

Understanding the protected airspace for Western Sydney Airport

Protecting immediate airspace around airports is essential to ensuring and maintaining a safe operating environment and to provide for future growth. Obstructions in the vicinity of an airport, such as tall structures and exhaust plumes from chimney stacks, have the potential to create air safety hazards and to seriously limit the ability of aircraft arriving and departing from the airport to operate effectively.

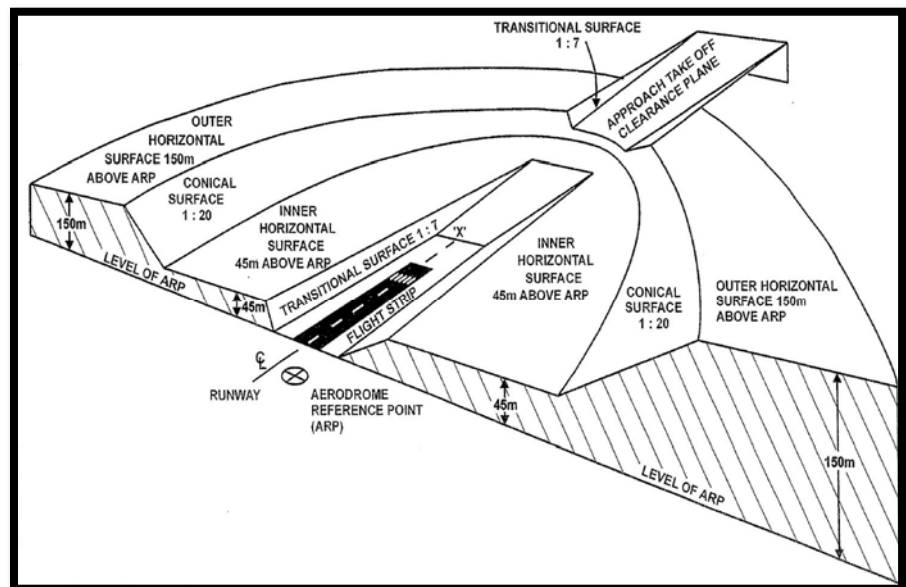
The protected airspace is known as the Obstacle Limitation Surface (OLS) and has been declared under the provisions of the *Commonwealth Airports Act 1996* and *Airports (Protection of Airspace) Regulations 1996*.

What does the OLS do?

The OLS is designed to protect aircraft flying in visual conditions in close proximity to the airport.

The OLS defines a volume of airspace above a set of surfaces that are primarily modelled upon the layout and configuration of the proposed runways. The surfaces of the OLS extend outward and upward, from ground level at the location of the proposed runways, to a distance of 15 kilometres from the Western Sydney Airport.

The OLS components consist of a series of sloping and horizontal surfaces. In the immediate vicinity of the Western Sydney Airport site the surfaces are closer to the ground, an average of 125.5 metres on the Australian Height Datum (AHD). Heights of the OLS components are given above mean sea level, using AHD elevation.



Features of the Western Sydney Airport OLS

The Western Sydney Airport OLS is based on the long-term runway layout identified in the Airport Plan, consisting of two widely spaced parallel runways of 3,700 metres in length. The OLS has been developed to International Civil Aviation Organization and Civil Aviation Safety Authority standards. The OLS for the Western Sydney Airport has the following key features.

- The OLS is based on an aerodrome elevation of 80.5 metres (AHD) at the Aerodrome Reference Point (ARP).
- The inner horizontal surface extends to 4 kilometres from the proposed runways at an altitude of 125.5 metres (AHD), or 45 metres above the ARP.
- The outer horizontal surface extends up to 15 kilometres from the aerodrome reference point at an altitude of 230.5 metres AHD, or 150 metres above the ARP.
- The inner horizontal and outer horizontal surfaces are connected by the conical surface, sloping upwards with a gradient of 1 in 20.
- Approach and take-off clearance surfaces extending from the threshold of each runway.

Each approach and take-off surface is calculated separately using the elevation of the relevant runway threshold.

The OLS overlaps with the protected airspace of nearby airports: Bankstown Airport to the east, and Camden Airport to the south. The protected airspace of these airports is at a lower altitude than the Western Sydney Airport OLS, and also needs to be considered when identifying potential controlled activities.

