Australian Government
Department of Infrastructure, Transport, Cities and Regional Development

WESTERN SYDNEY
Fact Sheet

Understanding aircraft noise

Operation of the Western Sydney International (Nancy-Bird Walton) Airport will result in changes to the pattern and exposure of aircraft movements above Western Sydney through the introduction of new aircraft operations.

Communities in Western Sydney and the Blue Mountains would be impacted by noise from aircraft during take-off, landing and when in flight. The greatest impacts are predicted to be experienced in those locations closer to the airport under or near the aircraft departure and arrival routes.

The geographic extent and level of aircraft noise exposure that will result from operation of the airport is complex and depends on final flight paths, operating procedures, time of day, season, weather conditions as well as other factors.

Aircraft noise

The level of noise heard from an aircraft during take-off, landing and during flight can vary. Aircraft noise is affected by a number of factors, including:

- weather, including season, wind and cloud cover
- height of an aircraft
- changes in engine thrust
- type of aircraft
- topography

People react differently to noise and this can be influenced by many different factors, including surroundings and other activities happening in the background.

Noise amelioration

A government policy on noise amelioration will be considered closer to commencement of operation of the airport.

Curfew-free operations

Western Sydney International will operate on a curfew-free basis. Very few airports around the world, including in Australia, are restricted by a curfew. Curfew-free airports provide significant benefits to communities and economies.

Measures to mitigate the effects of aircraft noise

Planning measures

An effective way of protecting communities from aircraft noise is the application of land-use planning controls, which place restrictions on the types of buildings that can be established in areas where aircraft noise will be highest.

Flight path design

The design of flight paths for Western Sydney International will be guided by airspace design principles, including:

- ensure arrivals do not converge through a single merge point over any single residential area
- avoid direct overflight of noise sensitive facilities/areas and visually sensitive areas where possible
- provide the community with height above ground altitude information for the most common and noisiest aircraft types, particularly for areas of elevated topography
- ensure residential areas that are overflown, do not receive overflight from both arriving and departing aircraft where possible
- prioritise Continuous Climb Operations (CCO) and Continuous Descent Operations (CDO), which reduce noise and fuel use
- consider possible flight paths that assist in managing aircraft overflight noise at night or during low demand periods
- accommodate a procedure involving arrivals and departures to the southwest of the airport to manage aircraft noise at night
- avoid changes to existing noise sharing arrangements at Sydney (Kingsford Smith) Airport.

Health risk assessment for the airport

The *Environmental Impact Statement 2016* (EIS) for Western Sydney International included a health assessment that measured the potential health risks, including the health factors associated with noise impacts.

The assessment found that the increased risk of these impacts, if any, would be limited to areas around the airport site and would be largely within accepted international and national standards. In developing final flight paths, opportunities to minimise noise impacts on communities are a key consideration.