



Australian Government

Australian Transport Safety Bureau

Airspace related event – Amateur Built Van's RV-8, VH-YGY

near Redcliffe aerodrome, Queensland, 13 May 2012

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Airspace related event – Amateur Built Van’s RV-8, VH-YGY

AO-2012-067

What happened

On 13 May 2012, a Cessna Aircraft Company 208, registered VH-DZQ (DZQ), was conducting parachute operations at Bells Beach¹, near Redcliffe aerodrome, Queensland (Figure 1). At about 1229 Eastern Standard Time², DZQ departed Redcliffe aerodrome with nine parachutists for a parachute drop (drop) from Flight Level (FL)³ 140 under the Visual Flight Rules (VFR).

Redcliffe CTAF



Source: Aairservices Australia

DZQ was equipped with two very high frequency (VHF) radios, COMM 1 and COMM 2. While in controlled airspace, COMM 1 was selected to the Brisbane Approach frequency 124.7 and COMM 2 was used for communication on three frequencies alternately (Brisbane Centre 125.7, the Redcliffe Common Traffic Advisory Frequency (CTAF)⁴ 127.15 and the ground control frequency⁵).

At about the same time, an amateur built Van’s RV-8 aircraft, registered VH-YGY (YGY), was operating near Archerfield aerodrome as part of a private VFR scenic flight around the Brisbane area. On board were a pilot and one passenger. YGY was equipped with one VHF radio. The radio was serviceable although the aircraft’s transponder was reported as intermittent by air traffic control.

Four minutes before dropping the parachutists, at about 1244, the pilot of DZQ made a broadcast on the Redcliffe CTAF advising that nine canopies (i.e. nine parachutists) would drop from FL 140 at Bells Beach. There was no response on the CTAF. The pilot then switched COMM 2 to Brisbane Centre to make a three minutes before parachuting drop call, before switching back to monitor the CTAF.

At 1244, YGY was operating in the Archerfield area with the pilot monitoring the Archerfield Tower frequency.

At 1246, after completing all broadcasts regarding the parachute operation, the pilot of DZQ was cleared for the drop by Brisbane Approach. At around the same time, the pilot of YGY switched his radio to monitor Brisbane Centre and headed towards the Redcliffe area at about 1,000 ft.

At 1249, the parachute drop was completed and the pilot of DZQ switched COMM 2 to the CTAF and broadcast that nine parachutes were in the air from FL 140 at Bells Beach. DZQ then returned to Redcliffe aerodrome. At that time, the pilot of YGY was monitoring the Brisbane Centre frequency as the aircraft had not yet entered the Redcliffe CTAF.

Near the Bald Hills Mast (Figure 1) at about 1250, the pilot of YGY switched the radio to the Redcliffe CTAF and broadcast his intent to track along the coastline. DZQ did not hear YGY’s CTAF broadcast.

¹ Bells Beach is 6 km south south-east of the Redcliffe aerodrome, at 27°15' 26"S; 153°05' 25"E.

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

³ At altitudes above 10,000 ft in Australia, an aircraft’s height above mean sea level is referred to as a flight level (FL). FL 370 equates to 37,000 ft.

⁴ Common Traffic Advisory Frequency (CTAF) is the name given to the radio frequency used for aircraft-to-aircraft communication in the vicinity of aerodromes without a control tower.

⁵ Ground control was a company frequency for the drop zone safety officer who monitored conditions on the drop zone.

At about 1252, as YGY flew along Bells Beach, the passenger saw a parachute above the aircraft and advised the pilot. On looking up, the pilot saw four parachutes, the closest being on the left of the aircraft. The pilot made a slight right turn away from the parachutist, being mindful of the Brisbane control zone boundary on his right. After passing the parachutes, YGY continued the flight and landed without further incident.

PIC of VH-YGY recollection of events

The pilot of YGY did not hear any broadcasts about the parachute operation on either Brisbane Centre or the Redcliffe CTAF.

The pilot further stated that there was no NOTAM⁶ issued about parachute operation on Bells Beach and that the drop zone location was not marked with a parachute symbol on the Brisbane Visual Terminal Chart (VTC)⁷ (Figure 1).

Parachutist recollection of events

At about 1,200 ft on descent under canopy, the parachutist heard an engine noise and then saw an aircraft flying directly toward him. The parachutist was at about 1,000 ft when the aircraft passed about 150 to 200 ft below and about 50 ft to his left.

The parachutist noted that it could take between six and eight minutes from the time the last parachutist exited the aircraft until that parachutist landed.

Radio broadcasts

Before the drop, the pilot of DZQ made a broadcast on the Redcliffe CTAF and the Brisbane Centre frequency as required by the Civil Aviation Safety Authority (CASA)⁸ and in accordance with company policy. Neither of those calls were heard by the pilot of YGY as he was operating away from the drop zone area at that time and was consequently monitoring a different radio frequency when each broadcast was made.

Location of parachute operations

Airservices Australia (Airservices)⁹ had a Letter of Agreement (LOA)¹⁰ with the parachute operator in relation to the drop zones in the Redcliffe area. There were four approved drop zones – Castlereagh Point, Queens Beach, Suttons Beach and Bells Beach (Figure 1).

Of the four drop zones, only Castlereagh Point was marked on the VTC. Further, the four drop zones were not marked with parachute symbols on the VTC. The only parachute area marked with a symbol in the Redcliffe area, to the west of the Redcliffe aerodrome, had not been used for at least eight years (Figure 1).

DZQ operated in accordance with the LOA.

⁶ A notice to airmen (NOTAM) is a notice containing information that is of direct operational significance and which may immediately affect aircraft operations.

⁷ The VTC is a chart which provides both aeronautical and topographical information at a scale of 1:250,000 for VFR operations in the vicinity of major aerodromes. In some cases, these charts show detail of tracks to be flown and significant landmarks which are used by pilots of VFR aircraft to avoid inadvertent penetration of controlled airspace.

⁸ Section 10 of Instrument number CASA 405/09.

⁹ Airservices Australia provides air traffic services and is responsible for the Aeronautical Information Publication (AIP) which includes VTCs.

¹⁰ Letter of Agreement number LOA_3209, effective from 4 November 2010.

Figure 1: Diagram of the Redcliffe CTAF area



Source: Airservices Australia

Legend:

- 1. Castlereagh Point (27°11' 30"S; 153°06' 38"E)
- 2. Queens Beach (27°12' 25"S; 153°06' 59"E)
- 3. Suttons Beach (27°14' 07"S; 153°06' 55"E)
- 4. Bells Beach (27°15' 26"S; 153°05' 25"E)
- 5. Bald Hills Mast
- 6. Parachute symbol near Redcliffe aerodrome

ATSB comment

Pilots are responsible for obtaining information necessary to make operational decisions. Before beginning a flight, a pilot in command must study all available information appropriate to the intended operation. The pilot of YGY had reviewed available operational information prior to the flight. However the location of parachute operations in the Redcliffe area was not marked on the VTC, nor was a NOTAM issued so the pilot could not assess and mitigate the potential risk of his planned route.

Broadcasts prior to and following the drop were made by the pilot of DZQ in accordance with CASA requirements. However, these were not heard by the pilot of YGY as he was monitoring a different radio frequency at the time.

In this instance, the vigilance of the passenger ensured that the pilot of YGY had sufficient time to manoeuvre away from the parachutes, ensuring that the aircraft and the parachutist remained separated.

Safety action

Whether or not the ATSB identifies safety issues in the course of an investigation, relevant organisations may proactively initiate safety action in order to reduce their safety risk. The ATSB has been advised of the following proactive safety actions in response to this occurrence.

Australian Parachute Federation

As a result of this occurrence, the Australian Parachute Federation (APF)¹¹ has advised the ATSB that they are taking the following safety actions:

Amendments to the AIP

The APF will liaise with the South Queensland Regional Airspace and Procedures Advisory Committee (RAPAC)¹² and the Office of Airspace Regulation (OAR)¹³ within CASA to amend the Aeronautical Information Publication (AIP) to:

- On the VTC, remove the parachute symbol to the west of Redcliffe aerodrome and add symbols to denote the drop zones detailed in the Airservices LOA; and
- In the En Route Supplement Australia (ERSA)¹⁴, amend the location of skydiving operations in the vicinity of Redcliffe aerodrome in the entry for that aerodrome.

Education program for local operators

The APF will facilitate an education program on skydiving activities in the Redcliffe CTAF for aircraft operators based at aerodromes in the Brisbane area.

NOTAM release

The APF are liaising with the CASA OAR on the correct procedure for the release of a NOTAM to cover the period until the publication of the amended VTC and ERSA in June 2013.

Safety message

The incident highlights the importance of accurate information being available to pilots to facilitate an adequate pre-flight brief. The correct placement of parachute symbols on the Brisbane Visual Terminal Chart (VTC) or a NOTAM on current parachute operations would have alerted the pilot of YGY to the potential for parachutists in the Bells Beach area.

CASA have published a number of Civil Aviation Advisory Publications (CAAPs) on the importance to pilots of a continuous visual scan and not relying solely on radio broadcasts for traffic advice in the vicinity of non-towered aerodromes.

The following publications provide useful information on the limitations of see-and-avoid and the importance of an effective visual scan technique:

- CASA Publications 166-1(0) – *Operations in the vicinity of non-towered (non-controlled) aerodromes* and 166-2(0) – *Pilots' responsibility for collision avoidance in the vicinity of non-towered (non-controlled) aerodromes using 'see-and-avoid'* are available at: www.casa.gov.au/scripts/nc.dll?WCMS:STANDARD::pc=PC_91054

¹¹ The APF controls skydiving and parachuting at most civilian operations in Australia. With the approval of CASA, the APF sets standards of operation, conducts competitions, issues licences and instructor ratings, conducts exams and distributes various publications to keep its members informed of current events and safety standards.

¹² RAPACs are primarily state-based forums for discussion of all matters relating to airspace and related procedures in Australia, and specifically in their areas of responsibility. Membership is open to all significant airspace users through their major industry associations/organisations or independently.

¹³ Within CASA, the Office of Airspace Regulation (OAR), a distinct operational unit, is responsible for regulating Australian airspace. There are members of the Australian Defence Force embedded within the OAR.

¹⁴ The ERSA is an airport directory for Australian aerodromes. It has pictorial presentations of all licensed aerodromes and includes aerodrome physical characteristics, hours of operation, visual ground aids, air traffic services, navigation aids and lighting.

- *Limitations of the see-and-avoid principle* (1991) is available at:
www.atsb.gov.au/publications/2009/see-and-avoid.aspx

Special Operational Information provided by Airservices titled *Sport Parachuting Operations* is available at:

www.airservicesaustralia.com/publications/special-operational-information/

Details of the radio broadcasts required by CASA in relation to parachute operations can be found at:

www.comlaw.gov.au/Details/F2009L03395

Aircraft details

Manufacturer and model:	Amateur Built Aircraft Van's RV-8	
Operator:	Owner	
Registration:	VH-YGY	
Type of operation:	Private	
Location:	155° M 6 km from Redcliffe aerodrome, Queensland	
Occurrence type:	Airspace related event	
Persons on board:	Crew – 1	Passengers – 1
Injuries:	Crew – nil	Passengers – nil
Damage:	None	

About the ATSB

The Australian Transport Safety Bureau (ATSB) is an independent Commonwealth Government statutory agency. The Bureau is governed by a Commission and is entirely separate from transport regulators, policy makers and service providers. The ATSB's function is to improve safety and public confidence in the aviation, marine and rail modes of transport through excellence in: independent investigation of transport accidents and other safety occurrences; safety data recording, analysis and research; and fostering safety awareness, knowledge and action.

The ATSB is responsible for investigating accidents and other transport safety matters involving civil aviation, marine and rail operations in Australia that fall within Commonwealth jurisdiction, as well as participating in overseas investigations involving Australian registered aircraft and ships. A primary concern is the safety of commercial transport, with particular regard to fare-paying passenger operations.

The ATSB performs its functions in accordance with the provisions of the *Transport Safety Investigation Act 2003* and Regulations and, where applicable, relevant international agreements.

The object of a safety investigation is to identify and reduce safety-related risk. ATSB investigations determine and communicate the safety factors related to the transport safety matter being investigated.

It is not a function of the ATSB to apportion blame or determine liability. At the same time, an investigation report must include factual material of sufficient weight to support the analysis and findings. At all times the ATSB endeavours to balance the use of material that could imply adverse comment with the need to properly explain what happened, and why, in a fair and unbiased manner.

About this report

Decisions regarding whether to conduct an investigation, and the scope of an investigation, are based on many factors, including the level of safety benefit likely to be obtained from an investigation. For this occurrence, a limited-scope, fact-gathering investigation was conducted in order to produce a short summary report, and allow for greater industry awareness of potential safety issues and possible safety actions.