

INFORMATION BRIEF	
ISSUE	LAHSO AT MELBOURNE AIRPORT
DATE	8 February 2016

### Purpose

To provide a chronology and an update on the activities undertaken by Airservices Australia in relation to Land and Hold Short Operations (LAHSO) at Melbourne Airport.

### Background

- November 2011: Runway 09/34 LAHSO was suspended due to the construction of the new Melbourne Tower
- May 2014: Runway 09/34 LAHSO operations were reinstated
- 20 October 2014: Concerns were raised at a Senate Estimates hearing regarding the use of LAHSO at Melbourne Airport.
- 4 November 2014: Senator Xenophon corresponded with the CEO reiterating the issues and seeking copies of the relevant risk assessment, safety case and CASA's dispensation from the requirements of the Aeronautical Information Publication (AIP).
- 13 November 2014: Airservices responded providing a safety case, a copy of an operational directive clarifying crosswind and downwind limitations, and advising that a targeted review of the application of Airservices safety management system to changes in LAHSO operations had been initiated by Airservices.
- 20 March 2015: The LAHSO review was completed and Airservices subsequently accepted all recommendations and work commenced work to address the actions required.
- 5 July 2015: An off-mode departure by an international heavy aircraft requiring runway 34 during LAHSO operations, resulted in a "double go-around" event. Following an initial review of the occurrence and two internal LAHSO-specific workshops on 9 and 15 July and an industry workshop on 17 July, a Temporary Local Instruction was issued on 24 July which resulted in:
  - Runway 34 departures (off mode departures) were limited to aircraft requiring that runway for operational reasons; and
  - The runway 09/34 LAHSO mode was suspended indefinitely.
- In July 2015, ATSB advised Airservices that it had commenced an investigation into this event - the report is expected mid-2016.
- 28 July 2015: CASA wrote to Airservices raising LAHSO-related safety concerns and requesting an action plan to address those concerns.

- 7 August 2015: Airservices responded to CASA with a consolidated list of the safety actions in progress.
- 1 September 2015: Airservices investigation into the 5 July double go-around event was finalised, with six findings of contributory safety factors relating primarily to phraseology, training, documentation, and decision making. Safety actions were identified to address all of the findings and these are either complete or well advanced.
- 2 November 2015: CASA wrote to Airservices with ongoing concerns about the safety of LAHSO at Melbourne airport, particularly at night. CASA's key concern was the safe management of simultaneous go-arounds from crossing runways. CASA stated its intention to issue a Direction that would "Prohibit simultaneous landings during Land and Hold Short Operations (LAHSO) at Melbourne Airport at night". Once implemented, CASA would consider revoking this if:
  - (a) Airservices provides evidence to CASA that all ATCs endorsed for Melbourne Tower Aerodrome Control (ADC) have been assessed as competent in effective night-time compromised separation techniques which include the requirements associated with the Minimum Vectoring Altitude; and
  - (b) Airservices provides evidence to CASA of the outcomes of an SMS analysis of the discrete hazard "Double go-around during LAHSO at night"; and
  - (c) Airservices identifies and implements a systemic safety solution that provides appropriate separation or segregation between aircraft conducting simultaneous go-arounds from the crossing runways at Melbourne Airport during LAHSO. In this regard, CASA is aware of Airservices' efforts to design a system that provides alternative means of air traffic segregation between arriving aircraft during LAHSO (a 'stagger' at the runway intersection). It is likely CASA will consider appropriate implementation of such a system as an acceptable systemic safety solution.
- 9 November 2015: Airservices responded to CASA's letter notifying a voluntary suspension of LAHSO at night until 31 March 2016. This decision was taken after internal safety review and coordination and consultation with our airline customers and Melbourne airport.

## Issues

- Airservices remains confident in the safety of operations at Melbourne. We have implemented a number of enhancements to LAHSO to improve the safety of our operations and there are further enhancements planned for implementation shortly.
- The ATSB investigation into the 5 July 2015 go around incident is ongoing. Airservices is cooperating fully with the investigation and will closely consider any findings of the ATSB. The ATSB has not conveyed any major concerns to Airservices to date.
- LAHSO is an internationally recognised procedure to safely manage periods of high air traffic demand. The Federal Aviation Administration FAA has advised that there are 111 aerodromes in the USA that utilise authorised LAHSO procedures.



### **Improvements implemented since 2014**

- 24 May 2015: Changes to the air traffic control ruleset clarifying potential ambiguity in relation to cross-wind, wind-shear and runway nomination.
- 24 July 2015: The use of 09/34 LAHSO mode suspended indefinitely.
- 3 September 2015: The introduction of a requirement for a shift manager to be on duty in Melbourne Tower during LAHSO operations.
- 9 November 2015: Airservices introduced a suspension of LAHSO at night until 31 March 2016
- 10 December 2015: The implementation of a requirement for traffic on Runway 34 to be processed via an instrument approach procedure during LAHSO to reduce the likelihood of a go around due to unstable approaches.
- 10 December 2015: Implementation of a requirement for LAHSO to be used only during periods of high demand.
- An annual safety review of LAHSO will be undertaken.

### **Ongoing improvement actions**

- Airservices will implement a national program to further enhance the knowledge and skills of tower controllers. This includes enhancements to night time compromised separation training involving go arounds, including LAHSO at night. The training is being developed with the active support of our airline customers and consultation with CASA has commenced. It is expected to be implemented by March 2016.
- Procedures to effectively manage "Off Mode" departures are drafted and will be implemented in March 2016.
- Airservices is further reviewing and refining the existing evidence and safety risk assessment in relation to double go-around during LAHSO, including an analysis of the impact of changes made on 10 December 2015, and the report is due in March 2016.
- Airservices has continued the development of systemic solution to introduce greater aircraft segregation (a 'stagger') in consultation with CASA. Simulation of a potential solution was conducted on 4 February 2016, with a further simulation session incorporating lessons learned scheduled for 11 February 2016. Subject to appropriate safety analysis, an operational trial of the "stagger" will commence by the end of February 2016.