8 Non-Aircraft Noise

8.1 Introduction

8.1.1 This chapter presents the Principal Assessment of the likely significant effects of the Proposed Order on non-aircraft noise. The Principal Assessment compares the 2029 Permitted Operation (32 million passengers per annum (mppa)) and the 2029 Proposed Operation (40 mppa) conditions in accordance with the project-wide assessment framework described in Chapter 5: Methodology.

8.1.2 As detailed in Chapter 4: Proposed Order, the Proposed Order seeks to amend the existing planning condition of 32 mppa to 40 mppa and does not involve the construction of new infrastructure. This chapter of the EIAR identifies, describes and assesses the likely direct and indirect significant effects of the Proposed Order on non-aircraft noise. As the Proposed Order does not include any new infrastructure, no construction works are required and therefore no construction related noise effects will occur. However, increased passenger numbers may affect surface access to the airport through associated increases in road traffic linked to airport activity. This chapter, therefore, assesses noise impacts from potential increases in operational road traffic related to the operation of Dublin Airport as a whole. There are no other potential non-aircraft noise impacts as a direct or indirect result of the Proposed Order.

8.1.3 The Proposed Order would result in an intensification of existing traffic flows and would not introduce a new source of vibration. The changes in traffic flows are not expected to result in a material change to the baseline vibration environment. Accordingly, no likely significant effects associated with traffic-induced vibration are anticipated and further assessment is not considered necessary. Traffic-induced vibration has therefore not been assessed further in this EIAR.

8.1.4 Any airside noise impacts from aircraft movements at the Dublin Airport site, including for airside ground transport vehicles, are assessed in Chapter 9: Aircraft Noise.

8.1.5 This chapter was prepared by Edward Robinson BSc (Hons) Member of the Institute of Acoustics (MIOA), a Technical Director in AECOM's Acoustics team, with 20 years' experience in the assessment of environmental noise and vibration. Edward has experience of working on airport expansion projects having been involved in London Luton Airport Expansion, Heathrow Hub and Calgary Parallel Runway projects.

8.1.6 This chapter was reviewed by Chris Skinner MSci / MA MIOA, a Regional Director in AECOM's Acoustics team, with 18 years' experience in the assessment of environmental noise and vibration. Chris has worked on major infrastructure and developments in the UK such as London Luton Airport Expansion, High Speed Two, and Battersea Power Station (including the Northern Line Extension). Chris also acts as a technical advisor to the UK Department for Environment, Food and Rural Affairs (Defra) on matters related to noise and nuisance.

8.1.7 For the competency of those individuals providing traffic information that has informed this assessment, see Chapter 6: Material Assets (Traffic and Transport).

8.2 Legislation, Policy and Guidance

8.2.1 This section sets out the legislation, policy and guidance sources which have informed the scope and methodology for assessment of the noise factor. Legislation, policy and guidance of general relevance to the EIAR methodology are set out in Chapter 5: Methodology.

Legislation

8.2.2 The following regulations are relevant to noise:

- Dublin Airport (Passenger Capacity) Act 2026[1]
- S.I. No 549/2018 – Environmental Noise Regulations 2018

[1] Government of Ireland. (2026). Dublin Airport (Passenger Capacity) Act 2026.

- European Communities Noise Emission by Equipment for Use Outdoors (Amendment) Regulations 2006

National Planning Policy

8.2.3 The National Planning Framework (NPF) (Government of Ireland, 2018) is the Irish Government's high-level strategic plan for future growth and planning. This includes Policy Objective 65 which states the following with regards to noise:

"*Promote the pro-active management of noise where it is likely to have significant adverse impacts on health and quality of life and support the aims of the Environmental Noise Regulations through national planning guidance and Noise Action Plans.*"

Regional and Local Planning Policy

8.2.4 The following local planning policy documents are relevant to noise:

- Fingal County Development Plan 2023-2029
- Dublin Airport Local Area Plan 2020
- Dublin Agglomeration Noise Action Plan 2024 – July 2028

Standards and Guidance

8.2.5 The following guidance documents are relevant to noise:

- Environmental Protection Agency Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (2022)
- EU Commission Environmental Impact Assessment of Projects, Guidance on the preparation of the Environmental Impact Assessment Report (2017) (Directive 2011/92/EU as amended by 2014/52/EU)
- Institute of Environmental Management & Assessment (IEMA) Guidelines for Environmental Noise Impact Assessment (2014)
- UK Department of Transport / Welsh Office Memorandum 'Calculation of Road Traffic Noise' (CRTN)
- International Organization for Standardization (ISO) (1996). ISO 9613-2 Acoustics – Attenuation of sound during propagation outdoors: Part 2: General method of calculation
- Transport Infrastructure Ireland (TII) Guidelines for the Treatment of Noise and Vibration in National Road Schemes (2004) (TII Guidelines)
- TII Good Practice Guidance for the Treatment of Noise during the Planning of National Road Schemes (2014) (NRA Guidance)

8.3 Assessment Methodology

Overall Approach

8.3.1 The assessment has been undertaken in accordance with the methodology set out below, informed by the EPA Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (2022) and the overarching assessment methodology described in Chapter 5: Methodology.

- Establishment of the baseline conditions, including identification and assessment of the receiving environment and receptor sensitivity
- Identification of the potential impacts and assessment of the magnitude of potential effects, and their significance
- Consideration of mitigation measures
- Assessment of cumulative effects
- Assessment of residual effects

Approach to Baseline Noise Surveys

8.3.2 Noise monitoring was undertaken between 4 and 7 June 2024 at twelve locations in the vicinity of Dublin Airport that have been used to establish representative baseline road traffic noise conditions at key receptor locations. The data is intended to provide context to the assessment of road traffic noise effects in the event that significant effects are identified. For example, if a significant effect is identified through a change in road traffic noise but the absolute level of road traffic noise is substantially lower than the measured ambient noise level due to the contribution of non-road traffic road sources (e.g. air traffic, community noise, fauna etc.), then measured baseline data is used to contextualise the significance of the effect.

8.3.3 The monitoring was originally undertaken to inform the Infrastructure Application. The 2024 data are considered representative of the 2023 Baseline for the purposes of this assessment, as natural traffic growth is expected to be minimal and there have been no material changes in the local road network or surrounding land uses that would be expected to alter the prevailing road traffic noise environment.

8.3.4 Details of the noise monitoring locations are presented in Table 8-1 and illustrated in Figure 8-1. Details on the noise monitoring methodology are provided in Appendix 8-1.

Table 8-1: Noise Monitoring Locations

ID	Measurement Dates	Location Description	Approximate coordinates (Lat/Long)
ST1	06/06/2024 – 07/06/2024	St. Margaret's, Co. Dublin	53°25'53.89"N, 6°18'3.24"W
ST2	04/06/2024 – 05/06/2024	Old Airport Road, Swords, Co. Dublin	53°25'5.56"N, 6°15'48.07"W
ST3	05/06/2024 – 06/06/2024	Swords Rd, Corballis, Swords, Co. Dublin	53°25'25.56"N, 6°13'48.82"W
ST4	04/06/2024 – 05/06/2024	Harristown Lane, Harristown, Swords, Co. Dublin	53°25'9.10"N, 6°17'43.46"W
ST5	05/06/2024 – 06/06/2024	The Hill, Stockhole, Cloghran, Swords, Co. Dublin	53°25'56.90"N, 6°13'33.95"W
ST6	05/06/2024 – 06/06/2024	Our Lady Queen of Heaven, Corballis Road North, Dublin Airport, Co. Dublin	53°25'42.01"N, 6°14'28.47"W
ST7	06/06/2024 – 07/06/2024	Forrest Road, Forrest Little, Swords, Co. Dublin	53°26'16.22"N, 6°14'58.63"W
ST8	04/06/2024 – 05/06/2024	Turnapin Cottages, Dublin 17	53°24'35.18"N. 6°13'56.43"W
ST9	06/06/2024 – 07/06/2024	Huntstown, Swords, Co. Dublin	53°25'54.64"N, 6°15'52.49"W
ST10	06/06/2024 – 07/06/2024	Dunbro Lane, Dunbro	53°25'35.65"N, 6°16'42.41"W
ST11	04/06/2024 – 05/06/2024	Swords Road, Cloghran, Co. Dublin	53°24'55.74"N, 6°14'23.12"W
ST12	05/06/2024 – 06/06/2024	San Michelle, Kettle Lane, Cloghran, Swords, Co. Dublin	53°26'14.23"N, 6°13'21.06"W

Study Area and Sensitive Receptors

8.3.5 The Study Area for the operational road traffic noise assessment extends approximately 4 km by 6 km around the Dublin Airport Site, as shown on Figure 8-1. The Study Area encompasses the affected routes identified in Chapter 6: Material Assets (Traffic and Transport) and the surrounding areas within which changes in road traffic noise associated with the Proposed Order have the potential to occur.

8.3.6 Road traffic noise changes were modelled across the Study Area by comparing the 2029 Proposed Operation with the 2029 Permitted Operation. Sensitive receptors requiring further assessment were

then identified within 300 m of affected routes where the modelling predicted an increase in road traffic noise of 1 dB or more under the 2029 Proposed Operation when compared to the 2029 Permitted Operation. Changes of less than 1 dB are classified as No Change or Negligible, in accordance with the criteria presented in Table 8-2.

Methodology for Determining Operational Effects

8.3.7 The effects of the Proposed Order on operational road traffic noise have been assessed by considering the change in traffic flows under the 2029 Proposed Operation relative to the 2029 Permitted Operation. The assessment of noise impacts has been undertaken using SoundPLAN 9.0 noise modelling software, which is a recognised industry leading software package for noise predictions. The following operational conditions, as described in Chapter 5: Methodology, were modelled:

- 2023 Baseline Operation (32 mppa)
- 2025 Current Operation (36.4 mppa)
- 2029 Permitted Operation (32 mppa)
- 2029 Proposed Operation (40 mppa)

8.3.8 SoundPlan 9.0 predictions have been made using the calculation methodologies outlined in the CRTN. The index adopted by CRTN to assess traffic noise is $L_{A10,18h}$. This value is the noise level exceeded 10% of the time between 06:00 and 00:00.

8.3.9 Annual Average Weekly Traffic levels are used in CRTN to determine $L_{A10,18h}$; however, the TII Guidelines requires the use of Annual Average Daily Traffic (AADT) traffic levels as this is needed for converting $L_{A10,18h}$ to L_{den}. This method has been applied to all road links, including road links with an AADT of less than 1,000[2] to ensure that all potential significant effects are accounted for.

8.3.10 The TII Guidelines outline two methods within Section 3, Noise Level Predictions, as a way of converting the $L_{A10,18h}$ noise metric, calculated using CRTN in SoundPlan, to L_{den}, the metric used for this assessment. Method B has been applied for this assessment. Method B is outlined in the NRA Guidance as follows:

"The following approach for the derivation of L_{den} values is based on the use of AADT traffic and percentage HCVs only. It entails predicting traffic noise levels using the methodology set out in CRTN, giving results in the form of $L_{10(18hour)}$ values. These should then be converted to L_{den} values in accordance with the following conversion procedure:

$$L_{den} = 0.86 \times L_{A1\ (18hr)} + 9.86\ dB"$$

8.3.11 The terminology used to describe the magnitude of impact of changes in traffic noise are presented in Table 8-2. As there is no relevant national standard relating to traffic noise, these criteria have been defined with reference to the IEMA's Guidelines for Environmental Noise Impact Assessment (2014), which is considered to represent industry best practice.

Table 8-2: Assessment Criteria for Changes in Traffic Noise

Magnitude of Impact	Change in Noise Level
High	5.0 dB(A) or more
Medium	3.0 – 4.9 dB(A)
Low	1.0 – 2.9 dB(A)
Negligible	0.1 – 0.9 dB(A)
No change	0.0 dB(A)

Significance Criteria

Effect and significance terminology overview

8.3.12 The sensitivity of receptors to noise and vibration has been defined with reference to the IEMA Guidelines for Environmental Noise Impact Assessment (2014) and professional judgement, as

[2] CRTN is generally considered less reliable for roads with relatively low traffic flows, particularly where flows are around or below 1,000 vehicles over the 18-hour assessment period.

presented in Table 8-3. Professional judgement is applied in interpreting the guidance and determining receptor sensitivity, having regard to the type and use of the receptor, the nature and duration of potential exposure, the existing acoustic environment and the susceptibility of the receptor to changes in noise or vibration.

Table 8-3: Sensitivity of Receptors

Sensitivity	Description	Examples of receptor usage
High	Receptors where noise will significantly affect the function of a receptor	• Auditoria / studios • Specialist medical/teaching centres • Libraries
Medium	Receptors where people or operations are particularly susceptible to noise	• Residential and student accommodation • Hotels • Places of worship • Conference facilities • Schools • Hospitals / residential care homes
Low	Receptors of low sensitivity to noise, where it may cause some distraction or disturbance	• Offices • Restaurants • Public houses • Sports grounds or facilities where noise is not a normal part of the event and where quiet conditions are necessary (e.g. tennis, golf)
Negligible	Receptors where distraction or disturbance from noise is minimal	• Residences and other buildings not occupied during working hours • Factories and industrial working environments with existing high noise levels • Sports grounds or facilities where noise is a normal part of the event

8.3.13 The EPA Guidelines provide guidance on the preparation of EIARs in Ireland, having regard to the requirements of Directive 2014/52/EU. The assessment presented in this chapter has been undertaken having regard to the methodology and principles set out in the EPA Guidelines.

8.3.14 Effects are described under various headings set out in EPA Guidelines, including Quality, Significance, Extent and Context, Probability, Duration and Frequency. Of relevance are the definitions of significance and duration and frequency, which are given in Table 8-4 and Table 8-5.

Table 8-4: Description of Significant Effects

Aspect	Description
Imperceptible	An effect capable of measurement but without significant consequences
Not Significant	An effect which causes noticeable changes in the character of the environment but without significant consequences
Slight	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities
Moderate	An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends
Significant	An effect which, by its character, magnitude, duration or intensity, alters a sensitive aspect of the environment
Very Significant	An effect which, by its character, magnitude, duration or intensity, significantly alters most of a sensitive aspect of the environment
Profound	An effect which obliterates sensitive characteristics

Table 8-5: Description of Duration and Frequency

Aspect	Description
Brief	Effects lasting less than a day
Temporary	Effects lasting less than a year

Aspect	Description
Short-Term	Effects lasting from one to seven years
Medium-Term	Effects lasting from seven to 15 years
Long Term	Effects lasting from 15 to 60 years
Permanent	Effects lasting over 60 years
Reversible	Effects that can be undone, e.g. through remediation or restoration
Frequency	How often the effect will occur

8.3.15 Table 8-6 provides a matrix based on Figure 3.4 of EPA Guidelines showing the magnitude of effects depending on the sensitivity of receptors and magnitude of impact. Based on the aspect descriptions in Table 8-4, Moderate and Slight effects are defined as 'not significant'.

Table 8-6: Classification of Effects

Sensitivity or value of resource / receptor	Magnitude of impact			
	High	Medium	Low	Negligible
High	Profound	Very Significant	Significant	Moderate
Medium	Very Significant	Significant	Moderate	Slight
Low	Significant	Moderate	Slight	Not Significant
Negligible	Moderate	Slight	Not Significant	Imperceptible

Application of the Assessment Framework

8.3.16 For this chapter, the Principal Assessment has been undertaken alongside a series of Supporting Assessments, using four operational scenarios: the 2023 Baseline Operation, the 2025 Current Operation, the 2029 Permitted Operation and the 2029 Proposed Operation. These scenarios represent different levels of airport activity in the relevant assessment years. Separately, the Current and Future Receiving Environments describe the environmental conditions in the respective assessment years, providing the baseline context within which the effects of the operational scenarios are assessed.

8.3.17 As set out in Chapter 5: Methodology, the Principal Assessment compares the 2029 Permitted Operation (32 mppa) with the 2029 Proposed Operation (40 mppa). Both operational scenarios are assessed for the same future year and against the same Future Receiving Environment and other baseline assumptions. The comparison therefore identifies the change in non-aircraft noise and vibration effects associated with the Proposed Order relative to the Permitted Operation. This provides the basis for identifying likely significant effects, determining any additional mitigation measures and reporting residual effects.

8.3.18 The following Supporting Assessments were also completed for non-aircraft noise to provide additional context to the Principal Assessment. The supporting assessments provide a comparison against different operational conditions/years to provide this context and include:

- Supporting Assessment 1 – Proposed Operation (2029, 40 mppa) vs 2023 Baseline Operation (32 mppa)
- Supporting Assessment 2 – Proposed Operation (2029, 40 mppa) vs Current Operation (2025, 36.4 mppa)
- Supporting Assessment 3 – 2025 Current Operation (36.4 mppa) vs 2029 Permitted Operation (32 mppa)

Assumptions and Limitations

Baseline Assumptions and Limitations

8.3.19 Any measurement of existing ambient or background sound levels will be subject to a degree of uncertainty. Environmental sound levels vary between days, weeks, and throughout the year due to variations in source levels and conditions, meteorological effects on sound propagation and other

factors. Hence, any measurement survey can only provide a sample of the ambient levels. Every effort has been made to ensure measurements were undertaken in such a way as to provide a representative sample of conditions, such as avoiding periods of adverse weather conditions and school holiday periods (which are often considered to result in atypical sound levels). However, a small degree of uncertainty will always remain in the values taken from such a measurement survey.

8.3.20 The measured data were collected in 2024 to inform the IA but are considered representative of the 2023 Baseline for the purposes of this assessment (see paragraph 8.3.3). Any material changes in the intervening period associated with new development or increased road or air traffic would be expected to increase, rather than decrease, baseline noise levels. Where the measured baseline data are used to provide context for the assessment of a significant effect, the use of potentially lower baseline noise levels provides a conservative basis for the assessment because it avoids assuming any increase in existing ambient noise that could reduce the apparent relative change associated with the Proposed Order.

Road Traffic Noise Assumptions and Limitations

8.3.21 The following assumptions for road traffic noise predictions have been made:

- The 2025 traffic survey (see Chapter 6: Material Assets (Traffic and Transport)) did not cover the full road network in the noise study area and covered AM and PM peak times only. Consequently, a different approach to traffic data was required for noise modelling than presented in Chapter 6: Material Assets (Traffic and Transport) to model baseline flows. 2019 was selected as the most recent year unaffected by the COVID-19 pandemic and had a level of passenger throughput broadly comparable to 2023. The representativeness of the 2019 traffic data was confirmed by the transport assessment through spot traffic surveys undertaken in 2023, which were compared favourably against the corresponding 2019 traffic data. As such, to model day, evening and night traffic flows, 2019 traffic data were used as a proxy for the 2023 Baseline Operation.
- Airport-related traffic data were obtained for each operational condition for the main affected road links (see Appendix 8-1). To model road traffic on the local road network, the increase in airport-related traffic over the 2023 Baseline for each operational condition was added to the 2019 baseline traffic data, which covered the wider local road network and include non-airport-related traffic.
- The 2023 Baseline Operation and 2029 Permitted Operation both represent airport passenger throughput of 32 mppa. For the purposes of the non-aircraft noise assessment, these operational conditions are assumed to generate equivalent levels of airport-related road traffic and equivalent modes of transport. The same underlying non-airport traffic data are consequently used for both operational conditions. As such, the use of the 2019 road traffic data as representative of all 32 mppa operational conditions means that future baseline conditions do not include natural growth of traffic flows or additional with planned and committed developments and schemes (see Section 8.6). It provides a reasonable worst-case basis for assessing the change in road traffic noise associated with the Proposed Order because road traffic noise is determined by the proportional change in total traffic flow. For a given increase in airport-related traffic between 32 mppa and 40 mppa, adding the same additional background traffic to both operational conditions would reduce the proportional change in total traffic flow and therefore result in an equal or smaller predicted change in road traffic noise. Retaining the lower, 2023-equivalent background traffic basis therefore cannot understate the comparative road traffic noise effect of the increase from 32 mppa to 40 mppa. The approach is used to assess the change attributable to the Proposed Order and does not represent a forecast of absolute 2029 background traffic conditions.
- Road links identified as affected routes based on the comparison of the 2029 Proposed Operation with the 2029 Permitted Operation are detailed in Appendix 8-1. The road traffic noise assessment focuses on these routes, where changes in traffic associated with the Proposed Order have the potential to result in changes in road traffic noise.
- As information on roads surfaces was not available, hot rolled asphalt road surfacing has been assumed on all roads throughout the study area as it is the most common road surface.
- A substantial proportion of the road traffic fleet is likely to be electric in the future. However, research shows that electric cars are less than 1 dB quieter than petrol and diesel equivalents above 50 km/h. [3] Where vehicles are travelling slower (up to 20 km/h) and therefore quieter, there is a

[3] Pallas, Berengier, Chartagnon, Czuka, Conter and Muirhead, *Towards a model for electric vehicle noise emission in the European prediction method CNOSSOS-EU (*2016), Applied Acoustics

requirement for such vehicles to generate an alternative to engine noise so people can hear the vehicles and hence are aware of their presence. As such, electric vehicles are not expected to be much quieter than petrol equivalents at these slow speeds either. The assessment is based on petrol- and diesel-powered vehicles as a future shift to electric vehicles is not expected to lead to noticeably different road traffic noise levels.

- An average of the AM and PM peak speeds provided in 2019 traffic data has therefore been used in the modelling. As there are no changes in road speed limits between the operational conditions being compared (see paragraphs 8.3.16 to 8.3.18), the principal driver of changes in predicted road traffic noise is the change in traffic flows. The use of average AM and PM peak speeds is therefore considered appropriate for the comparative assessment of changes in road traffic noise between the 2029 Permitted Operation and 2029 Proposed Operation.
- A small number of assessed road links have relatively low traffic flows, slightly below 1,000 vehicles AADT. The majority of these links are within the Dublin Airport landside and car parking areas. As a precautionary approach, these links have been retained in the road traffic noise predictions to ensure that potential changes in noise on and around the main airport road network are captured. Some assessed road links have traffic flows around or below 1,000 vehicles over the 18-hour assessment period. While CRTN predictions are less reliable at these traffic levels, the methodology has been applied consistently between assessment scenarios and remains appropriate for identifying the relative change in road traffic noise.

8.4 Current Receiving Environment

Noise Baseline Surveys

8.4.1 A summary of the results of noise baseline survey measurements is presented in Table 8-7. The noise survey accounts for all significant noise sources in the area, including air traffic and road traffic. Full results from the noise survey are provided in Appendix 8-1.

Table 8-7: Survey Results

Monitoring Location	Daytime (07:00 – 19:00)		Evening (19:00 – 23:00)		Night-time (23:00 – 07:00)	
	$L_{Aeq,12h}$ dB	$L_{A90,15min}$ dB[4]	$L_{Aeq,4h}$ dB	$L_{A90,15min}$ dB[4]	$L_{Aeq,8h}$ dB	$L_{A90,15min}$ dB[4]
ST1	64	49	62	44	55	35
ST2	76	63	74	53	73	46
ST3	69	59	67	56	65	53
ST4	57	48	56	43	54	37
ST5	57	53	54	51	51	46
ST6	60	57	59	53	57	51
ST7	69	59	65	56	60	45
ST8	63	59	59	60	57	52
ST9	63	43	62	43	59	40
ST10	57	47	53	42	53	34
ST11	66	60	63	54	61	46
ST12	67	46	64	46	61	41

Sensitive Receptors

8.4.2 Noise-sensitive receptors within the study area are predominantly residential properties. In addition, a number of non-residential noise-sensitive receptors are present, including hospitality facilities, places of worship, a crematorium and an educational facility. These receptors are representative of the population that could potentially be affected by noise arising from the Proposed Development, as per paragraph 8.3.6.

[4] Modal value of $L_{A90,15min}$ from day/evening/night monitoring period.

8.4.3 Sensitive receptors for the non-aircraft noise assessment are identified through a two-stage process. Road traffic noise is first modelled to identify areas where the 2029 Proposed Operation is predicted to result in an increase of 1 dB or more relative to the 2029 Permitted Operation. Sensitive receptors within these areas are then identified for further assessment.

Current Design and Management Measures

8.4.4 No existing environmental design or management measures specifically relating to non-aircraft noise and vibration have been identified on the local road network within the study area.

8.5 Future Receiving Environment

8.5.1 The 2029 Permitted Operation represents the Future Receiving Environment. A number of planned and committed transport schemes are expected to be delivered by daa and other parties by 2029. These schemes have the potential to influence travel patterns, traffic flows and the wider road traffic noise environment around Dublin Airport and therefore form part of the context for the Future Receiving Environment. The relevant schemes include:

- BusConnects Programme (NTA)
- Bus network redesign and additional services (ongoing rollout)
- Swords to City Centre Core Bus Corridor Scheme (planning permission granted June 2024)
- Dublin Airport Landside Transformation Programme (daa)
- Staff South Car Park (planning permission granted May 2026)
- Various sustainable travel initiatives
- Dublin Airport Access Strategy and Mobility Management Plan

8.5.2 These schemes form part of the wider Future Receiving Environment for the Principal Assessment and are common to both the 2029 Permitted Operation and 2029 Proposed Operation. However, their potential contribution to future background traffic is not explicitly forecast in the road traffic noise model. As explained in Section 8.3, this does not understate the comparative noise effect of the Proposed Order: where additional background traffic would be common to both operational conditions, its inclusion would reduce the proportional change in total traffic flow between the 32 mppa and 40 mppa cases and would therefore result in an equal or smaller predicted change in road traffic noise. The adopted traffic basis consequently provides a reasonable worst-case assessment of the change in road traffic noise attributable to the Proposed Order.

Future Design and Management Measures

8.5.3 Mitigation measures to reduce staff vehicle movements are set out in Chapter 6: Material Assets (Traffic and Transport). These measures focus on demand management to spread traffic across the day and are not expected to result in a material change in road traffic noise levels (L_{den}), which is based on total flows during the 12-hour daytime period, the 4-hour evening period and the 8-hour night-time period.

8.6 Assessment of Likely Significant Effects

8.6.1 This section presents the findings of the Principal Assessment, which compares the 2029 Proposed Operation (40 mppa) with the 2029 Permitted Operation (32 mppa). Both operational conditions are assessed for the same future year and against the same Future Receiving Environment and other baseline assumptions. The comparison therefore identifies the change in road traffic noise associated with the increase in passenger throughput from 32 mppa to 40 mppa and provides the basis for determining the effects of the Proposed Order in the Principal Assessment year of 2029.

8.6.2 All of the measures identified in Section 8.5 that contribute to the Future Receiving Environment are common to both the 2029 Permitted Operation (32 mppa) and the 2029 Proposed Operation (40 mppa) and are not a consequence of the Proposed Order. They therefore do not constitute a difference between the two operational conditions. As explained in Section 8.3, the road traffic noise model adopts a conservative common background traffic basis for the comparison rather than forecasting the absolute 2029 traffic associated with those measures.

8.6.3 The assessment considers the predicted change in road traffic noise due to the Proposed Order on affected routes and at sensitive receptors and determines the magnitude and significance of resulting effects in accordance with the methodology set out in Section 8.3. The findings form the basis for identifying likely significant effects and determining whether any additional mitigation measures are required.

Road Traffic Noise Assessment

8.6.4 Noise contour plots have been prepared for the 2029 Permitted Operation (32 mppa) and the 2029 Proposed Operation (40 mppa). Figure 8-2 presents the predicted road traffic noise contours for the 2029 Permitted Operation and Figure 8-3 presents the corresponding contours for the 2029 Proposed Operation. Figure 8-4 presents the predicted change in road traffic noise between these two operational conditions, thereby illustrating the change attributable to the Proposed Order.

8.6.5 Operational road traffic noise effects would be indirect and permanent. Comparison of the predicted road traffic noise levels for the 2029 Permitted Operation (32 mppa) and the 2029 Proposed Operation (40 mppa) (see Figure 8-4) identifies that road traffic noise is predicted to increase by less than 1 dB across the Study Area as a result of the Proposed Order. As such, sensitive receptors are not explicitly identified but it is assumed that there are sensitive receptors in the Study Area and these are conservatively assumed to be residential, which are the most sensitive type of receptor in the area. The magnitude of impact at affected sensitive receptors is therefore assessed as no greater than Negligible. Sensitive receptors are, at worst, of Medium sensitivity; this would result in an effect of no greater than Slight Adverse, which is Not Significant.

8.7 Mitigation and Monitoring

8.7.1 As no significant operational road traffic noise effects are identified, no additional mitigation measures are required. No specific monitoring of operational road traffic noise is therefore proposed.

8.8 Residual Effects

8.8.1 As no additional mitigation is required, the residual effects are the same as those identified in the Principal Assessment: Slight Adverse and Not Significant. No significant residual operational road traffic noise effects are therefore predicted.

8.9 Cumulative Effects

8.9.1 The assessment of cumulative effects considers whether the road traffic noise effects associated with the Proposed Order could combine with those arising from other relevant planned and committed developments to result in a significant cumulative effect. The assessment also considers the potential for road traffic noise effects to interact with effects arising from other environmental factors assessed within this EIAR.

8.9.2 As described in Section 8.5, a number of planned and committed transport schemes are expected to be delivered by daa and other parties by 2029. These include the BusConnects Programme, the Swords to City Centre Core Bus Corridor Scheme and elements of the Dublin Airport Landside Transformation Programme, including the Staff South Car Park and sustainable travel initiatives. These schemes are common to both the 2029 Permitted Operation (32 mppa) and the 2029 Proposed Operation (40 mppa) and are not a consequence of the Proposed Order.

8.9.3 The Principal Assessment identifies that changes in road traffic noise associated with the Proposed Order would be less than 1 dB across the Study Area. The resulting effects are assessed as Slight Adverse and Not Significant. Given the small magnitude of the predicted change attributable to the Proposed Order, road traffic noise associated with the Proposed Order would not materially contribute to cumulative noise effects when considered together with relevant planned and committed developments. No significant cumulative road traffic noise effects are therefore identified.

8.9.4 Potential interactions with other environmental factors have also been considered. Road traffic noise has the potential to interact with other noise sources, particularly aircraft noise, and with other environmental factors associated with road traffic, including air quality. However, as the change in road traffic noise attributable to the Proposed Order is predicted to be less than 1 dB, it would not materially contribute to an adverse interaction with these environmental factors.

8.9.5 Interactions between road traffic noise and other environmental factors are considered further at the EIAR-wide level in Chapter 20: In-combination and Cumulative Effects. No significant effects arising from interactions involving operational road traffic noise are identified.

8.10 Indirect, Secondary and Transboundary Effects

8.10.1 The operational road traffic noise effects assessed in this chapter arise indirectly from changes in air traffic associated with the Proposed Order. The Proposed Order would not directly increase road traffic so an increase in road traffic is likely to be an indirect effect of the increase in passengers facilitated by the Proposed Order. Therefore, the assessment of the noise effects of that increase in road traffic is an assessment of indirect effects of the Proposed Order and has been fully assessed through the road traffic noise assessment presented above.

8.10.2 The zone of influence for road traffic noise does not extend beyond Ireland and, accordingly, no transboundary noise effects are predicted.

8.11 Supporting Assessments

Supporting Assessment 1

8.11.1 Supporting Assessment 1 compares the 2029 Proposed Operation (40 mppa) against the 2023 Baseline Operation (32 mppa). This assessment provides a comparison between the road traffic noise environment associated with the Proposed Order in the principal assessment year of 2029 and the baseline operational condition in 2023.

8.11.2 Figure 8-2 presents the predicted road traffic noise contours for the 2023 Baseline Operation (32 mppa), while Figure 8-3 presents the corresponding contours for the 2029 Proposed Operation (40 mppa). Figure 8-4 presents an equivalent predicted change in road traffic noise between these two operational conditions.

8.11.3 For the purposes of the road traffic noise assessment, airport-related road traffic flows are directly related to passenger throughput. As both the 2023 Baseline Operation and the 2029 Permitted Operation represent passenger throughput of 32 mppa, the same airport-related traffic flows are assumed for these operational conditions. As described in Section 8.3, the same underlying non-airport baseline traffic data are also applied.

8.11.4 Supporting Assessment 1 therefore produces the same comparison in road traffic flows, and consequently the same predicted changes in road traffic noise, as the Principal Assessment. As per Figure 8-3, predicted changes in road traffic noise are less than 1 dB at affected sensitive receptors, resulting in a Negligible magnitude of impact. Residential receptors, which are the most sensitive receptors in the Study Area, are of Medium sensitivity. This results in a Slight Adverse effect, which is Not Significant. Supporting Assessment 1 therefore identifies no additional or different significant effects from those reported for the Principal Assessment.

Supporting Assessment 2

8.11.5 Supporting Assessment 2 compares the 2029 Proposed Operation (40 mppa) against the 2025 Current Operation (36.4 mppa). This assessment provides a comparison between the current road traffic noise environment, based on the most recent available operational condition, and that predicted at the passenger throughput associated with the Proposed Order in 2029.

8.11.6 Figure 8-5 presents the predicted road traffic noise contours for the 2025 Current Operation (36.4 mppa), while Figure 8-3 presents the corresponding contours for the 2029 Proposed Operation (40 mppa). Figure 8-6 presents the predicted change in road traffic noise between these two operational conditions.

8.11.7 The assessment identifies no areas where road traffic noise is predicted to increase by 1 dB or more between the 2025 Current Operation and the 2029 Proposed Operation (see Figure 8-6). The magnitude of impact at all affected sensitive receptors is therefore assessed as Negligible. Residential receptors, which are the most sensitive receptors in the Study Area, are of Medium sensitivity. This results in a Slight Adverse effect, which is Not Significant.

8.11.8 Supporting Assessment 2 therefore confirms that assessment against the 2025 Current Operation does not result in any additional or greater road traffic noise effects than those identified in the Principal

Assessment. The predicted change is smaller than for the Principal Assessment because the difference in passenger throughput, and associated airport-related road traffic, between the operational conditions being compared is smaller.

Supporting Assessment 3

8.11.9 Supporting Assessment 3 compares the 2025 Current Operation (36.4 mppa) against the 2029 Permitted Operation (32 mppa). This assessment provides a comparison between the road traffic noise environment reflecting the passenger throughput experienced in 2025, and the road traffic noise environment associated with the permitted passenger throughput of 32 mppa.

8.11.10 Figure 8-5 presents the predicted road traffic noise contours for the 2025 Current Operation (36.4 mppa), while Figure 8-2 presents the corresponding contours for the 2029 Permitted Operation (32 mppa). Figure 8-7 presents the predicted change in road traffic noise between these two operational conditions.

8.11.11 The lower passenger throughput under the 2029 Permitted Operation would result in a corresponding reduction in airport-related road traffic compared with the Current Operation. This assessment therefore provides an indication of the change in the road traffic noise environment that would arise if passenger throughput reduced from the level experienced in 2025 to the permitted level of 32 mppa.

8.11.12 As shown on Figure 8-7, the resulting reductions in road traffic noise are less than 1 dB across the assessed road network. The magnitude of impact at all affected sensitive receptors is therefore assessed as Negligible. Residential receptors, which are the most sensitive receptors in the Study Area, are of Medium sensitivity. This results in a Slight Beneficial effect, which is Not Significant.

8.11.13 Supporting Assessment 3 therefore demonstrates that a reduction in passenger throughput from the 2025 Current Operation to the 2029 Permitted Operation would not result in a material change in road traffic noise. No significant road traffic noise effects are identified.

8.12 Conclusion

8.12.1 The Proposed Order has the potential to result in indirect effects on road traffic noise as a consequence of increased passenger throughput and associated changes in road traffic on the local road network. It does not include any new infrastructure, so no construction works are required and there will be no construction noise emissions as a result of the Proposed Order. Therefore, operational road traffic noise has been assessed by comparing the 2029 Proposed Operation (40 mppa) with the 2029 Permitted Operation (32 mppa).

8.12.2 The assessment predicts that increases in road traffic noise associated with the Proposed Order would be less than 1 dB across the assessed road network. The magnitude of impact at affected sensitive receptors is therefore assessed as Negligible. For residential receptors of Medium sensitivity, this results in a Slight Adverse effect, which is Not Significant.

8.12.3 As no significant operational road traffic noise effects are identified, no additional noise-specific mitigation or monitoring is required. The residual effects remain Slight Adverse and Not Significant. No significant cumulative effects, interactions with other environmental factors, secondary effects or transboundary effects are identified.

8.12.4 The Supporting Assessments 1 and 2 also identify no significant road traffic noise effects when the 2029 Proposed Operation is compared with the 2023 Baseline Operation or the 2025 Current Operation. The assessment therefore concludes that the Proposed Order would not result in significant effects from operational road traffic noise. Supporting Assessment 3 demonstrated that a reduction in passenger throughput from the 2025 Current Operation to the 2029 Permitted Operation would not result in a material change in road traffic noise (reduction in road traffic noise of less than 1 dB across the assessed road network (Slight Beneficial effect, which is considered Not Significant).