

**Aviation Safety Investigation Report
199503859**

**Boeing Co
B767
Piper Aircraft Corp
Chieftain**

17 November 1995

Readers are advised that the Australian Transport Safety Bureau investigates for the sole purpose of enhancing transport safety. Consequently, Bureau reports are confined to matters of safety significance and may be misleading if used for any other purposes.

Investigations commenced on or before 30 June 2003, including the publication of reports as a result of those investigations, are authorised by the Executive Director of the Bureau in accordance with Part 2A of the Air Navigation Act 1920.

Investigations commenced after 1 July 2003, including the publication of reports as a result of those investigations, are authorised by the Executive Director of the Bureau in accordance with the Transport Safety Investigation Act 2003 (TSI Act). Reports released under the TSI Act are not admissible as evidence in any civil or criminal proceedings.

NOTE: All air safety occurrences reported to the ATSB are categorised and recorded. For a detailed explanation on Category definitions please refer to the ATSB website at www.atsb.gov.au.

The Bureau did not conduct an on scene investigation of this occurrence. The information presented below was obtained from information supplied to the Bureau.

Occurrence Number: 199503859 **Occurrence Type:** Incident
Location: Perth, Aerodrome
State: WA **Inv Category:** 4
Date: Friday 17 November 1995
Time: 1223 hours **Time Zone:** WST
Highest Injury Level: None

Aircraft Manufacturer: Piper Aircraft Corp
Aircraft Model: PA-31-350
Aircraft Registration: VH-NMP **Serial Number:** 31-7852149
Type of Operation: Charter Passenger
Damage to Aircraft: Nil
Departure Point: Manjimup WA
Departure Time:
Destination: Perth WA

Aircraft Manufacturer: Boeing Co
Aircraft Model: 767
Aircraft Registration: V8-RBH **Serial Number:**
Type of Operation: Air Transport International Passenger Scheduled
Damage to Aircraft: Nil
Departure Point: Perth WA
Departure Time: 1225 WST
Destination: Brunei

Approved for Release: Tuesday, January 7, 1997

FACTUAL INFORMATION

The Piper Navajo Chieftan (PA-31) was inbound to Perth from the south and was descending to 4,000 ft. The approach west controller (AppW) initially intended to put the aircraft onto a right downwind for runway 21; however, due to traffic near the city, he co-ordinated with the approach east controller (AppE) for the aircraft to track via a left downwind. This was accepted by AppE and the pilot was transferred to his frequency at 1213 WST.

The Boeing 767 (B767) was taxiing for runway 21 for a departure to the west. At 1220, AppW advised the aerodrome controller that the departure clearance for the B767 was to maintain runway heading and to maintain 6,000 ft. This clearance was issued to the crew at 1221, when the B767 was cleared for take-off.

At the same time, and with the aim of expediting its landing, AppE arranged with AppW for the PA31 to change to a right circuit for runway 21. The aircraft was still south of the airport when AppE advised the pilot of this change and instructed him to turn left onto a heading of 340 degrees and to descend to 2,500 ft.

At 1223, the aerodrome controller contacted AppE and asked what the intention was with the PA31. Shortly after, AppE noticed an aircraft (the B767) departing and asked AppW what instructions the crew had received. Almost simultaneously, the aerodrome controller contacted AppE and told him to turn the PA-31. AppE immediately instructed the PA-31 pilot to turn right onto a heading of 070 degrees and asked if the pilot had the B767 in sight. The pilot replied that he did.

AppE then asked the tower to maintain the B767 at 2,000 ft. The aerodrome controller instructed the crew of B767 crew to turn right onto a heading of 240 degrees and then informed AppE that he could provide visual separation. The two aircraft passed with approximately 1 NM lateral separation and 300 ft vertical separation.

ANALYSIS

Approach/Departure controllers record information on flight progress strips to assist in the processing of aircraft. AppE and AppW sit side by side and use a common central strip holding bay for the display of active strips. A feature of this display is a "next" designator which houses the current arrival/departure sequence. When busy, this bay can become overcrowded with strips and they are often placed elsewhere on the console for convenience. AppW could not recall whether the strip for the B767 had been placed under the "next" designator in the central bay. AppW omitted to take the B767 into consideration when he gave approval to AppE for the PA-31 to track for a right downwind for runway 21.

AppE was unsure of the position of the strip for the B767 or whether he had looked at the "next" designator bay prior to co-ordinating a change of circuit direction for the PA-31. The alteration of the track of the PA-31 resulted in the tracking of the aircraft across the departure track of aircraft taking off from runway 21.

SIGNIFICANT FACTORS

1. The procedures adopted by the approach east controller resulted in the PA-31 being directed to track across the departure path of aircraft departing from runway 21.
2. The approach west controller overlooked the impending departure of the B767 from runway 21 when he approved the request from the approach east controller to track the PA-31 for a right downwind for runway 21.
3. The central strip holding bay on the approach console was overcrowded and did not readily indicate all aircraft pertinent to the traffic situation.

SAFETY ACTION

As a result of the investigation, several safety actions were initiated by both Airservices Australia and the Bureau.

Airservices Australia

Instrument departure procedures for Jandakot aerodrome have been published which have minimised the variation of random departure paths.

Bureau of Air Safety Investigation

The Bureau issued interim recommendation IR960044 on 14 May 1996.

"IR960044

"The Bureau of Air Safety Investigation recommends that Airservices Australia conduct a review of Perth terminal airspace and procedures with a view to reducing the number of conflicting flight paths and the amount of intra-unit co-ordination. Such a review should include:

- jurisdiction over the runway heading departure track from each runway;
- airspace division between the approach/departure control positions;
- improved SID/STAR interface; and
- the introduction of standardised holding patterns."

Airservices Australia replied on 16 June 1996 as follows:

"I refer to your Air Safety Recommendation No. IR960044 involving VH-NMP and V8-RBH at Perth and concur with the recommendations.

"Your Interim Recommendations to review aspects of Perth Terminal Airspace and Procedures have generally been addressed. Ongoing planning of the revised airspace and procedures under ROTAP (Restructure Of Terminal Area Perth) will reflect other recommendations provided they are predicted to be compatible with forthcoming and future developments of the ROTAP structure requirements.

"The introduction of additional outer holding patterns is under consideration. Prior to any selection of holding points, a full assessment of any implications as to their placement will need to be made to ensure compatibility with the future airspace revisions.

"SID and STAR changes have been actioned under ROTAP, an Environment Impact Statement has been submitted, and implementation is planned for December 1996. This will provide an improved interaction of Arrival and Departure traffic at Perth.

"Temporary Local Instruction (TLI) WADO/95/023, issued 20 Dec 1995, redefines the areas of responsibility. A more comprehensive documentation of procedures and airspace divisions will be incorporated progressively with ROTAP amendments. The TLI addresses:

- enhancements to jurisdiction over the runway heading departure tracks from each runway;
-
-

- enhancements to airspace division between Approach East and Approach West, and Departures Control positions;
- Procedure, Co-ordination, and flight Progress Strip annotation requirements."

This response was classified as CLOSED - ACCEPTED.

Other aspects of the investigation involving the provision of radar advisory services by approach/departure control are still being researched by the Bureau and any safety outputs from this research will be published in the Quarterly Safety Deficiency Report.

