe Mahon
Senior Noise Technical Officer
Aircraft Noise Competent Authority

An tÚdarás Inniúil um Thorann Aerárthaí
Aircraft Noise Competent Authority

3 Population exposed to aircraft noise above 45dB L_{den}, 40dB L_{night}; Population Highly Annoyed above 45dB L_{den} and Highly Sleep Disturbed above 40dB L_{night}.

Appendix A: Assessment Report by Noise Consultants Limited

04



Supporting ANCA in the Assessment and Identification of a Noise Problem

Review and Assessment of a Potential Noise Problem associated with Planning Application F23A/0781

Fingal County Council – Aircraft Noise Competent Authority

12 January 2026

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1 Introduction

This report has been prepared by Noise Consultants Limited | Part of Logika Group (NCL) to assist the Aircraft Noise Competent Authority (ANCA) in determining whether a noise problem would arise due to changes in the noise situation at Dublin Airport as proposed by planning application F23A/0781 'the Infrastructure Application' (herein referred to as 'the Proposed Development').

The Infrastructure Application ('the Application') was submitted by Dublin Airport Authority (daa) in December 2023 with the Proposed Development comprising of two core aspects:

- a proposal to increase airport passenger numbers requiring an uplift in Dublin Airport's current passenger cap of 32mppa to 40mppa; and
- the provision of airport infrastructure to support and facilitate increased passenger numbers and support the delivery of high-quality international connectivity.

By Chief Executive Order on 17 January 2024, ANCA determined through the provisions of Section 34B(1)(a) of the Act of 2000 that the proposed development, the subject of the Application contained a proposal requiring the assessment for the need for a noise-related action, and issued a notice to the planning authority to this effect pursuant to 34B(2) of the Act of 2000. On 01 March 2024, the applicant was directed to provide additional information to facilitate a detailed assessment of the potential aircraft noise impact of the development as proposed. The information specified in the Direction was received during November 2025.

Under the Aircraft Noise (Dublin Airport) Regulation Act 2019 ('the 2019 Act'), ANCA must apply the Balanced Approach where a noise problem has been identified at the airport.

Furthermore, in such considerations, ANCA must ensure that *"the noise situation at the airport is assessed in accordance with the European Communities (Environmental Noise) Regulations 2018 (S.I. No. 549 of 2018) and the Environmental Noise Directive."*

Based on information provided by daa as part of the Infrastructure Application in December 2023, and in response to the ANCA request for further information in November 2025, this Report has been commissioned to identify any problematic aspects relating to aircraft noise caused by the Proposed Development. This assessment may inform ANCA in the exercise of its statutory powers under the 2019 Act and in the identification of a Noise Problem caused by the Proposed Development.

In carrying out this assessment, NCL has reviewed the information provided with the Application, assessed the noise situation at Dublin Airport, including the situation as described within the Dublin Airport Noise Action Plan 2024 – 2028 (the 'NAP'), and how it may change due to the Proposed Development. This assessment, which has been carried out in accordance with Section 9(1) of the 2019 Act, has been used to provide opinion on any potentially problematic noise aspects associated with the Proposed Development. This may inform ANCA, should it be minded to, in the identification and characterisation of a noise problem at Dublin Airport associated with the Proposed Development for the purposes of Section 9(2) of the 2019 Act.

1.1 Background

To provide background and wider context, there are several planning permissions that are relevant to how changes in aircraft noise due to the Proposed Development shall be considered. These are covered in the following sections.

1.1.1 North Runway Planning Permission (NRPP)

Dublin Airport's North Runway Planning Permission (NRPP) was granted in August 2007 by An Bord Pleanala (ABP)[1].

The NRPP operates within the framework of the existing planning permissions, which include the established passenger cap of 32 million passengers per annum (mppa) set under ABP Ref. No. PL06F.220670 (F06A/1248) and reaffirmed by Condition 2 of ABP Ref. No. PL06F.223469 (F06A/1843), along with other relevant conditions.

The NRPP was subject to 31 conditions. Two of these conditions place restrictions on night flights and came into force upon completion of the construction of the north runway. These are:

- *Condition 3(d) "On completion of the runway hereby permitted … Runway 10L-28R (the 'North Runway') shall not be used for take-off or landing between 2300 hours and 0700 hours 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."*
- *Condition 5 "On completion of construction of the runway hereby permitted, the average number of night time aircraft movements at the airport shall not exceed 65/night (between 2300 hours and 0700 hours) when measured over the 92 day modelling period"*

The wider parts of Condition 3 of the North Runway consent introduce a form of preferential runway use during daytime periods (0700 – 2300). Condition 3(a) to 3(c) state that:

> "(a) the parallel runways (10R-28L and 10L-28R) shall be used in preference to the cross runway, 16-34,
>
> *(b) when winds are westerly, Runway 28L shall be preferred for arriving aircraft. Either Runway 28L or 28R shall be used for departing aircraft as determined by air traffic control,*
>
> *(c) when winds are easterly, either Runway 10L or 10R as determined by air traffic control shall be preferred for arriving"*

This form of operating preference is known as 'Option 7b' which is the name of the runway operating preference scenario aligned to Condition 3 as reported within the Environmental Impact Statement (EIS) and additional information as submitted to ABP. These operating restrictions came into effect with the commencement of North Runway operations at Dublin Airport in August 2022.

1.1.2 North Runway Relevant Action (NRRA)

In December 2020, daa submitted a planning application for a 'relevant action' under Section 34C of the Planning and Development Act 2000 (Act of 2000). A 'relevant action' is a statutory term under Section 34C for actions including the revocation, amendment or replacement of an existing operating restriction.

The relevant action sought by daa in this application related to amendments of operating restrictions set out in Condition 3(d) and the replacement of the operating restriction set out in Condition 5 of the grant of planning permission for Dublin Airport's North Runway (F04A/1755; ABP PL06F.217429 as amended by F19A/0023; ABP-305289-19) (the 'North Runway Planning Permission') (NRPP), as well as proposing new noise mitigation measures.

[1] FCC Reg. Ref:. F04A/1755; ABP Ref: PL06.217429'

Condition 3(d) and Condition 5 of the NRPP relate to night-time operating restrictions following the commencement of operations from the North Runway. Condition 5 of the NRPP imposed a limit of 65 flights per night (2300-0700) with Condition 3(d) restricting all but exceptional use of the North Runway during night.

The 'relevant action' proposed by daa sought to amend Condition 3(d) to provide for use of the North Runway between 0600hrs and 0000hrs, thus allowing it to be used for two hours during the night, along with Condition 5 being replaced by a Noise Quota Scheme. A night-time noise insulation scheme was also proposed.

Through Section 34C, ANCA commenced an assessment of the proposals, carrying out the process of Aircraft Noise Regulation and exploring alternatives to the proposals made by daa. A 14-week consultation on ANCA's draft regulatory decision (DRD) on the proposals and a Noise Abatement Objective for Dublin Airport commenced in November 2021, with a final Regulatory Decision in June 2022.

The Regulatory Decision provided for:

- Condition 5 of the North Runway Planning Permission to be revoked and replaced with a Night-time Noise Quota Scheme. This scheme set an annual noise quota for the period 2300 to 0700;
- Condition 3(d) of the North Runway Planning Permission to be revised to apply over the period 00:00 to 05:59. This revised condition would provide for use of the North Runway for the first and last hour of the night-time period; and
- A night-time Residential Sound Insulation Grant Scheme (RSIGS). This scheme focussed on providing noise insulation to residential dwellings exposed to noise above 55 dB L_{night} a priority value within the Noise Abatement Objective. Eligibility to this scheme was also afforded to residential dwellings that would observe a 9 dB increase and be exposed above 50 dB L_{night} due to the Relevant Action.

Permission for the Proposed Development was granted by An Coimisiún Pleanála (ACP) on 16 July 2025 (Ref. ABP-314485-2). In addition to the annual noise quota scheme from ANCA's Regulatory Decision, ACP also imposed a cap of 35,672 night-time aircraft movements per year, together with a residential dwelling insulation scheme criterion of 80 dB L_{Amax}.

This Regulatory Decision (RD) is currently subject to a judicial review in the High Court.

1.1.3 Infrastructure Application (IA)

In December 2023, Dublin Airport Authority (daa) submitted a formal application for planning permission for the Infrastructure Application (IA). The IA seeks permission for a range of significant investments to facilitate the projected growth of passenger numbers through Dublin Airport. The proposed developments will consist of:

Increase in passengers' numbers per annum.

- An increase in the capacity of the airport from the permitted combined capacity of Terminal 1 together with Terminal 2 of 32 million passengers per annum (32mppa) (as referenced by condition no. 3 of ABP Ref. No. PL06F.220670 (F06A/1248) and condition no. 2 under ABP Ref No. PL06F.223469 (F06A/1843)) to 40 million passengers per annum (40mppa).
- The increase to the capacity will include all attendant airport operations at Dublin Airport. The proposed increase in passenger numbers will supersede and replace condition no. 3 of

ABP Ref. No. PL06F.220670 (F06A/1248) and condition no. 2 under ABP Ref. No. PL06F.223469 (F06A/1843).

The provision of airport infrastructure to include the following Project Elements, namely:

- Project Element 1: North Apron
- Project Element 2: South Apron
- Project Element 3: Terminal 1 Central Search
- Project Element 4: New Apron 7
- Project Element 6: Airfield Drainage Project
- Project Element 7: Ground Transportation Centre
- Project Element 9: Long Term Car Park (Red)
- Project Element 10: Staff Car Park North
- Project Element 11: Junction Improvements.

The Application has been accompanied by a series of reports providing assessments of the potential noise impacts of the Proposed Development along with other environmental effects.

1.2 Scope of Works

This report has been commissioned by ANCA to inform its consideration of whether a noise problem would arise from the Proposed Development and the nature of that noise problem.

The scope of works as presented in this report is as follows:

- Undertake a review of the information provided within the Application from a noise perspective to identify the potential impacts associated with the Proposed Development; and
- Based on the identified impacts, consider noise-related problematic aspects associated with the Proposed Development having regard for relevant legislation, policies and any other associated guidance.

To support this exercise, consideration has been given to information reported within the Dublin Airport Noise Action Plan 2024 – 2028 ('the NAP'). This provides information presenting changes in noise exposure levels for each round of strategic noise mapping since 2006, as required under European Communities (Environmental Noise) Regulations 2018 (as amended). The information contained within and reported by the NAP is a consideration under the Aircraft Noise (Dublin Airport) Regulation Act 2019 which may influence the identification of a noise problem.

The contents of this report represent an assessment of the noise situation, as it relates to the Proposed Development, in accordance with Section 9(1) of the 2019 Act.

1.3 Structure of this Report

This report is structured as follows:

- **Section 2** provides an overview of relevant legislation and guidance, along with other documents which may assist in determining how a 'noise problem' can be identified;
- **Section 3** presents the method of assessment which is defined by the Irish and EU regulatory frameworks governing the assessment and reporting of aircraft noise and the implementation of the ICAO Balanced Approach;
- **Section 4** provides an overview of the information and reports submitted with the Application, outlines the materials considered, and describes the assumptions and limitations of this study based on the data available.
- **Section 5** considers the potential implications of the Proposed Development on aircraft noise. This section considers the changes in the airport's operation as reported within the Application.
- **Section 6** presents a review of the information provided within the Application highlighting the effect of the Proposed Development on noise at Dublin Airport along with considering the evaluation of the noise climate and historic trends.
- **Section 7** provides an overview of the noise mitigation measures in place at Dublin Airport and their relevance to the Proposed Development. It summarises the current Noise Management Plan, the Residential Sound Insulation Grant Scheme (RSIGS), and comparable schemes at other airports.

Having regard for the reviews carried out in Sections 2 – 7, **Section 8** summarises various aspects and observations which may indicate a potential noise problem.

2 International, European and National Context of the Identification of a Noise Problem

2.1 ICAO Guidance on the Balanced Approach to Aircraft Noise, Second Edition 2008

ICAO guidance states that the goal of the ICAO Balanced Approach is to:

"… address noise problems on an individual airport basis and to identify the noise-related measures that achieve the maximum environmental benefit most cost-efficiently using objective and measurable criteria".

Whilst the drawing out of the use of objective and measurable criteria is important it is noted that the guidance also goes on to state that:

"The Balanced Approach is intended to apply to any airport being served by international air traffic which has a perceived noise problem".

A "perceived noise problem" could well be determined in a different manner to one which is evidenced by "objective and measurable criteria". The concept that a noise problem may be identified by other means is specifically referred to within Appendix 1[2] of the guidance where ICAO urges states to:

"institute or oversee a transparent process when considering measures to alleviate noise, including assessment of the noise problem at the airport concerned based on objective, measurable criteria and other relevant factors" [emphasis added]

The guidance provides some narrative with respect to how a noise problem may be determined[3]. It states that:

"A fundamental part of the Balanced Approach as defined by the ICAO Assembly is the identification of the noise problem at an airport. To determine whether there is a noise problem at a particular airport that needs to be addressed, it is necessary to assess the evolution of the noise climate at that airport and the surrounding community. To the extent a noise problem is identified, characterization of the problem should assist in determining what measure or measures might mitigate or solve the problem."

States may form their own views as to what may constitute a noise problem, consideration of the "evolution of the noise climate" either, for example, over time or as the result of airport development. Both are capable of being measured by establishing a change in noise exposure. Clearly what is, and is not, an acceptable level of noise must be defined in setting such policies.

The guidance goes on:

"The noise objective to be achieved should be identified and defined in order to assist in determining the extent of the noise problem. For the purposes of assessment under the Balanced Approach, an actual noise problem is deemed to exist if any difference between the defined objective and the assessed evolution of the noise climate can be identified. This may be reflected in the evolution of the number of people affected by an unacceptable level of aircraft noise. However, it is recognized that ICAO Contracting States and their airports may have different standards and policies regarding

[2] Appendix 1, I-A1-5, 2(b)
[3] Chapter 3, Paragraph 3.1.1

what constitutes a noise problem, how these may be assessed and what objectives are sought in airport-related noise programmes".

The above paragraphs are drafted with the premise that a noise abatement objective (i.e. the noise objective) is already defined so that the "extent of the noise problem" can be understood. However, in the 2019 Act, ANCA must be satisfied that a noise problem exists before the statutory Noise Abatement Objective is defined, restated or amended as part of the Balanced Approach. Accordingly, this report looks beyond the current Noise Abatement Objective and a broader range of relevant criteria, particularly the criteria prescribed by the European Communities (Environmental Noise) Regulations 2018 (S.I. No. 549 of 2018), as amended, and by extension the Environmental Noise Directive (EC Directive 2002/49/EC), as amended.

The guidance is clear that objective and measurable criteria entail the use of noise contours and associated noise exposure statistics for different times of the day. As outlined above, this is implicit within the 2019 Act through the requirement to have regard for the European Communities (Environmental Noise) Regulations 2018 (S.I. No. 549 of 2018), as amended, and by extension the Environmental Noise Directive (EC Directive 2002/49/EC), as amended. These instruments adopt noise contours and associated noise exposure metrics as the means of assessment for aircraft noise and, as outlined above, are adopted by the 2019 Act and Regulation 598/2014 as the means of "assessing the noise situation" at an airport which foreruns the identification of a 'noise problem'.

In summary, the ICAO guidance advocates the use of measurable and objective criteria in the identification of a noise problem at an airport but recognises that states may have their own policies or standards with respect to this. Other factors may also be a consideration, and a noise problem could potentially be identified if an authority perceives there to be one.

2.2 EU Regulation No. 598/2014

Under the European legislation, upon which the 2019 Act gives further effect, EU Regulation 598/2014 does not provide any guidance in relation to the identification of a noise problem.

The stated objective of EU Regulation 598/2014 is to set down:

"… where a noise problem has been identified, rules on the process to be followed for the introduction of noise related operating restrictions in a consistent manner on an airport by airport basis, so as to help improve the noise climate and to limit or reduce the number of people significantly affected by potentially harmful effects of aircraft noise, in accordance with the Balanced Approach."

Given the objective of Regulation 598/2014, a 'noise problem' may be identified where the noise situation at the airport or resulting from development may be counter to this objective i.e.

"to limit and reduce the number of people significantly affect by potentially harmful effects".

Annex I of Regulation 598/2014 describes the assessment of the noise situation at an airport. This annex makes clear that *"air traffic noise impact will be described, at least, in terms of noise indicators L_{den} and L_{night} which are defined and calculated in accordance with Annex I to Directive 2002/49/EC".*

The calculation and presentation of noise impacts at Dublin Airport in terms of L_{den} and L_{night} is carried out every 5 years under the European Communities (Environmental Noise) Regulations 2018 (S.I. No. 549 of 2018), as amended, and is reported within the NAP.

The use of measures such as L_{den} and L_{night} along *with "additional noise indicators which have an objective basis"* is an important feature of Regulation 598/2014. This is because application of the

ICAO Balanced Approach as described within Annex I and II relies on objective and measurable criteria as part of establishing the cost-effectives of the measures being proposed.

2.3 European Commission – Call for Tenders ENG/2020/OP/0036 'Study on Airport noise Reduction' Tender Specification

As outlined above, EU Regulation 598/2014 does not provide any guidance as to what constitutes a 'noise problem'. However, within a tender specification issued by the European Commission[4] some insight is provided as to the Commission's thinking as to the circumstances under which a 'noise problem' may arise.

Box 1 of the tender specification states that the identification of a 'noise problem' is a prerequisite for the application of the Balanced Approach under Regulation 598/2014. It also confirms that a 'noise problem' may "*emerge from the action plan*" i.e. the airport's NAP.

Box 1 states that the END "*does not state expressly how the Member States shall identify a problem*" but links potential problems back to the objective of END i.e. reducing the harmful effects of environmental noise exposure on human health.

Box 1 introduces a series of 'Q&As'. One of these is entitled 'Noise problem: to be assessed or not?'. Under this heading Box 1 states that:

"The Directive does not state expressly how the Member States shall identify a problem. However, the objective of the END is to reduce on a prioritised basis harmful effects (defined in Article 3(b) as negative effects on human health) of exposure to environmental noise, Article1 (1). To that end, Member States adopt action plans, "with a view to preventing and reducing noise levels where necessary, and particularly where exposure levels can induce harmful effects on human health", Article 1(1)(c) ·It can be inferred from these provisions that where the noise exposure level are harmful to human health, Member States are required to identify that situation in the action plan as a "problem" in the sense of Annex V No. 1, 6th indent to the END."

The consideration of noise exposure and human health is addressed under Annex III of the END. This was amended by Commission Directive (EU) 2020/367 of 4 March 2020 which establishes assessment methods for harmful effects of environmental noise. Directive 2002/367 adopts the Exposure Response Functions (ERF) published within the World Health Organisation (WHO) Environmental Noise Guidelines for the European Region 2018.

Annex III of the END, through Directive 2020/367, reproduces the ERFs for the number of people 'highly annoyed' and 'highly sleep disturbed' from aircraft noise.

Box 1 of the tender specification suggests that the Balanced Approach may be triggered when measures other than operating restrictions are introduced and potentially when the noise action plan is being revised or reviewed.

A further 'Q&A' which may be helpful in the interpretation of how a 'noise problem' can be identified is "*Can there be an increase in the number of people exposed to the health effect?*". In response to this the Commission Services' assessment states that:

"No if the airport does not undergo a major expansion.

Yes if the airport undergoes an expansion and in such case, the EIA directive shall come into play if it may have significant adverse noise effects on the environment.

[4] Available here: https://etendering.ted.europa.eu/cft/cft-display.html?cftId=7178

Yes if the population is allowed to build in the surrounding of the airport."

When read in combination the view offered by Commission Services' within the tender specification suggests that a noise problem could be determined where:

- aircraft noise exposure is harmful to human health;
- aircraft noise exposure is increasing in the absence of an expansion of the airport; and
- where there is a major change (as identified through the EIA Directive) which entails the introduction of new operating restrictions or noise mitigation measures

2.4 European Commission – Study on Airport Noise Reduction

In 2022 The European Commission published a Study on Airport Noise Reduction. The study aimed to assess how Directive 2002/49/EC (END) and Regulation 598/2014 (BAR) have been implemented by Competent Authorities at airports within the European Union, how these may have helped achieve noise reduction objectives, and whether there is a need to revise the existing legislation to improve their effectiveness.

Through an online questionnaire and ad-hoc interviews, quantitative and qualitative data were collected from the Competent Authorities of 63 European major airports on how the provisions of both END and BAR have been implemented and on any associated practices and approaches.

The study found that most Competent Authorities define the noise problem in relation to non-compliance with the national legislation criteria, commonly identified when there is an exceedance of national noise limits and policies, or contour area limits, and often linked to a specific Environmental Permit or Planning Condition. These are usually the result of activities separate to the END and BAR process established in Member States prior the European legislation. Only few examples were found where a calculation of harmful effects, having regard for the effects of noise and health, was used to support the identification of a noise problem and setting of objectives. However, since this study was published, the use of such metrics has become much more common place and have been adopted in decisions and aircraft noise regulation at airports such as Schiphol.

In its conclusions, the Study suggested that the effectiveness of the END and BAR could be enhanced providing clearer guidance regarding the definition of the noise problem, including how to use harmful effects assessment in the identification of the noise problem, objectives, and cost-effective noise measures.

2.5 ACI World's Guidance on the Application of the ICAO Balanced Approach to Aircraft Noise Management

Airport Council International (ACI) World is an organization representing airport operators, advancing their collective interests and acting as the voice of the world's airports and the communities they serve, and promoting professional excellence in airport management and operations.

In 2024, ACI World has published a "Guidance on the Application of the ICAO Balanced Approach to Aircraft Noise Management" to provide an overview of the requirements of the ICAO Balanced Approach and guidance in relation to its successful application in the development of noise management strategies.

The guidance highlights the noise assessment of the situation, the determination of the noise problem and the establishment of the noise abatement objective as the most critical steps in the development of the noise management development at an airport. With regard to the determination of the noise

problem the guidance states that following the noise assessment the next step would be to determine whether and where a noise problem exists. The guidance refers to two potential methodologies which could be deployed:

- To establish a significance threshold level for a specific metric,
- To consider any risk to an individual.

Common to both approaches is the need for clarity regarding which parameters or impacts should be used to determine a problem. Annoyance is by far the most frequently used and accepted indicator for determining a noise problem. A significance threshold approach should be adopted to prioritize those communities most impacted by current or future operations.

2.6 Aircraft Noise (Dublin Airport) Regulation Act 2019

The Application has been submitted under Section 34B of the Planning and Development Act 2000. Under the Act, once an application for development has been submitted, the Planning Authority (PA) (Fingal County Council) must provide a copy of the application to ANCA for review. Consultations between the PA and ANCA are required in relation to:

> *"(b) any noise problem that would arise from the carrying out of the development as proposed, taking account of any noise mitigation measures or operating restrictions (if any), or any combination thereof, proposed in the application and any further information subsequently sought by the relevant authority from the applicant in relation to those matters and given by the applicant to the planning authority and the competent authority;"*

The 2019 Act does not define what is or is not considered a 'noise problem'. However, it does require that decisions in relation to the identification of a 'noise problem' be informed by an assessment of the 'noise situation at the airport' which should be undertaken in accordance with European Communities (Environmental Noise) Regulations 2018 (S.I. No. 549 of 2018) which transposes into Irish law the Environmental Noise Directive (EC Directive 2002/49/EC).

This strongly indicates that a noise problem should be identified having regard for the methodologies and approaches adopted under EU noise policy and associated legislation.

In the context of the END, its objective is to:

> *"to avoid, prevent or reduce on a prioritised basis the harmful effects, including annoyance, due to exposure to environmental noise"*.

2.7 Noise Abatement Objective (NAO) for Dublin Airport

A Noise Abatement Objective (NAO) is a policy objective for managing the effects of aircraft noise emissions on the surrounding communities and environment at an airport. It is a plan to ensure that any growth at the airport occurs in the most sustainable manner possible, with respect to aircraft noise.

In 2022, following consultation, ANCA defined a Noise Abatement Objective (NAO) for Dublin Airport. The NAO was defined in response to a potential noise problem resulting from Planning Application F20A/0668, which sought to amend Conditions 3(d) and 5 of the North Runway Planning Permission (NRPP). This planning application was referred to as the North Runway Relevant Action (NRRA).

The Noise Abatement Objective (NAO), along with its policy objective, supporting explanation and the proposed expected outcomes is as follows:

Policy Objective
"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."

Explanation of the Policy Objective
"Noise from Dublin Airport should be limited and reduced in line with principles of sustainable development. As Dublin Airport grows, the long-term adverse effects on human health and quality of life should progressively reduce over the lifetime of this NAO. The Balanced Approach will be used to ensure that cost-effective, practicable and sustainable measures are implemented to achieve this objective. "

Measurable Criteria
"The NAO will be primarily measured through the number of people highly sleep disturbed and highly annoyed in accordance with the approach recommended by the World Health Organisation's Environmental Noise Guidelines 2018 as endorsed by the European Commission through Directive 2020/367, taking into account noise exposure from 45 dB L_{den} and 40 dB L_{night}. These measures describe those chronically disturbed by aircraft noise.

These metrics help articulate the effect of aircraft noise on health and quality of life. Further to these metrics, the following will also be used to help identify priorities i.e., where noise exposure results in the populations experiencing the harmful effects.

These are the number of people exposed to aircraft noise above:
• 55 dB L_{night} (a level of night-time noise exposure described by the WHO as representing a clear risk to health)
• 65 dB L_{den} (where a large proportion of those living around Dublin Airport can be considered highly annoyed)

In order to measure performance, these metrics shall be completed using a noise model prepared in accordance with the methodology described in Directive 2015/996 (European Civil Aviation Conference (ECAC) Doc.29 4th Edition or as amended). The noise model shall be validated using local noise and track keeping performance data from Dublin Airport's systems.

Expected Outcomes
ANCA expects the following outcomes to be achieved through this NAO as set against the measures:

The number of people highly sleep disturbed and highly annoyed shall reduce so that:
• The number of people highly sleep disturbed and highly annoyed in 2030 shall reduce by 30% compared to 2019.
• The number of people highly sleep disturbed and highly annoyed in 2035 shall reduce by 40% compared to 2019.
• The number of people highly sleep disturbed and highly annoyed in 2040 shall reduce by 50% compared to 2019.
• The number of people exposed to aircraft noise above 55 dB L_{night} and 65 dB L_{den} shall be reduced compared to 2019.

Monitoring the NAO
Monitoring of the NAO will be informed by annual reports which will be reviewed by ANCA as part of its obligations under the Aircraft Noise (Dublin Airport) Regulation 2019.

The Noise Abatement Objective (NAO) can be used to guide the decisions that are needed to manage the aircraft noise and aspects of future aircraft operations at and around Dublin Airport.

Action 3 of the Noise Action Plan for Dublin Airport 2024 – 2028 requires Fingal County Council to *"Carry out a review of the Noise Abatement Objective for Dublin Airport to support sustainable community and airport development in accordance with relevant plans and policies."*. The Action notes that *"The NAO for Dublin Airport will be, as appropriate, restated or amended, taking into account, as appropriate, Article 8 of, and Annex V to the Environmental Noise Directive"*.

In addition, as part of the application of the Balanced Approach in the context of Infrastructure Application, ANCA must ensure that the Noise Abatement Objective is defined, restated or amended, as appropriate.

2.8 Summary

When considering the legislation, policies, associated guidance and studies outlined above, it is concluded that there is no prescribed method of identifying a 'noise problem' under the ICAO Balanced Approach, BAR or END. However, horizonal analysis of these documents does allow for the following principles to be drawn. These principles also underpin the Noise Abatement Objective (NAO), which seeks to limit and progressively reduce the long-term adverse effects of aircraft noise on health and quality of life, particularly at night.

In summary:

- A noise problem should be identified using measurable and objective data. In the context of EU noise policy this should have regard for:
    - ENR, as amended, transposing Directive 2002/49/EC and, as a minimum, primarily the use of the L_{den} and L_{night} metrics;
    - Directive 2020/367 allowing the harmful effects of aircraft noise to be quantified through use of the ERFs adopted from the WHO ENG18, which replaces Annex III of Directive 2002/49/EC;
    - The calculation of aircraft noise facilitating the above should have regard for the noise assessment method for aircraft noise as described in Directive 2015/996 (as amended) which replaces Annex II of Directive 2002/49/EC;
    - The potential use of other noise metrics or measures provided these have an objective basis. The NAO reflects this by relying on these objective indicators and methods to assess and reduce harmful effects over time.
- The EU regulatory framework for aircraft noise, as is described above, through both Directive 2002/49/EC and EU Regulation 598/2014 sets objectives to "limit and reduce" the "harmful effects" of aircraft noise. Trends or the evolution of the noise climate at an airport which goes against these objectives may constitute a 'noise problem'.
- Where aircraft noise is resulting in a population being exposed to levels which are "harmful to human health" or an "unacceptable level of aircraft noise" then this may also be considered a noise problem.
- A major change in the noise situation, identified under the EIA Directive, which results in new operating restrictions and/or new mitigation measures may be a noise problem. This view is tabled by Commission Services'.
- An increase in the number of people exposed to health effects may be a noise problem, unless the airport undergoes an expansion, or the population is allowed to build in the surrounding of the airport. This view is tabled by Commission Services'.

- Other relevant factors may be considered in the identification of a noise problem. Whilst the ICAO guidance does not elaborate on this, there are a number of considerations which may apply in this regard, such as whether:
    - the evolution of the airport noise is likely to result in a specific population becoming affected thus introducing populations to a certain level of effect which they may not have previously observed;
    - whether the evaluation of the noise climate may be subject to a decision making and the identification of significant environmental effects in the context of the EIA Directive[5];
    - the acceptability of the noise situation or a forecast is subject to mitigation at a receptor level i.e. through the provision of noise insulation or other compensation policies.
- A noise problem may be identified if one is 'perceived'. This is suggested by the ICAO guidance however such an approach does not necessarily align with the use of 'objective and measurable' criteria.

[5] Directive 2011/92/EC and Directive 2014/52/EU amending the EIA Directive 2011/92/EU

3 Method of Assessment Required under EU Assessment Framework

As identified in **Section 2**, the objective and measurable approach to assessing aircraft noise under EU Regulation 598/2014 and the 2019 Act is consistent with the approach described in Directive 2002/49/EC which has in turn been transposed into Irish law through European Communities (Environmental Noise) Regulations 2018, as amended.

Under the Process of Aircraft Noise Regulation as set out under Section 9(1) of the 2019 Act, ANCA "*shall ensure that the noise situation at the airport is assessed in accordance with the European Communities (Environmental Noise) Regulations 2018 (S.I. No. 549 of 2018) and the Environmental Noise Directive.*"

Having regard for the status of European Communities (Environmental Noise) Regulations 2018, as amended, the objectives of both the END including Directive 2020/367 and the WHO ENG18, the following method of assessment is required to ensure that the noise situation is accordingly assessed:

- Noise contours and associated noise exposure forecasts prepared using the L_{den} and L_{night} metrics as stipulated within Directive 2002/49/EC and within Annex I of Regulation 598/2014.
- The requirements of Annex III of Directive 2002/49/EC, as amended by Directive 2020/367, in relation to the calculation of the harmful effects of aircraft noise, namely the population 'highly annoyed' and 'highly sleep disturbed' as quantifiable under this Directive. Consideration should be given to the WHO ENG18 as the underpinning evidence base for Annex III.

The preparation of the above should be undertaken using the noise assessment method described within Annex II of Directive 2002/49/EC, as replaced by EU Directive 2015/996[6] and amended by Delegated Directive (EU) 2021/1226[7], which is the legal implementation of the calculation methodology set out in ECAC Doc 29 4th Edition 2016[8].

ANCA has provided the Applicant with an 'Aircraft Noise Information Reporting Template' ('the Reporting Template') and associated guidance. This template and guidance require noise exposure data using the metrics outline above to be provided in the following bands:

- For L_{den} for 45-49, 50-54, 55-59, 60-64, 65-69, 70-74, ≥ 75 dB
- For L_{night} for 40-44, 45-49, 50-54, 55-59, 60-64, 65-69, ≥ 70 dB

The reporting of noise exposure information from 45 dB L_{den} and 40 dB L_{night} has regard for the recommendations made within the WHO ENG18. The Reporting Template accordingly allows for the harmful effects of aircraft noise to be reported in accordance with the method described in Annex III of the END at and above these thresholds.

The above metrics provide for the assessment of the noise situation at an airport in accordance with the European Communities (Environmental Noise) Regulations 2018, as amended, and the Environmental Noise Directive, as amended. The metrics are the primary basis upon which the ICAO

[6] COMMISSION DIRECTIVE (EU) 2015/996 of 19 May 2015 establishing common noise assessment methods according to Directive 2002/49/EC of the European Parliament and of the Council.

[7] COMMISSION DELEGATED DIRECTIVE (EU) 2021/1226 of 21 December 2020 amending, for the purposes of adapting to scientific and technical progress, Annex II to Directive 2002/49/EC of the European Parliament and of the Council as regards common noise assessment methods

[8] ECAC.CEAC Doc 29 4th Edition Report on Standard Method of Computing Noise Contours around Civil Airports

Balanced Approach under EU Regulation 598/2014 and the 2019 Act can be executed and provided the basis for identifying the existence and/or extent of a noise problem.

Alternative and supplementary noise metrics, including those with an objective basis, can be used to further articulate and communicate the effects of aircraft noise before making a regulatory decision in response to the Application. This is matter which can be considered when applying the ICAO Balanced Approach. If such metrics are defined as part of a noise abatement objective, they may be used to identify the existence and extent of any noise problem.

4 Information Considered

This section provides an overview of the data, documents, and information considered in this assessment. It outlines the datasets forming the basis of the analysis and explains the rationale for selecting the primary data source.

The focus of the assessment is to provide a comparative analysis between the 32mppa and 40mppa noise situations derived from the information provided with the IA. This approach allows consideration of how the noise situation at Dublin Airport would change due to the Proposed Development. Consequently, three situations have been selected which represent:

- The current situation having regard for information provided with the Application and as presented in the NAP;
- The forecast situation without the Proposed Development which adopts an operational baseline of 32mppa, and
- The forecast situation with the Proposed Development which adopts an operational throughput of 40mppa.

At the time of preparing this Report, the An Coimisiún Pleanála (ACP) decision on the North Runway Relevant Action (NRRA) (case reference: PL06F.314485, Reg. Ref: F20A/0668) remains under legal review. The NRRA itself sought to modify the night-time operating restrictions originally imposed under the North Runway Planning Permission (NRPP).

To ensure that the assessment captures the potential impacts of the Proposed Development independently of ongoing legal proceedings, and reflects the regulatory uncertainty regarding future night-time restrictions this creates, two scenarios have been evaluated for both the operational baseline and Infrastructure Application scenarios:

- a scenario with NRRA, reflecting the night-time operating conditions arising from the ACP decision, as provided in ANCA RFI 2025 datasets; and
- a scenario without NRRA, reflecting the restrictions as originally set by the NRPP, based on IA 2023 datasets

This dual-scenario approach provides a balanced and comprehensive assessment of potential noise impacts under both regulatory outcomes in the context of the Proposed Development.

Information relating directly to the Proposed Development was first received with the Application which was lodged on 15 December 2023. Following review of the information received, ANCA prepared a Request for Information (RFI) which was issued on 1 March 2024. On 21 November 2025, daa provided their response to the RFI.

Datasets considered as part of the assessment have been selected where they represent the most complete, up-to-date, and consistent approach to considering the impact of the Proposed Development and the requirements of Section 9(1) of the 2019 Act.

4.1 Documents and information considered

Table 1 sets out the documents which have been considered by NCL from the Application as they are relevant to the scope of works requested by ANCA.

Table 1. Application Documents Consulted

Document	Description and Contents
ANCA Aircraft Noise Change Considerations Proforma	The form is used by ANCA to assist in 'screening' potential changes are Dublin Airport and to identify whether these may result in a noise change and potentially a noise problem. The form allows a number of considerations to be captured in a manner where early indication of the potential implications of the proposals on noise can be identified.
Planning Report Infrastructure Application, Dublin Airport, Co. Dublin	This report presents the planning case for the Proposed Development at Dublin Airport. It outlines the need for the development and the process by which the proposals have been prepared and assessed. The report also summarises the potential environmental effects, including noise impacts, and sets out the proposed mitigation measures and controls to ensure compliance with relevant planning, environmental, and policy requirements.
Dublin Airport Infrastructure Application **Environmental Impact Assessment Report**	This document is the main assessment report for the Environmental Impact Assessment (EIAR) of the Proposed Development. The noise and vibration assessment is presented in Chapter 9. Chapter 9 of the EIAR reports the current state and the following assessment years: 2027 – Likely Worst-Case Interim Year 2031 – First Year of 40mppa with NRRA 2034 – First Year of 40mppa without NRRA 2046 – Long Term Assessment Year (with and without NRRA) These scenarios provide the framework against which the potential noise effects of the Applicant's preferred development option are evaluated.
Infrastructure Application: European Union Regulation 598/2014 Forecast **Without New Measures Assessment**	This report has been prepared by Ricondo and Associates and is based on the outcomes of the noise modelling undertaken by Bickerdike Allen Partners. The modelling results were used to determine whether an International Civil Aviation Organization (ICAO) Balanced Approach and cost-effectiveness assessment would be required. Based on the NAO comparative results for the Infrastructure Application scenarios, the report confirms that both the Infrastructure Application with and without the NRRA will meet the NAO targets set by ANCA for all future years. Furthermore, the report concludes that no additional or new measures are required for the proposed Infrastructure Application, regardless of the inclusion of the NRRA.
ANCA Reporting Template - A11524_03_CA150_2.0 ANCA Reporting Template 40mppa Nov 2023	A completed Airport Noise Information Reporting Template has been provided for all scenarios and situations considered as part of the Application taking into account a range of forecasts, scenarios and situations considered within the wider assessment work.
IA ANCA RFI Response	A report that has been prepared by the daa plc. Providing response for on elements of the original submission, including the underlying datasets, modelling

[redacted]	assumptions, and the alignment of the assessment with the current regulatory context. The response also integrates updated information previously submitted to ANCA, including: • Alignment to the revised ANCA Reporting Template as included in response to a Section 9 Direction (June 2025). • The recent An Coimisiún Pleanála (ACP) decision on the NRRA (July 2025)

4.2 Overview of Information Received

Based on the information received, and when read alongside the Noise Action Plan for Dublin Airport 2024 – 2028, NCL is satisfied that the noise situation at the airport, along with the noise situation that would arise with and without the Proposed Development, has been assessed in accordance with the European Communities (Environmental Noise) Regulations 2018 (S.I. No. 549 of 2018) and the Environmental Noise Directive.

The information summarised in **Section 4.1** has been provided in line with the methodology required by the assessment framework as set out in **Section 3.**

Following review, NCL is satisfied that the information can be used to identify any noise problem associated with the Proposed Development. The information required under the assessment framework is underpinned by noise modelling which has been prepared by consultants to the daa. Importantly, NCL considers the standard and sophistication of this noise modelling to be based on appropriate inputs, assumptions and methodologies. This includes appropriate evidence of the validity of the outputs of the noise modelling.

Using this information, NCL has identified problematic aspects as reported in **Section 5.**

5 Potential Implications of the Proposed Development on Aircraft Noise

As outlined in Section 1, the Proposed Development centres around changes Condition 3 of ABP Ref. No. PL06F.220670 (F06A/1248) and Condition 2 under ABP Ref. No. PL06F.223469 (F06A/1843).

This section summarises the potential implications of the Proposed Development on aircraft noise, as identified within the ANCA Aircraft Noise Change Considerations Proforma completed by the Applicant and submitted with the Application. The inclusion of the information from the ANCA Proforma in this section is intended to provide completeness and transparency within this assessment, ensuring that all relevant aspects of the Application are considered in relation to potential noise effects. The implications identified within the ANCA Proforma are considered individually in the following sections.

5.1 Increase in capacity numbers per annum.

The completed ANCA Proforma, together with references to the Environmental Impact Assessment Report (EIAR) and the Dublin Airport Operating Restrictions, Quantification of Impacts on Future Growth report (prepared by Mott MacDonald), confirms that the Proposed Development seeks to increase the annual passenger capacity from 32mppa to 40mppa.

This increase in capacity will naturally lead to a corresponding rise in aircraft operations, as higher passenger numbers are accommodated through additional flights and/or a shift in the fleet mix towards bigger aircraft able to carry more passengers. However, an increase in passenger numbers and flight movements does not necessarily result in a noise problem, as overall noise outcomes depend on a range of factors, including fleet mix, runway use, and operating procedures.

The increase in capacity therefore represents a potential change in operational activity, the implications of which are evaluated within this assessment to determine whether it gives rise to any significant noise effects.

5.2 Increase in the number of operations

As outlined in Section 5.1, the Proposed Development seeks to increase Dublin Airport's overall annual passenger capacity from 32mppa to 40mppa. This increase in capacity is associated with a corresponding rise in Air Transport Movements (ATMs), as set out in the completed ANCA Proforma. **Table 2** summarises the forecast ATMs across various operational scenarios.

Table 2. Air Transport Movements (ATMs)

Scenario	Air Transport Movements (ATMs)			
	Annual Day 0700 – 1900	Annual Evening 1900 – 2300	Annual Night 2300 – 0700	Annual 24 - Hour
2027 without Development without NRRA	159,460	52,082	16,445	227,987
2027 with Development without NRRA	162,607	53,561	16,445	232,613
2027 without Development with NRRA	156,735	50,168	32,890	239,794
2027 with Development with NRRA	169,631	51,641	35,167	256,439

2031 without Proposed Development with NRRA	156,735	50,168	32,890	239,794
2031 with Proposed Development with NRRA	186,739	54,808	37,444	278,991
2031 with Proposed Development with ACP NRRA	187,974	55,344	35,673	278,991
2046 without Proposed Development without NRRA	159,460	52,082	16,445	227,987
2046 with Proposed Development without NRRA	194,281	58,156	16,445	268,882
2046 without Proposed Development with NRRA	156,735	50,168	32,890	239,794
2046 with Proposed Development with NRRA	186,739	54,808	37,444	278,991
2046 with Proposed Development with ACP NRRA	187,974	55,344	35,673	278,991

Overall, the data suggest that:

- The Proposed Development facilitates an increase of approximately 40,000–50,000 ATMs across the forecast horizons.
- The NRRA and ACP NRRA primarily affect the night period, with night operations roughly doubling relative to non-NRRA scenarios. The impact of this is independent of the Proposed Development.
- Without NRRA or the Proposed Development, ATM growth remains limited, implying operational and regulatory constraints would cap future activity close to current levels leaving only changes in the Airport's fleet mix in affecting aircraft noise.

While the total number of aircraft movements provides an indicator of potential operational growth, it does not on its own determine the scale or significance of potential noise impacts. To accurately assess the implications of the increase in ATMs, it is necessary to understand the composition of the aircraft fleet, or fleet mix, that will be operating at Dublin Airport in the forecast years.

5.3 Change in the fleet mix

The completed ANCA Proforma indicates that the Proposed Development will result in a change in the proportion of various aircraft types operating at Dublin Airport over time. Information on projected fleet mixes is provided within the Reporting Template and the Dublin Airport Operating Restrictions: Quantification of Impacts on Future Growth report. These sources describe how the fleet will modernise in parallel with passenger growth from 32 million to 40 million passengers per annum, extending to 2046.

For the purposes of fleet mix analysis, aircraft have been categorised into generations of aircraft technology:

Generation 0 (G0) – Older aircraft types, typically developed in the 1970s or 1980s and now generally out of production, eg, B737 Classic (300/400/500), B757, B767, A300, A310.

Generation 1 (G1) – This represents the current generation of aircraft operating at Dublin Airport. Aircraft types typically developed in the 1990s or 2000s, eg, B737NG (700/800/900), B777, A320ceo, A330ceo, A340, A380, Bombardier CRJ, Embraer EJets, Avro RJ, Bombardier Q400, ATR42/72.

Generation 2 (G2) – Latest aircraft types recently entering production or under development, eg, B737MAX, B787, B777X, A220, A320neo, A330neo, A350, Embraer Ejet-E2.

Generation 3 (G3) – Further new-generation aircraft types not yet in development (expected to enter service in the late 2030s).

The data from these reports show that the fleet mix operating at the Airport will evolve significantly across the assessment years, reflecting the continued introduction of newer, quieter, and more efficient aircraft types.

Table 3. Aircraft Mix by Generation.

Assessment Year	Percentage of Aircraft Generation			
	G0	G1	G2	G3
2027 Without the Proposed Development	6%	58%	37%	0%
2027 With the Proposed Development	5%	55%	39%	0%
2031 Without the Proposed Development	5%	35%	60%	0%
2031 With the Proposed Development	5%	32%	64%	0%
2046 Without the Proposed Development	0%	10%	71%	19%
2046 With the Proposed Development	0%	9%	69%	22%

The airport is currently undergoing a fleet renewal phase, during which existing Generation 1 (G1) aircraft are progressively being replaced by Generation 2 (G2) types. This transition began prior to 2019 and is expected to be largely complete by 2035[9]. From the early 2040s, Generation 3 (G3) aircraft are projected to enter the fleet, gradually replacing G2 types. By 2046, it is anticipated that approximately 19–22% of aircraft operating at Dublin Airport will comprise these latest G3 models.

By 2046, a shift toward heavier, larger, and more efficient aircraft types, including the *Boeing 767, 777, 777X, 787, 797 NMA,* and *Airbus A350neo*, is also expected. This evolution in fleet composition is claimed to enable passenger growth to 40mppa with only an approximately 16% increase in total aircraft movements, reflecting improved capacity efficiency and utilisation of higher-capacity, next-generation aircraft.

It should be noted that the design parameters for future aircraft technologies with respect to noise and emissions are only beginning to emerge. The Committee for Aviation Environmental Protection (CAEP) of the International Civil Aviation Organization (ICAO) is currently working towards a new 'dual standard' for future types that will focus on both noise and carbon emissions. These standards are

[9] Dublin Airport Operating Restrictions: Quantification of Impacts on Future Growth, page 24.

planned to be in place for all new aircraft types that are to be submitted for type certification on or after 1 January 2029 and be applicable to all new in-production aircraft models from 1 January 2035. At this time, those standards are currently undefined although some indication has been given through the minutes and reports of various CAEP meetings. As such, there is some uncertainty as to how these types will perform particularly in forecasts that consider G3 aircraft in the 2040s.

Nonetheless, **Table 3** shows that the fleet mix is broadly consistent across both the *with* and *without development* scenarios for each forecast year. This indicates that the Proposed Development does not affect the rate of fleet modernisation, and that both scenarios assume similar levels of technological advancement within the commercial aircraft fleet. The same fleet mix assumptions and percentage trends also apply to night-time operations.

Current generation aircraft, such as the Airbus A320neo and Boeing 737 MAX, are significantly quieter and more fuel-efficient than the older models they replace. As airlines continue to modernise their fleets, the average noise per aircraft movement is expected to decrease over time, meaning that the projected increase in ATMs associated with the Proposed Development may not correspond to a proportionate increase in noise exposure.

5.4 Other potential implications

Based on the information provided in the ANCA Proforma and verified within the ANCA Report Template, the following operational factors are confirmed as unchanged as a result of the Proposed Development. Accordingly, they have been excluded from consideration in relation to potential noise implications:

- **Change in use of runways**: The Proposed Development is not expected to result in any change to the use or configuration of the airport's runways. Runway operations will continue in accordance with existing procedures and established usage patterns.
- **Change in use of airspace**: The Proposed Development is not expected to require any change in the use, structure, or management of the airspace associated with Dublin Airport. All aircraft will continue to operate within the current controlled airspace design and established flight paths.

As these operational parameters remain consistent with existing conditions, they do not contribute to potential changes in the airport's noise environment and have therefore been removed from further assessment.

6 Noise Exposure Observations

Based on the information provided with the Application, *the Noise Action Plan for Dublin Airport 2024 – 2028*, and information available to ANCA, an assessment of the noise situation at Dublin Airport has been carried out. The information also provides for the basis of identifying any noise-related problematic aspects associated with the Proposed Development.

The information considered responds to the primary objective measures required by the regulatory framework as outlined in **Section 3**, namely noise exposure statistics relating to the L_{den} and L_{night} noise indicators, and calculations of the numbers of people highly annoyed and highly sleep disturbed.

Due to the nature of the Proposed Development, which constitutes an increase in the passenger capacity of the Airport, the observations reported in this Section focus on the corresponding changes in noise exposure over the 24-hour day, along with discrete daytime and nighttime periods.

6.1 Noise Situation at Dublin Airport Reported in NAP

The noise situation for Dublin Airport is outlined in *The Noise Action Plan for Dublin Airport 2024–2028 (NAP)*, prepared in accordance with the European Communities (Environmental Noise) Regulations 2018. The NAP indicates the existence of problems and/or situations that need to be improved at the airport having regard to the noise situation reported under the Regulations of 2018 and for 2023 and when considered against the measurable outcomes of the NAO. It also includes comparisons with previous reports prepared under earlier rounds of the regulations in 2016, 2011, and 2006.

Table 4. Population exposed in Noise Contour Areas – L_{den}: 2006, 2011, 2016, 2021 and 2023.

Contour Level (dBL_{den})	Population				
	2006 (R1)	2011 (R2)	2016 (R3)	2021 (R4)	2023
Annual Movements	183,400	159,000	207,520	85,433	240,638
55 – 59.9	13,000	11,900	18,500	12,600	28,200
60 – 64.9	1,200	300	1,500	700	8,900
65 – 69.9	200	200	300	100	300
70 – 74.9	0	0	0	0	<100
>= 75	0	0	0	0	0

Table 5. Population exposed in Noise Contour Areas – L_{night}: 2006, 2011, 2016, 2021 and 2023.

Contour Level (dBL_{night})	Population				
	2006 (R1)	2011 (R2)	2016 (R3)	2021 (R4)	2023
Annual Night Movements	-	16,682	25,150	16,111	33,507
50 – 54.9	1,800	1,200	6,200	3,300	18,300
55 – 59.9	200	200	400	300	4,300
60 – 64.9	0	0	0	<100	200
65 – 69.9	0	0	0	0	<100
>= 70	0	0	0	0	0

The NAP recognises the increase in daytime and night-time noise over the period 2006 to 2023, highlighting that the population exposed to level of 55 dB L_{den} and 50 dB L_{night} or above had increased significantly over this period.

The results of the mapping presented demonstrate that population exposure to aircraft noise in 2023 was higher than any other year reported under the Regulations with the areas exposed to noise, an indication of the total amount of noise produced by Dublin Airport, above these reporting requirements of the Regulations also increasing.

Noise contour mapping for Round 4 (2021) and 2023 are provided in **Figure A2-1** to **Figure A2-4** in **Appendix A2**.

6.2 Changes Forecast due to the Proposed Development

The Infrastructure Application has provided noise forecasts for 2027, 2031 and 2046, assessing the impact of increasing the Airport's passenger capacity (up to 40mppa) under different night-time operating conditions.

The without NRRA scenarios for all years are derived from the IA 2023 dataset, while the with NRRA scenarios, which represent the ANCA decision and include the Noise Quota Scheme and associated night-time operating restrictions on north runway use. The ACP NRRA scenarios represent 40mppa with the Noise Quota Scheme and night-time operating restrictions on runway use determined by ANCA with the addition of an annual Night Movement Limit (NTM) of 35,672. This information is based on the updated information provided as part of the ANCA RFI (2025).

The forecast scenarios represent the following assessment years and regulatory conditions:

- 2027 - evaluated under both NRRA and without NRRA. This year is included as a reference year, as there is no "without NRRA" data available for 2031;
- 2031 – the first year in which 40mppa operations are assessed, evaluated under NRRA and ACP NRRA conditions;
- 2046 – the long-term assessment year, evaluated under both NRRA and without NRRA frameworks, including the ACP NRRA scenario.

A comparison of the forecast data for each assessment year is provided in

Table 7 to

Table 8, summarising operational activity, population noise exposure, and NAO outcomes across all regulatory and development cases.

6.2.1 2027 Forecast Future Situation

The 2027 forecast represents the first assessment year for the proposed development, providing an early indication of how airport operations and noise exposure are expected to change in the near term. Forecasts are presented for four scenarios, reflecting the presence or absence of development and whether current night-time operating restrictions (NRRA) are maintained or not. These scenarios allow for a clear comparison of the potential impacts of development on passenger numbers, aircraft movements, and noise exposure for both daytime (L_{den}) and night-time (L_{night}) periods. Corresponding noise contours for the 2027 forecast scenarios are presented in **Figure A2-5** to **Figure A2-8** in **Appendix A2**.

Table 6. 2027 Forecast Future Situation.

Metric	Forecast Future Situation, 2027			
	2027 without Development without NRRA	2027 with Development without NRRA	2027 without Development with NRRA	2027 with Development with NRRA
Passengers	32.0m	33.2m	32.0m	35.6m
Annual 24-Hour ATMs	227,987	232,613	239,794	256,439
Annual Night-time ATMs	16,445	16,445	32,890	35,167
Population ≥ 45 dB L_{den}	354,098	356,101	347,485	357,390
Population ≥ 40 dB L_{night}	154,353	154,353	179,639	185,513
Population Highly Annoyed ≥ 45 dB L_{den}	59,130	59,510	347,485	357,390
Population Highly Sleep Disturbed ≥ 40 dB L_{night}	22,478	22,478	179,639	185,513
Population datasets include: 2023 dataset (with additional population allowances for consented developments and zoned land)				

When night-time restrictions remain unchanged (without NRRA), the introduction of development results only in a small increase in overall ATMs and passenger numbers, with no change in night-time activity or noise exposure for the 2027 forecast scenario.

Under the 'with NRRA' framework, both *with* and *without development* scenarios show higher night-time activities. Development in this context supports additional growth, with total ATMs increasing from 239,794 to 256,439 and passenger demand rising from 32.0 to 35.6 million. This translates to modest increases in noise exposure, with the population ≥45 dB L_{den} rising by approximately 3% and the population ≥40 dB L_{night} by 3.3%. Similar trends are observed for the HA and HSD metrics.

In summary, development alone has minimal noise impact under the NRPP restrictions, whereas under the NRRA, it enables modest additional growth and a corresponding modest increase in noise exposure due to higher overall activity.

6.2.2 2031 Forecast Future Situation

The 2031 forecast represents the medium-term scenario under NRRA conditions, assessing how operations and noise exposure change as passenger demand reaches 40 million per annum. In addition to the NRRA scenario, a further forecast scenario reflecting the ACP decision has now been analysed. This scenario incorporates the changes to permitted runway operations arising from the ACP decision, including the revised night-time movement limit. Both the with NRRA and with ACP NRRA scenarios are compared against the 2031 without development with NRRA scenario to clearly illustrate the effects of increased aircraft activity and of the updated regulatory conditions on population noise exposure. Corresponding noise contours for the 2031 forecast scenarios are presented in **Figure A2-9** to **Figure A2-12** in **Appendix A2**.

Table 7. 2031 Forecast Future Situation.

Metric	Forecast Future Situation, 2031		
	2031 without Development with NRRA	2031 with Development with NRRA	2031 with Development with ACP NRRA
Passengers	32.0m	40.0m	40.0m
Annual 24-Hour ATMs	239,794	278,991	278,991
Annual Night-time ATMs	32,890	37,444	35,673
Population ≥ 45 dB L_{den}	286,385	311,047	308,822
Population ≥ 40 dB L_{night}	56,782	60,580	59,334
Population Highly Annoyed ≥ 45 dB L_{den}	49,787	54,442	54,032
Population Highly Sleep Disturbed ≥ 40 dB L_{night}	22,223	24,239	23,361
Population datasets include: 2023 dataset (with additional population allowances for consented developments and zoned land)			

Under NRRA conditions, the proposed development is forecasted to reach 40mppa, which results in an increase in aircraft activity. Total ATMs rise from 239,794 to 278,991 (+16%), while night-time ATMs increase by approximately 14%.

These operational increases lead to a wider population exposure to aircraft noise. The population exposed to 45 dB L_{den} or more increases by around 9%, with the population exposed to ≥40 dB L_{night} increasing by 7%. Similarly, the numbers of people highly annoyed and highly sleep disturbed increase by approximately 10%.

In summary, by 2031, the Proposed Development results in increased aircraft activity in both daytime and nighttime operations, leading to a higher population exposed to noise across all key indicators. The ACP NRRA scenario shows slightly lower night-time ATMs and marginally reduced noise exposure compared to the NRRA scenario, reflecting the movement restriction applied by the ACP NRRA decision.

6.2.3 2046 Forecast Future Situation

The 2046 forecasts represent the long-term operational scenarios, assessing how aircraft activity and population noise exposure evolve as passenger demand reaches 40 million passengers per annum under both with-NRRA and without-NRRA conditions. As with the 2031 assessment, the 2046 analysis includes *without development* and *with development* scenarios for both regulatory frameworks, along with an additional *with ACP NRRA* scenario reflecting the night-time movement limit introduced by the ACP decision.

This set of scenarios, presented in

Table 8, allows for a comprehensive evaluation of how long-term operational growth combined with different regulatory constraints affects noise exposure outcomes. Corresponding noise contours for the 2031 forecast scenarios are presented in **Figure A2-13** to **Figure A2-18** in **Appendix A2**.

Table 8. 2046 Forecast Future Situation.

Metric	Forecast Future Situation, 2046				
	2046 without Development without NRRA	2046 with Development without NRRA	2046 without Development with NRRA	2046 with Development with NRRA	2046 with Development with ACP NRRA
Passengers	32.0m	40.0m	32.0m	40.0m	40.0m
Annual 24-Hour ATMs	227,987	268,882	239,794	278,991	278,991
Annual Night-time ATMs	16,445	16,445	32,890	37,444	35,673
Population ≥ 45 dB L_{den}	173,973	190,743	218,711	233,354	231,877
Population ≥ 40 dB L_{night}	64,005	64,005	47,002	50,603	49,007
Population HA ≥ 45 dB L_{den}	29,810	32,446	38,108	41,154	40,852
Population HSD ≥ 40 dB L_{night}	9,938	9,938	17,908	19,081	18,555
Population datasets include: 2023 dataset (with additional population allowances for consented developments and zoned land) and assume a 1% annual population increase from 2031 onwards.					

Under the *without NRRA* scenario, the Proposed Development increases total annual ATMs from 227,987 to 268,882 (+18%), while night-time movements remain unchanged at 16,445 ATMs. These operational changes lead to an increase in the population exposed to ≥45 dB L_{den} of approximately 10%, with night-time exposure levels stable due to the unchanged night-time operations.

When the NRRA is applied, both passenger and movement levels are higher. Total ATMs increase from 239,794 to 278,991 (+16%), while night-time ATMs rise from 32,890 to 37,444 (+14%). This results in a broader population exposure: the population exposed to ≥45 dB L_{den} increases by around 7%, and those exposed to ≥40 dB L_{night} increase by approximately 6% under the development scenario.

Across the NRRA scenarios, the *with ACP NRRA* case shows slightly lower night-time ATMs and correspondingly marginal reductions in population exposure compared with the NRRA development scenario, reflecting the influence of the revised night-time movement limit introduced by the ACP decision.

In summary, by 2046, the Proposed Development enables additional growth in overall aircraft activity, leading to increased noise exposure across all key indicators, particularly under NRRA conditions. The ACP NRRA scenario moderates these impacts slightly but still reflects higher exposure levels compared to the without-development situation.

6.3 Findings of the EIAR and Supplementary BAP Assessment

The *EIAR – Chapter 9*[10] concludes that the Proposed Development will not give rise to any significant effects from aircraft noise or vibration, stating:

"This chapter has assessed the likely significant effects from aircraft noise and vibration as a result of the Proposed Development. No significant effects were found as a result of the Proposed

[10] Environmental Impact Assessment Report Chapter 9: Aircraft Noise & Vibration

Development….
The Proposed Development does not include any new mitigation measures because no significant effects were identified, and the Noise Abatement Objective for Dublin Airport is forecast to be met."

The supplementary BAP Reports submitted as part of the RFI are consistent with the EIAR findings. Across all operational scenarios modelled the BAP assessments confirm that no significant noise or vibration effects arise as a consequence of the Proposed Development.

7 Mitigation

The Proposed Development does not bring forward any further noise mitigation measures above what already comprises the airport's noise management inventory. The current noise management inventory is set out in the Noise Management Plan July 2025 - 2028 and listed below:

Table 9. Noise Mitigation Measures in Place at Dublin Airport.

Ref	Description	Source	Comments / Outline
Reduction of Noise at Source (NS)			
NS-1	Develop incentives for quieter aircraft types	daa	Promotion of quieter aircraft types, particularly at night, through incentives such as a "Fly Quiet" programme or environmental charges schemes should continue to be progressed.
Noise Abatement Operational Procedures (NA)			
NA-1	Develop incentives for quieter aircraft operations	daa	Promotion of quieter operational procedures through consultation and incentives, such as a "Fly Quiet" programme should continue to be progressed
NA-2	Preferential Runway Use	NRPP	Adherence to North Runway Planning Permission NRPP (2007) Conditions 3(a) to 3(c).
NA-3	Noise Preferential Routes (NPRs) and Flight-Track Keeping	AIP	Promulgate rules and provide systems to assist ANI and airlines for monitoring, reporting and performance improvement.
NA-4	Noise Abatement Operational Procedures	daa/AIP	Research noise impacts and potential benefits including Noise Abatement Departure Procedure (NADP)
NA-5	Continuous Climb Operations	daa	Update and promulgate rules and provide systems to assist ANI and airlines for monitoring, reporting and performance improvement.
NA-6	Continuous Descent Approach	daa	Update and promulgate rules and provide systems to assist ANI and airlines for monitoring, reporting and performance improvement.
NA-7	Reverse Thrust	AIP	Research impacts, potential monitoring and safety implications
NA-8	Engine Ground Running	AIP	
NA-9	APU Usage		Research potential APU monitoring and use reduction
NA-10	Delayed Landing Gear Deployment		Research potential Delayed Landing Gear Deployment monitoring and noise reduction
LU-1	RNIS	NRPP c7	Residential Noise Insulation Scheme
LU-2	VDPS	NRPP c9	Voluntary Dwelling Purchase Scheme
LU-3	SIS	NRPP c6	School Insulation Scheme
LU-4	RSIGS	NRRA c6	Residential Sound Insulation Grant Scheme to reduce nighttime exposure to aircraft noise.
LU-5	Encroachment	daa	Working with stakeholders, take a proactive role in the prevention of

			residential encroachment in the most noise impacted areas.
Operating Restrictions (OR)			
OR-1	NR night-time closure	NRRA c4	Runway 10L-28R shall not be used for take-off or landing between 2400 hours and 0600 hours
QR-2	Quota Count Scheme	NRRA c3	Annual Quota Count limit of 16260 2300- 0700
OR-3	Night movement limit	NRRA c5	Annual night-time movement limit 35,672
Supplementary to ICAO Balanced Approach – Community Engagement			
CE-1	Aviation Stakeholder Engagement	daa	Continue and enhance engagement with stakeholders including AirNav Ireland, airlines, and aviation and local authorities.
CE-2	Community Engagement Programme	daa	Continue and enhance engagement with community groups, representatives and individuals including via individual and group meetings, community forums, website, and webtools.
CE-3	Noise and Flight Track Monitoring System	daa/NRPP Condition 10	Continue and enhance systems for measuring noise and monitoring flight tracks.
CE-4	Noise Complaint Management	daa	Continue and enhance systems and processes for receiving and responding to complaints.
CE-5	Monitoring and Reporting	daa / 2019 Act/ NRPP c10/ NRRA c1	Continue and enhance monthly, quarterly, and annual reporting on operations, noise, complaints, and compliance.
CE-6	Health and Quality of Life	daa	Monitor research and best practice on the impacts and benefits of airport operations on community health, quality of life and broader non-acoustic factors.

In its RFI response, daa have stated that the Noise Management Plan, along with its associated noise mitigation measures and the NRPP Condition 10[11], constitutes further mitigation that is currently in place, being implemented, and subject to ongoing management. daa indicated that these measures are designed to address both expected and unforeseen impacts arising from the Infrastructure Application. The daa state that *"This is considered appropriate and sufficient in our expert technical view"*.

The changes in night-time noise impacts that occur due to the NRRA introduce further mitigation through a night-time noise insulation scheme. The Residential Sound Insulation Grant Scheme (RSIGS) as defined by ACP in the granting of permission of the NRRA is designed to help reduce night-time noise impacts on nearby communities.

It is typical for airport development projects to consider enhancements to their mitigation and compensation schemes, particularly where these relate to either operational changes or an intensification of use. Several airports in Europe and the UK have updated or proposed noise insulation measures in response to their development plans.

[11] NRPP Condition 10 - the biennial review of the existing insulation and purchase schemes.

Across Europe, major airport development projects have also led to the introduction or enhancement of noise insulation and compensation schemes. For instance, at Milan Bergamo Airport, a Noise Insulation Scheme was implemented alongside the airport's long-term development programme, while at Frankfurt Airport, an expanded Noise Insulation and Compensation Scheme accompanied the opening of a new runway in 2011. In both cases, these schemes reflect a broader European trend in which airport growth is paired with stronger, more inclusive noise mitigation measures, providing greater eligibility and improved protection for communities affected by operational changes.

Airports in the UK are similarly proposing enhanced Noise Insulation Schemes as part of their wider development plans. At Gatwick, Luton and Stansted, the proposed schemes accompany projects involving increases in passenger capacity, terminal expansion and, in some cases, additional runway capacity. Across these airports, the proposals generally move toward strengthened and more comprehensive noise insulation packages, offering wider eligibility and improved support for communities exposed to aircraft noise at lower level of noise exposure.

Except for the RSIGS scheme, the noise insulation schemes in place at Dublin Airport were established and discharged through the NRPP. The intervention thresholds associated with these schemes are based on policies in place at the time in the UK. These policies utilise the $L_{Aeq,16hr}$ metric with intervention thresholds set based on evidence gathered by the UK Department for Transport in 1984 and adapted in 1990. Whilst these policies remain broadly in place in the UK, up to date studies, namely the 2023-24 Aviation Noise Attitudes Survey (ANAS) and Aircraft Night Noise Effects (ANNE) are due to be published with changes to UK aviation noise policy expected in 2026. The regulatory framework along with RSIGS is based on the EU noise assessment framework utilising the L_{den} and L_{night} metrics. It is also noted that proposals to update British Standard BS8233:2014 'Guidance on sound insulation and noise reduction for buildings' which were consulted on in 2025 support the use of the L_{den} and L_{night} metrics in designing sound insulation.

ANCA may therefore wish to consider whether reliance on the existing schemes set through the NRPP remains appropriate in the context of the Proposed Development.

8 Noise Related Problematic Aspects of the Proposed Development

Taking into account the relevant legislation and guidance, the nature of the Proposed Development, and the observations set out in **Section 6**, the following may be considered problematic aspects that ANCA may consider in the identification of a Noise Problem deriving from the Infrastructure Application:

- **Increase in Exposure:** Forecasts indicate an incremental increase in population exposure to aircraft noise, and consequently of HA and HSD, compared with the current 32mppa operational baseline.

Although daa have not brought forward any new noise mitigation measures as part of the Proposed Development, it remains prudent to assess whether the forecast noise contours in future year scenarios may result in some residents becoming newly eligible for noise insulation support. Across the EU and UK, it is standard practice to review existing noise-insulation schemes whenever a proposed development is expected to increase noise exposure, even where such increases may not lead to significant effects.

The current Residential Noise Insulation Scheme (RNIS) was introduced under the 2007 North Runway Planning Permission to mitigate the expected noise impacts associated with the operation of the North Runway. The eligibility boundary for the RNIS was originally defined using the forecast 2022 63 dB $L_{Aeq,16hr}$ contour, with the intention that all eligible households would receive insulation before the runway became operational.

Given that the RNIS is based on a daytime contour and noting that European practice increasingly relies on integrated indicators such as L_{den} to capture overall community exposure, it may now be appropriate to consider both a review of the RNIS eligibility boundaries and the metric on which eligibility is determined for noise insulation. Such a review would ensure continued alignment with current and forecast levels of noise, and emerging best practice across EU and UK in noise management.

A1 Aircraft Noise Change Considerations Proforma

An tÚdarás Inniúil um Thorann Aeárthaí
Aircraft Noise Competent Authority

Aircraft Noise Change Considerations Proforma

Purpose of this proforma

This proforma has been prepared by the Aircraft Noise Competent Authority to 'screen' potential changes at Dublin Airport to identify whether these may result in a noise change and potentially a noise problem.

How to use this proforma

This proforma sets out a series of considerations / questions along with the type of information that should be provided by the applicant to support the screening process.

- **Section 1** of the proforma addresses the proposals themselves.
- **Section 2** of the proforma requires detail to be provided so that the potential consequences of the proposal on aircraft noise can begin to be considered.
- **Section 3** of the proforma addresses any information being provided by the applicant in relation to approach and methodology.
- **Section 4** of the proforma relates to tracking and ensuring due consideration of the non-restrictive elements of the ICAO balanced approach.
- **Section 5** of the proforma addresses the proposed operating restrictions.

SECTION 1 – DESCRIPTION OF DEVELOPMENT

QUESTION / CONSIDERATION	RESPONSE (INCLUDING ANY LINKS OR REFERENCES TO DOCUMETATION)
Q1: Provide a description of the change / development that is proposed?	daa plc intends to apply for planning permission for proposed new airport infrastructure and an uplift in passenger capacity to 40 million passengers per annum (mppa) at Dublin Airport. The site notice provided in Part One of the Planning Application details all elements of the proposed development in full.
Q2: Does the proposal result in any new physical infrastructure? If so – please provide drawings showing the location with reference to the airport boundary on a geo-referenceable map	The proposed development seeks permission for a suite of airside, terminal and landside infrastructure elements that are specific critical infrastructure elements required to meet future passenger demand in a sustainable manner while maintaining service quality for passengers and airlines. The site notice provided in Part One of the Planning Application details all elements of the proposed development in full. A site location map as well as Existing and proposed Site Layout drawings are included in Part One of the Planning Application.
Q3: Does the proposal warrant the change in any existing or forthcoming planning restrictions? If so – please provide references to the extant planning conditions and a description of the proposed changes.	The proposed development will consist of: Increase in capacity numbers per annum. a) An increase in the capacity of the airport from the permitted combined capacity of Terminal 1 together with Terminal 2 of 32 million passengers per annum (32mppa) (as referenced by condition no. 3 of ABP Ref. No. PL06F.220670 (F06A/1248) and condition no. 2 under ABP Ref No. PL06F.223469 (F06A/1843)) to 40 million passengers per annum (40mppa). b) The increase to the capacity will include all attendant airport operations at Dublin Airport. The proposed increase in passenger numbers will supersede and replace condition no. 3 of ABP Ref. No. PL06F.220670 (F06A/1248) and condition no. 2 under ABP Ref. No. PL06F.223469 (F06A/1843). The proposed development will also supersede and replace condition no. 23 of ABP Ref. No. PL06F.220670 (F06A/1248) in respect of short-term, long-term and staff parking as follows: (a) The total number of long-term public car parking spaces serving the Airport shall not exceed 28,671 spaces. (b) The total number of short-term public car parking spaces shall not exceed 4,654 spaces. (c) The total number of staff car parking spaces shall not exceed 5,360 spaces.

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	The site notice provided in Part One of the Planning Application details all elements of the proposed development in full.

SECTION 2 – NOISE-RELATED CONSIDERATIONS

Q3: Does the change have potential to result in any of the following:	
a. Additional stand capacity? If so, how many stands and what aircraft can these accommodate? Can information be provided in relation to the use of the stands?	Overall, the proposed development will result in a loss of 4no. Narrow Body Equivalent (NBE) stands (2no. at Pier 3 and 2no. at Pier 4), however there will be an overall net increase of 33no. NBE stands across the airfield resulting in a total capacity of 167no. NBE. For details please refer to the Dublin Airport - Airport Capacity Report – this is provided in Part 4 of the Planning Application - EIAR, Volume 4 Appendices, Appendix 1-1 of the Environmental Impact Assessment which is provided Part 4 Volume 4 of the Planning Application
b. Additional aircraft capacity/movements? If so, what additional capacity would be generated above and beyond either the operational capacity and/or any existing restrictions on airport movements? When would the additional capacity be used? i.e., what slots would be generated?	Additional capacity will be provided by the proposed development. For details, please refer to the Dublin Airport - Airport Capacity Report – this is provided in Part 4 of the Planning Application - EIAR, Volume 4 Appendices, Appendix 1-1 of the Environmental Impact Assessment which is provided Part 4 Volume 4 of the Planning Application
c. Additional passenger capacity/movements? If so, what additional capacity would be generated above and beyond either the operational capacity and/or any existing restrictions on passenger movements? When would the additional capacity be used? i.e., what proportion of the additional passenger capacity would be due to transfer passenger?	The proposed development seeks permission to increase the annual passenger limit from 32 to 40mppa. For details please refer to the Dublin Airport - Airport Capacity Report – this is provided in Part 4 of the Planning Application - EIAR, Volume 4 Appendices, Appendix 1-1 of the Environmental Impact Assessment which is provided Part 4 Volume 4 of the Planning Application.
d. Change the fleet mix at the airport? i.e., does the change result in a change in the proportion of various aircraft types operating at the airport.	For details, please refer to Chapter 9 Aircraft Noise of the Environmental Impact Assessment which is provided in Part 4 Volume 1 of the Planning Application. Please also refer to the Appendices 9.1-9.7 provided in Part 4 Volume 1 of the Planning Application, which provides supplementary data to Chapter 9 Aircraft Noise of the Environmental Impact Assessment which is provided in Part 4 Volume 1 of the Planning Application. Specifically, please refer to the Dublin Airport Operating Restrictions, Quantification of Impacts on Future Traffic, Growth from 32m to 40 million annual passengers – Fleet modernisation to 2046. July 2023 Report. This is provided in Part 4 of the Planning Application - EIAR, Volume 4 Appendices, Appendix 9-7 of the Environmental Impact Assessment which is provided Part 4 Volume 4 of the Planning Application
e. Rate of growth i.e., does the change facilitate accelerated growth of aircraft operations? If so, growth forecasts in terms of ATMs and Passengers should be provided.	For details, please refer to Chapter 9 Aircraft Noise of the Environmental Impact Assessment which is provided in Part 4 Volume 1 of the Planning Application. Please also refer to the Appendices 9.1-9.7 provided in Part 4 Volume 1 of the Planning Application, which provides supplementary data to Chapter 9 Aircraft Noise of the Environmental Impact Assessment which is provided in Part 4 Volume 1 of the Planning Application.
f. Change in the use of airport's runways?	The proposed development will not result in a change of use of the airport's runways.

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If the proposals result in a change in the use of the airport's existing runways, then information regarding the proposed operating pattern should be provided alongside a baseline position.	
g. Use of the airspace? If the proposals result in a change in the use of the airport's existing runways, then information regarding the proposed operating pattern should be provided alongside a baseline position.	The proposed development will not result in a change of use of the airspace at Dublin Airport.
Q4: Are forecast schedules available with and without the proposed change? If so, what do this show? Where a proposed change is likely to result in a change falling within Q4b, Q4c, Q4d or Q4e, forecast schedules must be provided.	For details, please refer to Chapter 9 Aircraft Noise of the Environmental Impact Assessment which is provided in Part 4 Volume 1 of the Planning Application. Please also refer to the Appendices 9.1-9.7 provided in Part 4 Volume 1 of the Planning Application, which provides supplementary data to Chapter 9 Aircraft Noise of the Environmental Impact Assessment which is provided in Part 4 Volume 1 of the Planning Application. Specifically, please refer to the Dublin Airport Operating Restrictions, Quantification of Impacts on Future Traffic, Growth from 32m to 40 million annual passengers – Fleet modernisation to 2046. July 2023 Report. This is provided in Part 4 of the Planning Application - EIAR, Volume 4 Appendices, Appendix 9-7 of the Environmental Impact Assessment which is provided Part 4 Volume 4 of the Planning Application Please also see the Electronic copy of the ANCA Reporting Template – Completed (excel file) which is included on a DVD as an appendix to this proforma.

SECTION 3 – METHODOLOGICAL (NOISE) CONSIDERATIONS AND REQUIREMENTS

Q5: Has a scope and methodology report been issued in relation to the proposed change? If so, provide a reference, if not, provide any details of any methodological correspondence or documentation?	For details please refer to the Chapter 5 Methodology and Chapter 9 Aircraft Noise of the Environmental Impact Assessment which is provided in Part 4 Volume 1 of the Planning Application
Q6: Provide details of any methodological approaches under the following headings.	
a. Assessment years / scenarios Have assessment years / scenarios been determined and do these align with the proposals under considerations. Are any other scenarios required?	For details, please refer to the Chapter 5 Methodology and Chapter 9 Aircraft Noise of the Environmental Impact Assessment which is provided in Part 4 Volume 1 of the Planning Application. Please also refer to the Appendices 9.1-9.7 provided in Part 4 Volume 1 of the Planning Application, which provides supplementary data to Chapter 9 Aircraft Noise of the Environmental Impact Assessment which is provided in Part 4 Volume 1 of the Planning Application.
b. Has the current 'noise situation' and associated noise management information been prepared in line with Annex I of EU598 and in line with the Bill?	Please see the Electronic copy of the ANCA Reporting Template – Completed (excel file) which is included on a DVD as an appendix to this proforma
c. What noise metrics are used in the assessment?	For details please refer to the Chapter 9 Aircraft Noise of the Environmental Impact Assessment which is provided in Part 4 Volume 1 of the Planning Application
d. What dose-response relationships are being applied?	For details please refer to the Chapter 9 Aircraft Noise of the Environmental Impact Assessment which is provided in Part 4 Volume 1 of the Planning Application

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e. How is cost-effectiveness being considered and has a methodology been developed? Does it have regard for: 1. Anticipated noise benefit of anticipated measures, now and in the future 2. The safety of aviation operations including third party risks 3. The capacity of the airport 4. Any effects on the European network Ref: EU598 Annex II	The Noise Abatement Objective will be achieved with the Proposed Development. EU Reg598 does not apply. For details, please see INFRASTRUCTURE APPLICATION: EUROPEAN UNION REGULATION 598/2014 FORECAST WITHOUT NEW MEASURES ASSESSMENT which is provided in Part 1 of the Planning Application
f. Is a modelling methodology available and is has any validation work taken place?	For details please refer to the Chapter 9 Aircraft Noise of the Environmental Impact Assessment which is provided in Part 4 Volume 1 of the Planning Application
g. What other possible development scenarios have been assessed?	For details please refer to the Chapter 9 Aircraft Noise of the Environmental Impact Assessment which is provided in Part 4 Volume 1 of the Planning Application
h. Are the following factors being taken into account as part of the methodology? 1. The Health and Safety of local residents living in the vicinity of the airport. 2. Environmental sustainability, including interdependencies between noise and emissions. 3. Any direct, indirect or catalytic employment and economic effects?	For details please refer to the Chapter 9 Aircraft Noise of the Environmental Impact Assessment which is provided in Part 4 Volume 1 of the Planning Application

Note: EU598 requirements state that *"if the assessment referred to in paragraph 1 indicates that new operating restriction measures may be required to address a noise problem at the airport, the competent authority shall ensure that:*

(a) The method, indicators and information at Annex I are applied in such a way as to take due account of the contribution of each type of measure under the Balanced Approach, before operating restrictions are introduced.

(c) the cost-effectiveness of any new operating restriction is assessed in accordance with Annex II. Minor technical amendments to measures without substantive implications on capacity or operations shall not be considered new operating restrictions.

SECTION 4 – BALANCED APPROACH

Q6: Have the following balanced approach aspects been considered before the consideration of noise-related operating restrictions?	
a. Reduction of noise at source Has consideration been given to airline fleet turnover, incentives such as differential landing charges, airline fleeting plans?	The Noise Abatement Objective will be achieved with the Proposed Development. EU Reg598 does not apply. For details please see INFRASTRUCTURE APPLICATION: EUROPEAN UNION REGULATION 598/2014 FORECAST WITHOUT NEW MEASURES ASSESSMENT which is provided in Part 1 of the Planning Application
b. Noise Abatement Procedures Have a range of noise abatement procedures been considered as part of developing a package of noise management measures for the airport in line with the proposals? *See additional note on NAPs.*	The Noise Abatement Objective will be achieved with the Proposed Development. EU Reg598 does not apply. For details please see INFRASTRUCTURE APPLICATION: EUROPEAN UNION REGULATION 598/2014 FORECAST WITHOUT NEW MEASURES ASSESSMENT which is provided in Part 1 of the Planning Application
c. Land Use Planning	The Noise Abatement Objective will be achieved with the Proposed Development. EU Reg598 does not apply.

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A2 Noise Contours

Figure A2-1. END Noise Mapping Round 4. 2021 L_{den} Annual Noise Contours.

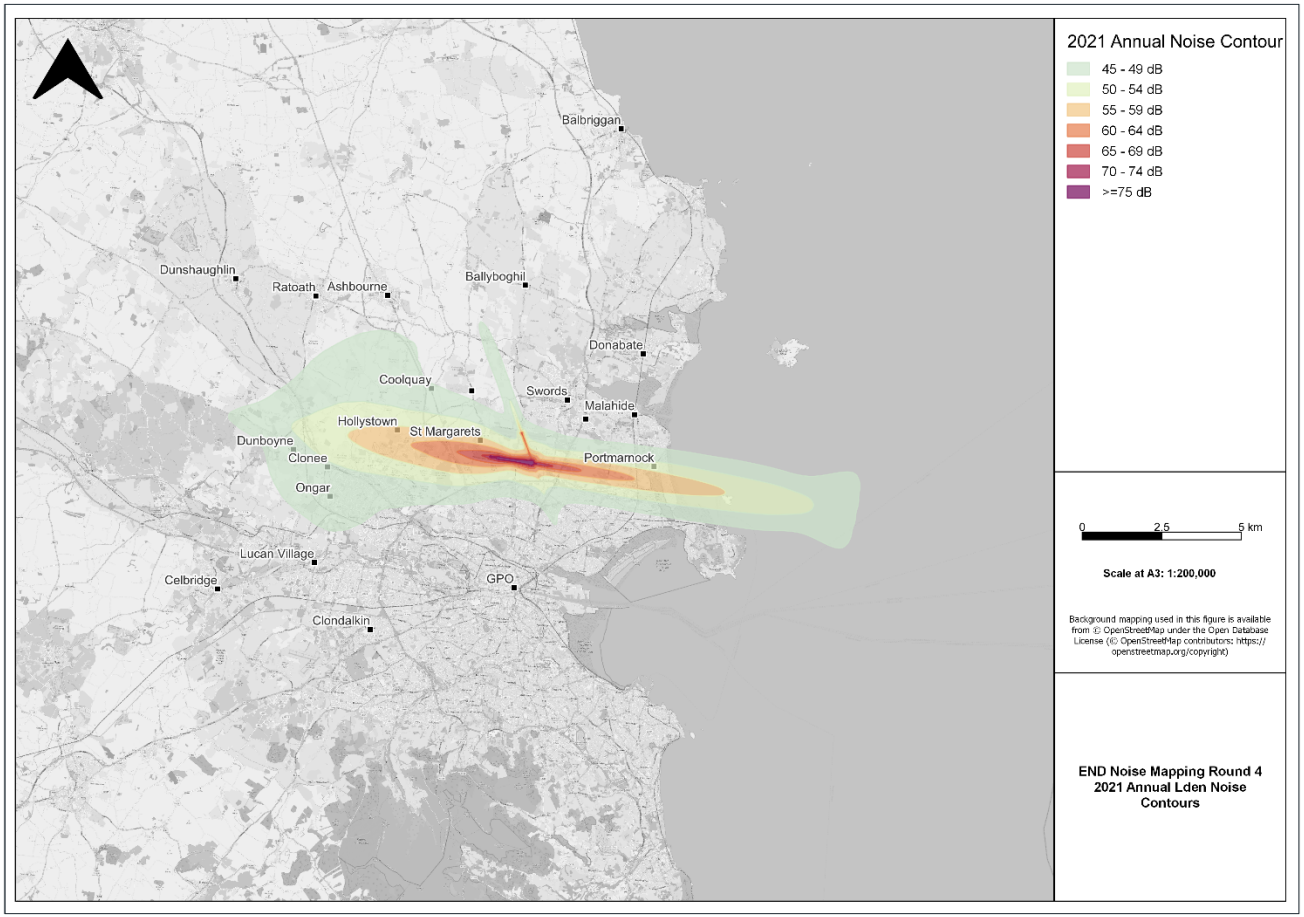


Figure A2-2. END Noise Mapping Round 4. 2021 L_{night} Annual Noise Contours.

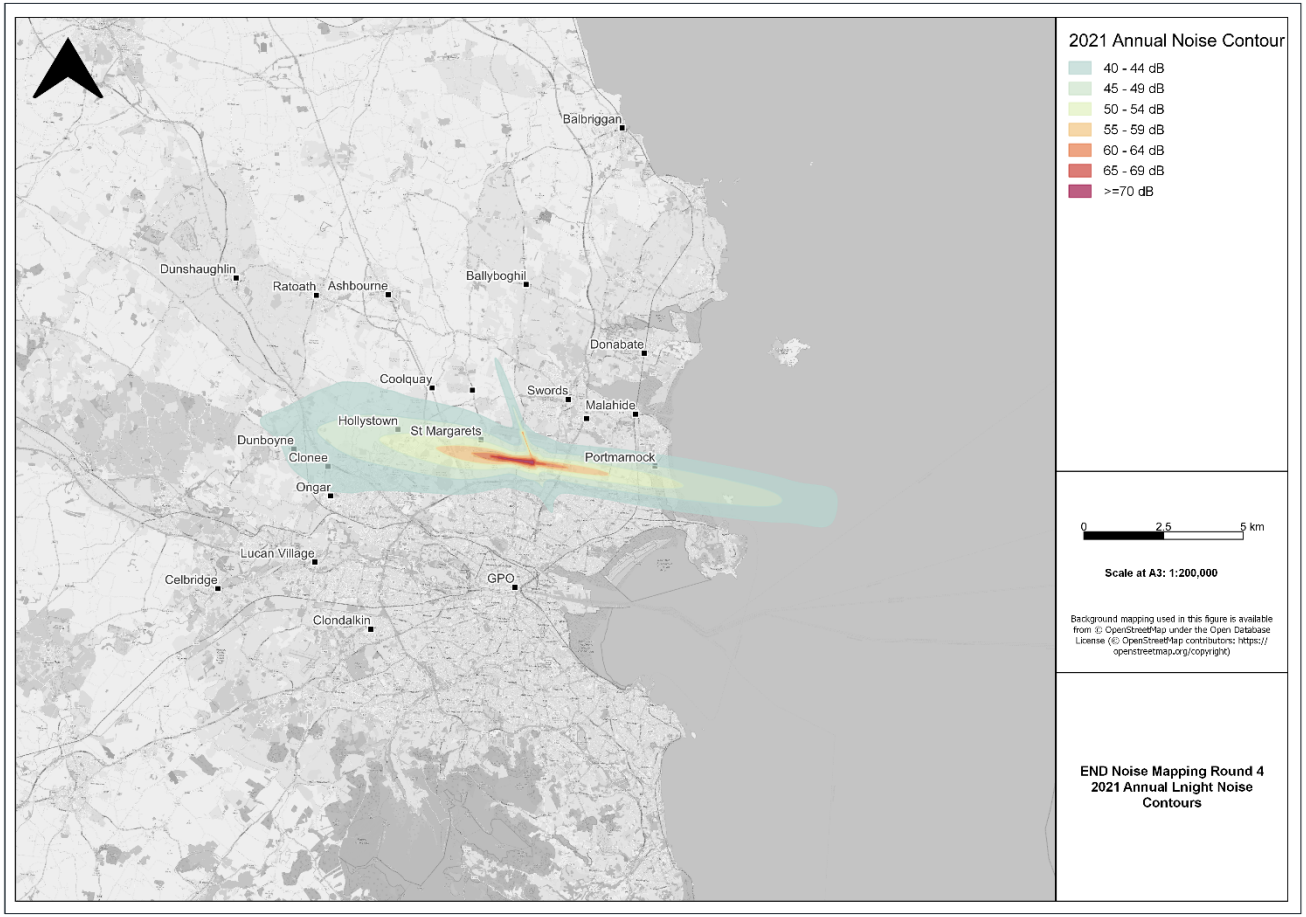


Figure A2-3. END Noise Mapping Round 4. 2023 L_{den} Annual Noise Contours.

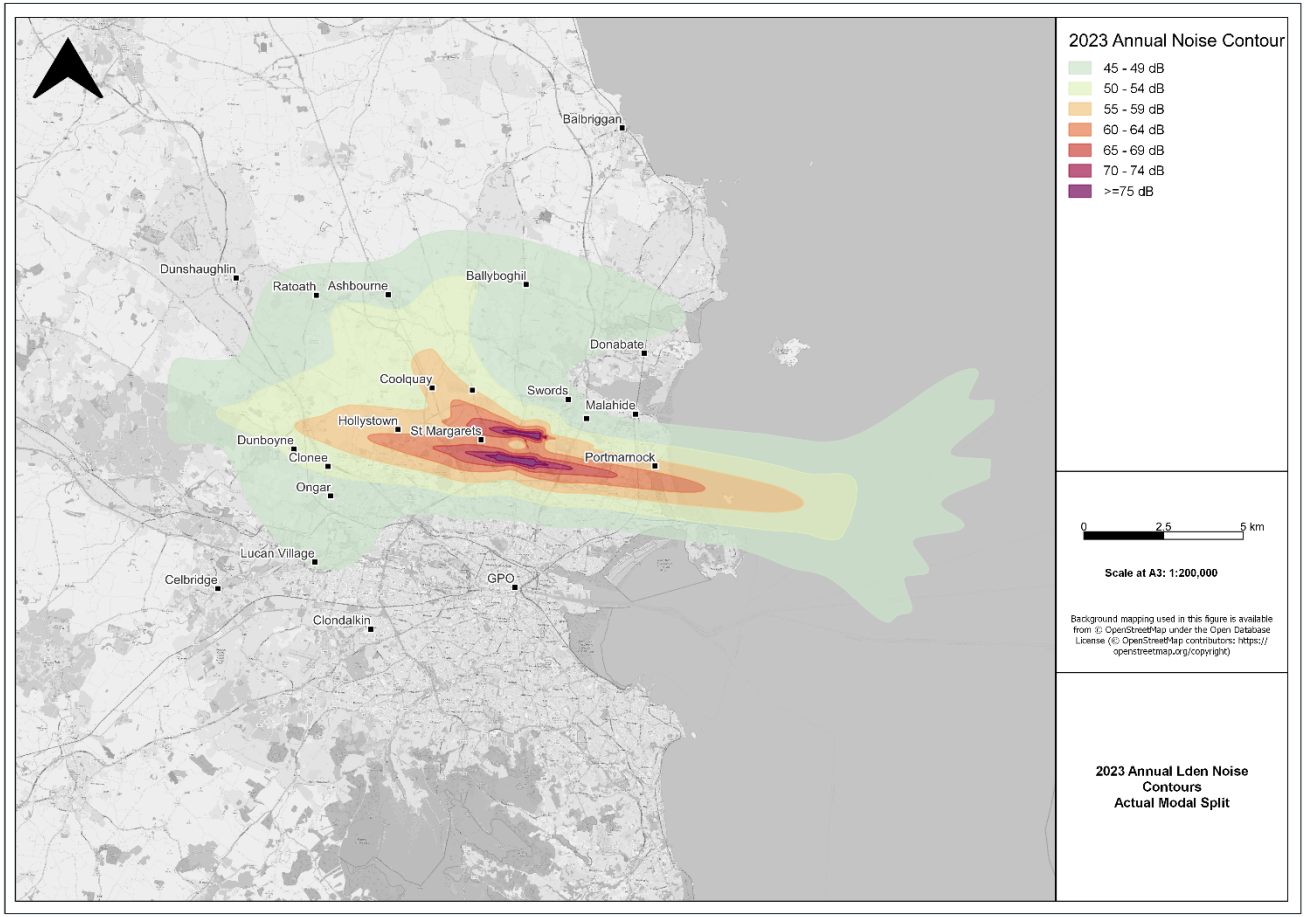


Figure A2-4. END Noise Mapping Round 4. 2023 L_{night} Annual Noise Contours.

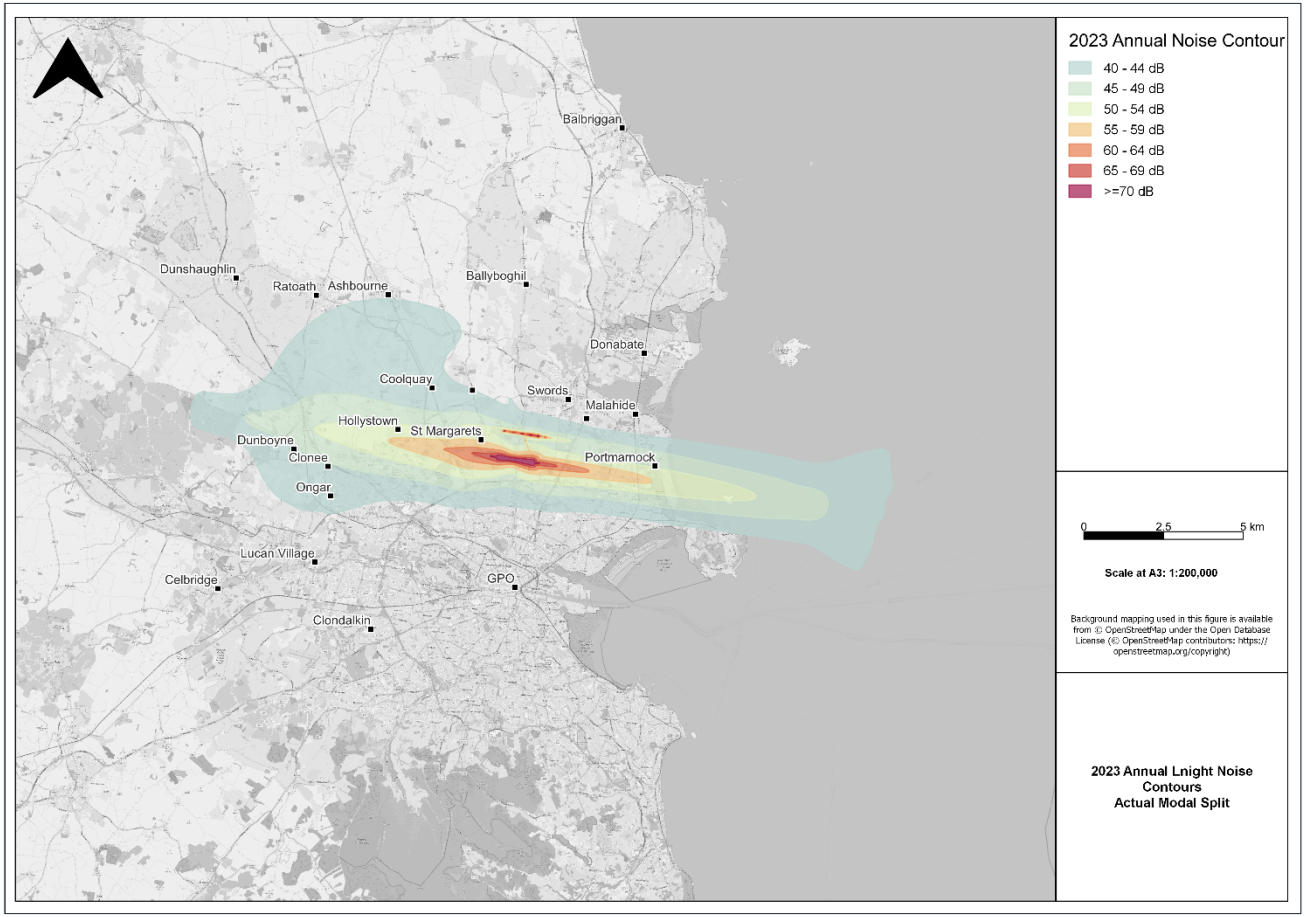


Figure A2-5. 2027 L_{den} Noise Comparison. Without NRRA Scenarios.

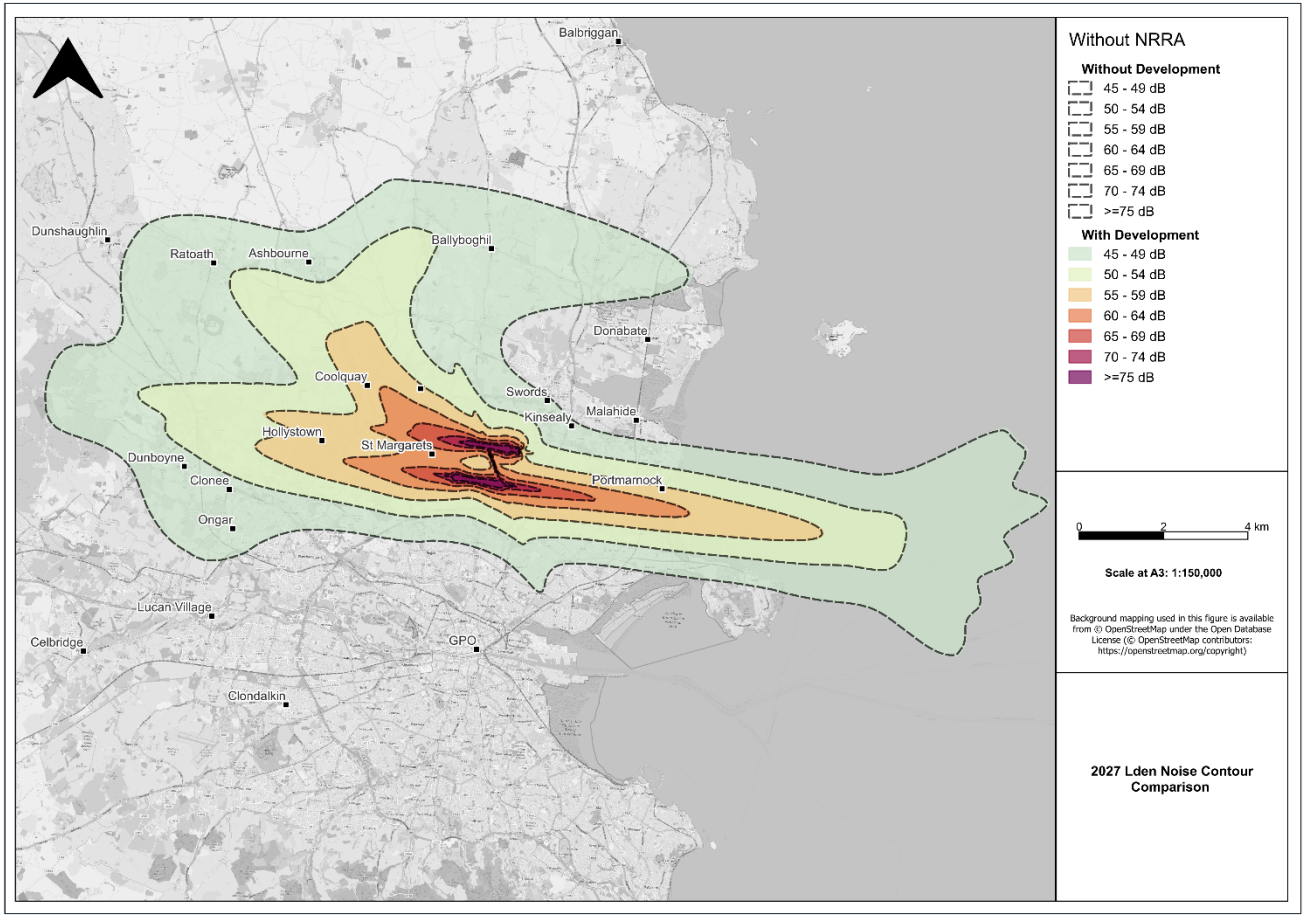


Figure A2-6. 2027 L_{night} Noise Comparison. Without NRRA Scenarios.

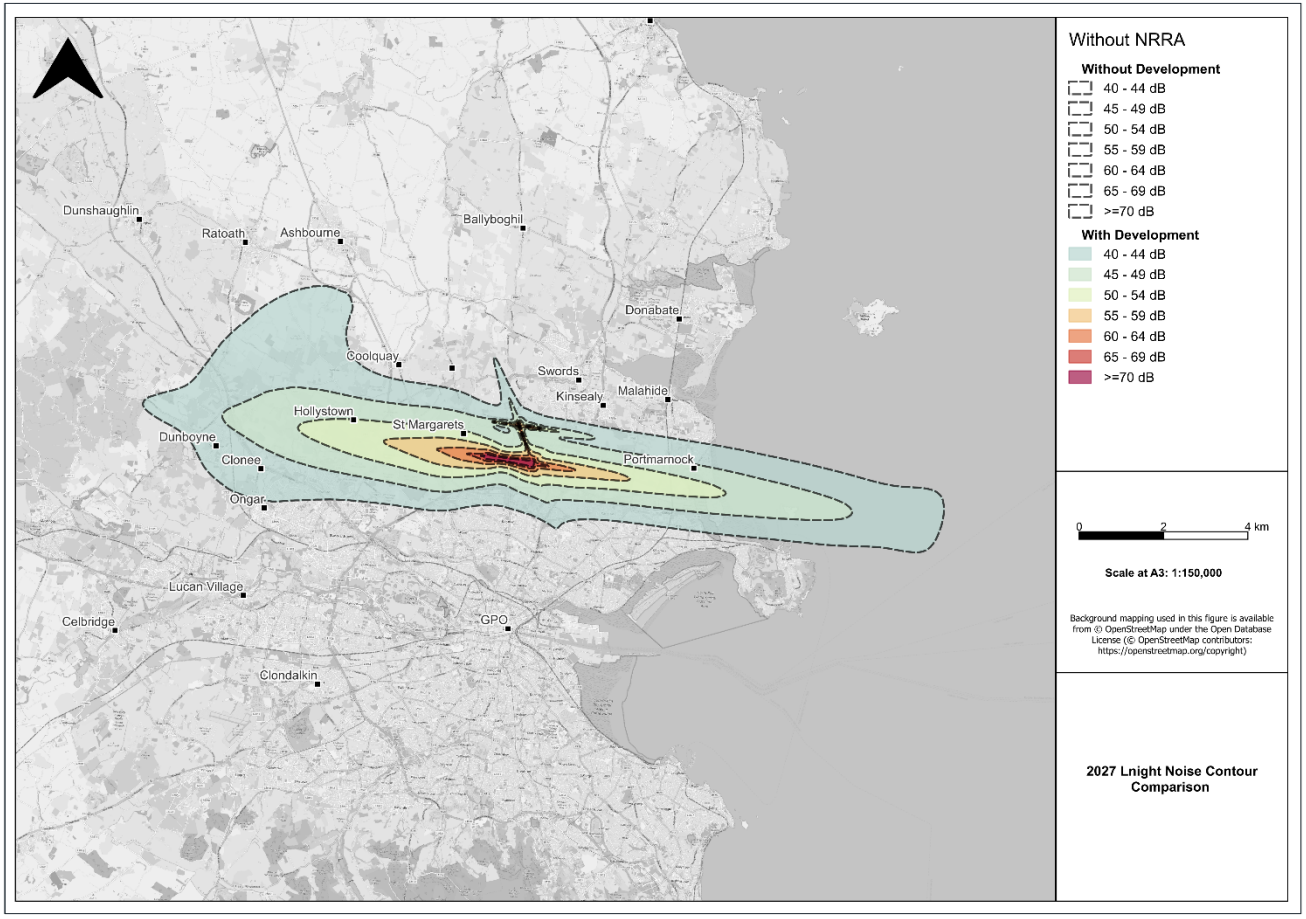


Figure A2-7. 2027 L_{den} Noise Comparison. With NRRA Scenarios.

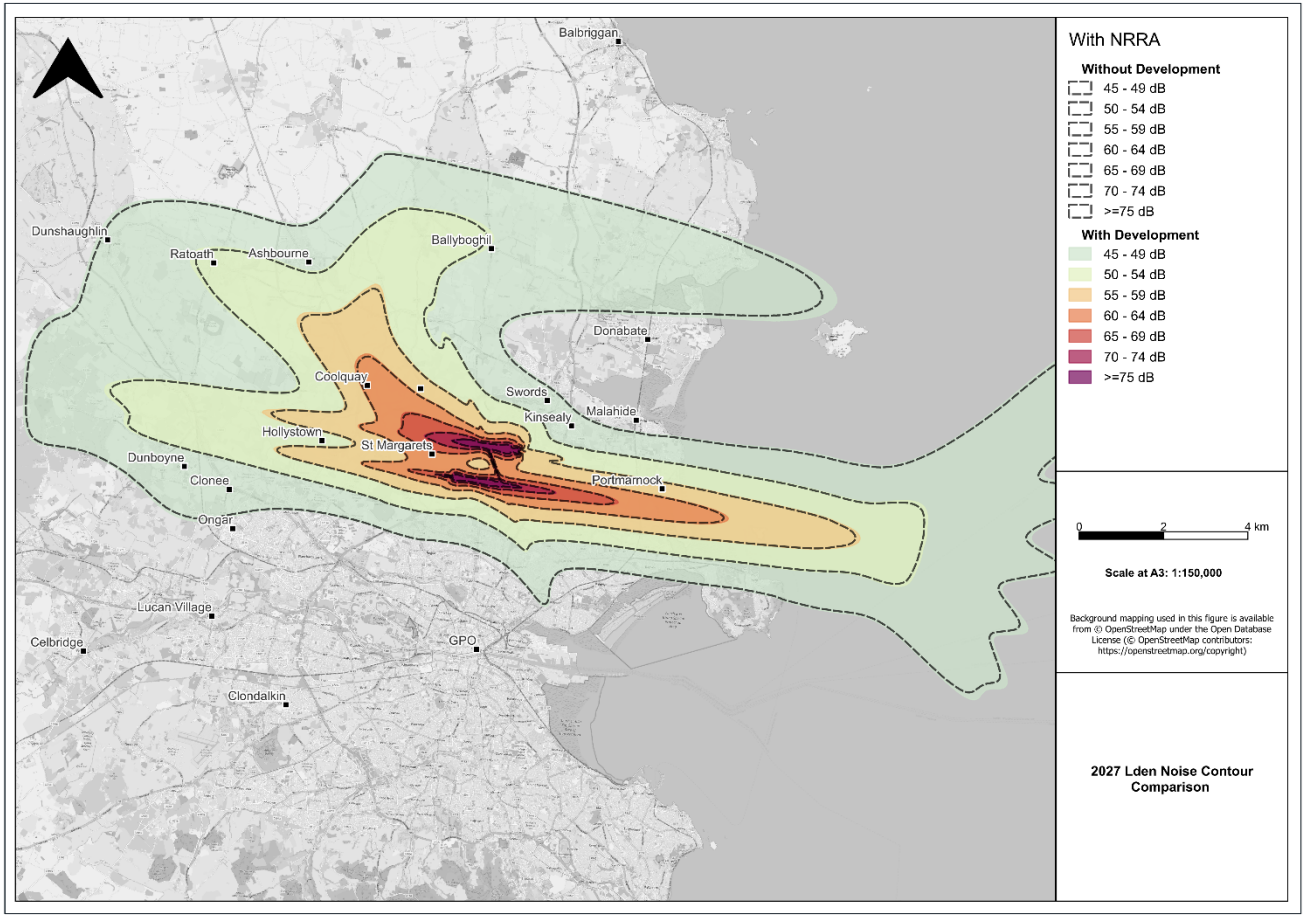


Figure A2-8. 2027 L_{night} Noise Comparison. With NRRA Scenarios.

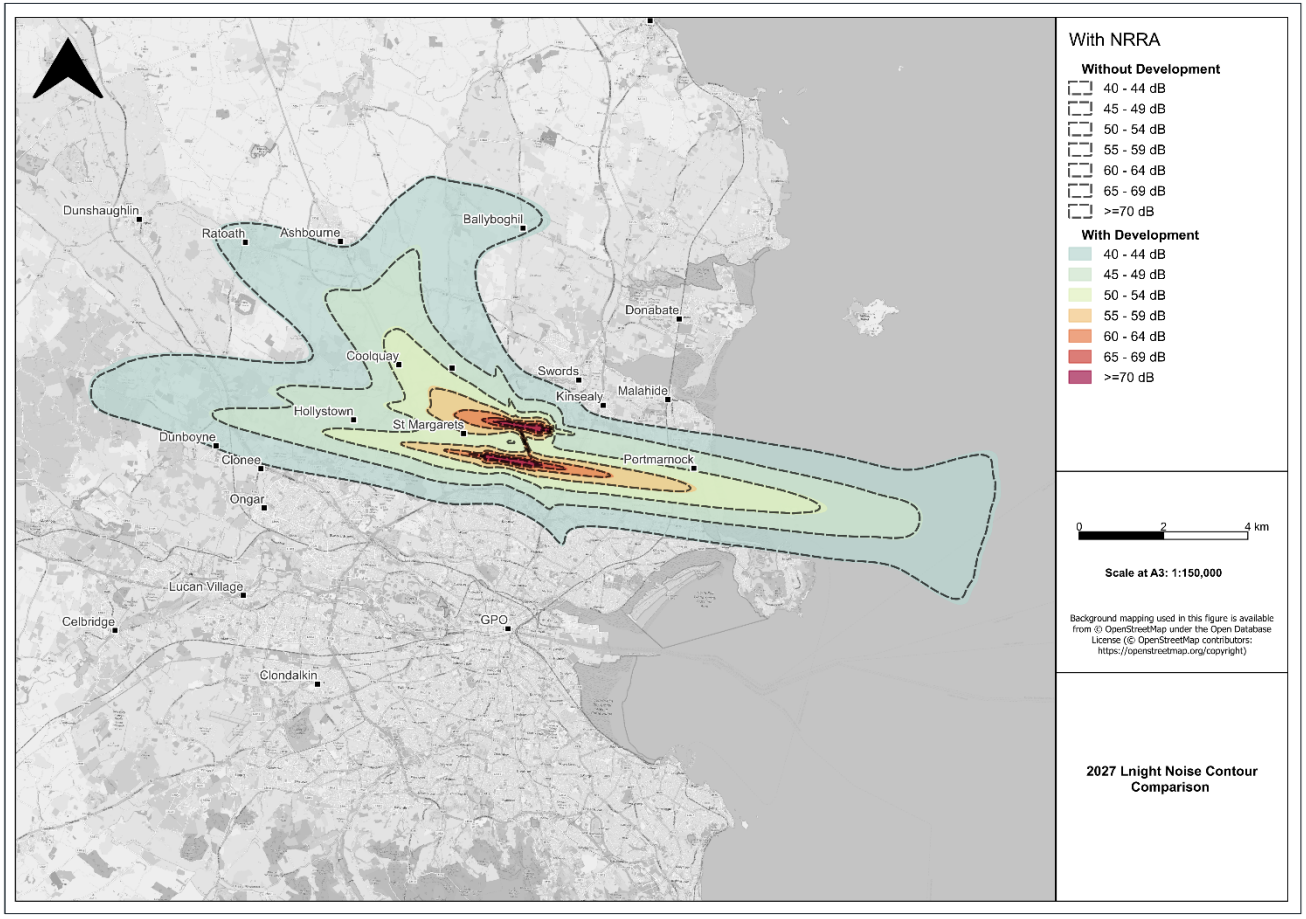


Figure A2-9. 2031 L_{den} Noise Comparison. With NRRA Scenarios.

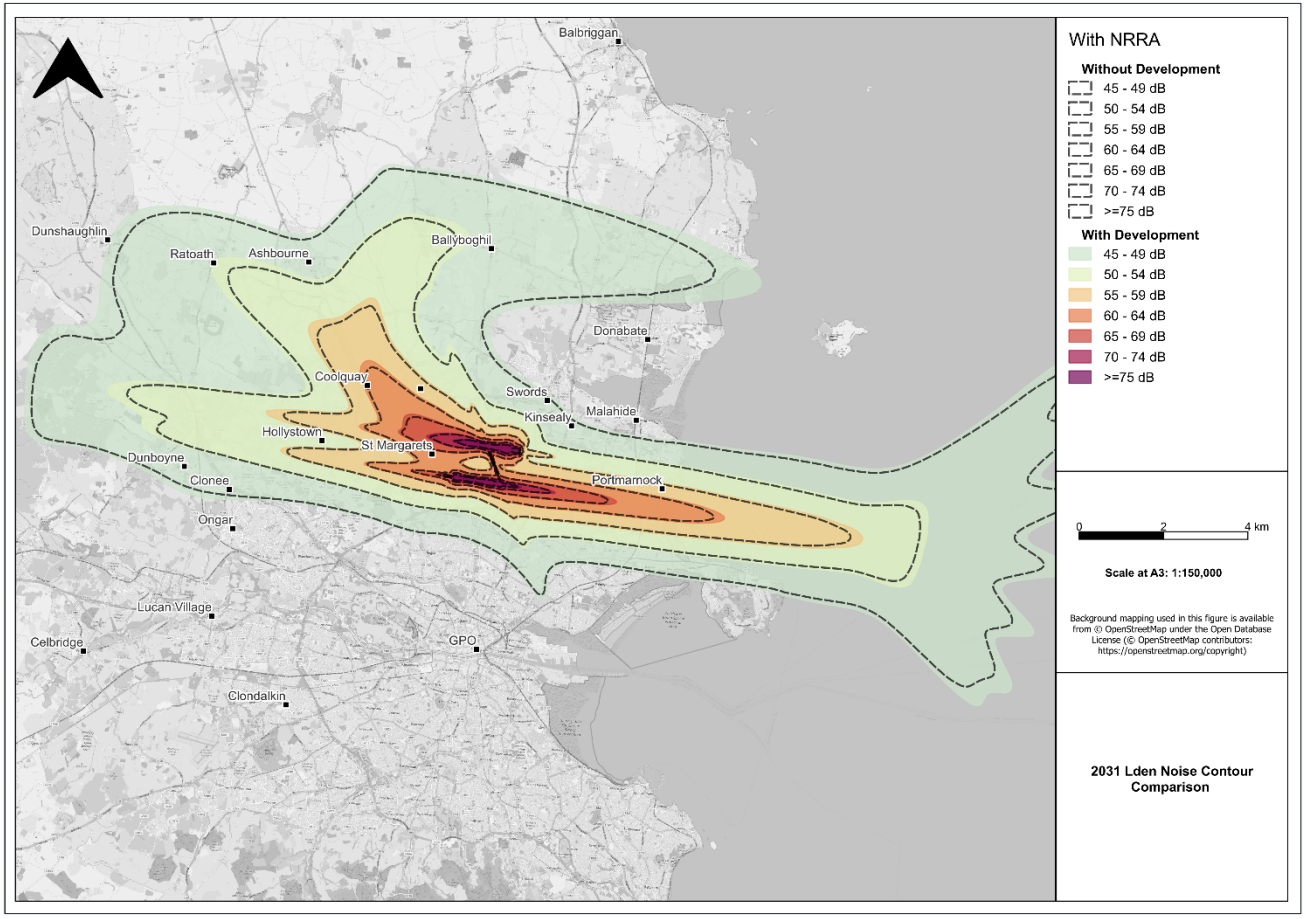


Figure A2-10. 2031 L_{night} Noise Comparison. With NRRA Scenarios.

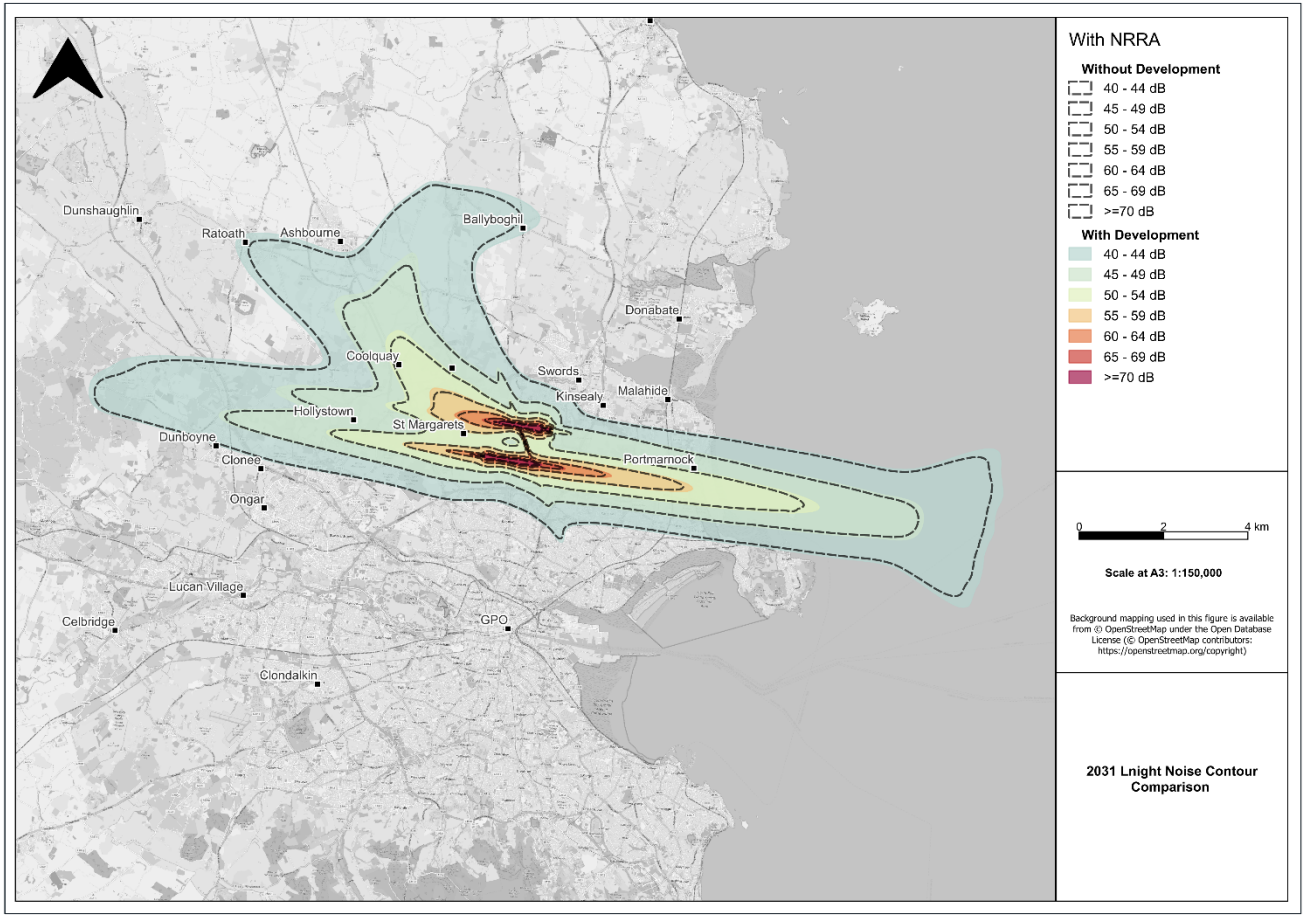


Figure A2-11. 2031 L_{den} Noise Comparison. With ACP NRRA Scenarios.

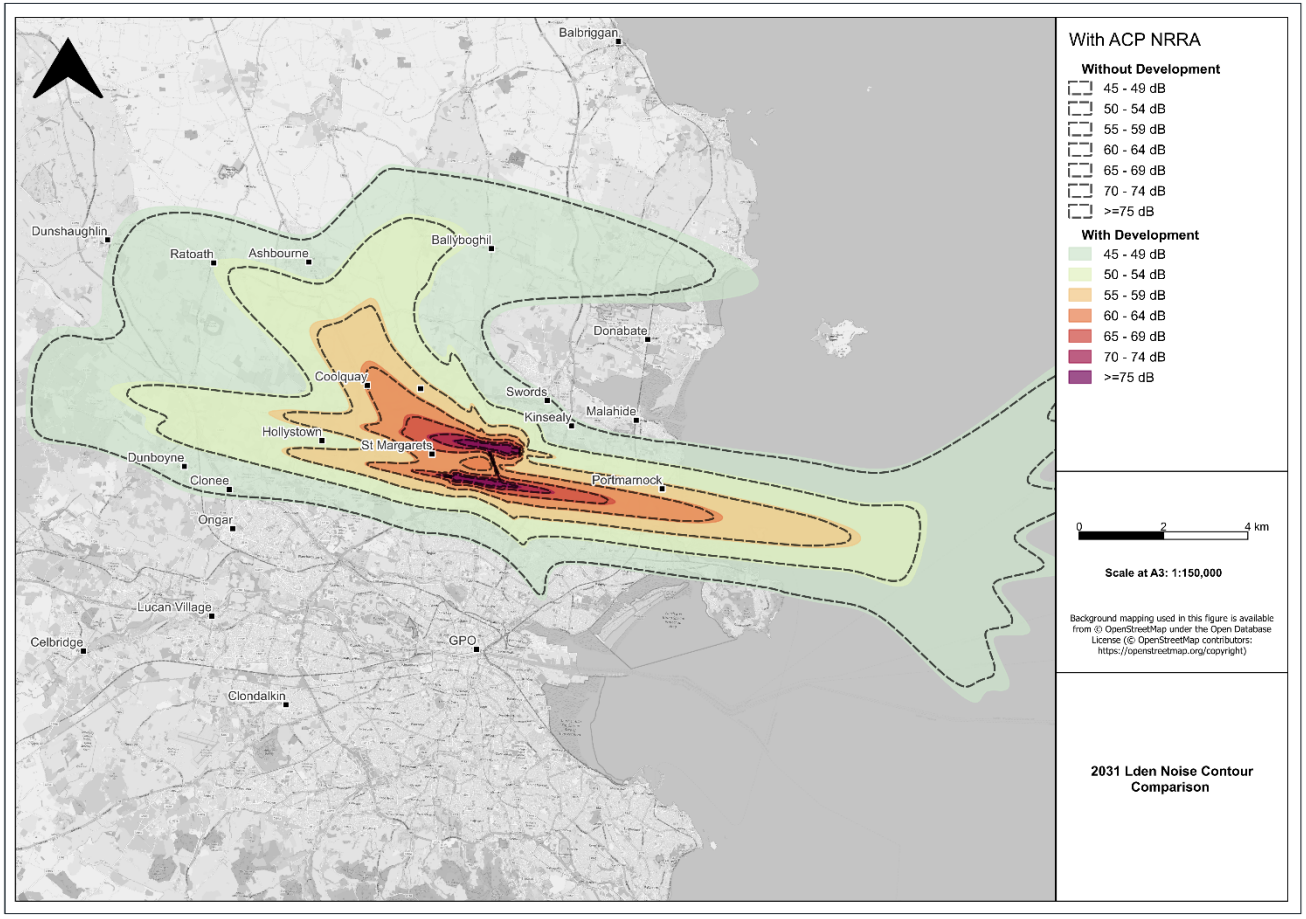


Figure A2-12. 2031 L_{night} Noise Comparison. With ACP NRRA Scenarios.

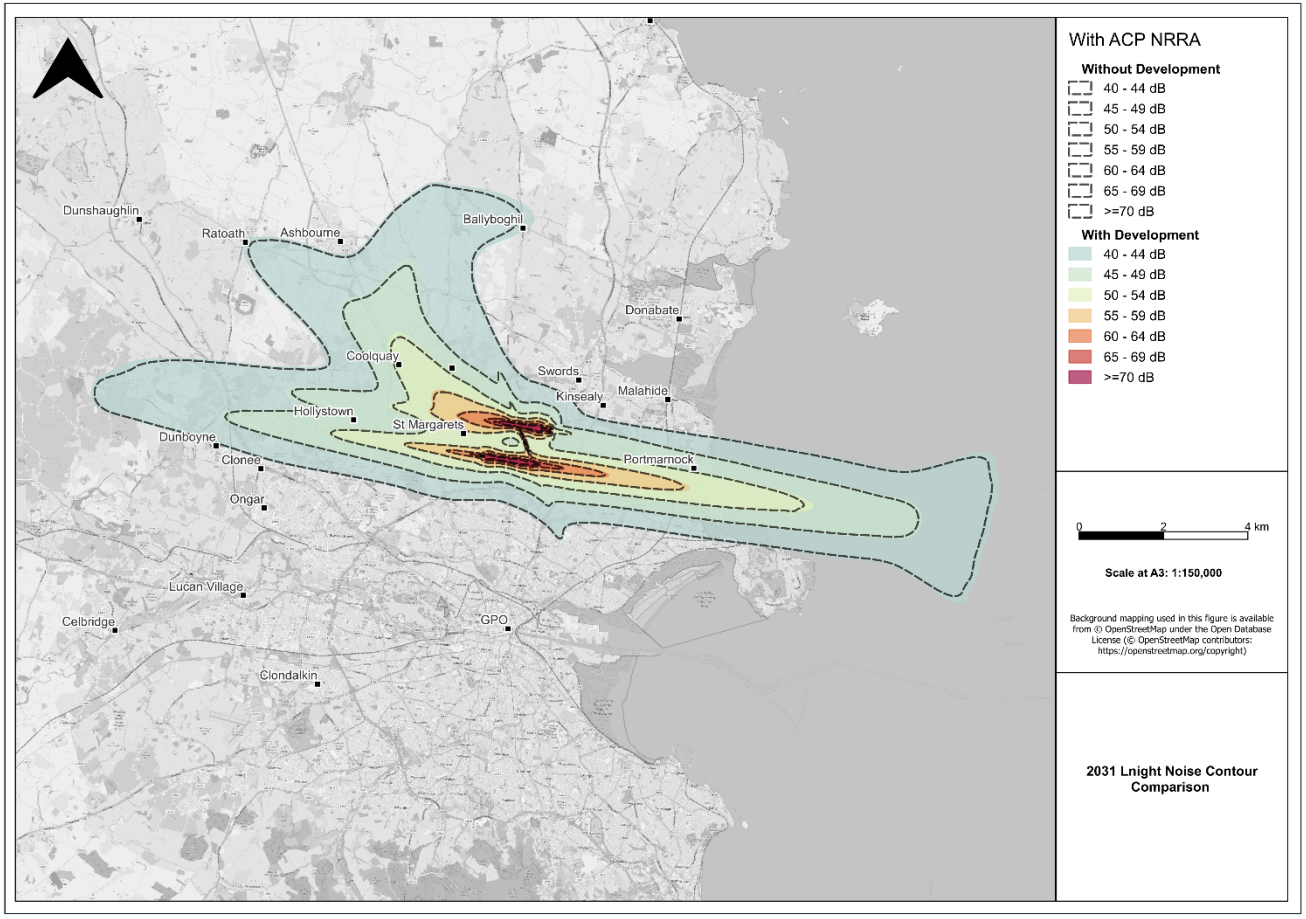


Figure A2-13. 2046 L_{den} Noise Comparison. Without NRRA Scenarios.

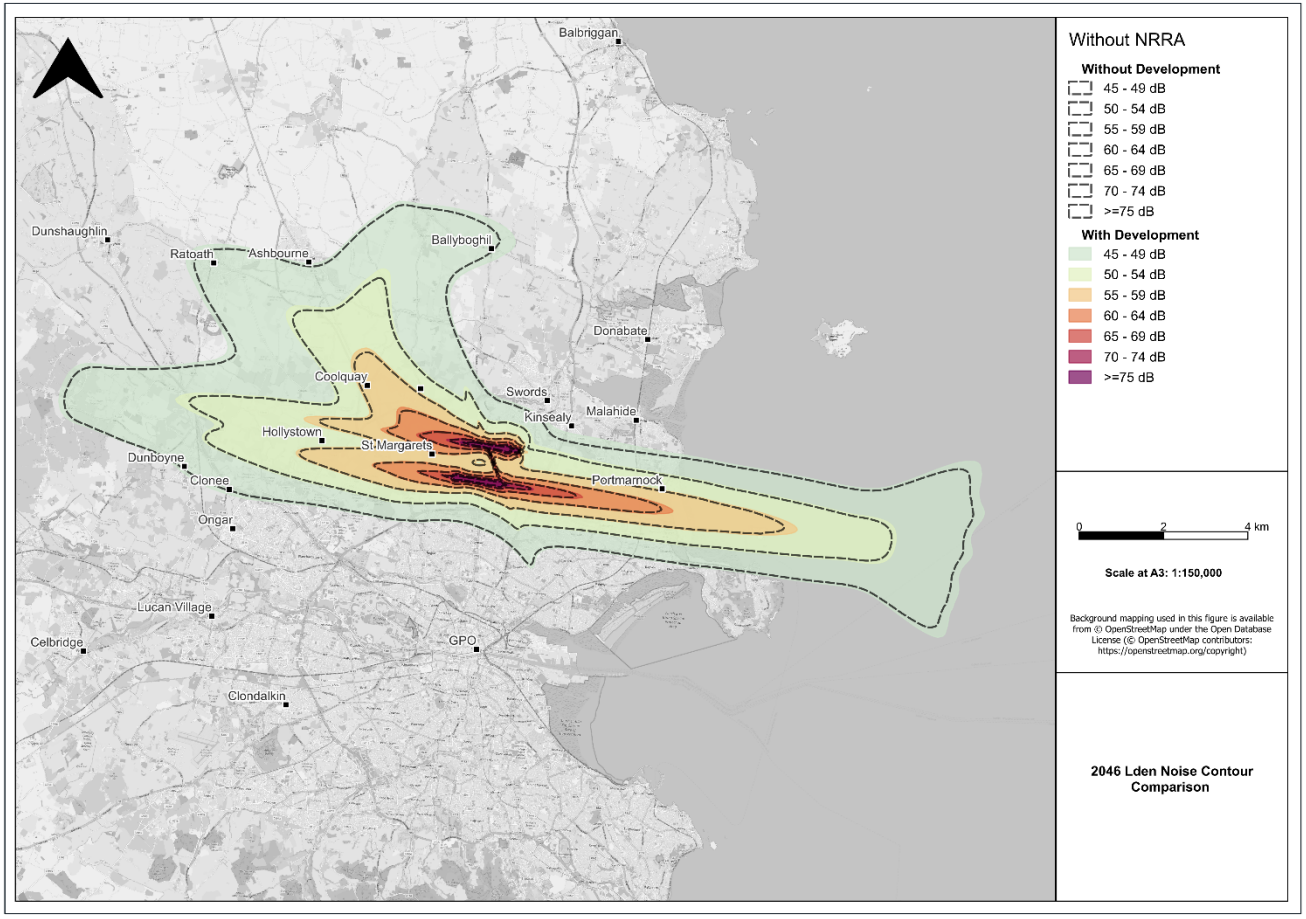


Figure A2-14. 2046 L_{night} Noise Comparison. Without NRRA Scenarios.

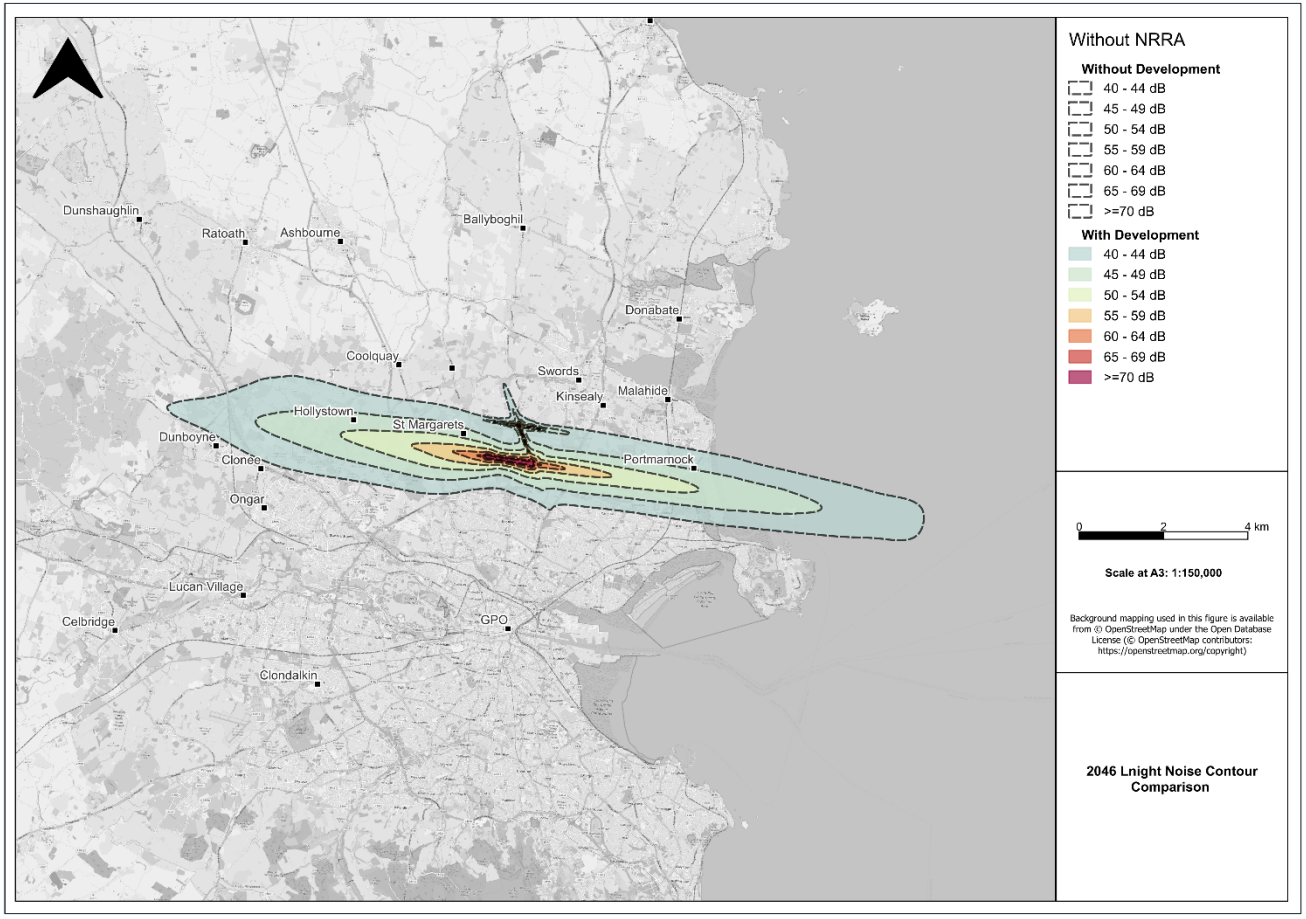


Figure A2-15. 2046 L_{den} Noise Comparison. With NRRA Scenarios.

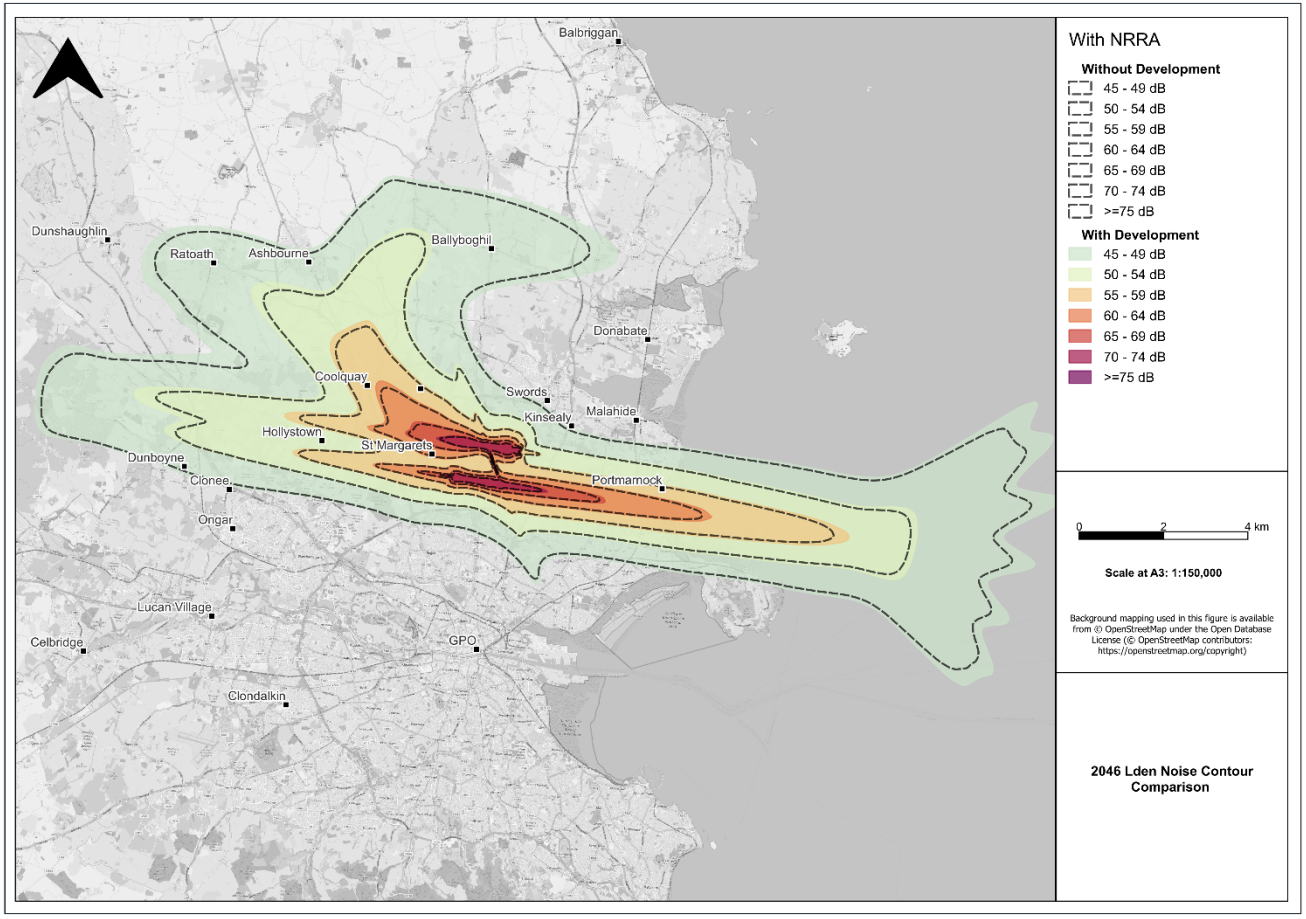


Figure A2-16. 2046 L_{night} Noise Comparison. With NRRA Scenarios.

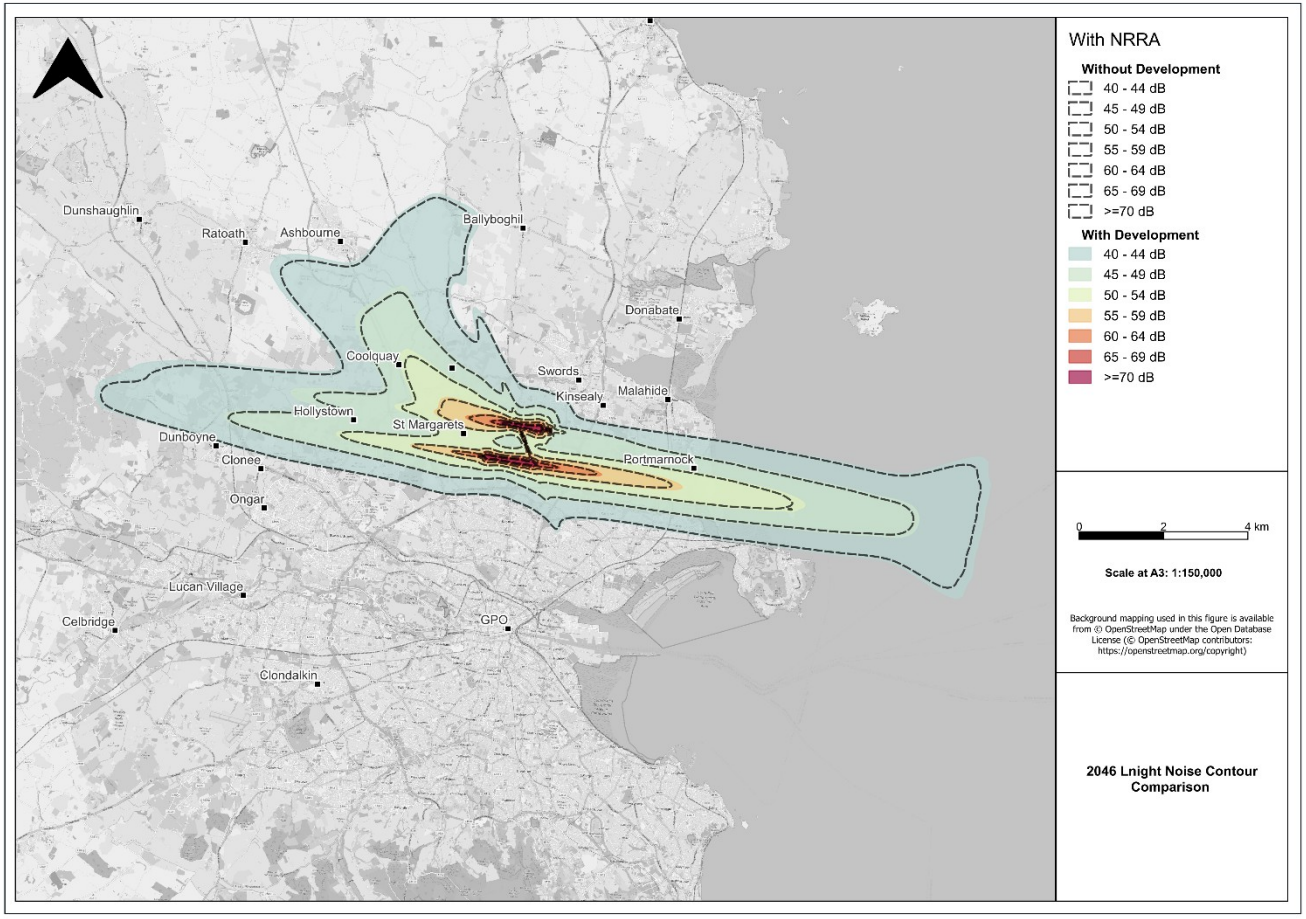


Figure A2-17. 2046 L_{den} Noise Comparison. With ACP NRRA Scenarios.

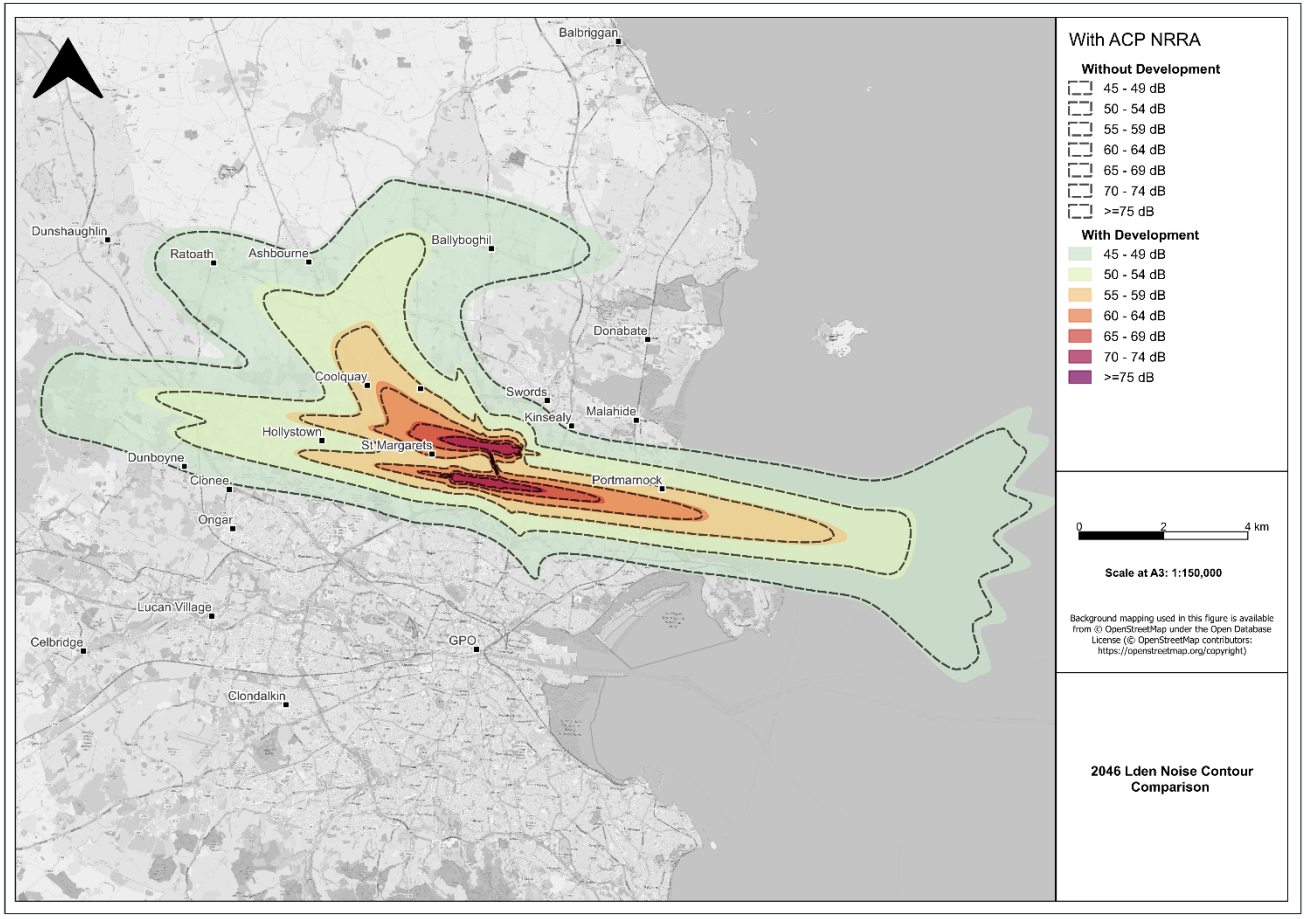
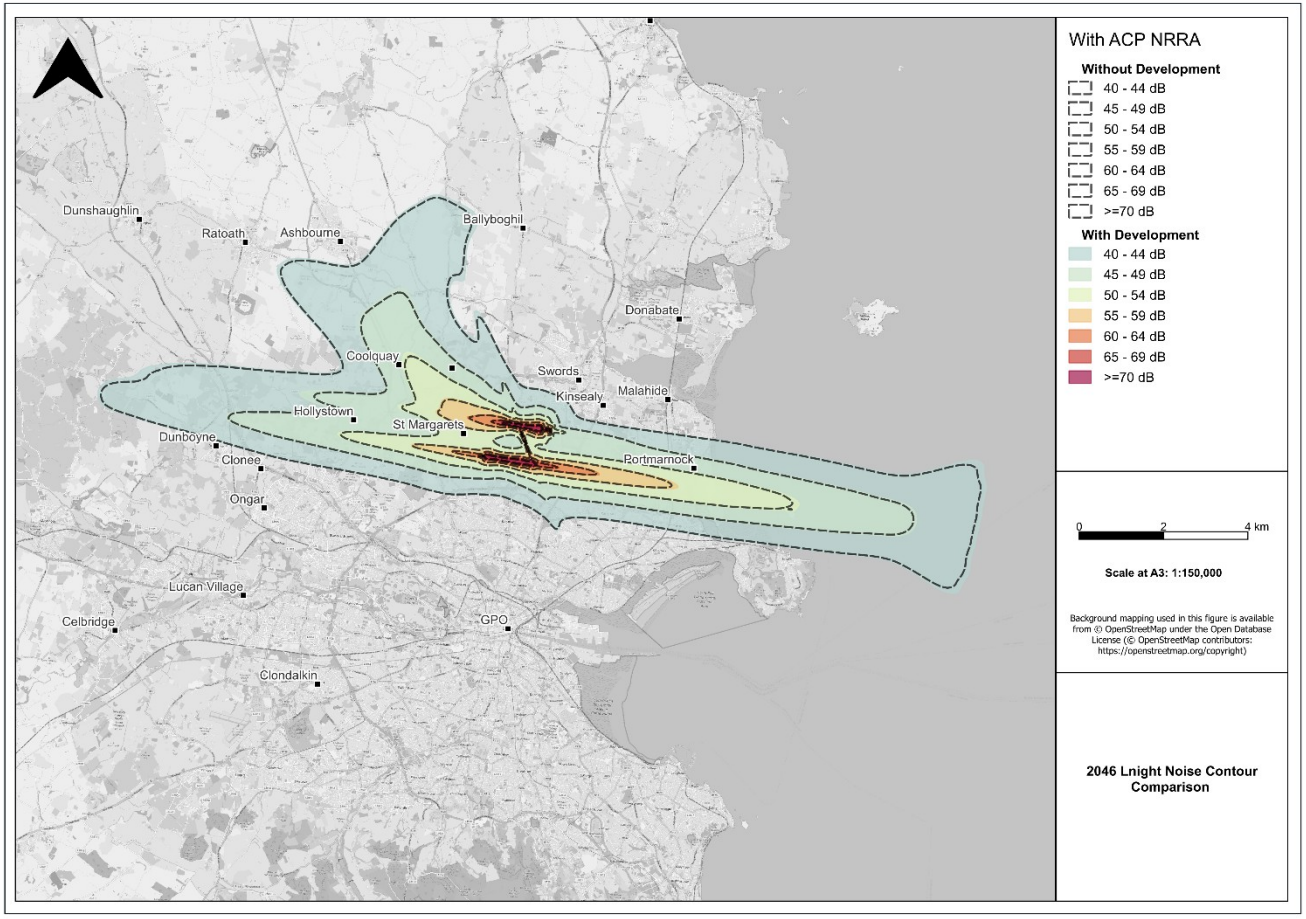


Figure A2-18. 2046 L_{night} Noise Comparison. With ACP NRRA Scenarios.





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