Australian Government
Australian Transport Safety Bureau

Wirestrike involving a Kavanagh Balloons B-350, VH-JDI

Broke, New South Wales, 6 December 2013

ATSB Transport Safety Report
Aviation Occurrence Investigation
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Addendum

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Wirestrike involving a Kavanagh Balloons B-350, VH-JDI

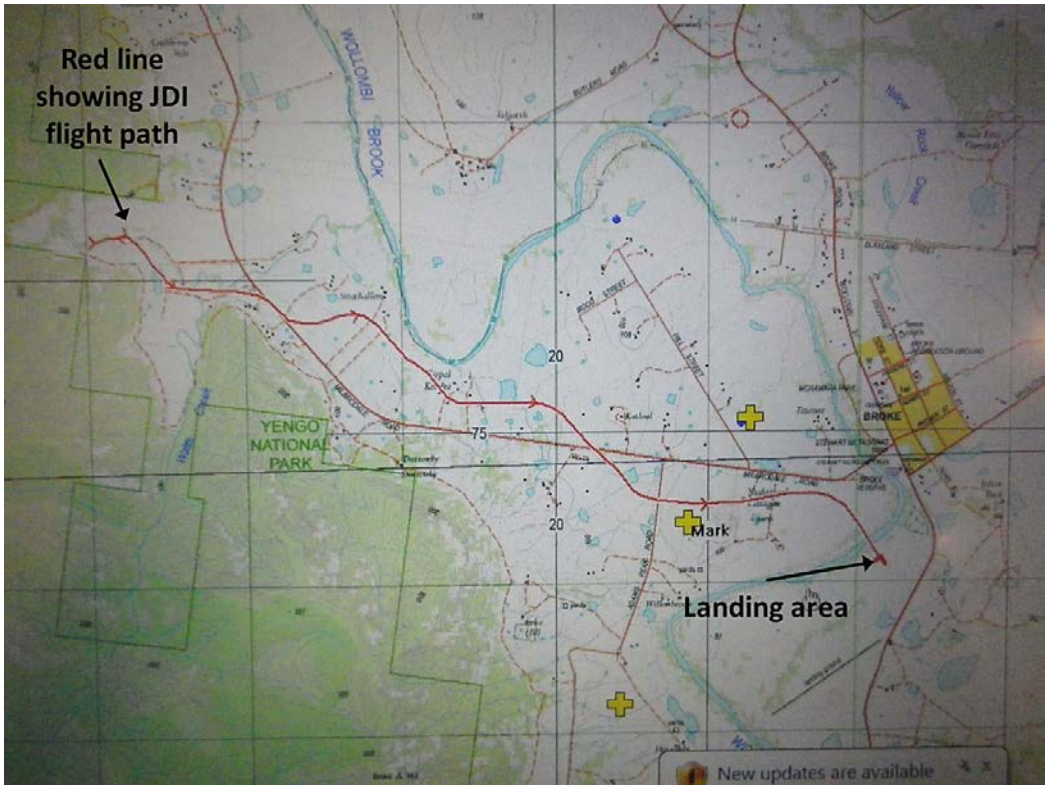
What happened

Kavanagh Balloons B-350

Source: Kavanagh Balloons

On 6 December 2013, a Kavanagh Balloons B-350 balloon, registered VH-JDI, was on final approach to land near Broke, New South Wales. At a height of about 50 ft, as the balloon flew over a river and a line of trees (Figure 1), the pilot observed the sun glistening off a power line on the left of the landing area and looked for the poles associated with that power line. The pilot did not observe any other power lines coming off the poles. The pilot instructed the passengers to get into the landing position. The landing area looked to be clear of obstacles. As the balloon came over the end of the tree line the pilot slowly vented the hot air in the envelope to descend to the landing area. The pilot then noticed that there was a pole to the right that had been in the shadows and that a power line stretched horizontally in front of the balloon flight path. The pilot opened the envelope ventilation system so the balloon would descend quicker. The basket touched the ground gently and came to rest just under the power line at about 0630 Eastern Daylight-saving time (EDT). The envelope folded over the three power lines, resulting in them contacting each other and sparking. The pilot instructed the passengers to remain in the basket and, when he considered that it was safe, he exited the basket. The pilot telephoned the electrical company who confirmed that the system was isolated and that a technician would be dispatched. The passengers then disembarked the basket. The pilot and 15 passengers were not injured. The balloon envelope had a small area of heat damage to the fabric where it had contacted the power lines.

Figure 1: Map showing flight path and landing area of VH-JDI



Source: Balloon operator

Pilot comment

The pilot reported that this was the first time that he had landed in this paddock.

The pilot reported that, during the landing, he was focused on the power line on the left that was glistening in the sun, although looking for wires coming off that power line. The power line that stretched across the flight path was hidden by the tree line. The balloon was also flying at a similar height of the power line, making the wires more difficult to see as only one wire was visible. The pilot also reported that the sun was not high above the horizon and he was looking directly into the sun for the landing.

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 was not advised of any safety action in response to this occurrence.

Safety message

The Australian Ballooning Federation notes in its safety advisory notice pilot circular number 18 (dated February 2012) that avoidance is the key. The safety advisory notice contains the following points:

- Pre-flight planning: Critical for ballooning, maps, charts and information must definitely be current. Consult council staff, locals and farmers, topo map in hand, for precise location of power lines and those not on the maps.
- Complacency: Familiarity and repetition regarding operation and location can lead to complacency. Be aware of this and hence be vigilant. Data shows the worst accidents are often made by the most experienced and skilled operators.
- Crew/passenger briefing: Stress to crew and passengers pre-takeoff and before approach: (1) you are only human and may not see threatening power lines, and (2) to feel free to point them out to you.
- Reduced visibility: Sun, mist, haze, contrast. Be vigilant and conservative under these conditions.
- See and Avoid scanning technique: Avoid focusing too long on close objects or scanning quickly left and right. Focus at a distance and move attention slowly over small arcs pausing briefly for a few seconds each time to closely examine the area.
- Country flying: Expect lines to be along roads with feed offs to farm houses. Often, single wires can be identified only by first locating their poles, so look for them first and assume lines run between them. They also cross paddocks to connect to other facilities. In this case be aware poles are often placed among trees making them difficult to see.
- Minimum safety altitude: Most power line strikes involve wires which are usually no more than 15 metres (50 feet) above ground level. Except for take-off and landing, staying above this height when flying in unfamiliar or risky areas is great insurance against hitting a wire.
- Distraction on approach: Checks, fuel, pilot lights, passengers, stock, obstacles, stress, tunnelling. All are Human Factors aspects that must be recognised and managed early such that full attention is then available for approach and landing.

The Australian Ballooning Federation *Pilot Circular No 18* is available at www.abf.net.au.

General details

Occurrence details

Date and time:	6 December 2013 – 0630 EDT	
Occurrence category:	Serious incident	
Primary occurrence type:	Wirestrike	
Location:	Broke, New South Wales	
	Latitude: 32° 45.40' S	Longitude: 151° 06.04' E

Aircraft details

Manufacturer and model:	Kavanagh Balloon B-350	
Registration:	VH-JDI	
Serial number:	B350-378	
Type of operation:	Charter - passenger	
Persons on board:	Crew – 1	Passengers – 15
Injuries:	Crew – Nil	Passengers – Nil
Damage:	Minor	

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.