22 Summary of Mitigation and Monitoring Measures

22.1 Introduction

22.1.1 This chapter of the EIAR contains a summary of the mitigation and monitoring measures that are required to avoid any likely significant effects occurring as a result of the Proposed Order.

22.1.2 This chapter does not provide detail on the current design and management measures which are already in place as part of the ongoing operation of Dublin Airport as a whole to mitigate the potential for any likely significant effects from current and future operations. These existing design and management measures are described, where relevant, in Sections X.4 (Current Receiving Environment) and X.5 (Future Receiving Environment) of the technical EIAR chapters (Chapters 6 to 19). This includes measures that are already in place and those that will be implemented prior to the Proposed Order taking effect.

22.1.3 The mitigation and monitoring measures summarised in this chapter are those that have been identified as being required in addition to the current design and management measures. This chapter also identifies the additional voluntary residential sound insulation measures committed to by daa, which are intended to provide benefits to eligible residents but are not required to mitigate significant environmental effects arising from the Proposed Order.

22.1.4 In identifying mitigation and monitoring measures for the Proposed Order, regard has been had to their relevance to the environmental effects assessed, their proportionality and their practicability of implementation in the context of the Proposed Order. Measures proposed through consultation or third-party submissions which fall outside the scope of the Proposed Order, are not within daa's control to implement, or would require separate statutory consent or regulatory processes have not been relied upon as mitigation for the purposes of this EIAR.

22.2 Summary Table

22.2.1 Table 22-1 lists the mitigation and monitoring proposed as part of the Proposed Order.

Table 22-1: Summary of Mitigation and Monitoring Measures

Chapter	Identified Effect	Mitigation	Monitoring
Chapter 6: Material Assets (Traffic and Transport)	• Increased bus passenger demand	• Additional bus services to address the identified capacity shortfall and accommodate the forecast bus passenger demand associated with the Proposed Order. • Based on results from the assessment, an increase of approximately 8% in daily bus services above the planned and committed provision would be required to accommodate the forecast 2029 Proposed Operation demand. • Further detail on additional bus services required over a 24-hour period is provided in EIAR Chapter 6: Material Assets (Traffic and Transport) – Table 6-50. • To accommodate an increase in bus services, there is also a requirement to optimise bus facilities. This includes the following measures: – Optimisation of stand usage across the GTC, T1 kerbs and Coach Park, including shared use of stands by lower-frequency operators where required. – Relocation of ticket machines and bus shelters within the GTC, where required to facilitate the optimised stand arrangement – Revised road markings within the GTC and T1 kerbs to delineate the required independent bus stands. – Application of a maximum 30-minute dwell time within the GTC and Coach Park, with longer layovers accommodated within the existing bus layover facilities in the Red Long-Stay Car Park. – Active management by daa staff of key pedestrian crossing points within the GTC during peak periods to regulate pedestrian flows and provide safe gaps for bus movements. • With the implementation of these measures, the assessment demonstrates that the existing GTC, T1 kerbs and Coach Park have sufficient operational capacity to accommodate the additional bus services required to meet the forecast demand associated with the Proposed Operation. No new infrastructure, construction works, demolition works or alterations to existing kerb lines are required to accommodate the forecast demand.	• Monitoring of the use of the existing bus layover facilities within the Red Long-Stay Car Park, with additional layover capacity to be provided if monitoring indicates that the capacity of the existing facilities is becoming constrained.
	• Increase in general traffic	• Implementation of demand management measures targeted at reducing staff car travel during the peak periods. • The following measures have been identified to reduce staff car travel and achieve the reduction in peak-period airport-related vehicle trips required to mitigate the identified effect: – Active travel – improvements to end-of-trip facilities, including bicycle parking, showers and lockers, together with improvements to walking and cycling routes within the airport campus. These measures, alongside planned and committed external infrastructure including the BusConnects Swords CBC and FCC active travel improvements on the R132, will support increased staff travel by active modes. – Modal Shift Rewards – daa staff who choose not to renew an existing parking permit, or not to take up a permit, will be offered a financial incentive to travel by sustainable modes. daa will also contribute towards the cost of annual TaxSaver public transport tickets. – Review of parking permit charges – parking permit charges will be increased, with differentiated charges applied so that permits for off-campus car parks cost less than those for on-campus car parks. – Staggered working hours – daa will promote staggered working arrangements to distribute staff travel demand across a wider period, reducing peak-hour traffic volumes and associated pressure on the local road network and key junctions serving the airport campus. • Measures involving changes to working arrangements or financial incentives can be directly implemented by daa only in relation to its own employees. Other employers operating within the airport campus will be encouraged to implement equivalent or complementary measures for their employees. • The modal shift would increase the number of bus passengers and could therefore increase pedestrian movements within the GTC. However, the active management of pedestrian crossings identified as part of the bus facilities mitigation described above would accommodate increased pedestrian movements during peak periods. • These measures can be implemented without the provision of additional transport infrastructure.	• The Monitoring Framework will be used to monitor the effectiveness of the demand management measures and changes in the key surface access indicators, including passenger and staff mode share. Monitoring will identify whether travel patterns are developing towards the BAU or High PT forecasts and will enable the demand management measures to be reviewed and adapted as necessary to maintain the required reduction in peak-period staff car travel.
Chapter 7: Air Quality	• Local Air Quality Impacts • Odour Impacts	• As the Proposed Order will not have any significant effects on Air Quality or odour, there is no requirement for mitigation to be implemented.	• No significant effects are identified therefore no monitoring is required for air quality or odour.
Chapter 8: Non-Aircraft Noise and Vibration	• Impacts from increased road traffic noise	• As the Proposed Order will not have any significant effects on Traffic Noise Emissions, there is no requirement for mitigation to be implemented.	• No significant effects are identified therefore no monitoring is required for traffic noise emissions.
Chapter 9: Aircraft Noise and Vibration	• Impacts from increased air and ground aircraft noise on population • Impacts from increased vibration	• As the Proposed Order will not have any significant effects on Aviation Noise and Vibration, there is no requirement for mitigation to be implemented. • Separately, daa has committed to implementing a voluntary Residential Sound Insulation Grant Scheme (MO SIGS) should the Proposed Order be made. The scheme would provide grants of up to €40,000 per eligible dwelling for sound insulation works, subject to eligibility criteria including aircraft noise exposure of at least 60 dB Lden. The scheme is an additional voluntary measure intended to provide benefits to eligible residents and is not relied upon as mitigation in the assessment of likely significant environmental effects. Further details are provided in Chapters 4 and	• No significant effects are identified therefore no monitoring is required for aircraft noise or vibration
Chapter 10 Land and Soils	• Accidental spills and leaks	• As the Proposed Order will not have any significant effects on Land and Soils, there is no requirement for mitigation to be implemented.	• No significant effects are identified therefore no monitoring is required for land and soils.
Chapter 11: Water	• Pollution of waterbodies from increased de-icer in surface run off • Increased risk of accidental spills and leaks	• As the Proposed Order will not have any significant effects on Water, there is no requirement for mitigation to be implemented.	• No significant effects are identified therefore no monitoring is required for water.
Chapter 12: Biodiversity	• Air quality impacts • Pollution of surface water, groundwater, soils, and/or vegetation	• As the Proposed Order will not have any significant effects on Biodiversity, there is no requirement for mitigation to be implemented.	• No significant effects are identified therefore no monitoring is required for biodiversity.

Chapter	Identified Effect	Mitigation	Monitoring
	• Direct injury or mortality from aircraft collisions with avian species (bird strike) • Increased noise and visual disturbance and/or displacement of species.		
Chapter 13: Climate	• Increase in aviation related greenhouse gas (GHG) emissions • Increased GHG emissions related to airport operations • Increased GHG emissions related to surface access	• As the Proposed Order will not have any significant effects on Climate, there is no requirement for mitigation to be implemented.	• Measures to offset GHG emissions and monitoring are proposed on an airport-wide basis and set out in the daa's Carbon Reduction Strategy.
Chapter 14: Cultural Heritage	• Impact of increased emissions to air and noise effects on heritage assets or changes to their settings	• As the Proposed Order will not have any significant effects on Cultural Heritage, there is no requirement for mitigation to be implemented.	• Monitoring measures are not required as no significant effects have been identified.
Chapter 15: Landscape and Visual	• Impacts of Proposed Order on landscape • Visual effects of the Proposed Order	• As the Proposed Order will not have any significant effects on Landscape and Visual, there is no requirement for mitigation to be implemented.	• No impacts or significant effects to landscape and visual have been identified arising from the operation of the Proposed Order, therefore, no monitoring is required
Chapter 16: Material Assets (Waste)	• Impacts on municipal waste arisings • Impacts on hazardous waste	• As the Proposed Order will not have any significant effects on Material Assets (Waste), there is no requirement for mitigation to be implemented.	• The Dublin Airport Waste Minimisation Plan14 sets a number of goals and targets that daa aspires to achieved by 2030 and daa monitors and will continue to monitor achievement against these goals and targets.
Chapter 17: Material Assets (Built Services)	• Impacts on electricity, natural gas and water consumption • Impacts on wastewater treatment facilities	• As the Proposed Order will not have any significant effects on Material Assets (Built Services), there is no requirement for mitigation to be implemented.	• Monitoring measures are not required as no significant effects have been identified.
Chapter 18: Major Accidents and Disasters	• Vulnerability of the airport to disasters • Vulnerability of the airport to on-site hazards • Vulnerability of the off-site receptors to the airport	• As the Proposed Order will not have any significant effects on Major Accidents and Disasters there is no requirement for mitigation to be implemented.	• Monitoring measures are not required as no significant effects have been identified.
Chapter 19: Population and Human Health	• Effects on amenity and local communities • Effects on human health and wellbeing • Effects on local and regional economy including employment and tourism and implications for human health	• As the Proposed Order will not have any significant effects on Population and Human Health there is no requirement for mitigation to be implemented.	• Monitoring measures are not required as no significant effects have been identified.