An tÚdarás Inniúil um Thorann Aerárthaí
Aircraft Noise Competent Authority

Noise CONSULTANTS

Noise Abatement Objective and Regulatory Decision relating to Aircraft Noise Management at Dublin Airport:

Appropriate Assessment – Screening Report

August 2021






Experts in noise and vibration assessment and management

Working with:

acustica
Trax
Logika CONSULTANTS
RUPERT TAYLOR Acoustics · Noise · Vibration
altitude aviation advisory
CEPA economics matters

Document Control

Client	Aircraft Noise Competent Authority	**Principal Contact**	Angela Dullaghan

Job Number	LJ1010

Report Prepared By:	Helen Davies, Declan Murphy, Sophie McCabe

Document Status and Review Schedule

Report No.	Date	Status	Reviewed by
LJ1010 ANCA-R09-AA	17 August 2021	Final	Toby Gibbs

Noise Consultants Ltd operates a formal Quality Management System, which is certified to ISO 9001:2015 and a formal Environmental Management System, which is certified to ISO 14001:2015. NCL are an Associate Member of the Association of Noise Consultants (ANC).

When printed by Noise Consultants Ltd, this report will be on Evolve Office, 100% Recycled paper.

Noise Consultants Ltd
6 Bankside, Crosfield Street, WA1 1UD Tel: 01925 937 195
119 Marylebone Road, London, NW1 5PU Tel: 0203 873 4780
23 Coldharbour Road, Bristol, BS6 7JT Tel: 0117 974 1086
contact@noiseconsultants.co.uk

Registered Office: 23 Coldharbour Road, Bristol, BS6 7JT
Companies House Registration No: 10853764

Contents

1 Introduction

Background

Aircraft Noise Regulation

1.1 Regulation (EU) 598/2014 (hereinafter referred to as 'Regulation 598') requires Ireland and other 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 Competent Authority 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').

1.2 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 detailed guidance in ICAO Doc 9829, Guidance on the Balanced Approach to Aircraft Noise Management. 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;
- Operating Restrictions.

1.3 In addition to those elements specified in ICAO, Regulation 598 also requires ANCA, in the context of the Balanced Approach, to define 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. 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.

1.4 The 2019 Act gives further effect to Regulation 598 in Ireland. It provides for ANCA to 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) "any noise problem that would arise from the carrying out of the development as proposed" (Section 34B) or (2) "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').

How Regulation 598 will apply to the daa planning application

1.5 daa have made, on 18/12/20, a planning application (F20A/0668) (hereinafter referred to as the 'planning application') to FCC which proposes to amend Condition 3(d) and replace Condition 5 of Planning Permission Reg. Ref. No. F04A/1755 (ABP Ref. No. PL06F.217429) as amended by Fingal County Council F19A/0023 (ABP Ref. No. ABP-305289-19) (hereinafter referred to as the 'Dublin Airport North Runway Planning Permission') that was granted in 2007 to provide for new operating procedures. Specifically, these Conditions restrict the way the Airport can be operated during the night-time (2300-0700) after the construction of the new North Runway, including particularly by not allowing use of the North Runway, and by restricting the number of air traffic movements (ATMs), that are allowed during this period.

1.6 Section 34C of the Planning and Development Act 2000, which was introduced by the 2019 Act, deals with planning applications that seek only to modify noise-related operating restrictions. Such operating restrictions are regulated by EU legislation on aircraft noise (i.e. Regulation 598). In seeking to modify such operating restrictions, daa can seek to have noise mitigation measures imposed in place of or in addition to operating restrictions. Section 34C requires the planning authority to refer such applications to ANCA, which must apply the Balanced Approach to the data and proposals made by daa.

1.7 Pursuant to Section 34C, the planning authority has referred the planning application to ANCA and has consulted with ANCA in relation to any noise problem that could arise from the planning application. ANCA has explored this through its report 'Ascertaining a Noise Problem at Dublin Airport', concluding that "the proposed development may significantly influence the evolving noise climate at Dublin Airport to the extent that presents a noise problem that requires detailed assessment." The following reasons were given:

- "The Application proposes an increase in aircraft activity at night, when referenced against the situation that would otherwise pertain, which may result in higher levels of human exposure to aircraft noise."
- "The Application proposes a situation where some people will experience elevated levels of night-time noise exposure for the first time which may be considered harmful to human health."
- "The EIAR accompanying the Application indicates that the proposed Relevant Action will give rise to significant adverse night-time noise effects. This indicates that the noise effects of the Proposed Development are a material consideration. Mitigation in the form of a night-time noise insulation scheme is proposed by the Application. The provision of such mitigation is an indicator that the Proposed Development may give rise to a Noise Problem."

1.8 A noise problem arising from the planning application has consequently been declared by ANCA, through delegated authority from the Chief Executive of FCC (CE Order: ANCA/002/2021).

1.9 ANCA can require daa to carry out such assessments and give to it such information or plans arising from such assessments, or to give to it such other information or plans as it may reasonably require for the purposes of making the RD. ANCA must also give notice to the planning authority and daa of the noise mitigation measures and operating restrictions it intends to provide for in the RD before adopting the RD. The planning authority and daa may then make comments and observations and make counterproposals. ANCA must take those into account and apply the Balanced Approach to the counterproposals.

1.10 ANCA must then publish a draft regulatory decision ('DRD') and an underlying report for public consultation. The underlying report must include a summary of the data examined, the NAO, the noise mitigation measures considered, an evaluation of their cost-effectiveness, a summary of how ANCA applied the Balanced Approach, the alternative measures that have been considered, the noise mitigation measures and operating restrictions actually proposed, the reasons for those measures, any relevant technical information in that regard, and a non-technical summary of the foregoing. ANCA must take account of all submissions and observations made in that public consultation and revise the draft RD and underlying report if necessary, before making the final RD.

1.11 The RD can impose the operating restrictions and noise mitigations measures sought by daa, or it can impose other operating restrictions and noise mitigation measures. There is no requirement for the RD to mirror exactly the proposals made in the planning application. If ANCA believe that the RD needs to, for example, consider alternative options or cover a wider breadth of operating procedures to that proposed within the planning application they have the

ability to do so. Equally, if ANCA believe it to be appropriate, they can extend the RD to consider more than simply the proposals made in the application, for example to be extended so that a wider range of noise related measures and/or forecasts are considered.

1.12 When ANCA makes the final RD post-consultation, the planning authority will then consider the planning merits of the application, including Environmental Impact Assessment (EIA) and Appropriate Assessment if required. The planning authority must then incorporate the RD in any planning permission granted and, if necessary, revoke, replace or amend the conditions of any previous planning permission to make it consistent with the RD.

1.13 In this way, Section 34C gives effect to the provisions of Regulation 598 which applies to operating restrictions, such as Conditions 3(d) and 5 of the Dublin Airport Northern Runway Planning Permission, that were pre-existing when the Regulation was introduced. Article 14 of Regulation 598 provides that those operating restrictions shall remain in force until a CA, like ANCA, decides to revise them in accordance with the Regulation.

1.14 The planning permission incorporating the RD may be appealed to An Bord Pleanála by the parties normally entitled to make such appeals, as well as by any party who made a submission or observation in the public consultation on the RD.

1.15 If the RD introduces a new operating restriction, it must be notified to the European Commission and other Member States. The European Commission may review whether the Balanced Approach was properly applied in imposing the operating restriction.

Need for Appropriate Assessment

1.16 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. 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.

1.17 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.'

1.18 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). 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.

Purpose of this Report

1.19 The purpose of this report is to assist ANCA in determining whether the NAO and RD require Appropriate Assessment (AA). The specific purpose of AA is to ensure that proposed plans will not have adverse effects on the integrity of SPAs or SACs (either alone or in combination with other plans or projects). AA is required if it cannot be excluded, on the basis of objective scientific information following screening, that the plan, individually or in combination with other plans or projects, 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 applies, is completed through a process known as Screening.

1.20 It is ANCA, in their role as CA, who are required to make a screening direction on whether AA applies. This direction is made by undertaking a screening exercise whereby information, including an AA 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 and RD, individually or in combination with other plans or projects, will have a significant effect on any European site .

Approach to Screening

1.21 Screening for AA should follow a systematic process, as set out in the guidance document, Appropriate Assessment of Plans and Projects in Ireland (Environment, Heritage and Local Government, 2010) (hereinafter referred to as the 'AA Guidance'):

- 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;
- Step 4: Screening statement with conclusions.

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

1.23 In that regard, ANCA will prepare a Natura Impact Statement (NIS). The NIS will comprise a scientific examination of the NAO and RD and the relevant European Site or European Sites, to identify and characterise any possible implications of the NAO and RD 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.

1.24 Where an AA is required, ANCA will publish the NIS and any other information relevant to the AA at the same time as the DRD, the statutory report underlying the DRD and the Environmental Report (see "Related Environmental Assessments" below) for the full period of 14 weeks provided for public consultation on the DRD pursuant to Section 34C of the 2000 Act.

Related Environmental Assessments

1.25 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.

1.26 ANCA, in its role as CA, was required to make a Screening Determination on whether SEA applies. On 15 April 2021, having regard information provided in the SEA Screening Report, and submissions and observations provided by the prescribed Environmental Authorities, ANCA determined that there is potential for likely significant environmental effects to occur as a result of implementing the NAO and RD. The next stage of the SEA process, SEA Scoping, is therefore 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.

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

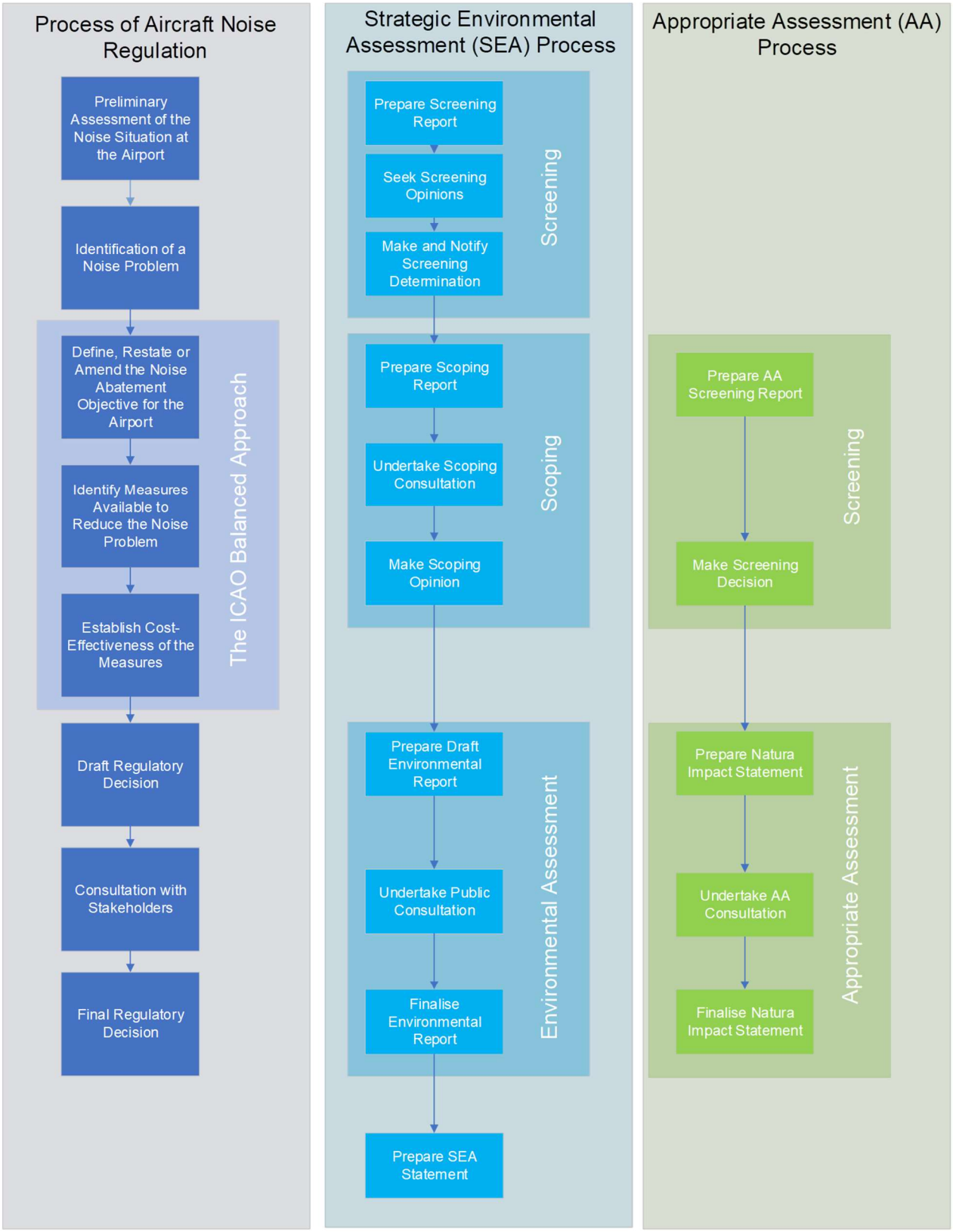

Figure 1.1: The concurrent processes of Aircraft Noise Regulation, SEA and AA

1.28 Separately to the SEA and AA potentially being carried out for the NAO and RD, the planning application submitted by daa has also undergone both EIA and AA Screening. The planning authority must have regard to the EIA Report and AA Screening Report submitted by daa when deciding whether permission should be granted for the development. ANCA may take account of the EIA Report and AA Screening Report submitted by daa in the drafting of the NAO and RD, however, these were prepared for a different statutory purpose of the planning application, rather than the processes undertaken by ANCA in setting the NAO or making the RD. Accordingly, those reports will contain information that is not relevant to ANCA's process and may lack information that is relevant to ANCA's processes.

Consultant Team

1.29 This Report has been prepared by Logika Consultants Ltd. ('Logika'), part of the Noise Consultants Ltd, Consultant Team engaged to provide expert support to ANCA in setting the NAO and making the RD. Specifically Logika are responsible for providing SEA and AA input to the NAO and RD process.

2 Description of the Plan (Step 1)

Site Location

2.1 As stated in the National Aviation Policy, Dublin Airport has the potential to become an established secondary hub of European significance, with routes to over 200 different destinations, served by nearly 50 airlines. In 2019 a total of 32.9 million passengers used the Airport and its 241,000 ATMs. Dublin Airport is currently served by one main runway 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.

2.2 Dublin Airport is located on the east coast of Ireland, see Figure 2.1, in Collinstown, in County Dublin in the administrative area of FCC. 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.

2.3 The Airport is accessed by the M1 motorway, which provides access from Dublin itself 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 to the rest of Ireland.

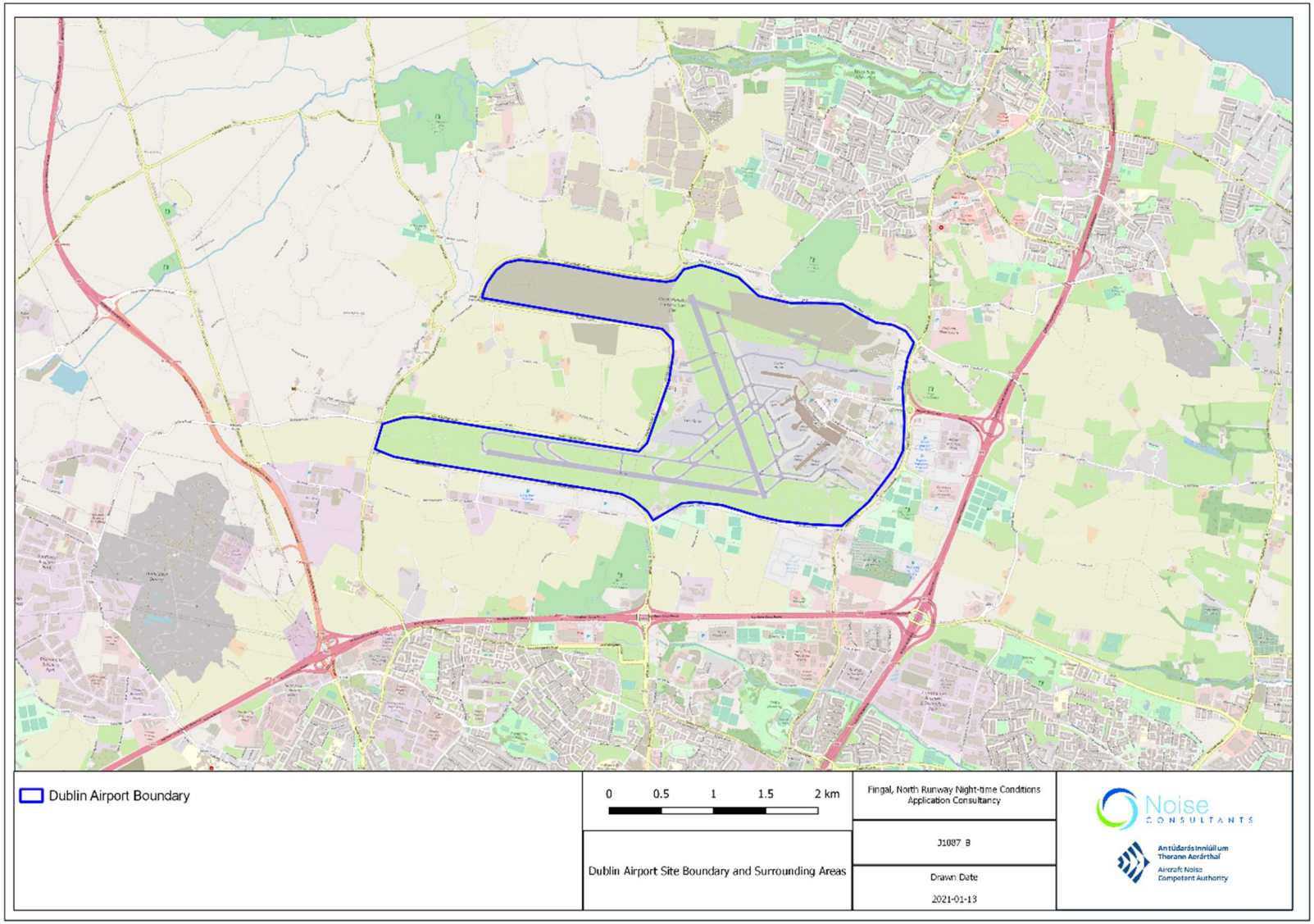

Figure 2.1: Dublin Airport site location

Plan Description

2.4 As stated in the previous chapter, where ANCA identifies a noise problem at Dublin Airport, an NAO must be defined in order to apply the Balanced Approach, including identification of the measures available to reduce the noise impact, and the cost-effectiveness of these measures. The noise problem that will be triggered by the development proposed in the planning application must then be assessed in the context of the NAO, culminating in ANCA making an RD. The 'Plan' addressed through this AA Screening Report therefore has two components: the NAO (focused on noise outcomes) and the RD (focused on noise mitigation measures and if necessary, operating restrictions which seek to secure the noise outcomes set by the NAO). ANCA is preparing the NAO and RD as two separate outputs of an interlinked process. The alternative approaches for delivering the NAO and RD are currently being developed by ANCA.

2.5 It is important to note that the NAO and RD will not prevent the planning authority or any other competent authority from imposing any conditions necessary to ensure the impacts of other 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.

2.6 Also important is that national, regional and local policy direction for the future of Dublin Airport could increase passenger numbers to c.40 mppa in 2030, and c.54 mppa from 2050, through further terminal development and infrastructure although such expansion will be subject to permission of future planning applications (or similar consenting processes). The Airport may grow beyond the 32 mppa passenger cap being introduced from 2022 onwards[1] regardless of the planning application, NAO or RD being implemented. As a result, any effect of the NAO and RD has to consider that the Airport is set to grow in the future. It is the effect of implementation of the NAO and RD that needs to be assessed, this being the result of those changes that could be made by daa to ensure that any growth is sustainable, and limits and reduces the impact of noise, rather than assesses the impact of growth per se.

The Noise Abatement Objective

2.7 ANCA's powers and obligations to define an NAO arise from Regulation 598 and, while they are exercised in parallel with the planning process in this instance, the NAO is not constrained by the terms of the planning application. As stated in para. 1.4 of this report, ANCA could define a narrow NAO that responds only to the planning application made by daa. However, ANCA has chosen to develop an NAO which is broader in its remit. The result of this latter

[1] The 32 mppa passenger cap is required by Condition 3 of daa's 'Terminal 2' planning application F06A/1248 and An Bord Pleanála 06F.220670, and Condition 2 of daa's 'Extension to Terminal 1' planning application F06A/1843 and An Bord Pleanála 06F.223469.

approach is that the NAO itself becomes an overarching policy or plan which presents aspirations for the sustainable development of Dublin Airport. The NAO will sit above both this and future planning applications, designed to complement other published policies which present scenarios for the sustainable development of Dublin Airport to a 40 mppa operation in 2030 and a c.55 mppa operation from 2050, through further terminal development and infrastructure.

2.8 In this situation, the NAO seeks to manage noise outcomes including as a result of the granting of planning applications for future growth, be that an increase in ATMs/passenger numbers and/or any associated infrastructure works, without any alteration in the NAO. However, any such growth could only occur if these outcomes are met and would additionally be subject to planning permission and, where applicable, a formal AA process. In that case the NAO may set a framework for future planning permissions, but any permission must be refused if it would adversely affect the integrity of any European site. Consequently, as stated above in para 2.5, only impacts resulting from the management of aircraft noise will be assessed through the AA, as the NAO and RD 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 refusing permission where necessary to avoid such impacts. The statutory scheme therefore requires and empowers other competent authorities to address those impacts.

2.9 The purpose of an NAO is to set the level of ambition for a noise management regime that secures both environmental improvement and a sustainable transport network. In addition, an NAO should aim to unite multiple stakeholder interests around a common purpose. Different interest groups are however likely to have their own principal expectations for the NAO. These are that it should:

- Use clear accessible language;
- Provide a level of certainty by setting realistic outcomes and/or expectations of change;
- Ensure the desired outcomes are measurable, and the metrics used are evidence based and credible with stakeholders;
- Provide opportunities for sustainable growth and protect the health of those affected; and
- Recognise the balance between the needs of different stakeholder groups.

2.10 Though still in the early stages of drafting the NAO, ANCA has determined that the key components of the NAO are likely to be those set out and described in Table 2.1 below.

Table 2.1: Key components of the emerging NAO

Element	Description
Part 1: Policy Objective	Having identified a noise problem this statement should detail the ambition against a stated baseline i.e. the resolution. This could be a visionary or focused ambition. If the former, its objective requires an interim timebound "priority or target statement" to provide the necessary focus for identifying measures, the noise action planning process[2] etc.
Part 2: Explanation	Explanatory text which should clarify that overall impacts which will be within the envelope, set by the situation, in the baseline period, but not necessarily for individuals. It should identify the impacts and effects being considered e.g. the number of people who are highly sleep disturbed or highly annoyed. It should clarify the general expectation and timeframe that effects will be limited, reduced, removed or improved.
Part 3: Measuring Performance	This should set out the mechanism and assumptions used to calculate outcomes of interest. For example, the specific noise contours and metrics used to determine particular health effects. It could extend / define measures that link to other certain measures i.e. average aircraft quota counts. It could even define the population base and other parameters which define how the measurement should take place etc.
Part 4: Expected Outcomes	This should detail the specific outcomes of interest and the expected change over the lifetime of the objective (or if visionary the interim target or goal). This could be the first target, but it could also be a trajectory defining progressive limits.
Part 5: Progress Reporting	This should set out how data will be independently verified and reported to interested stakeholders. In the case of Ireland there is a clear role for ANCA and FCC in their Competent Authority roles for noise management at Dublin Airport[3].
Part 6: Review	This could describe how, when and/or under what circumstances the objective may be reviewed.

2.11 The precise wording of the NAO has not yet been chosen, and hence all the measures which could be potentially included within the NAO are subject to Screening for AA. Consistent with

[2] Noise action planning is required in relation to environmental noise issues and effects arising from road traffic, railways, major industrial sites and aircraft departing from and arriving at airports, through the Environmental Noise Regulations 2006, S.I. No. 140, which transposes the Environmental Noise Directive 2002/49/EC.

[3] ANCA is the Competent Authority for applying the Balanced Approach, whilst FCC is the Competent Authority for preparing Noise Action Plans.

the precautionary principle, the assessment of likely effects undertaken in Chapter 4 therefore considers the widest possible breadth of any NAO that could be made.

The (Draft) Regulatory Decision

2.12 The Dublin Airport North Runway Planning Permission is a ten-year permission to allow development of a new North Runway at Dublin Airport by daa. Extension of the duration of the permission was granted in 2017 (F04A/1755 E1). This project is currently under construction with, according to the daa application, a scheduled opening date of 2022.

2.13 The planning permission associated with the second runway was subject to 31 planning Conditions. The recent planning application made by daa proposes to have two of these replaced by different operating procedures. The two Conditions in question are:

- Condition 3(d) which prohibits the use of North Runway for landings and take-offs between the hours of 23.00 and 07.00.
- Condition 5 which states that, on completion of construction of the new runway, the average number of night-time aircraft movements at the airport shall not exceed 65 per night (between 23.00 and 07.00) when measured over the 92-day modelling period.

2.14 daa seek, through a Section 34C application, to take a 'Relevant Action[4]' to revoke and replace these operating restrictions. The proposals would allow for scheduled North Runway operations between the hours of 0600-0659 and 2300-2330 to occur, and for the restriction to an average of 65 night-aircraft movements at the airport to be lifted. In its place is proposed a set of noise-related operating restrictions, specifically in the form of a Noise Quota Count and mitigation measures, namely a noise insulation retrofit scheme for affected dwellings.

2.15 The daa application will not require the development of new Airport or other associated infrastructure. It will though, change the distribution of arriving and departing ATMs across a 24-hour day, having the effect of allowing increased operations during the night-time period.

2.16 In addition, according to the daa application (Table 1-1, page 1-9 of the EIA Report, which is repeated in Tables 2.2 and 2.3 below), changing the night-time restrictions will also allow the Airport to operate at its consented maximum, this being to service 32 mppa which is the number of passengers at which the Airport is capped to operate at (as required by Condition 3 of daa's 'Terminal 2' planning application F06A/1248 and An Bord Pleanála 06F.220670, and Condition 2 of daa's 'Extension to Terminal 1' planning application F06A/1843 and An Bord Pleanála 06F.223469). Without these restrictions being changed, daa indicate that in 2025, the Airport will service no more than 30.9 mppa. Further information has and continues

[4] Under Section 34C a relevant action refers to: the revoking of an operating restriction; the amendment of an operating restriction; or the replacement of an operating restriction with another

to be provided by daa on forecasted numbers of flights post-2025 and the results of this will be considered in any later stages of AA required.

Table 2.2: Annual passengers (mppa)

Year	Unconstrained (with conditions 3(d) and 5 amended)	Constrained (baseline situation)	Difference
2018	31.5	31.5	0.0
2019	32.9	32.9	0.0
2020	8.2	8.2	0.0
2021	20.7	20.7	0.0
2022	29.6	28.7	-0.9
2023	30.4	29.3	-1.1
2024	31.2	30.1	-1.1
2025	32.0	30.9	-1.1

Table 2.3: Annual ATMs (000s)

Year	Unconstrained (with conditions 3(d) and 5 amended)	Constrained (baseline situation)	Difference
2018	233	233	0.0
2019	241	241	0.0
2020			
2021			
2022	229	223	-5.8
2023	233	226	-7.1
2024	237	229	-7.1
2025	241	233	-7.8

2.17 ANCA has exclusive competence to impose, revoke, replace, or amend the terms of, an operating restriction.

2.18 In responding to the planning application, ANCA will need to have regard for the cost-effectiveness of measures aimed at addressing the noise problem resulting from the daa's proposals, whilst keeping overall noise at the Airport within the expected outcomes of the NAO. Through application of the Balanced Approach, ANCA will therefore consider a number of alternative approaches for addressing noise by way of an RD in the context of the NAO. Currently under consideration to form part of the RD are the following:

- Night-time runway operating preferences;
- Restrictions on runway access either through aircraft movement related limits, noise quota or contour restrictions;
- A noise insulation scheme;
- Mandates in relation to monitoring and reporting, for example, the Airport's noise performance; and
- Restating any other constraints (which may have underpinned, for example, conditions in existing planning permissions) such as the passenger cap.

2.19 daa's planning application is still in the process of being assessed by ANCA and accordingly no decision has been taken in relation to the contents of any RD which may be proposed by ANCA. At this early stage, all the measures which could be potentially included within any RD are therefore subject to Screening for AA. Consistent with the precautionary principle, the assessment of likely effects undertaken in Chapter 4 therefore considers the widest possible breadth of any RD that could be made.

3 Identification of relevant Natura 2000 sites (Step 2)

Methodology

3.1 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), a distance of 15km is currently recommended in the case of plans. 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.

3.2 Though the precise content of the NAO and RD is currently unknown, 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.

3.3 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 report recommended that (with respect to waterbirds on mudflats), construction noise levels should be restricted to below 70 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,

[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.

- there is unlikely to be any response by waterbirds to any noises below 55 dB(A).

3.4 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 also very frequently. This means also that noise is not sudden but rather increases gradually as aircraft get closer, and then similarly tapers off gradually as aircraft get more distant. Furthermore, Dublin Airport operates 24 hours a day and for 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.

3.5 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 after reaching a height of 3000 ft on departure. During arrivals, and as the aircraft descends through 3,000ft these commercial planes would be expected to produce noise levels less than 65 dB LAmax. 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 5.54 km. 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 13.1 km. 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.

3.6 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.

3.7 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*.

3.8 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)[7] 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.

3.9 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.

3.10 In addition, a 15km ZoI is also considered appropriate for arrivals. A review of flight paths as provided by WebTrak 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.

3.11 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.

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

Identified Natura 2000 sites

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

[7] https://cpb-us-e1.wpmucdn.com/sites.ucsc.edu/dist/d/804/files/2019/06/pub_086_1995.pdf

- 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.

3.14 These sites are identified in Figure 3.1.

3.15 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

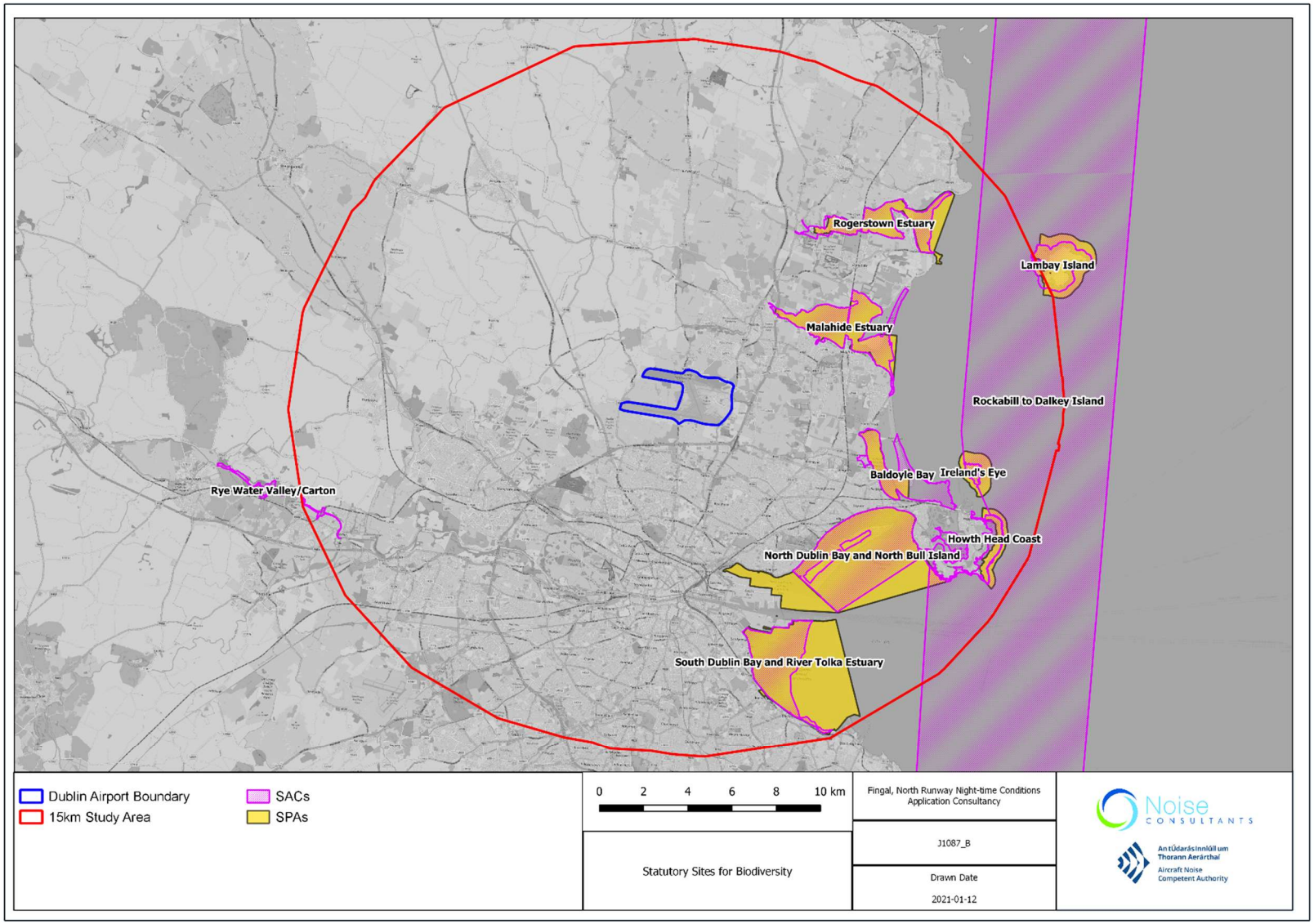

Figure 3.1: Natura 2000 sites within the AA study area

Nature 2000 sites

Current Baseline	Baldoyle Bay	
	SAC	SPA
Interest Features	Intertidal flats (sands/muds) exposed at low tide. Common Cord-grass in the inner estuary. Narrow-leaved Eelgrass and Dwarf Eelgrass also present. During summer, sandflats in sheltered areas are covered by green algae. Lugworm dominate the sandy flats. 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 crustaceans. Glassworts, Sea-purslane, Sea Plantain and Sea Rush are present in the existing saltmarsh. Dune hills are dominated by Marram, though Lymegrass is also found. Brackish marsh present along the Mayne River. Knotted Hedgeparsley has been recorded, along with Brackish Water-crowfoot.	An important site for wintering waterfowl, providing good quality feeding areas and roost sites. An internationally important population of Light-bellied Brent Goose, also supporting 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. Migrant birds of Curlew Sandpiper, Spotted Redshank and Green Sandpiper are regular in small numbers. Little Egret colonisation 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*	To maintain the favourable conservation condition of Light-bellied Brent Goose, Shelduck, Ringed Plover,

	and other annuals colonizing mud and sand, Atlantic salt meadows, and Mediterranean salt meadows.	Golden Plover, Grey Plover, Bar-tailed Godwit, and the wetland habitat.
Condition	Good diversity in sediment types, quality variable but generally good. Salt marshes are of moderate quality. The following quantum of habitat and conservation status is present: • Mudflats and sandflats not covered by seawater at low tide (409.24ha, good) • *Salicornia* and other annuals colonizing mud and sand (0.38ha, average or reduced conservation) • Spartina swards (10.78ha, not noted) • Atlantic salt meadows (12.51ha, average or reduced conservation) • Mediterranean salt meadows (2.64ha, average or reduced conservation)	The quality of habitats present is variable but generally good. The following conservation status is noted: • Excellent (Brent Goose and Grey Plover) • Good (Northern Pintail, Teal, Mallard, Turnstone, Sanderling, Dunlin, Knot, Ringed Plover, Oystercatcher, Bar-tailed Godwit, Black-tailed Godwit, Red-breasted Merganser, Curlew, Golden Plover, Great Crested Grebe, Shelduck, Greenshank, Redshank and Lapwing)
Vulnerabilities	The surrounding area is densely populated. The main threats to the site include visitor pressure, disturbance to wildfowl and dumping. In particular, the dumping of spoil onto the foreshore presents a threat to the value of the site. The high threat categories comprise:	The high threat categories comprise: • Urban pressure and human habitation • Human induced changes in hydraulic conditions

	• Outdoor sports and leisure activities, recreational activities • Sport and leisure structures • Urbanised areas, human habitation • invasive non-native species	• Sport and leisure structures • Invasive non-native species • Fertilisation

Current Baseline	Howth Head	
	SAC	SPA (Howth Head Coast)
Interest Features	Heathland vegetation comprises Western Gorse, Heather, Bell Heather and localised patches of Bracken. In more open areas species such as English Stonecrop, Wood Sage and Navelwort occur. The heath merges into dry grassland in places, with Bent Grasses, Red Fescue, Cock's-foot, Yorkshire-fog, Sweet Vernal-grass, Lady's, Ribwort Plantain and Yellow-wort. In the summit area there are a few wet flushes and small bogs, with Bog Asphodel and Sundews. Patches of scrub, mostly Hawthorn, Blackthorn, Willow and Downy Birch occur in places. Golden-samphire, Sea Wormwood, Grass-leaved Orache, Frosted Orache, Sea Spleenwort, Bloody Crane's-bill, Spring Squill, Sea Stork's-bill and three uncommon clover species (Knotted Clover, Bird's-foot Clover and Western Clover) are present. The Earlscliffe area is of national importance for lichens and supports black, yellow and grey lichen zonation. Green-winged Orchid, Bird's-foot, Hairy Violet, Rough Poppy, Pennyroyal, Heath Cudweed and Betony (Red Data Book species) are present.	The site is of special conservation interest for Kittiwake. A range of seabird species also breed including Fulmar, Shag, Herring Gull, Great Black-backed Gull, Guillemot and Razorbill, and Peregrine Falcon. Black Guillemot are also present. The site has important amenity and educational value due to its proximity to Dublin City.

	Curved Hard-grass (not previously recognised as occurring in Ireland), was found in 1979. A number of rare invertebrates have been recorded. The fly *Phaonia exoleta* occurs in the woods and has not been seen anywhere else in Ireland, while the ground beetle *Trechus rubens* is found on storm beaches on the eastern cliffs. A hoverfly, known from only a few Irish locations, *Sphaerophoria batava*, is present in the heathland habitat.	
Conservation Objectives	To maintain the favourable conservation condition of the Vegetated sea cliffs of the Atlantic and Baltic coasts, and European dry heaths.	To maintain or restore the favourable conservation condition of Kittiwake.
Condition	The flora is very diverse with several Red Data Book species and species of very restricted Irish distribution. The dry heath and sea cliff vegetation is extensive and well developed. The following quantum of habitat and conservation status is noted: • Vegetated sea cliffs of the Atlantic and Baltic coasts (74.97ha, excellent) • European dry heaths (131.20ha, excellent)	The following conservation status is noted: • Excellent (Kittiwake) • Good (Peregrine Falcon, Fulmar, Guillemot, Razorbill)

Vulnerabilities	The main land use within the area is recreation, mostly walking and horse-riding, and this has led to some erosion within the site. Fires pose a danger to the site. There may also be a threat in some areas from further housing development. The high threat categories comprise: • Outdoor sports and leisure activities, recreational activities • Mining and quarrying • Invasive non-native species • Fire and fire suppression	The high threat categories comprise: • Outdoor sports and leisure activities, recreational activities

Current Baseline	Ireland's Eye	
	SAC	SPA
Interest Features	Drift soils support Bracken and various grasses, especially Red Fescue, along with Bluebells, Common Dog-violet and Navelwort. The thinner soils support Spring Squill, Knotted Clover and Field Mouse-ear. Bloody Cranesbill has also been recorded. The cliff maritime flora includes Rock Sea-spurrey, Sea Stork's-bill, Rock Samphire, Golden Samphire,	Important populations of breeding seabirds. Species recorded include Fulmar, Gannet, Cormorant, Shag, Lesser Black-backed Gull, Great Black-backed Gull, Herring Gull, Kittiwake, Guillemot, Razorbill, Puffin Shelduck, Oystercatcher and Ringed Plover. Black Guillemot may also breed.

	Rock Sea-lavender, Meadow Rue, Portland Spurge and Tree-mallow. A small area of shingle vegetation occurs above the sandy beach at Carrigeen Bay. Species such as Curled Dock, Silverweed and Spear-leaved Orache occur. The rare Sea-kale, and Henbane (Irish Red Data Book species) are also present. Owing to its easy access and proximity to Dublin it has great educational and amenity value.	The Gannet colony is one of six in the country and one of only two sites on the east coast. Several pairs each of breed. The island is also a traditional site for Peregrine Falcon. In winter small numbers of Greylag Goose and Pale-bellied Brent Goose graze on the island and it is used as a roost site by gulls and some waders.
Conservation Objectives	To maintain the favourable conservation condition of Perennial vegetation of stony banks, and Vegetated sea cliffs of the Atlantic and Baltic coasts.	To maintain or restore the favourable conservation condition of Cormorant, Herring Gull, Kittiwake, Guillemot and Razorbill.
Condition	This uninhabited marine island has a well-developed maritime flora, with two habitats (sea cliffs and shingle). The following quantum of habitat and conservation status is noted: • Perennial vegetation of stony banks (0.13ha, excellent) • Vegetated sea cliffs of the Atlantic and Baltic coasts (8.37ha, excellent)	The following conservation status is noted: • Excellent (Razorbill, Cormorant, Kittiwake, Guillemot) • Good (Peregrine Falcon, Fulmar) • Average or reduced (Puffin, Gannet)

Vulnerabilities	The high threat categories comprise: • Fire and fire suppression • Outdoor sports and leisure activities, recreational activities • Sport and leisure structures • Other human intrusions and disturbances • Grazing	Owing to its proximity to the mainland, the island is popular with day-trippers and has educational value. As a result, the high threat categories comprise: • Outdoor sports and leisure activities, and recreational activities

Current Baseline	Lambay Island	
	SAC	SPA
Interest Features	Extensive heath formerly existed but this has been eliminated at the expense of improved pasture. Vegetated cliff is the most notable habitat – these are quite representative of eastern cliffs with diversity in height, slope and aspect. The cliffs hold internationally important populations of seabirds. This site provides year-round haul-out habitat for the Annex II species Grey Seal and Common (Harbour) Seal, (both species for which the site is designated), and includes regionally significant breeding and moulting sites. The foreshore surrounding the island holds examples of Reef habitat with typical biodiversity for the east coast. Qualifying features of the site additionally include Reefs and Vegetated Sea Cliffs.	The site is of special conservation interest for the following species: Fulmar, Cormorant, Shag, Greylag Goose, Lesser Black-backed Gull, Herring Gull, Kittiwake, Guillemot, Razorbill and Puffin. The site is also of special conservation interest for holding and assemblage of over 20,000 breeding seabirds, and is one of the top seabird sites in Ireland. The presence of Peregrine, a species that is listed on Annex I of the E.U. Birds Directive, is also of note.
Conservation Objectives	To maintain the favourable conservation condition of Reefs, Vegetated sea cliffs of the Atlantic and Baltic coasts, Grey Seal, and Common (Harbour) Seal.	To maintain or restore the favourable conservation condition of Fulmar, Cormorant, Shag, Greylag Goose, Lesser Black-backed Gull, Herring Gull, Kittiwake, Guillemot, Razorbill and Puffin.

Condition	The following quantum of habitat and conservation status is noted: • Reefs (58.0ha, good) • Vegetated sea cliffs (20.3ha, good) For species, the following conservation status is noted: • Excellent (Grey Seal)	The following conservation status is noted: • Excellent (Razorbill, Greylag Goose, Fulmar, Lesser Black-backed Gull, Kittiwake, Guillemot) • Good (Puffin, Cormorant)
Vulnerabilities	The high threat categories comprise: • Grazing	There are no high threat categories of impacts on the site.

Current Baseline	Malahide Estuary	
	SAC	SPA
Interest Features	This site is a fine example of an estuarine system with all the main habitats represented. 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, for which the site is designated. The inner estuary does not drain at low tide apart from the extreme inner part. Here, patches of saltmarsh and salt meadows occur (also qualifying features of the site). The site includes a fine area of rocky shore south-east of Malahide and extending towards Portmarnock.	This site is of high importance for wintering waterfowl and supports a particularly good diversity of species. The lagoonal nature of the inner estuary is of particular value as it increases the diversity of birds which occur. The site is 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.
Conservation Objectives	To maintain the favourable conservation condition of Tidal Mudflats and Sandflats, Salicornia Mud, Atlantic Salt Meadows, Mediterranean Salt Meadows, Marram (White) Dunes, and Fixed (Grey) Dunes	To maintain the favourable conservation condition of 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.

		There is an additional objective 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.
Condition	The following quantum of habitat and conservation status is noted: • Tidal Mudflats and Sandflats (310.7ha, good) • Salicornia Mud (1.92ha, good) • Atlantic Salt Meadows (25.1ha, good) • Mediterranean Salt Meadows (0.63ha, average or reduced) • Marram (White) Dunes (1.80ha, average or reduced) • Fixed (Grey) Dunes (21.4ha, good)	The following conservation status is noted: • Excellent (Black-tailed Godwit, Dunlin, Knot, Grey Plover, Oystercatcher, Red-breasted Merganser, Goldeneye, Pintail, Shelduck, Brent Goose) • Good (Redshank, Bar-tailed Godwit, Golden Plover, Great Crested Grebe)
Vulnerabilities	The inner part of the estuary is heavily used for water sports. A section of the outer estuary has recently been infilled for a marina and housing development. The high threat categories comprise:	The high threat categories comprise: • Roads, paths and railroads • Urbanised areas, human habitation

	• Outdoor sports and leisure activities, recreational activities • Roads, paths and railroads • Human induced changes in hydraulic conditions	• Human induced changes in hydraulic conditions • Outdoor sports and leisure activities, recreational activities

Current Baseline	North Dublin Bay and North Bull Island	
	SAC (North Dublin Bay)	SPA (North Bull Island)
Interest Features	Fixed dune grassland to pioneer communities on foredunes occur, which support Marram Grass, Lyme-grass and Sand Couch. Behind the first dune, Wild Pansy, Kidney Vetch, Common Bird's-foot-trefoil, Common Restharrow, Yellow-rattle, Pyramidal Orchid and Bee Orchid are present. About 1km from the tip of the island, a large dune slack with a rich flora occurs, usually referred to as the 'Alder Marsh' because of the presence of Alder trees. The water table is very near the surface and only slightly brackish. Saltmarsh Rush, Meadowsweet and Devil's-bit Scabious are present. Orchids include Marsh Helleborine, Twayblade, Autumn Lady's-tresses and Marsh Orchids. Saltmarsh is present on the landward side. On the lower marsh, Glasswort, Common Saltmarsh-grass, Annual Sea-blite and Greater Sea-spurrey are the main species. In the middle marsh Sea Plantain, Sea Aster, Sea Arrowgrass and Thrift appear. Above the normal high tide, species such as Common Scurvygrass and Sea Milkwort are found, while on	The site is of special conservation interest for Light-bellied Brent Goose (being one of the most important sites for this species), Shelduck, Teal, Pintail (14% of Ireland's population), Shoveler, Oystercatcher, Golden Plover, Grey Plover, Knot (10% of Ireland's population), 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. Grey Heron, Little Egret, Cormorant, Wigeon, Goldeneye, Red-breasted Merganser, Ringed Plover and Greenshank are also present. Gulls are present during winter (Black-headed Gull, Common Gull and Herring Gull). While some of the birds also frequent South Dublin Bay and the River Tolka

	the upper marsh, the rushes *Juncus maritimus* and *J. gerardi* are dominant. The habitat 'annual vegetation of drift lines' is found in places, with Sea Rocket, Oraches and Prickly Saltwort located. Two intertidal lagoons are present. The north lagoon is dominated by *Salicornia dolichostachya*. Beaked Tasselweed and Narrow-leaved Eelgrass occur. Dwarf Eelgrass also occurs in Sutton Creek. Common Cordgrass occurs but is controlled by management. Green algal mats cover large areas during summer. Sediments have a rich macrofauna, with high densities of Lugworms. Mussels occur, along with bivalves such as *Cerastoderma edule*, *Macoma balthica* and *Scrobicularia plana*. The small gastropod *Hydrobia ulvae* occurs in high densities, and crustaceans *Corophium volutator* and *Carcinus maenas* are common. On the seaward side Lesser Centaury, Red Hemp-nettle and Meadow Saxifrage (rare species) are present, alongside Wild Clary/Sage and Spring Vetch (Red Data Book listed). A rare liverwort, *Petalophyllum ralfsii* is present.	Estuary for feeding and/or roosting purposes, the majority remain within the site for much of the winter. There are regular passage waders, especially Ruff, Curlew Sandpiper and Spotted Redshank. The island is a regular wintering site for Short-eared Owl. The site formerly had an important colony of Little Tern but breeding has not occurred in recent years. Breeding birds include Skylark, Meadow Pipit, Stonechat, Mallard and Reed Bunting, Ringed Plover breed, and sometimes Shelduck.

	Irish Hare are resident. At least seven important invertebrate species are present (from the Orders Diptera, Hymenoptera and Hemiptera).	
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. 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.	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.
Condition	This site is an excellent example of a coastal site with all the main habitats represented. The following quantum of habitat and conservation status is present: • Mudflats and sandflats not covered by seawater at low tide (577.73ha, good) • Annual vegetation of drift lines (0.11ha, good) • *Salicornia* and other annuals colonizing mud and sand (29.10, excellent)	One of the top sites in Ireland for wintering waterfowl, and a Ramsar Convention site. The following conservation status is noted: • Excellent (Pintail, Shoveler, Teal, Turnstone, Light-Bellied Brent Goose, Sanderling, Dunlin, Knot, Oystercatcher, Black-headed Gull, Bar-tailed Godwit, Black-tailed Godwit, Curlew, Grey Plover, Shelduck, Redshank, Wigeon, Mallard, Ringed Plover, Common Gull, Red-breasted Merganser, Greenshank)

	• Spartina swards (73.75ha, not stated) • Atlantic salt meadows (82.27ha, good) • Mediterranean salt meadows (7.98ha, good) • Embryonic shifting dunes (6.07ha, excellent) • Shifting white dunes along the shoreline (3.18ha, good) • Fixed grey coastal dunes (104.8ha, excellent) • Humid dune slacks (12.11ha, excellent)	• Good (Golden Plover, Short-eared Owl, Curlew Sandpiper, Little Stint, Ruff, Spotted Redshank)
Vulnerabilities	The North Bull Island is the main recreational beach in Co. Dublin and is used throughout the year. Two golf courses are present. The site is used regularly for educational purposes. The high threat categories comprise: • Industrial or commercial areas • Urbanised areas, human habitation • Interspecific faunal relations • Outdoor sports and leisure activities, recreational activities • Discharges	The high threat categories comprise: • Outdoor sports and leisure activities and recreational activities • Roads, paths and railroads

Current Baseline	Rockabill to Dalkey Island
	SAC
Interest Features	Reef habitat is uncommon along the eastern seaboard of Ireland. Species recorded in the intertidal include Fucus spiralis, Fucus serratus, Pelvetia canaliculata, Ascophyllum nodosum, Semibalanus balanoides and Necora puber. Subtidally, 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 were present. 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. Harbour Porpoise occur year-round. The site also supports Common Seal and Grey Seal. Bottlenosed Dolphins have also occasionally been recorded. Minke, Fin, and Killer Whales, and Risso's and Common Dolphins are present.
Conservation Objectives	To maintain the favourable conservation condition of Reefs and Harbour Porpoise.
Condition	The following quantum of habitat and conservation status is present: • Reefs (181.84ha, good)

Vulnerabilities	The high threat categories comprise: • Shipping lanes, ports, marine constructions • Excess energy • Discharges • Fishing and harvesting aquatic resources

Current Baseline	Rogerstown Estuary	
	SAC	SPA
Interest Features	The site is a typical eastern estuary with fairly extensive intertidal sand and mud flats. The intertidal flats of the outer estuary are mainly of sands, with soft muds in the north-west sector and along the southern shore. The salt marshes which fringe the estuary are of moderate importance and quality and include both Atlantic and Mediterranean salt meadows, as well as Salicornia flats. The sand dune element at site is limited in its distribution and quality. Two plant species which are legally protected under the Flora (Protection) Order, 1999, occur within the site: Hairy Violet *Viola hirta* occurs on the sand spit and Meadow Barley *Hordeum secalinum* occurs in the saline fields of the inner estuary. Another rare species, Green-winged Orchid *Orchis morio*, occurs in the sandy areas of the outer estuary.	Rogerstown Estuary SPA is an important winter waterfowl site, a regular site for a range of autumn passage migrants, and an important link in the chain of estuaries on the east coast. The site is 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.
Conservation Objectives	To maintain the favourable conservation condition of Estuaries; Mudflats and sandflats not covered by seawater at low tide; *Salicornia* and other annuals colonising mud and sand; Atlantic salt meadows *Glauco-Puccinellietalia*	To maintain the favourable conservation condition of Greylag Goose, Light-bellied Brent Goose, Shelduck,

	maritimae; Mediterranean salt meadows *Juncetalia maritime;* Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes); Fixed coastal dunes with herbaceous vegetation (grey dunes)	Shoveler, Oystercatcher, Ringed Plover, Grey Plover, Knot, Dunlin, Black-tailed Godwit and Redshank.
Condition	The following quantum of habitat and conservation status is noted: • 1130 Estuaries (268.3ha, average or reduced) • 1140 Mudflats and sandflats not covered by seawater at low tide (370.5ha, average or reduced) • 1310 Salicornia and other annuals colonising mud and sand (0.90ha, average or reduced) • 1330 Atlantic salt meadows (37.2ha, average or reduced) • 1410 Mediterranean salt meadows (2.18ha, average or reduced) • 2120 Shifting (white) dunes (2.56ha, average or reduced) • 2130 Fixed (grey) coastal dunes (8.30ha, average or reduced)	The following conservation status is noted: • Excellent (Light-bellied Brent Goose, Shelduck, Shoveler, Oystercatcher, Grey Plover, Knot, Dunlin, Black-tailed Godwit, Redshank) • Good (Greylag Goose, Ringed Plover)

Vulnerabilities	The quality of the site is variable owing to pollution from a number of sources, especially a large landfill site which was built on the mudflats. The high threat categories comprise: • Human induced changes in hydraulic conditions • Invasive non-native species • Use of biocides, hormones and chemicals • Abiotic (slow) natural processes	The high threat categories comprise: • Discharges • Invasive non-native species • Fertilisation • Human induced changes in hydraulic conditions

Current Baseline	Rye Water Valley/Carton
	SAC
Interest Features	Around a series of lakes Reed Sweet-grass, Yellow Iris, Reed Canary-grass, Bulrush, Water Forget-me-not, Marsh-marigold and starworts are present. The river has been dredged, removing much of the reed fringe. A small clump of willows, with Dogwood, Alder, Ash and Elder exists. The ground flora includes Golden Saxifrage, Meadowsweet, Common Valerian, Wavy Bitter-cress and Bittersweet. The woods on Carton Estate are both deciduous and coniferous. Conifers, including some Yew are dominant, with Beech, Oak, Sycamore, Ash and Hazel also occurring. The ground flora is dominated by Ivy, with Hedge Woundwort, Wood Speedwell, Woodruff, Wood Avens, Common Dog-violet, Wild Angelica, Ramsons, Ground-ivy and Ivy Broomrape also found. Hairy St. John's-wort and Green Figwort are present, and there is an old record for Hairy Violet (Red Data Book listed, the latter not recoded recently). The marsh, mineral spring (considered rare) and seepage area found at Louisa Bridge support Stoneworts, Marsh Arrowgrass, Purple Moor-grass, Sedges, Common Butterwort, Marsh Lousewort, Grass-of-Parnassus and Cuckooflower. Blue Fleabane (Red Data Book listed) is found growing on a wall at Louisa Bridge. The Rye Water is a spawning ground for Trout and Salmon, and the rare Whiteclawed Crayfish has been recorded. The rare Narrowmouthed Whorl Snail and Desmoulin's Whorl Snail occur in marsh vegetation. The scarce dragonfly, *Orthetrum coerulescens*, has also been recorded. Within the woods, Blackcap, Woodcock and Long-eared Owl have been recorded. Little Grebe, Coot, Moorhen, Tufted Duck, Teal and Kingfisher occur on and around the lake.

Conservation Objectives	To maintain or restore the favourable conservation condition the Petrifying springs with tufa formation, Narrow-mouthed Whorl Snail and Desmoulin's Whorl Snail.
Condition	The following quantum of habitat and conservation status is present: • Petrifying springs with tufa formation (0.72ha, good) • Kingfisher (excellent) • Narrow-mouthed Whorl Snail (excellent) • Desmoulin's Whorl Snail (good)
Vulnerabilities	There are no high threat categories relating to the site. The medium threat categories comprise: • Urbanised areas, human habitation • Human induced changes in hydraulic conditions • Forest related activities

Current Baseline	South Dublin Bay and River Tolka Estuary	
	SAC (South Dublin Bay)	SPA
Interest Features	The bed of Dwarf Eelgrass is the largest on the east coast. Green algae are in low density. Fucoid algae occur on the rocky shore. Small, sandy beaches with incipient dune formation are present. Drift line vegetation occurs. Species present are Sea Rocket, Frosted Orache, Spear-leaved Orache, Prickly Saltwort and Fat Hen. Also occurring is Sea Sandwort, Sea Beet and Annual Sea-blite. A small area of pioneer saltmarsh now occurs in the lee of an embryonic sand dune. Pioneer stands of glassworts also occur. Lugworm, Cockles and Annelids, and other Bivalves are frequent. The small gastropod *Hydrobia ulvae* occurs.	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 are present. Other species occurring in smaller numbers include Great Crested Grebe, Curlew, Little Egret and Turnstone. An important site for wintering waterfowl. Birds regularly commute between the south bay and north bay, however recent studies have shown that certain populations which occur in the south bay spend most of their time there. A significant site for wintering gulls, including Black-headed Gull, Common Gull, Herring Gull and Mediterranean Gull. Common Tern (being one of their most important sites) and Arctic Tern breed in Dublin Docks, on a man-made

		mooring structure. South Dublin Bay is an important staging/passage site in autumn for Tern species.
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.
Condition	The following quantum of habitat and conservation status is present: • Mudflats and Sandflats not covered by seawater at low tide (719.95ha, good) • Annual vegetation of drift lines (0.01ha, good) • Salicornia and other annuals colonizing mud and sand (0.01ha, good) • Embryonic shifting dunes (0.03ha, good)	The following conservation status is noted: • Excellent (Brent Goose, Sanderling, Mediterranean Gull, Roseate Tern, Common Tern, Arctic Tern) • Good (Turnstone, Dunlin, Knot, Ringed Plover, Oystercatcher, Common Gull, Black-headed Gull, Bar-tailed Godwit, Red-breasted Merganser, Curlew, Cormorant, Grey Plover, Great Crested Grebe, Redshank)
Vulnerabilities	At low tide, the inner parts of the south bay are used for amenity purposes. Bait digging is a regular activity on the sandy flats. At high tide, some areas have windsurfing and jet-skiing. The high threat categories comprise:	The high threat categories comprise: • Industrial or commercial areas • Outdoor sports and leisure activities, recreational activities

	• Industrial or commercial areas • Human induced changes in hydraulic conditions • Outdoor sports and leisure activities, recreational activities • Biocenotic evolution, succession • Urbanised areas, human habitation	• Urbanised areas, human habitation • Human induced changes in hydraulic conditions • Discharges

4 Assessment of likely effects (Step 3)

4.1 As revealed in Chapters 1 and 2, the purpose of the NAO and RD is to introduce measures to address the noise problem identified at Dublin Airport, whilst ANCA can only introduce, modify or revoke operating restrictions and noise mitigation measures. In introducing these measures, the NAO and RD may set the framework for future development consent of projects at the Airport, thus facilitating growth. However, such growth has already been set out in numerous other plans, and has already been the subject of environmental assessment - in particular through SEA and Screening for AA of the Dublin Airport Local Action Plan (FCC, 2020). Any proposals for growth at the airport (e.g. relating to a new terminal) will be assessed in more detail at the planning application stage (e.g. through EIA and project level AA). The NAO and RD 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.

4.2 As stated in Chapter 2, ANCA is in the early stages of drafting the NAO and RD, and the preferred alternative mechanisms for delivering these have not yet been chosen. The assessment of likely effects therefore considers the widest possible breadth of any NAO and RD that could be made, from the changes to night-time operating preferences, as proposed through the daa's planning application and associated RD, to the potential for additional ATMs and passenger numbers that could be accommodated once the NAO is in place. Given these uncertainties, it is not possible at this stage to screen out any of the Natura 2000 sites identified in Step 2 and all sites will be screened in.

Considerations for Stage 2 AA

4.3 It is considered that the following possible effects, which could arise as a result of noise management measures required to meet the requirements of the NAO and the RD, on Natura 2000 sites may require consideration at the Appropriate Assessment stage:

- The effects of increases in the level and frequency of noise, and visual disturbance events caused by increases in aircraft overflying of Natura 2000 sites and potentially, also by this overflying occurring at differing times of the day and night.
- The effects of changes to air quality, particularly increases in the concentrations of NOx and levels of nitrogen deposition, caused by increased numbers of aircraft overflying Natura 2000 sites.

- The effects of emergency fuel dumping from overflying aircraft affecting Natura 2000 sites directly, or indirectly through surface water pathways.

4.4 In reaching this conclusion, consideration has been paid to the Source – Pathway – Receptor concept with, in all cases, the source of the potential effect being aircraft using Dublin Airport and the receptors being the Natura 2000 sites themselves. The potential pathways are, in all cases the routes used by the aircraft, and also, in the case of emergency fuel dumping, watercourses that connect to Natura 2000 sites.

Other relevant projects or plans

4.5 The following consider and inform, at a strategic level, and at a high level, future development, including passenger numbers and aircraft movement growth at Dublin Airport:

- National Aviation Policy for Ireland (Department of Transport, Tourism and Sport (DTTAS), 2015)
- Ireland's Action Plan for Aviation Emissions Reduction (DTTAS, 2019)
- Review of Future Capacity Needs at Ireland's State airports (DTTAS, 2018)
- Policy Statement on Runway Development at Dublin Airport (DTTAS, 2018)
- National Policy Statement on Airport Charges Regulation (DTTAS, 2017)
- National Planning Framework – Project Ireland 2040 (Government of Ireland, 2018)
- 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 2017-2023 (FCC, 2017, updated 2019)
- Meath County Development Plan 2013-2019 (Meath County Council, 2013)
- 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 2019-2023 (FCC, 2018)

4.6 Although, as mentioned earlier, a number of these Plans outline policies that promote growth or changes in operations at the Airport, the approach to assessment of the NAO and RD has considered this and will include them within the future baseline.

4.7 However, it cannot be ruled out at this stage that there may be projects occurring, or likely to occur, that could have effects that act in combination with proposals made in the NAO and RD. For this reason, in combination with the NAO and RD, the potential for other relevant projects to cause environmental effects will be considered at the Appropriate Assessment stage.

5 Screening statement with conclusions (Step 4)

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

5.2 As already noted in 1.17 and 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.'

5.3 Given that there is uncertainty around what exactly the NAO and RD will contain, the authors of this Report are of the view that it cannot be determined at this stage that there is no potential for significant effects on the Natura 2000 sites. Thus, the Plan must proceed to Stage 2 (AA).

5.4 In reaching this conclusion, consideration has been paid to the Source – Pathway – Receptor concept whereby the effect of the source, in this case the aircraft, has the potential to affect the receptors, the Natura 2000 sites, via pathways in particular these being the aircraft routes but also watercourses that connect to Natura 2000 sites.

5.5 Therefore, the scope of the assessment will include consideration of the potential changes in overflying of Natura 2000 sites that could occur as a result of development of the NAO and RD, coming forward in a way which complements published policies and which presents scenarios for the sustainable development of Dublin Airport to a 40 mppa operation in 2030 and a c.55 mppa operation from 2050. Such changes might include:

- Changes in the number of overflights;
- Changes in the aircraft fleet mix operating from the Airport, for example to include more larger aircraft; and
- Changes in the flight paths used, or at least changes in the frequency of use of flightpaths that already exist.

6 Next Steps

6.1 Given through this screening exercise it has been determined that AA likely applies, the second stage of the AA process, as prescribed in the AA Guidance, should be undertaken to ensure the protection of the designated European Sites identified in this Report:

- Appropriate Assessment (Stage 2): this is the detailed assessment itself, as will be documented in the Natura Impact Statement (further information on specifically what this stage entails is provided in Appendix 1), which will identify potential effects of the plan on Natura 2000 sites and explain how these effects will be avoided through mitigation. Following the completion of the AA, the competent authority must produce an AA Conclusion Statement. If the competent authority considers that residual adverse effects remain, then the plan may not proceed without further assessment of alternative solutions, this being Stage 3 of the AA process.

7 Appendices

Appendix 1: Appropriate Assessment (Stage 2)

Natura Impact Statement

To ensure the protection of the designated European Sites identified in this Report and to align with AA Guidance, a Natura Impact Statement (NIS) will be produced. The NIS will provide relevant information to establish whether the NAO and RD will affect the integrity of any Natura 2000 site(s). It will also include information on alternative options to the NAO and RD that have been considered including detailing why they have not been adopted.

If it cannot be conclusively determined that the NAO and RD will not have an adverse effect on the integrity of a site, the NIS will detail the IROPI that are being relied upon to indicate that the plan should proceed notwithstanding that it may adversely affect the integrity of a European site. In that instance it will also need to detail the mitigation and if relevant, compensatory measures that are being proposed.

AA Consultation

The NIS will be issued in draft, to the prescribed Minister , as part of the consultation exercise on the NAO and DRD. Notice of its publication will also be made in a national newspaper, and it will be placed on the ANCA website and a hard copy made available in ANCA's offices where copies can be made on payment of a reasonable fee. In addition, daa will be provided with a copy. Comments received during consultation on the draft will be considered when finalising the NIS. Any changes to the NAO or DRD themselves will also need to be considered and this may require the NIS to be updated.

Methodology for establishing significant effects

A competent authority can only rule out an adverse effect on the integrity of a European site where there is no reasonable scientific doubt as to the absence of such effects. The integrity of the site requires the lasting preservation of the constitutive characteristics of the site concerned that are connected to the presence of a natural habitat type whose preservation was the objective justifying the designation of that site.

On a precautionary basis, an assessment, informed by published research and guidance, and professional judgement, will be made to ascertain whether the last preservation of the constitutive characteristics of the Natura 2000 sites concerned could potentially be compromised by implementation of the RD and NAO specifically with regard:

- The effects of increases in the level and frequency of noise, and visual disturbance events caused by increases in aircraft overflying of Natura 200 sites and also by this overflying occurring at differing times of the day and night.

- The effects of changes to air quality, particularly increases in the concentrations of NOx and levels of nitrogen deposition, caused by increased numbers of aircraft overflying Natura 2000 sites.

AA Determination

The results of the Assessment, including having paid consideration to the consultation responses made, will be documented in the final AA Determination that will be issued alongside the final NAO and RD.