

Project: **A11267 DUBLIN AIRPORT**

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Subject: **ANCA RFI Responses**

## **1.0 INTRODUCTION**

Further to the initial RFI response to ANCA given in Chapter 02: Aviation Noise Competent Authority RFIs sent in June 2021 the following updated and additional responses are proposed. The revision of the EIAR air and ground noise chapters is ongoing. Where noted below, more details on specific RFIs will be provided in the revised EIAR.

## **2.0 RFI RESPONSE UPDATES**

Updates to some of the previous RFI responses are given below.

### **2.1 RFI 86**

Updated response:

*The updated EIAR will include discussion of the use of English noise and planning policy. In summary there are some areas where additional information to that contained in Irish policy is considered beneficial, in particular in relation to the significance of particular noise levels and criteria for particular types of buildings. For this use is made of elements from English policy documents.*

*It is also noted, as evidenced by the approach taken for the North Runway application itself that historically the approach in Ireland has considered noise criteria and metrics from the UK.*

### **2.2 RFI 87**

Updated response:

*The preparation of the updated EIAR will include a check that the latest requirements of legislation are applied. Regarding the reference to the Environmental Noise Regulations (S.I. No. 140/2006), this occurred in Table 13A-4 of Appendix A which reproduced entries from an ICCAN report on aviation noise metrics and so not revised.*

### 2.3 RFI 94

Revised response:

The EPA NG4 Guidance Note (January 2016 Update)<sup>1</sup> advises under *Purpose and Objectives of this Guidance Note (NG4)* that:

*This Guidance Document is designed to provide acoustic guidelines to the operators of activities which are listed in the First Schedule of the Environmental Protection Agency Act and the Third and Fourth Schedules of the Waste Management Act. Such activities are subject to an IPPC or Waste Licence.*

Reviewing the First Schedule of the Environmental Protection Agency Act<sup>2</sup> it sets out a range of industrial processes, under the twelve headings from Mineral and Other Materials to Surface Coatings with a final other category. None of these relate to airport activity.

Reviewing the Third<sup>3</sup> and Fourth<sup>4</sup> Schedules of the Waste Management Act the activities are either classified as waste disposal activities or solvent reclamation or regeneration. Neither of these relate to airport activity.

The guidance in EPA NG4 does not directly apply to aircraft ground noise, although the criteria included can be compared to that used in the EIAR.

The purpose of the EU directive which introduces noise mapping<sup>5</sup> is the assessment and management of environmental noise. The management involves the adoption of action plans with a view to preventing and reducing environmental noise where necessary and particularly where exposure levels can induce harmful effects on human health. The directive is therefore considered to be focussed on the most significant levels of noise.

Aircraft noise referred to in the noise mapping directive can include noise from when aircraft are in the air or on the ground. The directive requires that information on the number of people exposed to aircraft noise above certain thresholds from operations at major airports is provided

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<sup>1</sup> Environmental Protection Agency Office of Environmental Enforcement (OEE) Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities (NG4) [https://www.epa.ie/publications/monitoring--assessment/noise/NG4-Guidance-Note-\(January-2016-Update\).pdf](https://www.epa.ie/publications/monitoring--assessment/noise/NG4-Guidance-Note-(January-2016-Update).pdf)

<sup>2</sup> Environmental Protection Agency Act, 1992 First Schedule <http://www.irishstatutebook.ie/eli/1992/act/7/schedule/1/enacted/en/html#sched1>

<sup>3</sup> Waste Management Act, 1996 Third Schedule <http://www.irishstatutebook.ie/eli/1996/act/10/schedule/3/enacted/en/html>

<sup>4</sup> Waste Management Act, 1996 Fourth Schedule <http://www.irishstatutebook.ie/eli/1996/act/10/schedule/4/enacted/en/html>

<sup>5</sup> DIRECTIVE 2002/49/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 25 June 2002 <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32002L0049>

where their exposure is at least 55 dB  $L_{den}$  or 50 dB  $L_{night}$ . These threshold levels of exposure have been classified as medium for the ground noise assessment which when combined with an increase of at least 3 dB, also classified as medium, result in an overall rating of significant.

While the use of 50 dB  $L_{night}$  is higher than the value from the EPA NG4, as noted above these EPA NG4 criteria do not strictly apply. Despite this, taking the overall noise level ( $L_{den}$ ) which includes noise at night the approach is consistent. Specifically with the use of 55 dB  $L_{den}$  to mark where noise levels change from low to medium, and so have greater significance.

The updated EIAR will include information on the diurnal pattern.

#### **2.4 RFI 99**

Updated response:

*The dwellings are those that would be eligible under the existing and proposed noise insulation schemes for air noise. The location of these will indicated in the EIAR.*

#### **2.5 RFI 108**

Updated response:

*While a document such as that from the EU<sup>6</sup> in relation to the END include dose response relationships for the number of people highly annoyed and highly sleep disturbed at particular noise levels there is no guidance on how to rate the significance of the percentages, for example is having 5% of a population highly sleep disturbed significant.*

*The approach taken in developing the assessment criteria has therefore been to look at guidance in published documents, including policy, to characterise noise exposure levels rather than working from the dose response relationships. As an example, the value of 65 dB  $L_{den}$  was selected as it equates to 63 dB  $L_{Aeq,16h}$  which is used as a threshold at Dublin following the original north runway application, and also widely in the UK, in relation to eligibility for enhanced sound insulation. It is selected for this reason rather than because the calculated rate of people highly annoyed is 45.4%.*

*On the issue of switching between metrics it is noted that the UK Government did this in their airspace change policy. In the consultation they proposed a LOAEL of 45 dB  $L_{night}$  for night-time noise but following consultation with the CAA, the Government consider it appropriate to use 45 dB  $L_{Aeq,8h}$  as the LOAEL for consistency with daytime noise.*

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<sup>6</sup> COMMISSION DIRECTIVE (EU) 2020/367 of 4 March 2020 amending Annex III to Directive 2002/49/EC of the European Parliament and of the Council as regards the establishment of assessment methods for harmful effects of environmental noise <https://www.legislation.gov.uk/eudr/2020/367>

## 2.6 RFI 109

Updated response:

*As noted in the response to RFI 108 the approach to developing the assessment criteria has been to look at guidance in published documents, including policy, to characterise noise exposure levels rather than working from the dose response relationships. This does not however mean they are distinct from those relationships and for example they reflect the increases in dose response in the relationships put forward in the WHO Guidelines 2018.*

*The following table sets out the percentages associated with the WHO relationships and that from the SONA<sup>7</sup> study. While the latter relates to the response to aircraft noise in the UK it is noted in EU 2020/367 that:*

*'Beyond the dose-effect relations developed in the context of the WHO, other studies might show different health effect sizes and other health effects, in particular concerning effects of road, railway and aircraft noise in local situations in specific countries. The alternative dose-effect relations established therein could be used provided that they are based on high quality and statistically significant studies.'*

WHO Highly Annoyed			WHO Highly Sleep Disturbed			SONA Highly Annoyed		
L <sub>den</sub> (dB)	%	Diff to Previous	L <sub>night</sub> (dB)	%	Diff to Previous	L <sub>Aeq,16h</sub> (dB)	%	Diff to Previous
45	9.4	-	40	11.3	-	51	7	-
50	17.9	8.5	45	15.1	3.8	54	9	2
55	26.7	8.9	50	19.8	4.8	57	13	4
60	36.0	9.2	55	25.6	5.7	60	17	4
65	45.5	9.6	60	32.3	6.7	63	23	6
70	55.5	9.9	65	40.0	7.7	66	31	8
75	65.8	10.3	70	48.8	8.7	69	38	8

*Note: Diff to Previous means the percentage change in response from one noise level to the next.*

*As shown in the table all the relationships show an increase rate of response as the noise level increases, and particularly the WHO highly sleep disturbed relationship which given the nature of the Relevant Action is highly relevant.*

<sup>7</sup> Civil Aviation Authority Survey of noise attitudes 2014: Aircraft CAP 1506  
<https://publicapps.caa.co.uk/docs/33/CAP%201506%20FEB17.pdf>

*The approach taken in the EIAR of requiring a smaller change for there to be significance is also consistent with UK guidance<sup>8</sup> on how planning can manage potential noise impacts in new development which includes the following:*

*'In cases where existing noise sensitive locations already experience high noise levels, a development that is expected to cause even a small increase in the overall noise level may result in a significant adverse effect occurring even though little to no change in behaviour would be likely to occur.'*

**2.7 RFI 113**

Updated response:

Further details are to be provided in the Appendix 13B updated EIAR.

**2.8 RFI 114**

Updated response:

Further details are to be provided in the Appendix 13B updated EIAR.

**2.9 RFI 134**

Updated response:

*As noted in the response to RFI 108 the approach to developing the assessment criteria has been to look at guidance in published documents, including policy, to characterise noise exposure levels rather than working from the dose response relationships.*

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<sup>8</sup> UK Guidance Noise <https://www.gov.uk/guidance/noise--2>