



Australian Government

Australian Transport Safety Bureau

Near collisions involving Piper PA-28-151, VH-SEW; Cessna 172, VH-JBC; and Cessna 182, VH-BMS

overhead Parramatta, New South Wales, on 15 April 2020

ATSB Transport Safety Report

Aviation Occurrence Investigation (Discontinued)

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Addendum

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Discontinuation notice

Section 21 (2) of the *Transport Safety Investigation Act 2003* (TSI Act) empowers the ATSB to discontinue an investigation into a transport safety matter at any time. Section 21 (3) of the TSI Act requires the ATSB to publish a statement setting out the reasons for discontinuing an investigation. The statement is published as a report in accordance with section 25 of the TSI Act, capturing information from the investigation up to the time of discontinuance.

Overview of the investigation

The occurrence

On 28 April 2020, the ATSB commenced a transport safety investigation into a near collision involving 3 aircraft near Bankstown Airport, New South Wales on 15 April 2020. At that time, all 3 aircraft were converging on the Paramatta checkpoint within the Bankstown Airport lane of entry (LOE),¹ which was in non-controlled Class G airspace.

VH-SEW

At about 1315 Eastern Standard Time,² the pilot of a Piper PA-28-151 aircraft, registered VH-SEW (SEW), departed Camden Airport on a private flight under visual flight rules (VFR).³ The purpose of the flight was to complete the 'Victor 1 South'⁴ VFR coastal route and then return to Camden. After take-off, the pilot tracked to Prospect Reservoir at 2,300 ft. Upon reaching Prospect Reservoir, the pilot changed their radio to the Bankstown Tower frequency to monitor traffic inbound to Bankstown Airport. They then turned towards the Parramatta central business district⁵ to join the LOE northbound. The pilot changed their radio to the Sydney Centre frequency after passing Parramatta.

VH-JBC

Shortly after SEW took off, the instructor and student pilot of a Cessna 172S aircraft, registered VH-JBC (JBC), also departed Camden on a navigation check flight to Cessnock Airport. JBC was also tracking northbound via Prospect Reservoir to join the LOE at Parramatta. When about 3 NM (6 km) south of Prospect Reservoir, the student pilot turned the aircraft towards Parramatta. The student pilot had set Bankstown Tower on their primary radio and was monitoring Sydney Centre on their secondary radio.

VH-BMS

At about 1328, the instructor and student pilot of a Cessna 182 aircraft, registered VH-BMS (BMS), departed Bankstown Airport on a pre-commercial flight test to Remlap Park Airport via the LOE. BMS joined the LOE northbound at the perimeter of the Bankstown control zone and tracked to Parramatta. The crew were monitoring the Sydney Centre frequency.

Figure 1 shows the approximate tracks of the 3 aircraft.

¹ Lane/s of entry (LOE): a lane or lanes established to permit passage to and from specified Class D control zones (CTR) such as Bankstown Airport, without entering an adjacent Class C or military CTR. The vertical limits provide separation from overlying control or restricted areas. The Bankstown Airport LOE was a fairly narrow corridor between Sydney CTR to the east and the Richmond CTR to the west.

² Eastern Standard Time (EST): Coordinated Universal Time (UTC) + 10 hours.

³ Visual flight rules (VFR): a set of regulations that permit a pilot to operate an aircraft only in weather conditions generally clear enough to allow the pilot to see where the aircraft is going.

⁴ Victor One is a VFR coastal route east of the Sydney control zone between Long Reef and Jibbon Point. The Sydney CTR and the Victor 1 route are depicted on the Sydney visual terminal chart.

⁵ Parramatta was a check point within the LOE northbound.

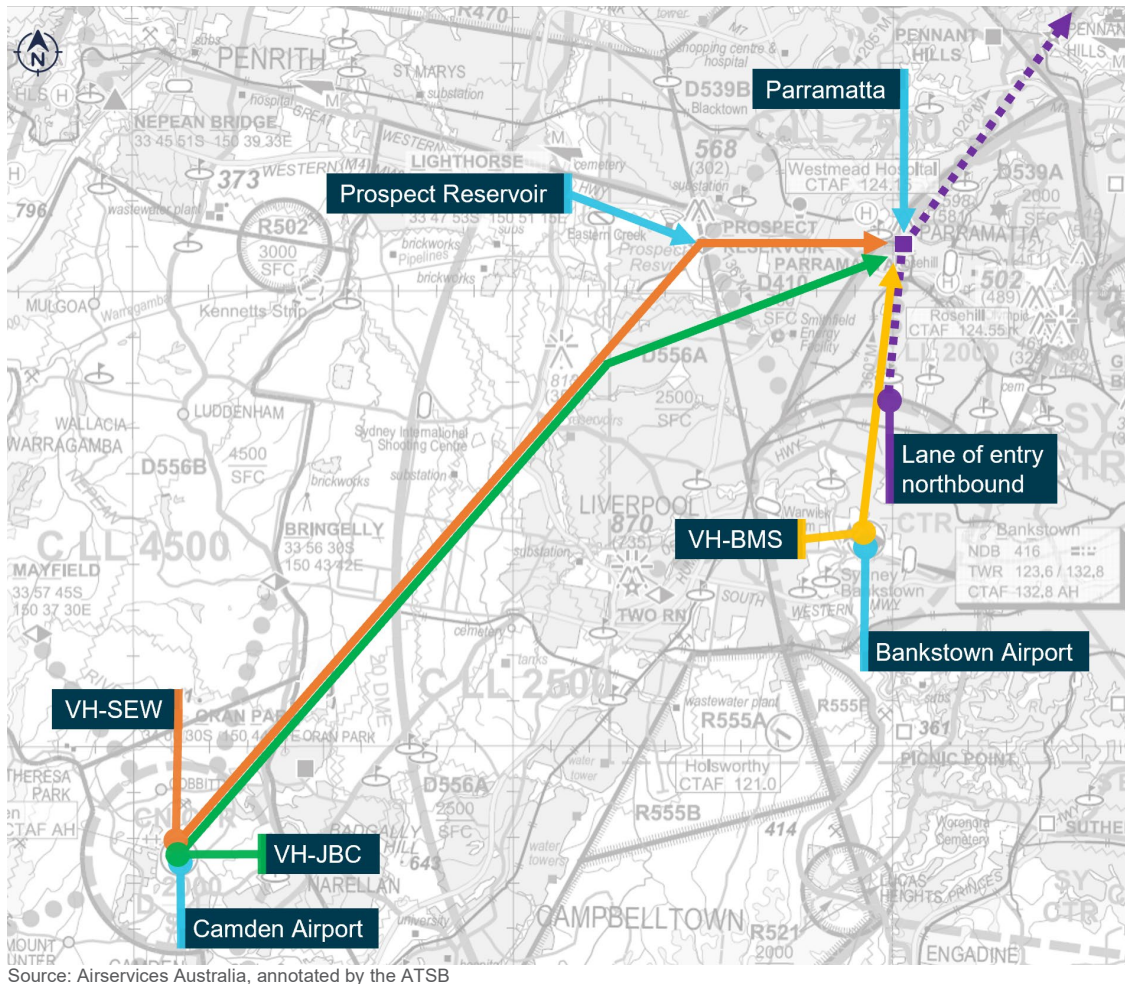
The incident

At about 1330, the instructor in JBC identified traffic (being SEW) in the 9 o'clock⁶ position and confirmed this with the student pilot. Shortly after, the instructor observed SEW descend 'rather sharply' and they lost sight of the aircraft in the urban background. The student pilot slowed the aircraft before the instructor observed SEW climb from the left and in front of JBC in close proximity. The instructor took control of the aircraft and manoeuvred to avoid SEW. The pilot of SEW reported that they had not seen any other aircraft operating in the area at that time. Air traffic control radar data showed that SEW and JBC were both at 1,900 ft, with a minimum horizontal separation of 0.2 NM (0.4 km).

As BMS approached Parramatta, the student verbally indicated that they had sighted 2 aircraft ahead (SEW and JBC). The student elected to maintain 1,700 ft. They continued up the LOE and commenced overtaking JBC. However, the manoeuvre made by JBC to avoid SEW put JBC in close proximity to BMS. At about 1331, the radar data showed a minimum vertical separation of 200 ft and horizontal separation of 0.2 NM (0.4 km) between JBC and BMS. The instructor of JBC then requested flight following⁷ from Sydney Centre to assist with their awareness of other traffic.

No broadcasts were made by either of the pilots when approaching and transiting the LOE.

Figure 1: Approximate aircraft flight paths



Source: Aircservices Australia, annotated by the ATSB

⁶ O'clock: the clock code is used to denote the direction of an aircraft or surface feature relative to the current heading of the observer's aircraft, expressed in terms of position on an analogue clock face. Twelve o'clock is ahead while an aircraft observed abeam to the left would be said to be at 9 o'clock.

⁷ Flight following: the provision of an ongoing surveillance information service.

Investigation activities

During the investigation, the ATSB:

- interviewed the pilot in command of each aircraft
- reviewed air traffic control recordings
- reviewed ATSB occurrence data of similar events
- consulted several flying schools and aero clubs
- reviewed the guidance available to pilots operating within the vicinity of Bankstown Airport and the LOE.

ATSB observation

The ATSB found that the pilots were relying on unalerted see-and-avoid principles for identifying other aircraft. This limited their situational awareness when converging on the Paramatta checkpoint in the Bankstown Airport lane of entry and resulted in the aircraft coming into close proximity.

Safety message

The practice of see-and-avoid has long been recognised as the primary method for minimising the risk of collision when flying in visual meteorological conditions;⁸ it is considered a crucial element of a pilot's situation awareness. The effective use of such is particularly crucial in Class G airspace, where aircraft separation is the pilot's responsibility.

An ATSB research report titled [Limitations of the See-and-Avoid Principle](#), showed that, when searching for traffic, alerted see-and-avoid (when a radio is used in combination with a visual lookout) is 8 times more effective than unalerted see-and-avoid (when no radio is used). However, pilots should be mindful that the absence of a traffic broadcast does not necessarily mean the absence of traffic. Pilots should remain vigilant and employ both unalerted and alerted see-and-avoid principles to ensure the greatest level of traffic awareness is achieved.

Reasons for the discontinuation

Based on a review of the available evidence, the ATSB considered it was unlikely that further investigation would identify any systemic safety issues or important safety lessons. Consequently, the ATSB has discontinued this investigation.

The evidence collected during this investigation remains available to be used in future investigations or safety studies. The ATSB will also monitor for any similar occurrences that may indicate a need to undertake a further safety investigation.

The ATSB has briefed the Civil Aviation Safety Authority about some of its observations and potential learnings. However, it considered that broader communication of this information would not be of significant benefit to other parties.

⁸ Visual meteorological conditions (VMC): an aviation flight category in which VFR flight is permitted – that is, conditions in which pilots have sufficient visibility to fly the aircraft while maintaining visual separation from terrain and other aircraft.