

**APPENDIX**

**NASF  
GUIDELINES  
OVERVIEW**



## NASF Guidelines Overview

### Guideline A: Measures for Managing Impacts of Aircraft Noise

Although the Australian Noise Exposure Forecast (ANEF) System and *Australian Standard AS 2021-2000 Acoustics – Aircraft noise intrusion – Building siting and construction* (AS2021) have both been in place for some time and recognised by a number of jurisdictions in planning decisions, it has been identified that the ANEF 20 and 25 zones do not incorporate all areas that are affected by high levels of noise.

This Guideline is intended to complement the current ANEF system, and should be incorporated into strategic planning documents to give guidance for rezoning land and assessing new applications within noise sensitive areas. Specific measurements of noise in decibels are being provided in order to assess whether rezoning or new development is appropriate in a particular location.

### Guideline B: Managing the Risk of Building Generated Windshear and Turbulence at Airports

The purpose of Guideline B is largely to assist decision-makers when assessing proposals for new buildings within the vicinity of airports with respect to whether the building will be located in the path of a cross-wind to an operational runway of an airport. The building could effectively become an obstacle and divert the flow of wind over or around the building; which will result in variances of speed along the runway. This may pose a significant safety issue to airport operations and result in windshear or turbulence.

The Guideline provides technical criteria with which to assess proposed buildings against the potential to generate windshear or turbulence, and offers design techniques in order to mitigate these effects. The document also includes mitigation options for existing buildings within the vicinity of airports.

### Guideline C: Managing the Risk of Wildlife Strikes in the Vicinity of Airports

Pursuant to Part 139 of the *Civil Aviation Safety Regulations 1998*, airports are obliged to reduce the risk of wildlife strikes to airport operations. This Guideline highlights the importance of reducing the risk of wildlife strikes by appropriately managing the surrounding land uses; particularly as there are often areas surrounding airports that are attractive to wildlife, as is the situation at Adelaide Airport. The main risks are that wildlife could cross the flight path of planes or migrate onto the airport.

Guideline C reiterates the need for airports to prepare a wildlife hazard management plan and that land use zoning within 13-kilometres of airports should be appropriately monitored. Airport managers and operators are to work with local authorities to ensure that land is appropriately used and developed within the vicinity of the airport. An inclusion with this Guideline identifies the level of risk for a number of land uses with respect to both new and existing airports, and the suitable distance of any high risk proposed development from the airport site.

### Guideline D: Managing the Risk of Wind Turbine Farms as Physical Obstacles to Air Navigation

Guideline D focuses on the effects of wind turbine farms and physical obstacles to air navigation as these structures can be hazardous to low-flying aircraft and can also affect the performance of Communications, Navigation and Surveillance equipment. These guidelines provide the framework to guide the location of new wind turbine farms to prevent interference with airport operations, and note that CASA and Airservices Australia should be informed when a wind turbine is proposed within 30-kilometres of an aerodrome.

A risk assessment is warranted for proposed development that has the potential to be hazardous to airport operations, including both the height of the proposed structure and associated lighting required for the structure. The Guideline also provides further detail for those assessing proposals for wind turbine farms or similar obstacles, and recommends that airport operators, developers and Council Planners work together to determine the best course of action.

## **Guideline E:**

### **Managing the Risk of Distractions to Pilots from Lighting in the Vicinity of Airports**

The purpose of this Guideline is to manage the risk of distractions to pilots by minimising the opportunity for pilots to mistake lighting within six-kilometres of airports as being ground lighting associated with the airport. This is particularly relevant for development proposals that seek to incorporate significant lighting onsite within the vicinity of airports, such as new freeway lighting or stadium flood lighting.

Guideline E includes a diagram of maximum light intensity surrounding airports. New development that proposes significant lighting should be reviewed in association with airport operators and CASA.

## **Guideline F:**

### **Managing the Risk of Intrusions into the Protected Airspace of Airports**

The final Guideline focuses on maintaining the safety and operational efficiency of airports by appropriately managing the height of new development within the vicinity of the airport. If risk is not appropriately mitigated prior to tall structures being developed near the airport, CASA could impose restrictions on airport operations such as reducing the runway distance that can be used.

Placing restrictions on airport operations in order to mitigate risk caused by inappropriate heights of structures can greatly reduce the efficiency of airport operations and result in operational penalties. Guideline F refers to the OLS and PANS-OPS criteria when determining the volumes and dimensions of airspace required to protect the safety of airport operations. Furthermore, in the majority of cases where a proposed structure would penetrate the 'prescribed airspace', the proponent must receive approval from the Department of Infrastructure and Regional Development to undertake the proposed development.