Report

Dublin Airport Noise Abatement Objective 2026

Appropriate Assessment Screening Report of the Noise Abatement Objective 2026

For ANCA

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1 Introduction

1.1 Background

1.1.1 Aircraft Noise Regulation

Regulation (EU) 598/2014 (hereinafter referred to as 'Regulation 598') requires Ireland and other European Union (EU) Member States to appoint a Competent Authority to regulate the noise situation at certain airports. Regulation 598 applies to airports with more than 50,000 civil aircraft movements per calendar year. Dublin Airport is the only airport in Ireland meeting this threshold. Fingal County Council (FCC) have been designated as the CA for the purposes of aircraft noise regulation at Dublin Airport. FCC have, to fulfil their function with regard noise management, created an independent division, the Aircraft Noise Competent Authority (ANCA), which discharges FCC's functions under Regulation 598 and the Aircraft Noise (Dublin Airport) Regulation Act 2019 (hereinafter referred to as the '2019 Act').

Under Regulation 598, ANCA must ensure that the noise situation at Dublin Airport is assessed in accordance with the Environmental Noise Directive (Directive 2002/49/EC) and by the adoption of the Balanced Approach. Regulation 598 requires ANCA to apply the Balanced Approach at those airports where a noise problem has been identified. The Balanced Approach is a policy of the International Civil Aviation Organization (ICAO), which has provided guidance in ICAO Doc 9829, Guidance on the Balanced Approach to Aircraft Noise Management[1]. Under Regulation 598, the Balanced Approach is applied where a noise problem at an airport has been identified. According to the ICAO guidance, it involves analysing various measures available to reduce noise which can be classified into four principal elements as follows:

- Noise at Source;
- Land-use Planning Management;
- Noise Abatement Operational Procedures; and
- Operating Restrictions.

In addition to those elements specified in ICAO, Regulation 598 also requires ANCA, in the context of the Balanced Approach, to define, restate or amend a Noise Abatement Objective (NAO) for the airport, identify the measures available to reduce the noise impact, and evaluate thoroughly the cost-effectiveness of the noise mitigation measures. Annex II of Regulation 598 also sets out guidance on assessing the cost-effectiveness of operating restrictions ANCA must then select the applicable noise mitigation measures without detriment to public safety and taking into account environmental sustainability (including interdependencies between noise and emissions), public interest in the development prospects of the airport, and consultation with stakeholders in a transparent way. At the end of this process, ANCA must specify the noise mitigation measures and ensure they are implemented.

The 2019 Act gives further effect to Regulation 598 in Ireland. It provides for ANCA to apply the Balanced Approach and discharge its functions under Regulation 598 on its own initiative or in response to any planning application by Dublin Airport Authority (daa) relating to:

[1] International Civil Aviation Organization (ICAO) (2008) Guidance on the Balanced Approach to Aircraft Noise Management. Available at: https://www.icao.int/environmental-protection/aircraft-noise

1) *any proposed development that (I) contains a proposal requiring the assessment for the need for a noise-related action, or (II) indicates that a new operating restriction may be required "any noise problem that would arise from the carrying out of the development as proposed" (Section 34B); or,*

2) *the taking of a 'relevant action' "any noise problem that would arise from taking [a] relevant action as proposed" (Section 34C), whereby the 'relevant action' consists exclusively of the revocation, amendment or replacement of an operating restriction, with or without the introduction of new noise mitigation measures.*

ANCA discharges its functions under Regulation 598 and the 2019 Act by, among other things, making a 'regulatory decision' (hereinafter referred to as 'the RD').

The first step in the application of the Balanced Approach under the 2019 Act is to define, restate or amend the Noise Abatement Objective.

1.2 Need for Appropriate Assessment

Directive 2009/147/EC on the conservation of wild birds (the 'Birds Directive') and Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the 'Habitats Directive') ensure the conservation within Member States of a wide range of rare, threatened or endemic animal and plant species, and all naturally occurring wild bird species.

The obligation to undertake appropriate assessment derives from Article 6(3) and 6(4) of the Habitats Directive, and both involve a number of steps and tests that need to be applied in sequential order. Article 6(3) is concerned with the strict protection of sites, while Article 6(4) is the procedure for allowing derogation from this strict protection in certain restricted circumstances. Each step in the assessment process precedes and provides a basis for other steps.

Article 6(3) – *Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.*

Article 6(4) – *If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.*

Where the site concerned hosts a priority natural habitat type and/or a priority species, the only considerations which may be raised are those relating to human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest.

Statutory Instrument (S.I.) No. 477/2011 - European Communities (Birds and Natural Habitats) Regulations (2011) (hereinafter referred to as the '2011 Regulations') transpose this Directive into Irish legislation.

Specifically, Section 42(1) of the 2011 Regulations state:

'A screening for Appropriate Assessment of a plan or project for which an application for consent is received, or which a public authority wishes to undertake or adopt, and which is not directly connected with or necessary to the management of the site as a European Site, shall be carried out by the public authority to assess, in view of best scientific knowledge and in view of the conservation objectives of the site, if that plan or project, individually or in combination with other plans or projects is likely to have a significant effect on the European site.'

European sites, as referenced in the paragraph above, are commonly referred to as Natura 2000 sites. In Ireland these include Special Protection Areas (SPAs) and Special Areas of Conservation (SACs), candidate Special Areas of Conservation (cSAC) and proposed Special Protection Areas (pSPA). Each site is designated because of its specific biodiversity value: for SPAs this is because of their value for wild birds; for SACs, it is because of the important habitats and species that it supports.

1.3 Purpose of this Screening Report

The purpose of this Screening Report is to assist ANCA, in their role as Competent Authority, in determining whether the NAO amendments require further consideration as part of an Appropriate Assessment (AA). The specific purpose of AA is to ensure that proposed plans or programmes will not have adverse effects on the integrity of Natura 2000 sites (either alone or in combination with other plans or projects). Further consideration is required if it cannot be excluded, on the basis of objective scientific information following screening, that the plan or programme, individually or in combination with other plans, programmes, will have a significant effect on a European site. Determining whether significant effects are considered to be likely (i.e. possible), and therefore whether AA is required, is completed through a process known as Screening.

It is ANCA, in their role as Competent Authority, who are required to make a screening determination on whether AA is required. This determination is made by undertaking a screening exercise whereby information, including a Screening Report, is considered by ANCA who, using this, determine whether it can be excluded, on the basis of objective scientific information following screening, that the NAO amendments, individually or in combination with other plans or projects, will have a significant effect on any European site.

This AA Screening Report provides:

- The methodology used to define the scope of the assessment and identify potential effects on Natura 2000 sites associated with the NAO amendments (Stage 1: screening);
- A list of the Natura 2000 sites and their designated features that may be subject to likely significant effects due to the NAO amendments, either alone or in combination with other plans or projects; and,
- An assessment (to inform the Competent Authority's AA, if required) of which likely significant effects may result in an Adverse Effect on the Integrity (AEOI) of one or more Natura 2000 sites, taking into account the type, extent and timing of the proposed development.

This Screening Report has been undertaken in accordance with the Department of Environment, Heritage and Local Government (DEHLG) guidance (2010)[2].

[2] Department of Environment, Heritage and Local Government (DEHLG) guidance (2010) Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities.

1.4 Appropriate Assessment

AA is a systematic process designed to assess potential likely significant effects of implementing plans or projects before they are formally adopted or consented.

The AA process can involve up to four stages, as described in the DEHLH guidance (2010):

- **Stage One: Screening:** The process that identifies the likely impacts upon a Natura 2000 site of a project or plan, either alone or in combination with other projects or plans and considers whether these impacts are likely to be significant.
- **Stage Two: Appropriate Assessment:** The consideration of the impact on the integrity of the Natura 2000 site of the project or plan, either alone or in combination with other projects or plans, with respect to the site's structure and function and its conservation objectives. Additionally, where there are adverse impacts, an assessment of the potential mitigation of those impacts. If adequate mitigation is proposed to ensure no significant adverse impacts on the integrity of Natura 2000 sites, then the process may end at this Stage. However, if the likelihood of significant impacts remains, then the process must proceed to Stage Three.
- **Stage Three:** Assessment of Alternative Solutions: The process that examines alternative ways of achieving the objectives of the project or plan that avoids adverse impacts on the integrity of the Natura 2000 site.
- **Stage Four:** Assessment where no alternative solutions exist and where adverse impacts remain: An assessment of compensatory measures where, in the light of an assessment of imperative reasons of overriding public interest (IROPI), it is deemed that the project or plan should proceed.

Regulation 42 of the Habitats Regulations requires the Competent Authority to undertake Stage 1 Screening for AA and where necessary Stage 2 AA of any plan or project. Stage 3 and 4 are included under Regulations 43 and 45 respectively.

A likely significant effect is, in this context, any appreciable effect that may reasonably be predicted as a consequence of a plan or project that may affect the conservation objectives of the features for which the site was designated, but excluding trivial or inconsequential effects.

1.5 Approach to Screening

Screening (Stage 1) for AA should follow a systematic process, as set out in the DEHLG guidance (2010):

- Step 1: Description of plan or project, and local site or plan area characteristics;
- Step 2: Identification of relevant Natura 2000 sites, and compilation of information on their qualifying interests and conservation objectives;
- Step 3: Assessment of likely effects – direct, indirect and cumulative – undertaken on the basis of available information as a desk study or field survey or primary research as necessary; and
- Step 4: Screening statement with conclusions.

This approach has been followed in carrying out the analysis detailed in this Screening Report, and for arriving at the conclusion about whether AA is required. Should AA be required, ANCA will carry one out in accordance with Article 42 of the 2011 Regulations.

In that regard, ANCA would prepare a Natura Impact Statement (NIS). The NIS would comprise a scientific examination of the NAO amendments and the relevant European Site or European Sites, to identify and characterise any possible implications of the NAO amendments individually or in combination with other plans or projects in view of the conservation objectives of the site or sites, and any further information including, but not limited to, any plans, maps or drawings, scientific information or data required to enable the carrying out of an AA.

If an AA is required, ANCA will publish the NIS and any other information relevant and the Environmental Report (see "Related Environmental Assessments" below) for the full period of 14 weeks provided for public consultation pursuant to Section 34B of the 2000 Act.

1.6 Related Environmental Assessments

S.I. No. 435/2004 - European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations (2004), which transposes the EU SEA Directive (2001/42/EC) into Irish law, requires that 'Strategic Environmental Assessment' (SEA) be carried out where a plan or programme is likely to have significant environmental effects. As with AA, determining whether significant effects are considered to be likely, and therefore whether SEA applies, is completed through a process known as Screening.

ANCA, in its role as Competent Authority, was required to make a Screening Determination on whether SEA applies. On 12 January 2026, having regarded information provided in the NAO SEA Screening Report[3], and submissions and observations provided by the prescribed Environmental Authorities[4], ANCA determined that there is potential for likely significant environmental effects to occur as a result of implementing the NAO amendments. The next stage of the SEA process, SEA Scoping, is being undertaken broadly concurrently, but separately, to AA Screening. A SEA will in many cases need to incorporate material from the AA; conversely, material from the SEA may help inform the AA. In particular, both the SEA and AA will consider air noise effects on Natura 2000 sites. As SEA is required, ANCA will also publish an SEA Environmental Report at the public consultation stage.

The process of aircraft noise regulation through the 2019 Act is summarised alongside the AA and SEA processes in Figure 1.1 below.

[3] Logika Consultants (2026) Strategic Environmental Assessment Screening Report
[4] The Environment Protection Agency, The Minister for Housing, Local Government and Heritage, The Minister for Agriculture, Food and the Marine Environment, and The Minister for Climate, Energy and the Environment.

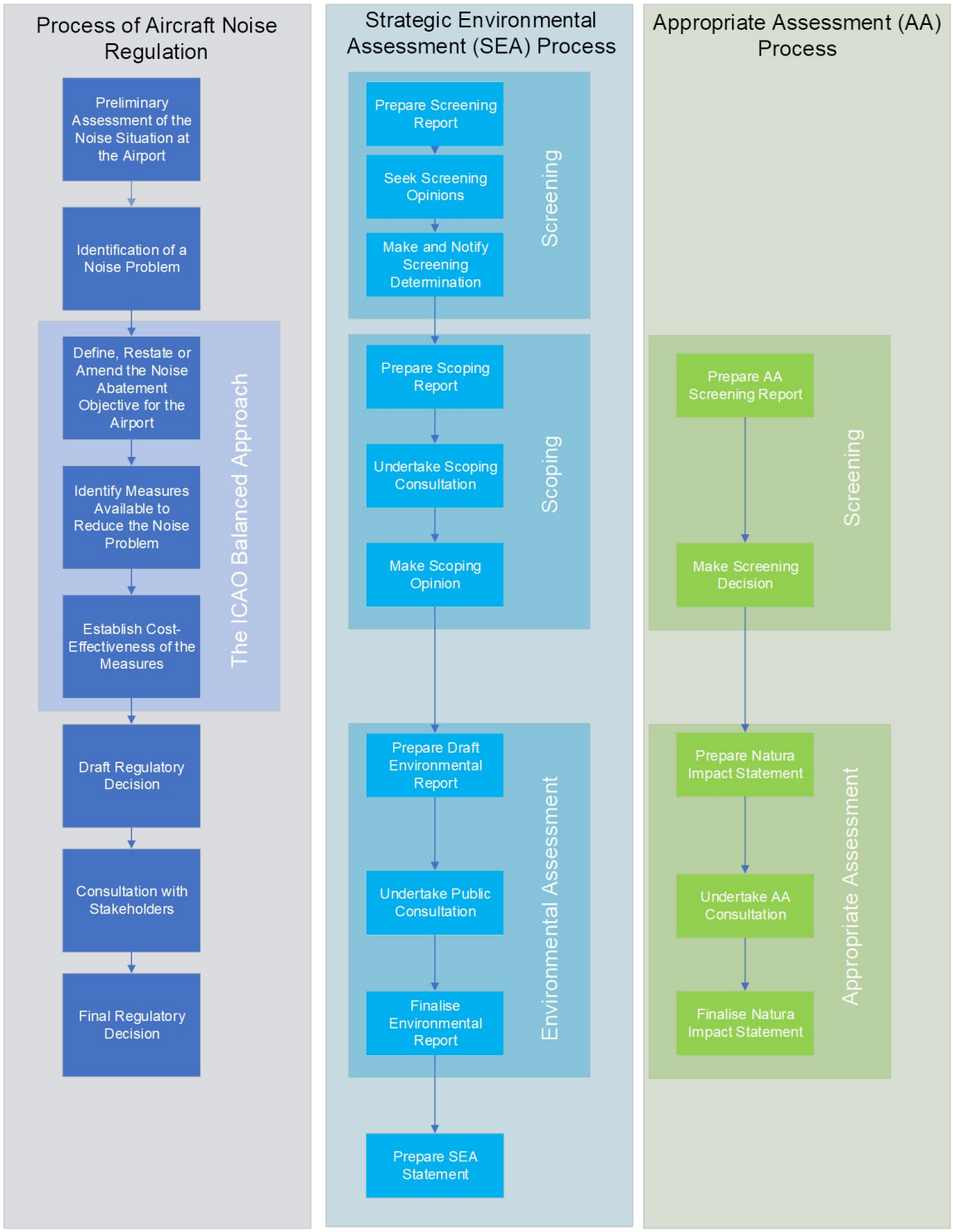

Figure 1-1: The concurrent processes of Aircraft Noise Regulation, SEA and AA

1.7 Consultant Team

This Screening Report has been prepared by Logika Consultants Ltd. ('Logika'), part of the Logika Group. Logika are the Consultant Team engaged to provide expert support to ANCA in the drafting of the NAO amendments. Specifically, Logika are responsible for providing AA input to the NAO process.

2 Description of the Plan (Step 1)

2.1 Site Location

Dublin Airport is the Hub Airport of Ireland with routes to over 200 different destinations, served by nearly 50 airlines. In 2025 a total of 36.4 million passengers used Dublin Airport and its 245,554 Air Traffic Movements (ATMs). Dublin Airport is currently served by two main runways and a further cross runway which is used less frequently. It has two terminals, operates 24 hours a day, and for 364 days a year. As with all major airports, it relies on considerable additional infrastructure including an extensive bus network and car parking facilities.

Dublin Airport is located on the east coast of Ireland, see Figure 2.1, in Collinstown County Dublin, in the administrative area of Fingal County Council. It lies approximately 7km north of Dublin City Centre, and between the City and the Airport lies mostly development. The area north of the Airport is also mainly developed all the way to the conurbation of Swords which lies approximately 3km to the north. In an easterly direction from the Airport is found a mixture of farmland and other open space, with scattered development all the way to the coast and the settlement of Portmarnock which lies approximately 5km from the Airport itself. West of the Airport is characterised by being mainly undeveloped and comprising mostly farmland and other forms of open space.

The Airport is accessed by the M1 motorway, which provides access from Dublin and from areas to the north as far as Belfast in Northern Ireland. The M50 Dublin ring road connects with the M1, and from this there are road connections throughout Ireland.

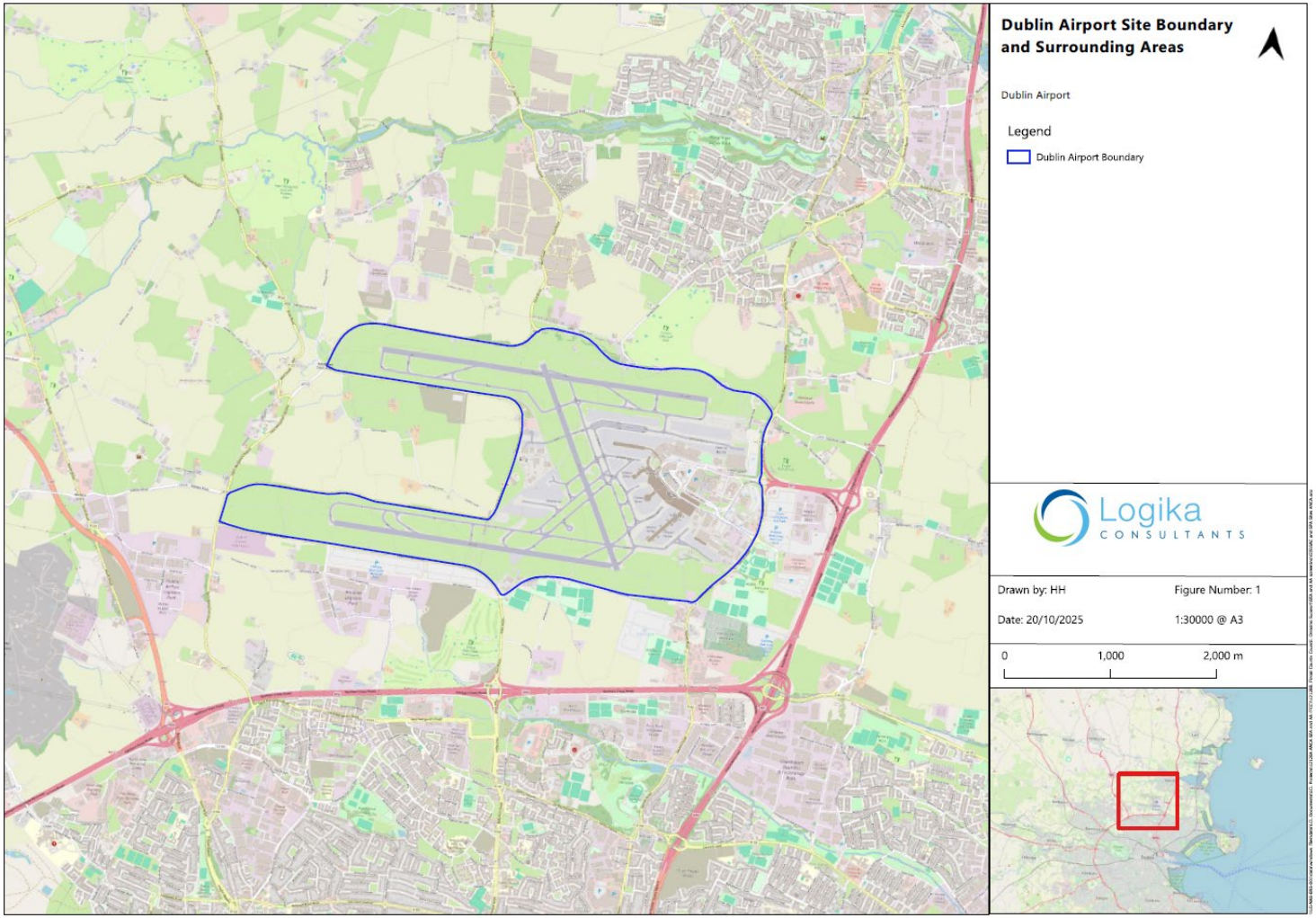

Figure 2-1: Dublin Airport Site Boundary

2.2 Plan Description

2.2.1 Overview

As part of the planning application F23A/0781(submitted in 2023) ANCA's statutory aircraft noise assessment process under the Aircraft Noise (Dublin Airport) Regulation Act 2019 was triggered. As part of this process, ANCA is required to review the NAO. Section 9 of the 2019 Act obliges ANCA to ensure that the NAO is defined, restated, or amended where a noise problem has been identified, and this must occur before any noise mitigation measures are identified or considered. In addition, Action 3 of the Noise Action Plan for Dublin Airport 2024–2028 requires Fingal County Council to review the NAO, informed by the current noise situation and the policy context set out in the Noise Action Plan. This review forms an essential part of the overall regulatory framework governing the management of aircraft noise at Dublin Airport.

The noise problem that has been identified must then be assessed in the context of the amended NAO culminating in ANCA making an RD. The 'Plan' addressed through this AA Screening Report however only comprises matters relating to the NAO. The RD will be dealt with in a separate AA Screening Report. The NAO is focussed on the noise outcomes.

ANCA's powers and obligations to define, restate or amend the NAO arise from Regulation 598 and, while they are exercised in parallel with the planning process in this instance, the amended NAO is not constrained by the terms of the planning application. Having regard for the above expectations, the amended NAO can usefully be a plan for the decisions that are needed to manage the aircraft noise aspects of future aircraft operations at Dublin Airport beyond the scope of the current planning application.

ANCA considers that the amended NAO should describe an outlook or set of noise outcomes over a period of time having regard for wider European, national and regional plans relating to Dublin Airport and aircraft noise. The amended NAO will therefore sit above both the present planning application and future planning applications and is designed to complement other published policies which present scenarios for the sustainable development of Dublin Airport. In this context, the amended NAO can guide noise management and the measures needed as part of meeting these policies in compliance with the Balanced Approach, Regulation 598/2014 and the 2019 Act. The amended NAO will therefore seek to define noise outcomes that would govern the implementation of activities associated with planning applications made for the future growth provided for in existing policies, be that an increase in ATMs/passenger numbers and/or any associated infrastructure works.

Any such growth could, however, only occur if these outcomes are met and would require planning permission and, where applicable, formal EIA and AA processes. In that case the amended NAO will set a noise management framework for future decisions on applications for planning permission, but the planning authority could grant or refuse permission within that framework if found to be unacceptable to the planning authority for other reasons. Consequently, only impacts, direct and indirect, resulting from the management of aircraft noise will be assessed in this AA Screening as ANCA cannot influence any other aspect of Dublin Airport's growth and operation. Other impacts will be addressed through the AA of other plans and projects.

2.2.2 The Amended Noise Abatement Objective

ANCA proposes the following Amendments to the NAO as described in Table 2-1, below.

Table 2-1: Key components of the Amended NAO

Element	Description
Part 1: Policy Objective	Limit and reduce the long-term adverse effects of aircraft noise on health and quality of life, particularly at night, through measures that mitigate impacts and provide certainty to the communities and the airport operator as part of the sustainable development of Dublin Airport.
Part 2: Explanation	The harmful effects of 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 be limited and progressively reduced. The Balanced Approach will be used to ensure that the measures adopted to achieve this objective are cost-effective, practicable and sustainable.
Part 3: Measurable Criteria	The NAO will primarily be measured through the number of people highly sleep disturbed and highly annoyed measured in accordance with the approach recommended by the World Health Organization's Environmental Noise Guidelines 2018 as endorsed by the European Commission through Directive 2020/367 (END) and transposed as the Second Schedule of the ENR.
Part 4: Expected Outcomes	In support of the sustainable development of Dublin Airport, particular noise outcomes are to be achieved in each relevant year under ENR in line with the methodology described in the NAO Guidance Note that has been produced alongside the Amended NAO. The number of people highly sleep disturbed and highly annoyed shall reduce so that: • people highly sleep disturbed and highly annoyed in 2031 shall reduce by 20% compared to 2023; • The number of people highly sleep disturbed and highly annoyed in 2036 shall reduce by 25% compared to 2023; and • The number of people highly sleep disturbed and highly annoyed in 2041 shall reduce by 30% compared to 2023. The number of dwellings, schools and hospitals exposed to aircraft noise above 65 dB Lden and/or 55 dB Lnight will be tracked, with the expectation that measures will be used to mitigate and/or limit the number of dwellings, schools and hospitals exposed in each relevant year under ENR. The size of the 55 dB Lden and 50 dB Lnight contours will be tracked with the expectation that these will reduce compared to 2023 in each relevant year under ENR. Noise mitigation measures may also be considered with reference to these contours.
Part 5: Progress Reporting	There are monitoring requirements for the Amended NAO which are set out in the NAO Review Report and area as follows: *"Progress towards the expected outcomes of the NAO will be monitored through annual reports as prepared by ANCA under Section 21 of the Act of 2019, and through the process of strategic noise mapping and noise action planning under ENR. This will require airport noise to be modelled and reported having regard for the guidance set out in the NAO Guidance Note."*

It is important to note that the Amended NAO will continue to set the noise outcomes that need to be achieved, and will not set the level of passengers or ATMs that could use or operate at Dublin Airport.

3 Identification of Relevant Natura 2000 Sites (Step 2)

3.1 Methodology

Any Natura 2000 sites within the likely Zone of Influence (ZoI) of the Plan should be included in the assessment. As set out in the AA Guidance (2010[2]), a distance of 15km is currently recommended in the case of aircraft. For projects it notes that this could be much less than 15km, but will need to be evaluated on a case-by-case basis with reference to the nature, size and location of the project, and the sensitivities of the ecological receptors, and the potential for in-combination effects. Natura 2000 sites that are more than 15km away could also be relevant, for example plans or projects affecting water quality or quantity upstream or downstream of sites with water dependent habitats or species.

It is considered appropriate to use a Study Area that is derived by a 15km ZoI around Dublin Airport for identifying relevant Natura 2000 sites, in line with the AA Guidance. This is driven by the implications of changes in air noise which could have the potential to affect Natura 2000 sites and the important features of these sites, within this ZoI.

The 15km ZoI has been arrived at after undertaking a review of literature associated with the disturbance of waterbirds, which are the primary features of the SPAs and most considered likely to be affected by increases in air noise (see the baseline information provided later in the Report), including that produced for the Humber Industry Nature Conservation Association (INCA) by the University of Hull (Cutts et al, 2009). Although not specifically relating to aircraft, this Screening Report recommended that (with respect to waterbirds on mudflats), construction noise levels should be restricted to below 70 decibels (dB)(A) because birds would habituate to regular noise below that level, and that also sudden irregular noise above 50 dB(A) should be avoided. The University of Hull subsequently produced refined guidance in the Waterbird Disturbance Mitigation Toolkit (Cutts et al, 2013). It concluded that:

- high level disturbance effects are likely with continuous noise above 72 dB[5] or sudden noise above 60 dB[6];
- moderate level disturbance effects are likely with regular noise of 60 – 72 dB or sudden noise of 55 – 60 dB; and,
- there is unlikely to be any response by waterbirds to any noises below 55 dB(A).

Aircraft noise from airports of the scale of Dublin Airport can be considered to generate near continuous noise. Even though an Airport will have a number of different flightpaths that can be used, when a flightpath is in operation, aircraft will use a route nearly continuously and very frequently. In relation to Dublin Airport, for departures to the east, a number of different flightpaths are utilised, meaning that the statutory sites are often overflown. When Dublin Airport is operating in a westerly direction, it is arrival traffic that overflies the statutory sites. The use of regular flightpaths results in noise increasing gradually as aircrafts approach, avoiding sudden peaks, and then similarly tapers off gradually as aircraft get more distant. Furthermore, Dublin Airport operates 24 hours a day and for

[5] Although the Guidance is not specific this measurement is considered to be an average noise measurement for example either Leq (which is the constant noise level that would result in the same total sound energy being produced over a given period) or Lden (which is a 2002 European standard to express noise level over an entire day).
[6] This measurement is considered to be Lmax which is the highest sound level measured during a single noise event in which the sound level changes value as time goes on.

364 days a year. For this reason, it is considered that the only thresholds listed above for bird disturbance that are relevant are those associated with continuous noise.

The most common commercial passenger planes (Boeing 737 and Airbus A320) that operate from Dublin Airport may result in noise events on the ground of approximately between 68 and 72 dB LAmax[7] after reaching a height of 3000 ft on departure. During arrivals, and as the aircraft descends through 3,000 ft these commercial planes would be expected to produce noise levels less than 65 dB LAmax, as experienced on the ground. The slowest recommended Knots-Indicated Air Speed (KIAS) for take-off climbing is 150 KIAS, which is the equivalent to 4.63 km/min. At the fastest climb rate at this speed 3000 ft will be reached in 5.54km. The fastest recommended KIAS for take-off climbing is 250 KIAS, which is the equivalent to 7.72 km/min. At the slowest climb rate at this speed 3000 ft will be reached in 13.1km. Therefore, noise emissions from aircraft will reach 71dB LAmax between 5.54km and 13.1km from the end of the airport runways. It is assumed that the noise on the ground anywhere between these two distances will be 71dB, but that is precautionary.

Much of the noise data above is measured in Lmax, that is the peak noise level recorded from an individual noise event. However, as stated earlier air traffic operations at Dublin Airport will not be made up of singular noise events but instead will be experienced by the wildlife as continuous, with noise gradually increasing as aircraft get closer and tapering off as they move further away, thus reducing the overall impact of individual events. Since continuous noise is an average over time (and measured in Leq) the Lmax for this time period will always be higher than Leq. As such, despite the fact that Lmax of noise events from air traffic can be high enough to have the potential to disturb features within designated sites, the continuous noise events from air traffic are always going to be much lower. Because of this sudden noise levels are not considered any further.

Whilst the main concern of the designated Sites within the ZoI (specifically the SPAs) is bird conservation, three of the SACs within the ZoI have non-avian conservation objectives. These are:

- Lambay Island SAC – grey seal *Halichoerus grypus* and common seal *Phoca vitulina;*
- Rockabill to Dalkey Island SAC – grey seal and common seal, and several cetaceans;
- North Dublin Bay SAC – Irish hare *Lepus timidus hibernicus*.

There is very little research undertaken on the effects of air traffic on aquatic mammals, including specifically cetaceans. Research undertaken by Kastak and Schusterman (1995)[8] concludes that the minimum noise level that was consistently detected by common seals is 65 dB albeit it is not known if this relates to continuous, frequent or sudden noise. This is a greater noise level than the moderate disturbance events from noise within birds and therefore it would not drive the ZoI. There is no available research on the effects of air traffic noise on Irish hare, however, it is considered that the ZoI prescribed based on noise impacts on birds would be appropriate for this species too.

Given all this, a precautionary 15km ZoI for aircraft noise is therefore proposed for departing aircraft from the Airport. This should ensure that both the potential for high level and moderate level effects (occurring continuously) will be undertaken. This will, however, be the subject of further review whilst undertaking the work associated with the Appropriate Assessment itself, albeit the assessment that will take place will be undertaken for a ZoI of no less than 15km.

[7] LAMax is defined as A weighted maximum sound pressure level, which captures a single loudest moment in a noise event.
[8] https://cpb-us-e1.wpmucdn.com/sites.ucsc.edu/dist/d/804/files/2019/06/pub_086_1995.pdf

In addition, a 15km ZoI is also considered appropriate for arrivals. A review of flight paths as provided by WebTrak[9] with specific regard to Dublin Airport airspace shows that aircraft arriving at the Airport, reach an altitude of 3000 ft at no more than 14-15km from the Airport.

It is customary for studies on air quality around airports to include the whole aircraft landing and take-off cycle, including operations on the ground and in the air up to 3,000 feet (~1,000 metres (m)) above ground level. However, it is generally understood that emissions from aircraft become negligible, in terms of their effect on ground-level air quality, once aircraft are more than approximately 350-650 ft (100-200m) above the ground on departure, and when greater than approximately 160-350 ft (50-100) on arrival. This height is reached by approximately 2km or less after take-off which is comfortably outside of the airspace of any Natura 2000 site. However, certain habitats and species are more sensitive to even lower levels of airborne pollution and so a prudent approach to undertaking the work to inform the Appropriate Assessment will be taken with a 15km ZoI enforced for consideration of the effects of airborne pollution also applied.

The AA study area with a 15km ZoI can be seen in Figure 3.1.

3.2 Identified Natura 2000 Sites

The following sites were identified as occurring within the study area:

- Baldoyle Bay (SAC and SPA): 5.9km in an east direction from the closest point of Dublin Airport boundary;
- Howth Head Coast (SAC and SPA): 10.5km in a southeast direction from the closest point of Dublin Airport boundary;
- Ireland's Eye (SAC and SPA): 10.6km in an east direction from the closest point of Dublin Airport boundary;
- Lambay Island (SAC and SPA): 14.2km in a northeast direction from the closest point of Dublin Airport boundary;
- Malahide Estuary (SAC and SPA): 3.7km in a northeast direction from the closest point of Dublin Airport boundary;
- North Dublin Bay and North Bull Island (SAC and SPA): 6.3km in a southeast direction from the closest point of Dublin Airport boundary;
- Rockbill to Dalkey Island (SAC): 10.4km in an east direction from the closest point of Dublin Airport boundary;
- Rogerstown Estuary (SAC and SPA): 7.4km in a northeast direction from the closest point of Dublin Airport boundary;
- Rye Water Valley/Carton (SAC): 13.6km in a southwest direction from the closest point of Dublin Airport boundary; and
- South Dublin Bay and River Tolka Estuary (SAC and SPA): 9.4km in a south direction from the closest point of Dublin Airport boundary.

These sites are identified in Figure 3.1.

[9] WebTrak (2026). Dublin Airport. Available at: https://eu.webtrak.aero/dub1

The interest features, conservation objectives, condition and vulnerabilities of these European sites were established by obtaining information from the following sources:

- National Parks and Wildlife Service https://www.npws.ie/protected-sites/sac and https://www.npws.ie/protected-sites/spa

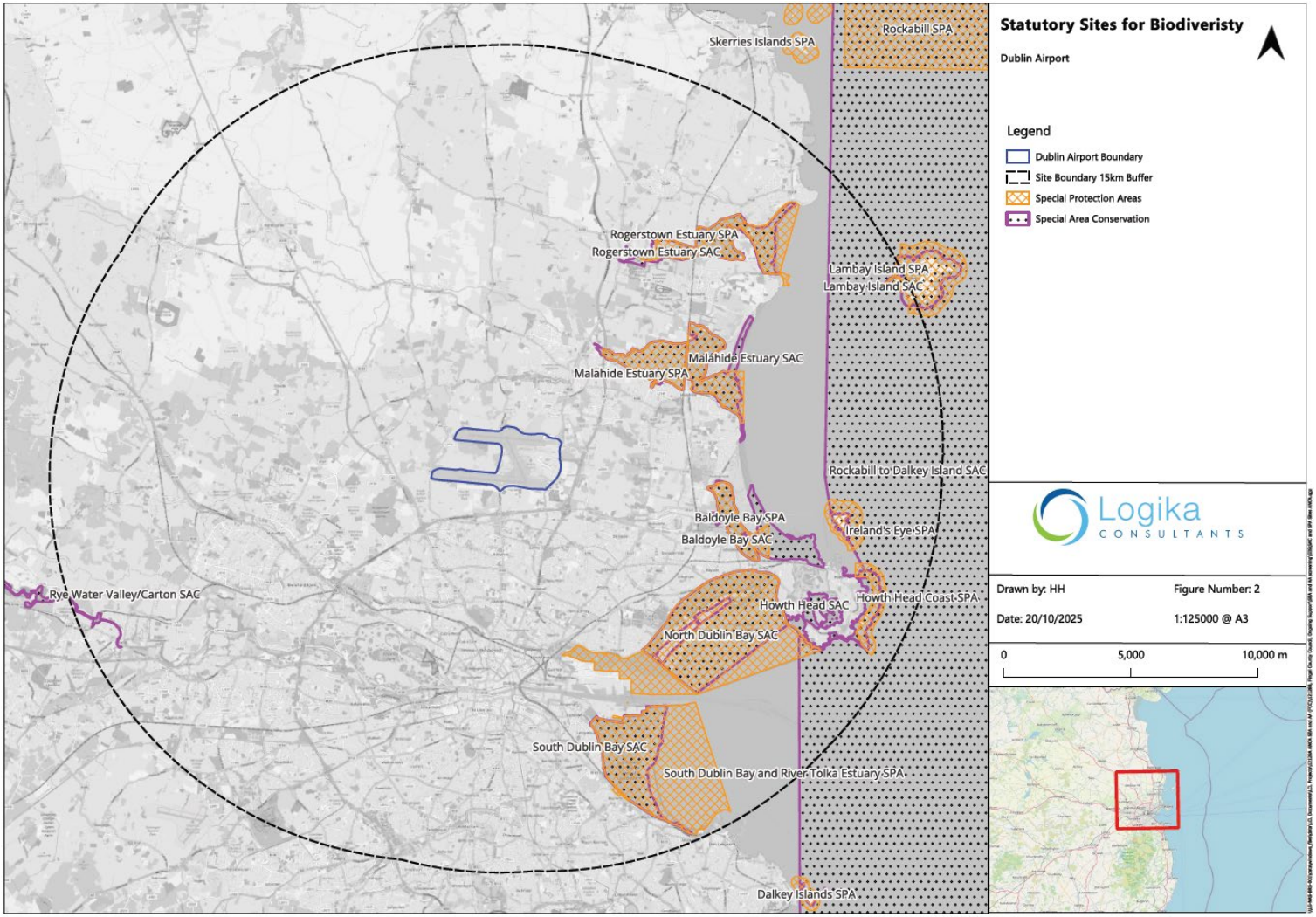

Figure 3-1: Natura 2000 sites within the AA study area

Table 3-1: Natura 2000 sites

	Baldoyle Bay	
	SAC	**SPA**
Interest Features	The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive: Tidal Mudflats and Sandflats Salicornia Mud Atlantic Salt Meadows Mediterranean Salt Meadow Large areas of intertidal flats are exposed at low tide at this site. These are mostly sands but grade to muds in the inner sheltered parts of the estuary. Extensive areas of Common Cord-grass (Spartina anglica) occur in the inner estuary. Both the Narrow-leaved Eelgrass (Zostera angustifolia) and the Dwarf Eelgrass (Z. noltii) are also found here. During summer, the sandflats of the sheltered areas are covered by mats of green algae (Enteromorpha spp. and Ulva lactuca). The sediments have a typical macrofauna, with Lugworm (Arenicola marina) dominating the sandy flats. The tubeworm Lanice conchilega is present in high densities at the low tide mark and the small gastropod Hydrobia ulvae occurs in the muddy areas, along with the crustacean Corophium volutator	An important site for wintering waterfowl, providing good quality feeding areas and roost sites. An internationally important wintering population of light-bellied brent goose, with nationally important populations of shelduck, ringed plover, golden plover, grey plover; and bar-tailed godwit. Other species include great crested grebe, pintail, teal, mallard, common scoter, oystercatcher, lapwing, knot, dunlin, black-tailed godwit, curlew, redshank, greenshank and turnstone. Passage migrants such as curlew sandpiper, spotted redshank and green sandpiper are regular in small numbers. Little egret also occurs. The inner part of the site is a Statutory Nature Reserve and designated as a wetland of international importance under the Ramsar Convention.
Conservation Objectives	To maintain the conservation condition of mudflats and sandflats not covered by seawater at low tide, *Salicornia* and other annuals colonizing mud and sand, Atlantic salt	To maintain the favourable conservation condition of light-bellied brent goose, shelduck, ringed plover, golden plover, grey plover, bar-tailed godwit, and the wetland habitat against defined attributes and targets[11].

[11] ConservationObjectives.rdl https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004016.pdf

	meadows, and Mediterranean salt meadows against defined attributes and targets[10].	
	Howth Head	
	SAC	**SPA (Howth Head Coast)**
Interest Features	The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive: Vegetated Sea Cliffs Dry Heath A mosaic of heathland vegetation occurs on the slopes above the sea cliffs and in the area of the summit. This is dominated by Western Gorse (Ulex gallii), Heather (Calluna vulgaris), Bell Heather (Erica cinerea) and localised patches of Bracken (Pteridium aquilinum). In more open areas species such as English Stonecrop (Sedum anglicum), Wood Sage (Teucrium scorodonia) and Navelwort (Umbilicus rupestris) occur, along with some areas of bare rock. The heath merges into dry grassland in places, with bent grasses (Agrostis spp.), Red Fescue (Festuca rubra), Cock's-foot (Dactylis glomerata), Yorkshire-fog (Holcus lanatus), Sweet Vernal-grass (Anthoxanthum odoratum), Lady's Bedstraw (Galium verum), Ribwort Plantain (Plantago lanceolata) and Yellow-wort (Blackstonia perfoliata). In the summit area there are a few wet flushes and small bogs, with typical bog species such as Bog Asphodel (Narthecium ossifragum) and sundews (Drosera spp.). Patches of scrub, mostly Hawthorn (Crataegus monogyna), Blackthorn (Prunus spinosa), Willow (Salix spp.) and Downy Birch (Betula pubescens), occur in places.	The site is a Special Protection Area (SPA) under the E.U Birds Directive, of special conservation interest for kittiwake; supporting a nationally important population. A range of seabird species also breed including fulmar, shag, herring gull, great black-backed gull, guillemot, razorbill, and peregrine falcon. Black guillemot are also present.

[10] Baldoyle Bay SAC - Conservation Objectives https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000199.pdf

	The site is also of scientific importance for its seabird colonies, invertebrates and lichens. It also supports populations of at least two legally protected plant species and several other scarce plants.	
Conservation Objectives	To maintain the favourable conservation condition of the Vegetated sea cliffs of the Atlantic and Baltic coasts, and European dry heaths.	To restore the Favourable conservation condition of Kittiwake in Howth Head Coast SPA, against defined attributes and targets[12].
	Ireland's Eye	
	SAC	**SPA**
Interest Features	The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive: Perennial Vegetation of Stony Banks Vegetated Sea Cliffs On Ireland's Eye the drift soils support a plant community of Bracken (Pteridium aquilinum) and various grasses, especially Red Fescue (Festuca rubra), along with Bluebells (Hyacinthoides non-scripta), Common Dog-violet (Viola riviniana) and Navelwort (Umbilicus rupestris). The thinner soils have some interesting species, including Spring Squill (Scilla verna), Knotted Clover (Trifolium striatum) and Field Mouse-ear (Cerastium arvense). Bloody Cranesbill (Geranium sanguineum) has also been recorded from here. The cliff maritime flora includes Rock Sea-spurrey (Spergularia rupicola), Sea Stork'sbill (Erodium maritimum), Rock Samphire (Crithmum martimum), Golden Samphire (Inula crithmoides), Rock Sea-lavender (Limonium binervosum), Meadow Rue (Thalictrum minor), Portland Spurge (Euphorbia portlandica) and Tree-mallow (Lavatera arborea).	The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species during the breeding season: Cormorant, herring gull, kittiwake, guillemot and razorbill, the populations of which are considered of national importance. Additional seabird species are also noted on the designation (fulmar, gannet, lesser black backed and greater black backed gull and puffin, though not in numbers considered of national importance. The regular presence of a breeding pair of peregrine, an Annex I species, is also of note.

[12] Howth Head SPA – Conservation Objectives https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004113.pdf

Conservation Objectives	To maintain the favourable conservation condition of the Vegetated sea cliffs of the Atlantic and Baltic coasts, and Perennial vegetation of stony banks against defined attributes and targets[13].	To restore the Favourable conservation condition of cormorant, herring gull, kittiwake and to maintain the Favourable conservation condition of guillemot and razorbill against defined attributes and targets[14]
	Lambay Island	
	SAC	**SPA**
Interest Features	The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive: Reefs Vegetated sea cliffs Grey seal Common (harbour) seal Harbour porpoise Much of the western third of the island is intensively farmed (mostly pasture), and there are small areas of parkland, deciduous and coniferous woodland, buildings, walled gardens and the harbour. The rest of the island is a mixture of less intensively grazed land, rocky outcrops, patches of Bracken (Pteridium aquilinum) and Bramble (Rubus fruticosus agg.), and cliff slopes with typical maritime vegetation e.g. Thrift (Armeria maritima), Sea Campion (Silene vulgaris subsp. maritima), Rock Sea-spurrey (Spergularia rupicola) and Spring Squill (Scilla verna). Some sheltered gullies have small areas of scrub woodland dominated by Elder (Sambucus nigra). Lambay Island is flanked by extensive areas of reef habitat. Typical species in the intertidal include Ascophyllum nodosum, Fucus spp., Laminaria spp., Dynamena pumila, Actinia equina, Littorina littorea, L. saxatilis, Patella vulgata and Semibalanus	Lambay Island SPA holds an internationally important seabird colony and is one of the top seabird sites in Ireland. Three seabird species have breeding populations of international importance (cormorant, shag and guillemot) and a further six (fulmar, lesser black-backed gull, herring gull, kittiwake, razorbill and puffin) have populations of national importance. The site is also of special conservation interest for holding and assemblage of over 20,000 breeding seabirds. In addition to the seabirds, the island also supports nationally important wintering populations of greylag goose and herring gull. The presence of peregrine, a species that is listed on Annex I of the E.U. Birds Directive, is also of note.

[13] Ireland's Eye SAC – Conservation Objectives https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO002193.pdf
[14] Ireland's Eye SPA – Conservation Objectives https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004117.pdf

	balanoides. In the subtidal reef the following algal species are frequently encountered - Palmaria palmata, Cystoclonium purpureum, Delesseria sanguinea, Membranoptera alata, Hypoglossum hypoglossoides, Chorda filum, Laminaria saccharina and Halidrys siliquosa. Invertebrate species commonly recorded include the typical shallow reef species Version date: 20.03.2024 2 of 2 000204_Rev24.Doc Obelia geniculata, Alcyonium digitatum, Caryophyllia smithii, Pomatoceros triqueter, Helcion pellucidum, Balanus crenatus, Echinus esculentus and Asterias rubens. Lambay supports the principal breeding colony of Grey Seal on the east coast of Ireland, numbering 196-252 seals, across all ages. It also contains regionally significant numbers of Common Seal, of which up to 47 individuals have been counted at the site. Grey Seals and Common Seals occur year-round and the island's intertidal shorelines, coves and caves are used by resting and moulting seals.	
Conservation Objectives	To maintain the Favourable conservation condition of Reefs, Vegetated sea cliffs of the Atlantic and Baltic coasts, harbour porpoise, grey seal, and common (harbour) seal against defined attributes and targets[15]	To restore the Favourable conservation condition of fulmar, cormorant, shag, kittiwake, puffin, greylag goose and herring gull and to maintain Favourable conservation condition of lesser black-backed gull, guillemot and razorbill against defined attributes and targets[16]
	Malahide Estuary	
	SAC	**SPA**
Interest Features	The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive: Tidal mudflats and sandflats *Salicornia* Mud Atlantic Salt Meadows	The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: great crested grebe, light-bellied brent goose, shelduck, pintail, goldeneye, red-breasted merganser, oystercatcher, golden plover, grey plover, knot, dunlin, black-tailed godwit, bar-tailed godwit and redshank. The E.U. Birds Directive pays particular attention to wetlands and, as these form part of this SPA, the site

[15] Lambay Island SAC – Conservation Objectives https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000204.pdf
[16] Lambay Island SPA – conservation Objectives https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004069.pdf

	Mediterranean Salt Meadows Marram Dunes (White Dunes) Fixed Dunes (Grey Dunes) The outer part of the estuary is mostly cut off from the sea by a large sand spit, known as 'the island'. The outer estuary drains almost completely at low tide, exposing sand and mud flats. There is a large bed of Eelgrass (Dwarf Eelgrass, Zostera noltii, and Narrow-leaved Eelgrass, Z. angustifolia) in the north section of the outer estuary, along with Beaked Tasselweed (Ruppia maritima) and extensive mats of green algae (Enteromorpha spp., Ulva lactuca). Common Cord-grass (Spartina anglica) is also widespread in this sheltered part of the estuary. The dune spit has a well-developed outer dune ridge dominated by Marram Grass (Ammophila arenaria). The dry areas of the stabilised dunes have a dense covering of Burnet Rose (Rosa pimpinellifolia), Red Fescue (Festuca rubra) and species such as Yellow-wort (Blackstonia perfoliata), Autumn Gentian (Gentianella amarella), Hound'stongue (Cynoglossum officinale), Carline Thistle (Carlina vulgaris) and Pyramidal Orchid (Anacamptis pyramidalis). Much of the interior of the spit is taken up by a golf course. The inner stony shore has frequent Sea-holly (Eryngium maritimum). Well-developed saltmarshes occur at the tip of the spit. Atlantic salt meadow is the principle type and is characterised by species such as Sea-purslane (Halimoine portulacoides), Sea Aster (Aster tripolium), Thrift (Armeria maritima), Sea Arrowgrass (Triglochin maritima) and Common Saltmarsh-grass (Puccinellia maritima). Elsewhere in the outer estuary, a small area of Mediterranean salt meadow occurs which is characterised by the presence of Sea Rush (Juncus maritimus). Below the salt marshes there are good examples of pioneering glasswort (Salicornia spp.) swards and other annual species, typified by S. dolichostachya and Annual Sea-blite (Suaeda maritima).	and its associated waterbirds are of special conservation interest for Wetland & Waterbirds. This site is of high importance for wintering waterfowl and supports a particularly good diversity of species. It has internationally important populations of light-bellied brent goose and black-tailed godwit. Furthermore, the site supports nationally important populations of an additional 12 species: great crested grebe, shelduck , pintail , goldeneye , red-breasted merganser , oystercatcher , golden plover , grey plover , knot , dunlin , bar-tailed godwit and redshank. The high numbers of diving ducks reflects the lagoon-type nature of the inner estuary, and this is one of the few sites in eastern Ireland where substantial numbers of goldeneye can be found. Malahide Estuary (also known as Broadmeadow Estuary) is a Ramsar Convention site.
Conservation Objectives	To maintain the Favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide, *Salicornia*	To maintain the Favourable conservation condition of great crested grebe, light-bellied brent goose, shelduck, pintail, goldeneye, red-breasted merganser, oystercatcher, golden

	and other annuals colonising mud and sand and Mediterranean Salt Meadows; and To restore the Favourable conservation condition of Atlantic Salt Meadows, shifting dunes along the shoreline with *Ammophilia arenaria* ('white dunes') and Fixed coastal dunes with herbaceous vegetation ('grey dunes') against defined attributes and targets[17]	plover, grey plover, knot, dunlin, black-tailed godwit, bar-tailed godwit and redshank; and To maintain the Favourable conservation condition of the wetland habitat in Malahide Estuary SPA as a resource for the regularly occurring migratory waterbirds that utilise it, against defined attributes and targets[18]
	North Dublin Bay and North Bull Island	
	SAC (North Dublin Bay)	**SPA (North Bull Island)**
Interest Features	The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive: Tidal Mudflats and Sandflats Annual Vegetation on Drift Lines *Salicornia* Mud Atlantic Salt Meadows Mediterranean Salt Meadows Embryonic Shifting Dunes Marram Dunes ('White Dunes') Fixed Dunes ('Grey Dunes') Humid Dune Slacks Petalwort (*Petalophyllum ralfsii*) This site is an excellent example of a coastal site with all the main habitats represented. The site holds good examples of nine habitats that are listed on Annex I of the E.U. Habitats Directive; one of these ('Grey Dunes') is listed with priority status. Several of the wintering bird species have populations of international importance, while some of the invertebrates	The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: light-bellied brent goose, shelduck, teal, pintail, shoveler, oystercatcher, golden plover, grey plover, knot, sanderling, dunlin, black-tailed godwit, bar-tailed godwit, curlew, redshank, turnstone and black-headed gull. The site is also of special conservation interest for holding an assemblage of over 20,000 wintering waterbirds. The E.U. Birds Directive pays particular attention to wetlands and, as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds. The North Bull Island SPA is of international importance for waterfowl on the basis that it regularly supports in excess of 20,000 waterfowl. The site supports internationally important populations of three species, light-bellied brent goose, black-tailed godwit and bar-tailed godwit. The site is one of the most important in the country for light-bellied brent goose. A further 14 species have populations of national importance – shelduck, teal, pintail, shoveler, oystercatcher, grey plover, golden plover, knot, sanderling, dunlin, curlew, redshank, turnstone and black-headed gull. The populations of pintail and knot are of particular note as

[17] Malahide Estuary SAC – Conservation Objectives https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000205.pdf
[18] Malahide Estuary SPA – Conservation Objectives https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004025.pdf

	are of national importance. The site contains a numbers of rare and scarce plants including some which are legally protected.	they comprise 14% and 10% respectively of the all-Ireland population totals. Other species that occur regularly in winter include grey heron, little egret, cormorant, wigeon, goldeneye, red-breasted merganser, ringed plover and greenshank. Gulls are a feature of the site during winter and, along with the nationally important population of black-headed gull, other species that occur include common gull and herring gull .
Conservation Objectives	To maintain the favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide, Atlantic salt meadows, Mediterranean salt meadows, and Petalwort; and To restore the favourable conservation condition of Salicornia and other annuals colonizing mud and sand, Annual vegetation of drift lines, Embryonic shifting dunes, Shifting dunes along the shoreline with *Ammophila arenaria* ('white dunes'), Fixed coastal dunes with herbaceous vegetation ('grey dunes'), and Humid dune slacks against defined attributes and targets[19]	To maintain the favourable conservation condition of light-bellied brent goose, shelduck, teal, pintail, shoveler, oystercatcher, golden plover, grey plover, knot, sanderling, dunlin, black-tailed godwit, bar-tailed godwit, curlew, redshank, turnstone, black-headed gull, and the wetland habitat against define attributes and targets[20]
Current Baseline	**Rockabill to Dalkey Island**	
	SAC	
Interest Features	The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive: Reefs Harbour porpoise Reef habitat is uncommon along the eastern seaboard of Ireland due to prevailing geology and hydrographical conditions. Expansive surveys of the Irish coast have indicated that the greatest resource of this habitat within the Irish Sea is found fringing offshore islands which are concentrated along the Dublin coast. A detailed survey of selected suitable islands has shown areas with typical biodiversity for this habitat both intertidally and subtidally. Species recorded in the intertidal included Fucus spiralis, Fucus serratus, Pelvetia canaliculata, Ascophyllum nodosum, Semibalanus balanoides and Necora puber. Subtidally, a wide	

[19] North Dublin Bay SAC – Conservation Objectives https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000206.pdf
[20] North Bull Island SPA – Conservation Objectives https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004006.pdf

	range of species include Laminaria hyperborea, Flustra folicacea, Alaria esculenta, Halidrys siliquosa, Pomatocereos triqueter, Alcyonium digitatum, Metridium senile, Caryophyllia smithii, Tubularia indivisa, Mytilus edulis, Gibbula umbilcalis, Asterias rubens, and Echinus esculentus. These reefs are subject to strong tidal currents with an abundant supply of suspended matter resulting in good representation of filter feeding fauna such as sponges, anemones and echinoderms. The area selected for designation represents a key habitat for the Annex II species Harbour Porpoise within the Irish Sea. Population survey data show that porpoise occurrence within the site boundary meets suitable reference values for other designated sites in Ireland. The species occurs year-round within the site and comparatively high group sizes have been recorded. Porpoises with young (i.e. calves) are observed at favourable, typical reference values for the species. Casual and effort-related sighting rates from coastal observation stations are significant for the east coast of Ireland and the latter appear to be relatively stable across all seasons. The selected site contains a wide array of habitats believed to be important for Harbour Porpoise including inshore shallow sand and mudbanks and rocky reefs scoured by strong current flow. The site also supports Common Seal and Grey Seal, Version date: 10.02.2014 2 of 2 003000_Rev13.Doc for which terrestrial haul-out sites occur in immediate proximity to the site. Bottlenosed Dolphins has also occasionally been recorded in the area. A number of other marine mammals have been recorded in this area including Minke, Fin and Killer Whales and Risso's and Common Dolphins.	
Conservation Objectives	To maintain the favourable conservation condition of Reefs and harbour porpoise against defined attributes and targets[21]	
Current Baseline	**Rogerstown Estuary**	
	SAC	**SPA**
Interest Features	The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive: Estuaries Tidal Mudflats and Sandflats *Salicornia* Mud Atlantic Salt Meadows Mediterranean Salt Meadows Marram Dunes (White Dunes) Fixed Dunes (Grey Dunes) This site is a good example of an estuarine system, with all typical habitats represented, including several listed on Annex I	The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: greylag goose, light-bellied brent goose, shelduck, shoveler, oystercatcher, ringed plover, grey plover, knot, dunlin, black-tailed godwit and redshank. The E.U. Birds Directive pays particular attention to wetlands and, as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds. Rogerstown Estuary is an important winter waterfowl site and supports a population of light-bellied Brent Goose of international importance. A further 10 species have populations of national importance as follows: greylag goose, shelduck, shoveler , oystercatcher, ringed plover, grey plover, knot, dunlin, black-

[21] Rockabill to Dalkey Island SAC – Conservation Objectives https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO003000.pdf

	of the E.U. Habitats Directive. Rogerstown is an internationally important waterfowl site and has been a breeding site for little terns. The presence within the site of three rare plant species adds to its importance.	tailed godwit and redshank. The greylag geese are part of a larger population which spends most of the winter on Lambay Island. Other species which occur regularly include wigeon, teal, mallard, red-breasted merganser, golden plover, lapwing, sanderling, curlew and turnstone. Large numbers of gulls including herring gull, great black-backed gull and black-headed gull are attracted to the area, partly due to the presence of an adjacent local authority landfill site. Little egret, a species which has recently colonised Ireland, also occurs at this site. Rogerstown Estuary SPA is an important link in the chain of estuaries on the east coast. The presence of Little Egret and Golden Plover is of note as these species are listed on Annex I of the E.U. Birds Directive. Rogerstown Estuary is also a Ramsar Convention site, and part of Rogerstown Estuary SPA is designated as a Statutory Nature Reserve and a Wildfowl Sanctuary.
Conservation Objectives	To maintain the favourable conservation condition of Estuaries, Mudflats and sandflats not covered by seawater at low tide and *Salicornia* and other annuals colonising mud and sand, and Mediterranean salt meadows (*Juncetalia maritime*); and To restore the favourable conservation condition of Atlantic salt meadows *Glauco-Puccinellietalia maritimae,* Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) and Fixed coastal dunes with herbaceous vegetation (grey dunes) against defined attributes and targets[22]	To maintain the favourable conservation condition of greylag goose, light-bellied brent goose, shelduck, shoveler, oystercatcher, ringed plover, grey plover, knot, dunlin, black-tailed godwit, redshank and the favourable conservation condition of wetland habitat in Rogerstown Estuary SPA against defined attributes and targets[23].
Current Baseline	**Rye Water Valley/Carton**	
	SAC	
Interest Features	The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive: Petrifying Springs	

[22] Rogerstown Estuary SAC – Conservation Objectives https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000208.pdf
[23] Rogerstown Estuary SPA – Conservation Objectives https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004015.pdf

	Narrow-mouthed whorl snail (*Vertigo angustior*) Desmoulin's whorl snail (*Vertigo moulinsiana*) The conservation importance of the site lies in the presence of several rare and threatened plant and animal species, and the presence of petrifying springs, a habitat type listed on Annex I of the E.U. Habitats Directive. The woods found on Carton Estate and their birdlife are of additional interest.	
Conservation Objectives	To maintain the favourable conservation condition of Desmoulin's whorl snail in the Rye Water Valley/Carton SAC and to restore the favourable conservation condition of the Petrifying springs with tufa formation and Narrow-mouthed whorl snail against defined attributes and targets[24]	
Current Baseline	**South Dublin Bay and River Tolka Estuary**	
	SAC (South Dublin Bay)	**SPA**
Interest Features	The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive: Tidal Mudflats and Sandflats Annual vegetation of drift lines Salicornia and other annuals colonising mud and sand Embryonic shifting dunes This site is a fine example of a coastal system, with extensive sand and mudflats, and incipient dune formations. South Dublin Bay is also an internationally important bird site.	The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: light-bellied brent goose, oystercatcher, ringed plover, grey plover, knot, sanderling, dunlin, bar-tailed godwit, redshank, black-headed gull, roseate tern, common tern and arctic tern. The E.U. Birds Directive pays particular attention to wetlands, and as these form part of the SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds. The site is an important site for wintering waterfowl, being an integral part of the internationally important Dublin Bay complex. Although birds regularly commute between the south bay and the north bay, recent studies have shown that certain populations which occur in the south bay spend most of their time there. An internationally important population of light-bellied brent goose occurs regularly and newly arrived birds in the autumn feed on the eelgrass bed at Merrion. At the time of designation the site supported nationally important numbers of a further nine species: oystercatcher, ringed plover, grey plover, knot, sanderling, dunlin,

[24] Rye Water Valley / Carton SAC – Conservation Objectives https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO001398.pdf

		bar-tailed godwit, redshank and black-headed gull. Other species occurring in smaller numbers include great crested grebe, curlew and turnstone. Little egret, a species which has recently colonised Ireland, also occurs at this site. South Dublin Bay is a significant site for wintering gulls, with a nationally important population of black-headed gull, but also common gull and herring gull. Mediterranean Gull is also recorded from here, occurring through much of the year, but especially in late winter/spring and again in late summer into winter. This site is selected for designation for its autumn tern populations: roseate tern, common tern and arctic tern. Sandymount Strand/Tolka Estuary is also a Ramsar Convention site.
Conservation Objectives	To maintain the favourable conservation condition of Mudflats and Sandflats not covered by seawater at low tide.	To maintain the favourable conservation condition of light-bellied brent goose, oystercatcher, ringed plover, knot, sanderling, dunlin, bar-tailed godwit, redshank, black-headed gull, roseate tern, common tern, arctic tern and the wetland habitat against defined attributes and targets[25]. Grey plover is proposed for removal from the list of special conservation interests for South Dublin Bay and River Tolka Estuary SPA. As a result, a site specific conservation objective has not been set for this species.

[25] South Dublin Bay and River Tolka Estuary SPA – Conservation Objectives https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004024.pdf

4 Assessment of Likely Effects (Step 3)

4.1 Overview

As revealed in Sections 1 and 2, the purpose of the NAO amendments is to provide an updated policy objective for managing the effects of aircraft noise emissions on the surrounding communities and environment at Dublin Airport. It is intended to ensure that any growth at the airport occurs in the most sustainable manner possible with respect to aircraft noise. It is also intended to guide the decisions that are needed to manage the aircraft noise aspects of future aircraft operations at and around the airport, including the measures proposed to address the identified noise problem at Dublin Airport. The NAO amendments will not prevent the planning authority or any other Competent Authority from imposing any conditions necessary to ensure the other impacts of future development have no adverse effect on the integrity of any European site or from refusing permission where necessary to avoid such impacts. The statutory scheme therefore requires and empowers other competent authorities to address those impacts.

A Screening Matrix is presented in **Table 4-1** based on the guidance provided in "Assessment of plans and projects in relation to Natura 2000 sites - Methodological guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC".

Table 4-1: Screening Matrix

Description of the Plan	An overview of the NAO amendments, including background and context are provided in Section 2.2 of this document.
Identification of Natura 2000 sites	Natura 2000 sites identified within the Zone of Influence (ZoI) of the NAO amendments are provided in Section 3.2 of this document.
Is the plan directly connected with, or necessary to the management of the Natura 2000 site(s)?	The Plan is not directly connected with, or necessary to, the conservation management objectives of the above listed Natura 2000 sites in Section 4.2 and therefore further consideration of likely significant effects is required.
What are the individual elements of the plan (either alone or in combination with other plans or projects) likely to give rise to impacts on the Natura 2000 site?	Noise is a principal source of disturbance for Qualifying Interest (QI) and Special Conservation Interest (SCI) features of Natura 2000 sites. The aim of the NAO amendments are to reduce the number of people exposed to noise. Therefore, there is no pathway for potential likely significant effects as the plan does not propose any measures which could increase or negatively affect existing noise levels. The potential noise impacts that arise from future development works will be assessed in their own right through Planning and Licensing processes, including through Environmental Impact Assessments, Strategic Environmental Assessments, Appropriate Assessments and application of relevant Guidance relating to noise.
What are the likely effects on the Natura 2000 sites in view of the specific conservation objectives set out for the designating features?	None – the NAO amendments do not provide a specific framework for development; it provides a strategy to reduce the amount of people exposed to noise, therefore there is no pathway for potential likely significant effects on Natura 2000 sites in view of their conservation objectives.

Describe how the project or plan (alone or in-combination) is likely to affect the Natura 2000 site(s).	No likely significant effects envisaged. The effects of the NAO amendments are considered to be beneficial in terms of the noise situation at the Airport, however no pathway for likely significant effects are identified.
Explain why these effects are not considered to be significant.	The proposed NAO amendments will not change the number of aircraft overflying the Natura 2000 sites. However there will be a reduction in perceptible noise from aircraft within these locations, as a result of technological advancements, which is considered beneficial. As there is no pathway for adverse effect, the effect cannot be considered significant. Any reduction in noise emissions will be indirectly beneficial for species associated with Natura 2000 sites albeit not significantly, as it is well documented that noise can have detrimental effects on a species ability to reproduce (timing, frequency and hatching success) and communicate[26]. It is acknowledged that some species may be habituated to current noise levels and it is considered that their function within the Natura 2000 sites would only be improved by reduced noise levels.
Are there other projects or plans that together with the project or plan being assessed could affect the site?	The following other Plans have been considered: • National Aviation Policy for Ireland (Department of Transport, 2015) • Ireland's Action Plan for Aviation Emissions Reduction (DTTAS, 2019) • Review of Future Capacity Needs at Ireland's State airports (Department of Transport, 2018) • Policy Statement on Runway Development at Dublin Airport (Department of Transport, 2018) • National Policy Statement on Airport Charges Regulation (Department of Transport, 2019) • National Planning Framework – Project Ireland 2040 First Revision (Government of Ireland, 2025) • National Development Plan 2018-2027 (Government of Ireland, 2018) • Regional Spatial and Economic Strategy for the Eastern and Midland Region 2019-2031 (Eastern & Midland Regional Assembly, 2019) • Transport Strategy for the Greater Dublin Area 2016-2035 (National Transport Authority, 2016) • South Fingal Transport Study (FCC, 2019) • Fingal Development Plan 2023-2029 (FCC, 2023) • Meath County Development Plan 2021-2027 (Meath County Council, 2021) • Dublin Airport Local Area Plan (FCC, 2020) • Dublin Airport Central Masterplan (FCC, 2016) • Dublin Airport Capital Investment Programme 2020+ (Dublin Airport, 2019) • Dublin Airport Noise Action Plan 2024-2028 (FCC, 2024) The NAO amendments present a strategy to reduce the amount of people exposed to noise. There are no additional sources for effects to Natura 2000 sites in combination with other projects or plans.

[26] Masayuki., S *et al* (2020) Sensory pollutants alter bird phenology and fitness across a continent. Nature.

5 Screening Statement with Conclusions (Step 4)

The NAO amendments are not directly connected with or necessary to the management of a Natura 2000 site, therefore there will be no likely significant effects.

The NAO amendments establish a framework for identifying a noise problem at Dublin Airport.

The potential noise impact of development is overseen through the Planning and Licensing processes, encompassing Environmental Impact Assessments, Strategic Environmental Assessments, Appropriate Assessments and adherence to pertinent guidance on noise. The primary trigger for Stage two AA would be if the NAO amendments were likely to significantly affect a Natura 2000 site. However, the NAO amendments are not identified as having any direct or indirect impacts on Natura 2000 sites.

Stage one: Screening has concluded that the NAO amendments are not predicted, either alone or in-combination with other plans or projects, to have likely significant effects upon the Natura 2000 sites identified in Section 4.2.

Therefore, in alignment with the Methodological guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC, it is concluded that the NAO amendments will generate no potential for likely significant effects. Consequently, a Stage two Appropriate Assessment is not required.

Should there be changes to the NAO amendments, which may affect the conclusions presented herein, then a further screening of the potential for likely significant effects upon Natura 2000 sites will be required.

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