



Australian Government

Australian Transport Safety Bureau

Landing accident involving a Kavanagh Balloons D-84, VH-YPI

10 km south-south-west of Canowindra Aeroplane Landing Area (ALA), New South
Wales on 19 May 2014

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Addendum

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Landing accident involving a Kavanagh Balloons D-84, VH-YPI

What happened

On 19 May 2014 at about 0705 Eastern Standard Time, a Kavanagh Balloons D-84, registered VH-YPI, departed 1.5 km west of Canowindra Aeroplane Landing Area (ALA), New South Wales, on a training flight with the instructor and student pilot on board. The flight was conducted in visual meteorological conditions.

During the flight, the student conducted a number of approaches to land, but levelled off with intentional overshoot just above ground level. About 50 minutes into the flight, a number of possible landing areas were selected. The balloon flew low and level and a landing area that favoured the surface wind conditions was selected. A normal approach was made in a 10 kt wind using windy landing procedures. The balloon flew over a line of trees on the eastern side of the landing area and then descended. At about 30 ft above the ground, the student indicated to the instructor that they would be landing and turned off the burner pilot lights. At about 6 ft above the ground, the student pulled the smart vent¹ to land. The basket contacted the ground and the instructor was thrown forward and out of the basket while the student remained in the basket. The basket hit the instructor who was lying on the ground and the basket was dragged over him. The student continued to vent the balloon and it stopped a further 20 m downwind at about 0805 and 10 km south-south-west of Canowindra ALA (Figure 1).

The instructor was seriously injured and transported to hospital, the student pilot was uninjured and the balloon was not damaged.

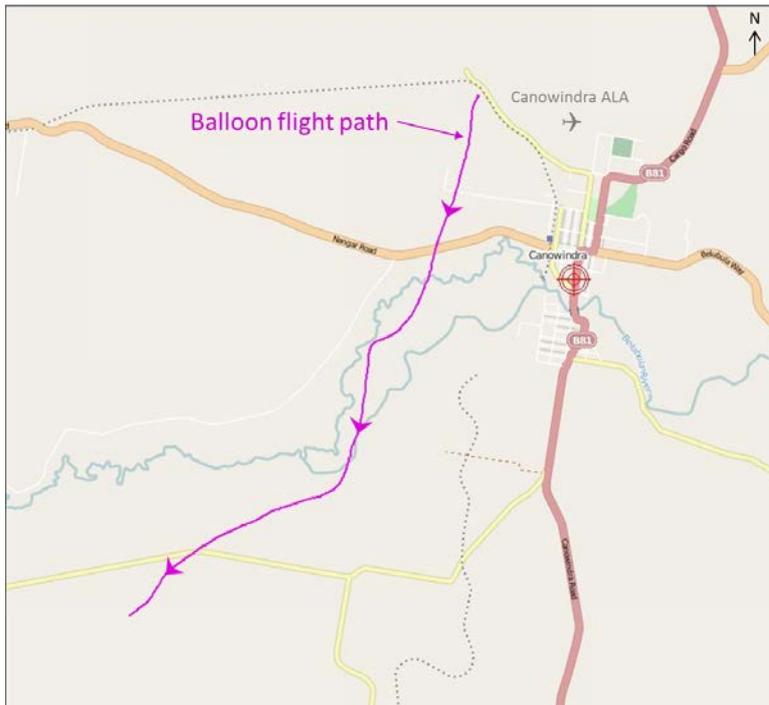
VH-YPI



Source: George Garcia

¹ The smart vent is a fast deflation system that is located at the top of the envelope of the hot air balloon. It allows rapid venting of gas, which may be needed on landing, and may be reset to maintain the last selected position

Figure 1: VH-YPI flight path



Source: ATSB

Instructor comment

The instructor reported that, during the flight, he had instructed the student on a windy landing procedure that was a requirement of the student’s training.

The instructor indicated that the weather at the departure point was calm on the ground, with about 3 kt wind speed from the north, from about 300 ft above the ground. At the landing area, the wind was from the north-east and there were no significant geographic features that would change the wind direction.

The instructor reported that he could remember providing venting instructions during the landing and after he was ejected from the basket but that the rest of the landing was a bit hazy.

Student pilot comment

The student pilot reported that the training flight was planned to be an hour, with the aim of reviewing approach and landing techniques. During the flight, there was discussion on the windy landing procedure and the use of the smart vent.

The student indicated that there was nothing unusual about the landing that may have resulted in the accident and that when a balloon lands in windy conditions the basket momentarily stops and tips over. If the people on board are not in the correct landing position or do not have a firm hold of the internal hold points, their momentum continues to carry them forward.

Safety message

The accident highlights that it is important for everyone in the balloon basket to assume and maintain the landing position and to hold on tight until the balloon fully stops.

The Australian Balloon Federation Pilot Training Manual Part 5 *Aerostatics and Airmanship* contains the following relevant information in regards to balloon landings:

- If the wind speed is moderate at landing, the deflating envelope may pull the basket onto its side and drag it along until friction with the ground stops further movement.

- Landings can vary widely according to the weather conditions and space available. It is good practice to ‘set up’ your landing well ahead, On board preparations should be completed in advance so the pilot can concentrate fully on the landing knowing passengers and gear are secure.
- Prior to Landing ensure passengers have located hand grips and have a firm grip.
- Landing positioning for a normal landing. Hold on and stand with knees together and slightly flexed, brace to anticipate sudden body movement forward as basket touches the ground in all landings.
- Landing positioning for drag landing. Hold on and resist temptation to put hands out as basket lays over. Stand with knees together and slightly flexed, brace to anticipate sudden body movement forward as basket touches the ground in all landings. Adopt a slightly lower position in basket.
- Landing positioning for hard landing. As for normal landing but warn of hard contact and vital importance to "keep holding on". Stand with knees together and slightly flexed, brace to anticipate sudden body movement forward as basket touches the ground in all landings.

The Australian Balloon Federation Pilot Training Manual Part 5 *Aerostatics and Airmanship* is available at www.abf.net.au/.

The Federal Aviation Administration *Balloon Flying Handbook FAA-H-8083-11A* also contains information for pilots about balloon landings and is available at www.faa.gov/regulations_policies/handbooks_manuals/aircraft/.

General details

Occurrence details

Date and time:	19 May 2014 – 0805 EST	
Occurrence category:	Accident	
Primary occurrence type:	Collision with terrain	
Location:	10 km south-south-west of Canowindra Aeroplane Landing Area (ALA), New South Wales	
	Latitude: 33° 36.80' S	Longitude: 148° 35.22' E

Balloon details

Manufacturer and model:	Kavanagh Balloons	
Registration:	VH-YPI	
Serial number:	D84-460	
Type of operation:	Flight training	
Persons on board:	Crew – 2	Passengers – 0
Injuries:	Crew – 1	Passengers – 0
Damage:	None	

About the ATSB

The Australian Transport Safety Bureau (ATSB) is an independent Commonwealth Government statutory agency. The ATSB 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.