# EIAR Volume 1
# Non-Technical Summary

daa



# Non-Technical Summary

## 1 Introduction

This document presents the Non-Technical Summary (NTS) of the Environmental Impact Assessment Report (EIAR) prepared in relation to daa's application to the Minister for Transport for a Proposed Order under the Dublin Airport (Passenger Capacity) Act 2026.

The Dublin Airport (Passenger Capacity) Act 2026 (the Act) was enacted into law on 16th of July.The Act recognises the strategic importance of Dublin Airport in supporting international connectivity, passenger travel, tourism, trade, investment, national competitiveness, economic growth, labour mobility and wider State interests.

The Act empowers the Minister for Transport (the Minister) to make an Order amending or revoking the existing passenger capacity conditions at Dublin Airport. These conditions currently limit the combined passenger throughput of Terminal 1 and Terminal 2 to 32 million passengers per annum (mppa). The Proposed Order would increase the permitted passenger throughput to 40 mppa across Dublin Airport as a whole.

The Proposed Order seeks to facilitate passenger throughput of up to 40 mppa through the use of existing and permitted airport infrastructure. It does not include any new airport infrastructure, construction works, demolition works or physical alterations to the Dublin Airport Estate. There is therefore no construction phase associated with the Proposed Order.

The Proposed Order does not constitute a "project" within the meaning of the EIA Directive itself, because it would not involve any physical alterations to the physical aspects of Dublin Airport. However, the Act establishes a specific statutory process requiring the likely significant environmental effects of the Proposed Order to be assessed. The EIAR has therefore been prepared to support that assessment.

The Dublin Airport Annual Capacity Report (Ricondo, 2026) demonstrates that passenger throughput of up to 40 mppa can be accommodated within the airport's existing and permitted infrastructure under the operational assumptions adopted for the assessment. The Proposed Order has therefore been assessed regarding Dublin Airport as a whole, including the terminals, aprons, runways, taxiways, baggage handling systems, road and public transport networks and associated operational infrastructure.

The EIAR assesses the likely significant environmental effects arising from the operational changes associated with the Proposed Order. The main assessment compares two forecast operating conditions for Dublin Airport in 2029: the 2029 Permitted Operation, in which the existing 32 mppa passenger capacity limit is retained, and the 2029 Proposed Operation, in which passenger throughput increases to up to 40 mppa under the Proposed Order. Using the same future assessment year for both operating conditions provides a consistent basis for identifying the environmental effects attributable to the Proposed Order, rather than changes that may arise over time for other reasons. This comparison is referred to throughout the EIAR as the Principal Assessment.

The Proposed Order does not authorise the physical expansion of Dublin Airport. Any future physical development would remain subject to separate statutory, planning and environmental assessment processes, as required.

## 2 Site and Surroundings

Dublin Airport is located to the north of Dublin City, comprising the existing operational areas of Dublin Airport that support passenger processing, aircraft operations and associated airport activities. The airport is bounded by a strategic road network, including the M1 to the east, the M50 to the south and the N2 to the west. The principal airport access is from the R132 via the Airport Roundabout, which connects directly to Junction 2 of the M1. Secondary access points are provided from Corballis Road South and Castlemoate Road.

Dublin Airport comprises a range of operational areas and supporting facilities used for passenger processing, aircraft operations and associated airport activities. These include the runway and taxiway system, terminal

buildings, aircraft aprons and stands, operational buildings, transport infrastructure, car parks and other supporting facilities.

For the purposes of the EIAR, the Dublin Airport Site has been divided into a number of sectors based on their operational function and location:

- Sector A: Runways and Taxiways – comprising the North Runway, South Runway, Crosswind Runway (primarily used for aircraft taxiing) and other operational areas. Grassed areas between the runways and taxiways are actively managed.
- Sector B: North Apron and Hangars – including aircraft parking and ground operations. Separate planning permissions have been granted for additional operational buildings, a hangar and an extension to the North Apron.
- Sector C: Terminal 1 and the Old Central Terminal Building – including Terminal 1, associated passenger piers and hangars, the Old Central Terminal Building, which is the original passenger terminal at Dublin Airport and is a Protected Structure.
- Sector D: Terminal 2 – including passenger processing and boarding facilities, together with United States Customs and Border Protection facilities and other passenger facilities.
- Sector E: South Apron and Cargo Terminals – supporting passenger operations and including Pier 4, passenger facilities and cargo terminals.
- Sector F: Energy Centre, Ground Transportation Centre, Integrated Transport Hub, car parks and accommodation – forming the main transport interchange at the airport and including public and private bus services, taxi and private vehicle pick-up and set-down areas, car parks, multi-use buildings and hotels. The Church of Our Lady, Queen of Heaven, a Protected Structure, is also located within this area.
- Sector G: Car Hire Compound and Long-Term Parking – including long-term surface car parking, vehicle storage and servicing, and customer collection areas.
- Sector H: Eastlands South – a largely undeveloped area within daa ownership, comprising mainly agricultural grassland divided by hedgerows and including the ALSAA Sports Centre.
- Sector I: West Apron – providing aircraft parking and operational support facilities, including the control towers and Dublin Airport Fire Station.
- Sector J – a largely undeveloped area within daa ownership, comprising mainly agricultural land divided into fields by hedgerows.
- Sector K – an area outside the airport boundary where drainage infrastructure associated with Apron 5H is currently under construction.

The area surrounding Dublin Airport is predominantly rural, with agricultural land, hedgerows, drainage ditches and local roads. Some adjoining land is owned by daa and leased for agricultural use, while other land is in third-party ownership. Recreational uses in the surrounding area include several golf courses.

Nearby residential areas include Swords to the north and St Margaret's to the west, together with more dispersed rural housing along local roads including Dunbro Lane and the R108. Malahide and Portmarnock are located approximately 4 km to the east of the airport.

# 3 Alternatives

The EIAR describes the reasonable alternatives considered by daa and explains the main reasons for selecting the preferred option, including the environmental considerations that informed that choice.

The alternatives were considered in two stages. First, daa examined the available mechanisms for addressing the existing 32 million passengers per annum (mppa) capacity conditions. These included retaining the existing restrictions, awaiting determination of the Infrastructure Application, making a separate planning application, and applying for an Order under the Dublin Airport (Passenger Capacity) Act 2026.

An application under the 2026 Act was identified as the preferred mechanism because it provides a direct statutory process for addressing the existing passenger capacity conditions without relying on the

determination or delivery of additional airport infrastructure. The other mechanisms were not considered capable of meeting daa's objectives, particularly the need to address the existing restrictions with the least practicable delay.

Having identified this mechanism, daa considered three alternative forms of Order:

- A passenger capacity limit below 40 mppa: This would generally result in lower levels of airport activity and consequently lower potential environmental effects. However, it would also constrain the airport's ability to accommodate forecast passenger demand and make effective use of its existing operational capacity.
- A passenger capacity limit of 40 mppa: This would enable forecast passenger demand to be accommodated within the demonstrated capacity of the existing airport facilities, infrastructure and operational processes, while retaining a defined upper limit on passenger throughput.
- Revocation of the existing passenger capacity conditions, or an increase above 40 mppa: This would provide greater flexibility for future passenger growth but would introduce greater uncertainty regarding the scale of future airport activity and its associated environmental effects. Any additional infrastructure required to accommodate future growth would remain subject to separate statutory consent processes.

The alternatives were compared having regard to daa's objectives, forecast passenger demand, the operational capacity of the existing airport and their relative environmental implications. A limit below 40 mppa would generally have fewer environmental effects but would be less effective in meeting forecast demand. Revocation would provide greater flexibility but less certainty about future airport activity and environmental effects.

Amendment of the existing passenger capacity conditions to 40 mppa was therefore selected as the preferred option, providing a balance between accommodating forecast passenger demand, making effective use of existing airport infrastructure and retaining a defined limit on passenger throughput.

The likely significant environmental effects of the preferred option are assessed in the technical chapters of the EIAR.

# 4 The Proposed Order

The Proposed Order would allow passenger throughput at Dublin Airport as a whole to increase to 40 mppa.

The environmental assessment considers the changes in airport activity associated with this increase in passenger throughput. These include passenger numbers, aircraft activity, runway operations, surface access demand and supporting airport operations. The relevant operational characteristics are used to inform the individual environmental assessments, depending on the topic being considered.

Passenger throughput has been used as the primary parameter for defining the operational conditions assessed in the EIAR. The proposed 40 mppa level has been informed by recent passenger growth, passenger throughput of approximately 36.4 mppa in 2025, forecast future passenger demand, relevant planning policy and the demonstrated capability of the airport’s existing and permitted infrastructure. Further information on the basis for the 40 mppa level is provided in the Airport Capacity Report (Ricondo, 2026).

Four operational conditions are used in the EIAR. Two describe the recent historical and current operation of Dublin Airport and provide context for the assessment. The other two describe alternative future operating conditions in the assessment year of 2029, depending on whether or not the Proposed Order is made:

- Baseline Operation (2023 – 32 mppa) represents the operation of Dublin Airport in 2023, when passenger throughput was at the level of the existing passenger capacity conditions. It provides a recent historical reference point for the assessment.
- Current Operation (2025 – 36.4 mppa) represents the current operation of Dublin Airport and provides context on how airport activity has changed since 2023.
- Permitted Operation (2029 – 32 mppa) represents the forecast operation of Dublin Airport in 2029 if the existing passenger capacity conditions remain unchanged. It provides the future scenario against which the effects of the Proposed Order are assessed.

- Proposed Operation (2029 – 40 mppa) represents the forecast operation of Dublin Airport in 2029 if the Proposed Order is made. It represents the future airport operation facilitated by the Proposed Order.

The 2029 Permitted Operation and 2029 Proposed Operation form the basis of the Principal Assessment, which identifies the environmental effects attributable to the Proposed Order. The 2023 Baseline Operation and 2025 Current Operation are used, where relevant, in Supporting Assessments to provide additional context on changes in airport operations and environmental conditions over time.

Further detail on the operational characteristics used in the assessment, including aircraft activity, runway operations, surface access demand and supporting airport operations, is provided in Chapter 4 of the EIAR.

# 5 Methodology

The overall approach used to assess the likely significant environmental effects of the Proposed Order is described in Chapter 5 of the EIAR and summarised below.

The assessment framework has three main elements:

- the Current Receiving Environment and Future Receiving Environment, which describe the environmental conditions against which effects are assessed;
- the Principal Assessment, which provides the main basis for identifying and evaluating the likely significant effects of the Proposed Order; and
- Supporting Assessments, which are undertaken for certain environmental topics to provide additional context.

The framework is applied consistently across the EIAR, while allowing individual technical chapters to use topic-specific methods where required by legislation, published guidance or recognised professional practice.

## 5.1 Current and Future Receiving Environment

The Current Receiving Environment describes the existing environmental conditions, receptors and environmental resources that could be affected by the Proposed Order. It is based on the best available information at the time of assessment and may include environmental surveys, monitoring data, published datasets, site inspections, consultation responses and other relevant sources.

It also takes account, where relevant, of existing environmental management measures, regulatory controls and operational practices that are already in place and are expected to continue regardless of whether the Proposed Order is made.

The Future Receiving Environment describes the environmental conditions expected to exist in the assessment year of 2029, taking account of changes that are reasonably expected to occur independently of the Proposed Order. Depending on the environmental topic, these may include planned development, environmental trends, regulatory changes, committed schemes and established environmental management measures.

Together, the Current and Future Receiving Environments provide the environmental context for assessing the effects of the Proposed Order.

## 5.2 Principal Assessment

The Principal Assessment is the main environmental assessment undertaken within each technical chapter of the EIAR.

As described in Section 2, it compares the 2029 Permitted Operation, in which the existing 32 mppa passenger capacity conditions remain in place, with the 2029 Proposed Operation, in which passenger throughput increases to 40 mppa under the Proposed Order.

Using the same assessment year for both operating conditions enables the assessment to distinguish the environmental effects attributable to the Proposed Order from other changes that are expected to occur by 2029.

The Principal Assessment provides the basis for:

- identifying environmental effects;
- determining whether effects are likely to be significant;
- identifying any additional mitigation measures required; and
- reporting residual effects after mitigation.

The year 2029 has been selected as the Principal Assessment year because passenger demand forecasts indicate that, in the absence of the existing passenger capacity conditions, passenger throughput at Dublin Airport is forecast to reach approximately 40 mppa by that year. This is informed by the Airport Capacity Report (2026) and is consistent with the relevant planning policy forecasts.

## 5.3 Supporting Assessments

For certain environmental topics, additional Supporting Assessments are undertaken to provide context for the findings of the Principal Assessment.

Supporting Assessments do not determine whether the Proposed Order is likely to result in significant environmental effects. That determination is made through the Principal Assessment. Instead, they provide additional information on how airport operations and environmental conditions have changed, or could change, under different operating conditions.

Three Supporting Assessments are used in the EIAR:

- Supporting Assessment 1: 2023 Baseline Operation (32 mppa) compared with 2029 Proposed Operation (40 mppa);
- Supporting Assessment 2: 2025 Current Operation (36.4 mppa) compared with 2029 Proposed Operation (40 mppa); and
- Supporting Assessment 3: 2025 Current Operation (36.4 mppa) compared with 2029 Permitted Operation (32 mppa).

Supporting Assessment 1 provides context on the change from the recent historical operation of the airport to the future operation under the Proposed Order.

Supporting Assessment 2 provides context on the additional change between current airport operations and the future operation under the Proposed Order.

Supporting Assessment 3 provides context on the change that would be required if the Proposed Order were not made and passenger throughput returned to the currently permitted level of 32 mppa by 2029.

The Supporting Assessments are used only where they provide meaningful additional context for a particular environmental topic.

# 6 Assessment Conclusions

## 6.1 Material Assets (Traffic and Transport)

The Traffic and Transport assessment considers the effects of the Proposed Order on surface access to Dublin Airport. This includes active travel infrastructure, public transport infrastructure and services, airport bus facilities and general traffic on the surrounding road network.

Traffic and transport data collected in October 2025 were used to develop the 2029 future-year assessment for the Principal Assessment. Traffic conditions representative of 2023 were also developed for use in the Supporting Assessments.

The Principal Assessment found no significant effects on active travel infrastructure or public transport infrastructure. However, without mitigation, significant adverse effects were identified in relation to the capacity of airport bus services and general traffic during peak periods, particularly at the Airport Roundabout.

To address increased demand for bus travel, approximately 8% more daily bus services would be required above the planned and committed level. These additional services can be accommodated within the existing airport bus facilities through measures including optimisation and sharing of bus stands, management of bus dwell times and active management of pedestrian movements. No significant new bus infrastructure is required.

For general traffic, measures are proposed to reduce staff car travel during peak periods. These include improvements to active travel facilities, incentives to encourage travel by more sustainable modes, changes to staff parking charges and promotion of staggered working arrangements. Staff and passenger travel patterns would also continue to be monitored so that measures can be reviewed and adapted where necessary.

With these mitigation and monitoring measures in place, the residual effects on active travel, public transport and general traffic are assessed as Not Significant.

## 6.2 Air Quality

The Air Quality assessment considers the effects of the Proposed Order on local air quality around Dublin Airport. The Principal Assessment uses dispersion modelling to assess emissions from aircraft and other airside activities, airport energy plant, surface access traffic and car park use.

Against the current National Air Quality Standards, the assessment identifies impacts ranging from Neutral to Slight Adverse for nitrogen dioxide ($NO_2$), and Neutral impacts for particulate matter ($PM_{10}$ and $PM_{2.5}$). These effects are assessed as Not Significant.

The assessment also considers the more stringent air quality limit values introduced by the new EU Air Quality Directive, which are required to be achieved by 2030. Moderate to Substantial Adverse impacts for annual mean $NO_2$ are predicted at a limited number of receptors, mainly properties close to the Airport and nearby road network. Of the 17 receptors predicted to exceed the annual mean $NO_2$ limit value under the Proposed Operation, 12 are already predicted to exceed the new limit value in 2029 without the Proposed Order (the Permitted Operation). The Proposed Order is predicted to result in five additional exceedances.

In determining the overall significance of the effect, account has been taken of the limited number and geographical extent of the affected receptors, the precautionary assumptions used in the modelling and expected future improvements in background air quality and emissions. Predicted concentrations under the Proposed Operation also remain below the current National Air Quality Standard. Taking these factors together, the overall effect of the Proposed Order on local air quality is assessed as Not Significant.

The assessment also considers potential odour effects associated with airport operations. Using the recommended odour emission factor, no residential receptor is predicted to experience concentrations above the criterion used to indicate when aviation fuel odour may become offensive. The effect on odour is therefore also assessed as Not Significant.

## 6.3 Non-aircraft Noise

The Non-Aircraft Noise assessment considers the potential for the Proposed Order to affect noise levels through changes in road traffic on the local road network. The Proposed Order does not itself introduce new non-aircraft noise-generating infrastructure, but increased passenger throughput has the potential to result in indirect effects through changes in operational road traffic.

Noise surveys were undertaken in 2024 at locations around Dublin Airport to establish existing noise conditions. These data, together with forecast traffic flows, were used in SoundPLAN 9.0, a recognised noise-modelling software, to predict future road traffic noise with and without the Proposed Order.

The assessment finds that the changes in road traffic noise associated with the Proposed Order would be very small. Road traffic noise is predicted to increase by less than 1 dB across the study area. By way of context, a change of approximately 3 dB is generally considered to be perceptible in typical environmental noise conditions, so the predicted increases would be unlikely to be noticeable to most people.

On this basis, the magnitude of impact is assessed as Negligible and the resulting effect as Slight Adverse, including at highly sensitive receptors such as nearby residential properties. The effect is therefore considered Not Significant.

## 6.4 Aircraft Noise and Vibration

The Aircraft Noise and Vibration assessment considers the effects of the Proposed Order arising from both aircraft in flight and aircraft operating on the ground. Noise levels were modelled using industry-standard aircraft noise assessment methods (the Federal Aviation Administration's Aviation Environmental Design Tool (AEDT)).

The assessment considers two main sources of aircraft noise:

- Air noise, associated with aircraft arriving at and departing from Dublin Airport, including aircraft using the runway system; and
- Ground noise, associated with aircraft activities on the ground, including taxiing and the use of onboard Auxiliary Power Units while aircraft are on stands.

For air noise, the 2029 Proposed Operation would result in higher noise levels and greater population exposure than the 2029 Permitted Operation. The number of people predicted to be highly annoyed is approximately 9% higher, while the number predicted to be highly sleep disturbed is approximately 8% higher. However, when the resulting noise levels and the magnitude of the changes attributable to the Proposed Order are considered together, no significant aircraft noise effects are identified at residential or non-residential receptors. Consequently, no significant aircraft noise effects are predicted.

Although noise levels and population exposure would increase compared with the 2029 Permitted Operation, the number of people predicted to be highly annoyed or highly sleep disturbed would remain lower than under current (2025) conditions, due in part to the continued introduction of quieter aircraft.

Aircraft ground noise would also increase under the 2029 Proposed Operation, principally as a result of increased aircraft taxiing and use of Auxiliary Power Units. However, the predicted changes in ground noise levels are small and do not result in significant effects at residential or non-residential receptors.

No Significant vibration effects are identified as a result of the Proposed Order.

## 6.5 Land and Soils

The Land and Soils assessment considers the potential effects of the Proposed Order on land, soils and geology, including potential pathways by which contaminants could reach groundwater.

The assessment draws on existing information for the Dublin Airport Site, including previous ground investigations. The land, soils and geology within the Dublin Airport Site are generally of Low sensitivity, and these conditions are not expected to materially change by 2029 in the absence of the Proposed Order.

Most of the airport is covered by hardstanding surfaces and is served by an extensive drainage network, which limits the potential for contaminants to infiltrate into underlying soils and groundwater.

The increased airport activity facilitated by the Proposed Order could increase the potential for accidental spills or leaks from vehicles and aircraft, as well as contamination associated with de-icing activities and surface water runoff. However, existing drainage and pollution-control measures are already in place across the airport. Potentially contaminated surface water passes through the airport drainage system and fuel interceptors before discharge, reducing the likelihood of pollutants infiltrating into the ground.

Accidental spills and leaks are also managed through existing operational controls incorporated into the airport's environmental management arrangements.

Taking these existing controls into account, and that the Proposed Order does not involve the construction of new infrastructure, land take or changes in land use, the potential effect on soils, geology and groundwater is assessed as Imperceptible and Not Significant.

## 6.6 Water

The Water assessment considers the potential effects of the Proposed Order on the water environment, including rivers, groundwater, water quality, flood risk and water-dependent ecosystems. It also takes account of the requirements of the Water Framework Directive.

The Proposed Order does not involve physical development or changes to the airport drainage network and therefore would not increase the volume or rate of surface water runoff.

The Cuckoo Stream is the only watercourse located within the Dublin Airport Site. It is situated in the eastern part of the Dublin Airport Site and flows downstream before joining the Mayne River, which then continues towards Baldoyle Bay.

The main potential effects associated with the Proposed Order arise from:

- an increase in the mass of de-icing chemicals entering the airport surface water drainage system; and
- an increased risk of accidental pollution from spillages, leaks or other operational incidents.

Dublin Airport already has drainage and pollution-control systems in place to manage contaminated surface water runoff. These include collection of de-icing and anti-icing chemicals using glycol recovery vehicles, oil interceptors to remove hydrocarbons from runoff, and pollution-control facilities that can identify and segregate contaminated flows before they are stored and discharged to the public sewer in accordance with the applicable trade effluent licence.

Further drainage and pollution-control improvements are also being implemented as part of the ongoing operation and management of the airport. These include improvements to the existing pollution-control networks and systems, upgrades to operational controls and discharge arrangements, and an increase in the number of glycol recovery vehicles. These measures are being commissioned and are assumed to be in place by the time the Proposed Order comes into effect.

The longer-term Airfield Drainage Project is also intended to improve the management of contaminated surface water runoff across the airfield, including runoff containing de-icing chemicals. However, the assessment does not rely on the full Airfield Drainage Project being completed before the Proposed Order comes into effect.

Although the Proposed Order would increase the quantity of de-icing chemicals entering the drainage system during periods when aircraft de-icing is required, modelling shows that the drainage and pollution-control measures assumed to be in place by 2029 would prevent an increase in the mass of de-icer pollution discharged to receiving surface waters.

Taking these measures into account, the potential effects on the surface water quality of the Mayne, Sluice and Santry sub-basins are assessed as Negligible, resulting in an Imperceptible effect which is Not Significant.

The potential for accidental pollution from spills and leaks is managed through existing drainage and pollution-control systems and established operational procedures. These measures reduce the likelihood of pollutants reaching receiving surface waters or groundwater. The resulting effects are assessed as Not Significant, and no additional mitigation or monitoring measures are required.

The separate Water Framework Directive assessment concludes that the Proposed Order would not result in deterioration of the status of receiving water bodies.

## 6.7 Biodiversity

The Biodiversity assessment considers the potential effects of the Proposed Order on ecological features, including sites designated for nature conservation, habitats, watercourses, birds and bats.

The Current Receiving Environment and Future Receiving Environment were established using desk studies and field surveys undertaken between 2018 and 2026. The assessment also takes account of existing environmental design and management measures at Dublin Airport, including pollution-prevention measures and habitat and wildlife management programmes.

The Principal Assessment considers internationally, nationally and locally designated sites, watercourses, breeding and non-breeding birds, and bats. The main potential sources of ecological effects considered are:

- changes in air quality that could affect sensitive habitats;
- pollution of surface water, groundwater, soils or vegetation;
- direct injury or mortality of birds as a result of aircraft collisions; and
- increased noise and visual disturbance or displacement of species.

For internationally designated sites, the worst-case effects identified are Permanent Adverse effects of limited magnitude and localised extent. These would not materially affect the qualifying ecological features of the designated sites and are therefore Not Significant.

Similarly, limited and localised adverse effects are identified at Santry Demesne pNHA and its associated local designation, Bog of the Ring pNHA, Royal Canal pNHA, Liffey Valley pNHA and Grand Canal pNHA, primarily as a result of changes in air quality. These effects would not materially affect the conservation value, structure or function of these ecological features and are therefore also Not Significant.

For all other important ecological features considered in the assessment, the effects are also assessed as Not Significant.

The detailed assessment of breeding and non-breeding birds, including the assessment undertaken through the Appropriate Assessment process and Natura Impact Statement, concludes that a Negligible effect is predicted as a result of the Proposed Order.

The assessment also concludes that effects on roosting, commuting and foraging bats would be Negligible and Not Significant.

Overall, the Proposed Order is not likely to have any significant effects on biodiversity.

## 6.8 Climate

The Climate assessment considers two main issues: the effect of the Proposed Order on climate change through greenhouse gas emissions, and the resilience of airport operations to the effects of future climate change. The assessment also considers the potential for future climate change to interact with other environmental effects.

### *Greenhouse Gas Emissions*

The Proposed Order would result in an increase in greenhouse gas emissions compared with the 2029 Permitted Operation. Aviation accounts for the substantial majority of these additional emissions, with smaller contributions arising from airport operations and surface access journeys.

For the purposes of the climate assessment, greenhouse gas emissions associated with the 2029 Permitted Operation and 2029 Proposed Operation have been projected to 2050. This allows the additional emissions associated with the Proposed Order to be considered in the context of Ireland's transition towards net zero.

The assessment takes account of measures and regulatory mechanisms that are expected to reduce emissions over this period. For aviation, these include improvements in aircraft and airspace efficiency, the mandated uptake of Sustainable Aviation Fuel and the application of the EU Emissions Trading System and CORSIA. For airport operations and surface access, the assessment takes account of measures contained in daa's Carbon Reduction Strategy and the wider decarbonisation of Ireland's energy and transport systems.

Although the Proposed Order would result in additional greenhouse gas emissions, the assessment predicts an overall declining emissions trajectory to 2050. Taking account of the scale and trajectory of the additional emissions, the mitigation and control measures included in the assessment, and relevant policy and regulatory requirements, the effect of the Proposed Order on climate is assessed as Minor Adverse and Not Significant.

### *Climate Change Resilience*

The Climate Change Resilience Assessment considers how projected future climate conditions could affect the operation of Dublin Airport at the passenger throughput facilitated by the Proposed Order. The principal climate risks identified were flooding, severe weather events and extreme temperatures.

The assessment takes account of the airport's climate adaptation and operational resilience measures, including flood-management measures, management of trees and vegetation during storm conditions, and procedures and building systems for responding to extreme temperatures.

Taking these measures into account, the assessment concludes that the operation of Dublin Airport under the Proposed Order would not be significantly vulnerable to the projected effects of climate change.

The assessment also considers the potential for climate change to interact with other environmental topics and concludes that no additional significant effects are anticipated.

## 6.9 Cultural Heritage

The Cultural Heritage assessment considers the potential effects of the Proposed Order on archaeology, historic buildings and historic landscapes.

As the Proposed Order does not involve construction, demolition, ground disturbance or other physical alterations to the Dublin Airport Site, it would not result in the direct loss or physical disturbance of archaeological remains or built heritage assets. The cultural heritage baseline is expected to remain unchanged under both the 2029 Permitted Operation and 2029 Proposed Operation scenarios.

The assessment therefore focuses on potential indirect effects on the setting of heritage assets arising from changes in airport activity, particularly changes in aircraft noise and air quality.

The heritage assets considered are already located within an established airport and wider urban environment, where their settings are currently influenced by aircraft operations, road traffic, noise and emissions. The additional changes associated with the Proposed Order would not materially alter the ability to understand, experience or appreciate the significance of these heritage assets or their settings.

No significant effects on heritage assets are therefore predicted as a result of the Proposed Order.

The surface access measures considered in the Traffic and Transport assessment would also not give rise to significant operational effects on cultural heritage.

As no significant effects have been identified, no additional mitigation or monitoring measures are required.

## 6.10 Landscape and Visual

The Landscape and Visual assessment considers potential effects on the character and quality of the landscape, and on views experienced by people around Dublin Airport.

The Dublin Airport Site is already characterised by large-scale airport infrastructure, including terminals, runways, control towers, lighting, car parks, roads and extensive areas of hardstanding. The surrounding area includes agricultural land, settlements, business and commercial areas, golf courses and other established land uses. Visual receptors include nearby residents, road users, airport passengers and airport workers.

There are no designated sensitive landscapes within the Dublin Airport Site. The nearest High Amenity areas are at Ward River Valley Park and Kinsealy. A small part of the Swords Historic Landscape Character area extends into the Dublin Airport Site, although no physical development is proposed within it.

As the Proposed Order does not involve new buildings, structures or other physical development, it would not materially alter the physical fabric, character or quality of the landscape. The magnitude of landscape change is therefore assessed as Negligible, and the effect is Imperceptible and Not Significant.

The visual character of the area would also remain that of an existing operational international airport. However, the Proposed Order would result in a greater intensity of activity within existing views, including more frequent aircraft movements, increased landside traffic and increased airside operational activity.

These changes would not materially alter the nature of existing views and the resulting visual effects are assessed as Negligible and Not Significant.

## 6.11 Material Assets (Waste)

The Waste assessment considers whether the additional waste generated as a result of the Proposed Order could materially affect available waste-management capacity in Ireland, after opportunities for waste prevention, reuse and recycling have been taken into account.

The Proposed Order would result in an increase in operational waste arising as passenger throughput and airport activity increase. This includes both municipal non-hazardous waste and hazardous waste.

daa has prepared an airport-wide Dublin Airport Waste Minimisation Plan, which sets targets for reducing waste intensity and increasing recycling by 2030. These include:

- reducing operational non-hazardous municipal solid waste from 0.164 kg per passenger in 2019 to 0.116 kg per passenger by 2030; and
- recycling 60% of operational non-hazardous municipal solid waste under daa's control by 2030.

Even with the increase in passenger throughput, the additional municipal and hazardous waste generated by the Proposed Order would represent only a very small proportion of national waste arisings, capable of being managed within existing waste-management infrastructure.

The magnitude of impact on waste-management capacity is therefore assessed as Negligible, resulting in a Neutral or Slight effect which is Not Significant. No additional mitigation is required beyond the existing waste management measures and commitments set out in the Dublin Airport Waste Minimisation Plan.

## 6.12 Material Assets (Built Services)

The Built Services assessment considers the potential effects of the Proposed Order on electricity, natural gas, water supply and wastewater infrastructure at Dublin Airport.

The increase in passenger throughput to 40 mppa would result in additional demand for electricity, natural gas and water supply, together with an increase in wastewater discharge.

The assessment considers the forecast increase in demand, the existing infrastructure serving Dublin Airport, available information on the capacity and constraints of those systems, and their historic operational performance.

Dublin Airport is already served by established utility infrastructure that has accommodated substantial historic growth in airport activity. The demand for services would increase under the Proposed Operation; however, the additional requirements are not expected to materially affect the availability or operation of the electricity, natural gas, water supply or wastewater infrastructure serving the airport.

The effects on Material Assets (Built Services) are therefore assessed as Permanent, Slight Adverse and Not Significant.

## 6.13 Major Accidents and Disasters

The Major Accidents and Disasters assessment considers both the potential for the Proposed Order to be affected by existing sources of major accident or natural-disaster risk, and whether the Proposed Order could itself introduce or materially increase such risks.

The assessment considered natural and man-made hazards, including hazards arising on and off the Dublin Airport Site and those associated with airport operations. A risk-based methodology was used, involving initial screening of potential hazards followed by more detailed assessment where further consideration was required.

The assessment takes account of the existing aviation safety framework, airport design, operational procedures, emergency planning and response arrangements, and relevant regulatory controls already in place at Dublin Airport.

The Proposed Order does not involve new physical development, airport infrastructure works or changes to the airport layout; many potential hazards remain unchanged from the Permitted Operation.

Compared with the 2029 Permitted Operation, the Proposed Order would not materially alter the overall risk profile for major accidents and disasters. The existing safety, operational and emergency-response arrangements provide an appropriate framework for managing the identified hazards.

All assessed residual risk ratings are below the significance threshold adopted for the assessment. The environmental effects associated with major accidents and disasters are therefore assessed as Not Significant.

## 6.14 Population and Human Health

The Population and Human Health assessment considers the potential effects of the Proposed Order on amenity and local communities, human health and wellbeing, and employment, economic activity and tourism.

The assessment draws on the findings of other EIAR topics where these have the potential to affect people, including air quality, non-aircraft noise, aircraft noise and vibration, and climate.

The assessment found the Proposed Order would result in adverse and beneficial effects on amenity and local communities; however, it concludes no significant effects are expected.

The Proposed Order would result in both beneficial and adverse effects. Beneficial effects are identified principally in relation to employment, economic activity and tourism, and range from Imperceptible Beneficial to Moderate Beneficial.

Adverse effects arise principally through changes in transport, climate, air quality and noise and vibration. These range from Imperceptible to Moderate Adverse, with the greatest adverse effects associated with aircraft noise and the resulting human health and wellbeing pathway.

Although some adverse effects are therefore identified, none reaches the significance threshold adopted for the assessment. No Significant, Very Significant or Profound effects on population or human health are predicted, and the adverse effects of the Proposed Order are therefore assessed as Not Significant for the purposes of the EIA.

## 6.15 Impact Interactions and Cumulative Effects

The assessment considers whether environmental effects associated with the Proposed Order could combine either with other effects arising from the Proposed Order or with the effects of other developments to give rise to a significant overall environmental effect.

### *In-Combination Effects*

In-Combination Effects can occur where a receptor is affected by more than one environmental change at the same time. For example, a residential receptor may potentially experience changes in more than one environmental factor, such as noise, air quality or traffic.

The assessment therefore considers whether the combined influence of different effects associated with the Proposed Order could result in an overall effect that is greater than the individual effects considered separately.

Having considered the potential for such interactions across the environmental topics assessed in the EIAR, the assessment concludes that these effects would not interact in a manner which would result in significant in-combination effects. No Significant in-combination effects are therefore expected.

### *Cumulative Effects*

Cumulative effects can occur where the environmental effects of the Proposed Order act together with effects arising from other developments in the surrounding area.

The assessment considers whether there is potential for the effects of the Proposed Order to act together with those of existing, approved and reasonably foreseeable developments. The assessment takes into account the nature, scale, timing and location of those developments. The assessment concludes that no Significant cumulative effects are predicted.

# 7 Potential Future Developments

The assessment considers potential future development that may take place at Dublin Airport beyond the Proposed Order.

The Proposed Order itself does not authorise any future physical development or expansion of airport infrastructure. Instead, the assessment considers whether allowing passenger throughput of up to 40 mppa would constrain or prejudice potential future development of the airport.

The Proposed Order has been framed so that it would not compromise the ability of Dublin Airport to accommodate potential future increases in passenger throughput. Any future development proposals would remain subject to their own statutory approval processes and would require separate assessment of their environmental effects at that time.

Potential future developments are therefore considered only as context for the assessment of the Proposed Order and are not themselves authorised or assessed as part of it.

Consideration of those potential future developments does not alter the conclusions of the environmental assessment of the Proposed Order.

# 8 Conclusion

The environmental assessment has considered the likely effects of increasing passenger throughput at Dublin Airport to up to 40 million passengers per annum through the use of existing and permitted airport infrastructure.

The Principal Assessment compares the 2029 Proposed Operation at 40 mppa with the 2029 Permitted Operation at 32 mppa. This provides the basis for identifying the environmental effects attributable to the Proposed Order.

The assessment identifies a number of adverse and beneficial environmental effects. Adverse effects arise principally in relation to traffic and transport, aircraft noise, air quality, climate, population and human health, and increased demand for resources and services. Beneficial effects are identified principally in relation to employment, economic activity and tourism.

Where potentially significant adverse effects were identified before mitigation, particularly in relation to surface access, measures have been identified to reduce those effects. Taking account of the mitigation, management and monitoring measures incorporated into the assessment, no significant residual adverse environmental effects are predicted as a result of the Proposed Order.

The assessment also concludes that the Proposed Order would not give rise to significant effects on water, biodiversity, land and soils, cultural heritage, landscape and visual receptors, aircraft noise and vibration, waste-management capacity, built services, or in relation to major accidents and disasters. No significant impact interactions or cumulative effects are predicted.

Overall, the assessment concludes that the implementation of the Proposed Order, allowing a passenger throughput of up to 40 mppa can be accommodated within the existing and permitted operation of Dublin Airport without giving rise to significant adverse environmental effects.