Australian Government
Australian Transport Safety Bureau

Aircraft proximity event between a Bell 206, VH-WCS and a PZL Bielsko 51, VH-XOP

Gympie (ALA), Queensland, 4 December 2013

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Published by: Australian Transport Safety Bureau
Postal address: PO Box 967, Civic Square ACT 2608
Office: 62 Northbourne Avenue Canberra, Australian Capital Territory 2601
Telephone: 1800 020 616, from overseas +61 2 6257 4150 (24 hours)
Accident and incident notification: 1800 011 034 (24 hours)
Facsimile: 02 6247 3117, from overseas +61 2 6247 3117
Email: atsbinfo@atsb.gov.au
Internet: www.atsb.gov.au

Addendum

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Aircraft proximity event between a Bell 206, VH-WCS and a PZL Bielsko 51, VH-XOP

What happened

VH-XOP

Source: Operator

On 4 December 2013, at about 1440 Eastern Standard Time (EST),[1] a PZL Bielsko 51 glider, registered VH-XOP (XOP), was winched at the Gympie aeroplane landing area (ALA), Queensland. About 20 minutes later, the glider entered the circuit on downwind at about 900 ft above ground level (AGL), and the pilot broadcast a downwind call on the common traffic advisory frequency (CTAF).

At about the same time, a Bell 206 helicopter, registered VH-WCS (WCS), was conducting circuits from runway 32. On board the helicopter were a flight instructor and two student pilots. The helicopter had been conducting circuits for about 1 hour and the pilot reported that he was in constant communication with the glider operators.

The instructor of WCS broadcast on the CTAF when turning base and subsequently heard the downwind call of XOP. At that time he sighted the glider on mid-downwind. Soon after, the pilot of XOP broadcast turning base.[2] The glider pilot then commenced a diagonal base leg, on about a 45° angle from the downwind leg (Figure 1).

WCS turned onto final approach and the instructor reported that he then broadcast a final call when at 500 ft AGL; 0.78 NM from the threshold of runway 32, and at a speed of 60kt. The instructor reported that, at that time, he believed the glider was on the late downwind or base leg of the circuit.

The pilot of XOP then reported broadcasting a final call. The pilots of XOP and WCS reported not hearing each other's finals broadcast. The pilot of XOP then broadcast a call to the pilot of WCS, asking whether he had the glider in sight, but no response was received.[3] The crew of WCS did not hear this call, despite hearing other transmissions from aircraft on the CTAF.

About 90 seconds later, the instructor of WCS sighted the glider to his right, at about the same height and about 10 m away. The pilot of XOP also observed the helicopter to his left and slightly above. In response, he lowered the nose of the glider to increase the airspeed to 60 kt to stay below the helicopter. The glider then landed on the grass to the left of the runway.

The instructor of WCS took control of the helicopter from the student, conducted a clearing turn and subsequently landed on the sealed runway. He then attempted to communicate with the pilot of XOP on the CTAF and received a response from the glider base operator. The operator advised that XOP had experienced 'an emergency', and later reported to the ATSB that this involved performing a diagonal base leg.

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

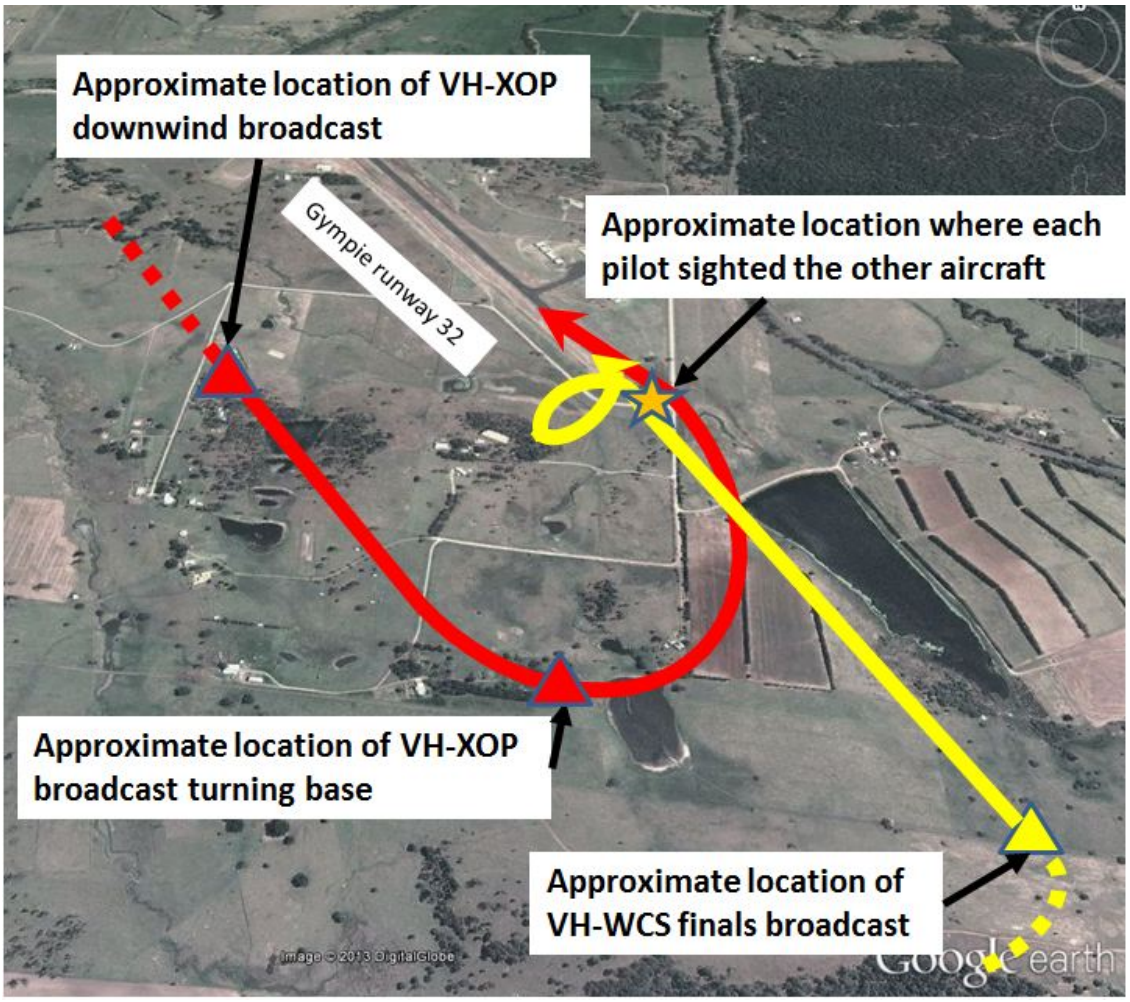
2 A pilot in the circuit reported hearing the glider pilot's base and finals broadcasts, and call to the pilot of WCS.

3 The ATSB was unable to verify the pilots' broadcasts as CTAF transmissions were not recorded at Gympie.

Gliding Federation of Australia comments

The Gliding Federation of Australia reported that the helicopter may have been in the glider pilot's blind spot during the diagonal base leg and turn onto final. If the glider turned onto final above, and in front of the helicopter, the pilots of each aircraft would not have been able to sight the other. The glider pilot had then applied the airbrakes, steepening the approach path.

Figure 1: Approximate aircraft flight paths and broadcast locations



Source: Google earth and pilot recollection

Safety message

The ATSB SafetyWatch highlights the broad safety concerns that come out of our investigation findings and from the occurrence data reported to us by industry. One of the safety concerns is safety around non-controlled aerodromes www.atsb.gov.au/safetywatch/safety-around-aeros.aspx.

The ATSB has issued a publication called *A pilot's guide to staying safe in the vicinity of non-towered aerodromes*, which outlines many of the common problems that occur at non-controlled aerodromes, and offers useful strategies to keep yourself and other pilots safe. The report found that insufficient communication between pilots and breakdowns in situational awareness were the most common contributors to safety incidents in the vicinity of non-controlled aerodromes.

In addition, issues associated with unalerted see-and-avoid have been detailed in the ATSB's research report *Limitations of the See-and-Avoid Principle*. The report highlights that unalerted see-and-avoid relies entirely on the pilot's ability to sight other aircraft. Broadcasting on the CTAF

is known as radio-alerted see-and-avoid, and assists by supporting a pilot's visual lookout for traffic. An alerted traffic search is more likely to be successful as knowing where to look greatly increases the chances of sighting traffic. The report is available at www.atsb.gov.au/publications/2009/see-and-avoid.aspx.

The ATSB report into a recent similar incident is also available at www.atsb.gov.au/publications/investigation_reports/2013/aair/ao-2013-108.aspx.

This incident highlights the importance of broadcasting radio calls to alert pilots and assist in see-and-avoid practices. It serves as a reminder to keep a good lookout for other aircraft, particularly around non-controlled aerodromes. Both incidents also demonstrate the importance of understanding the differences in performance and circuit patterns flown by gliders and helicopters or other powered aircraft.

General details

Occurrence details

Date and time:	4 December 2013 – 1500 EST	
Occurrence category:	Serious incident	
Primary occurrence type:	Aircraft proximity event	
Location:	Gympie (ALA), Queensland	
	Latitude: 26° 16.97' S	Longitude: 152° 42.12' E

Aircraft details: VH-WCS

Manufacturer and model:	Bell Helicopter Company 206B	
Registration:	VH-WCS	
Serial number:	2931	
Type of operation:	Flying training - dual	
Persons on board:	Crew – 2	Passengers – 1
Injuries:	Crew – Nil	Passengers – Nil
Damage:	Nil	

Glider details: VH-XOP

Manufacturer and model:	PZL – Bielsko 51-1 Junior	
Registration:	VH-XOP	
Serial number:	B-1822	
Type of operation:	Gliding	
Persons on board:	Crew – 1	Passengers – Nil
Injuries:	Crew – Nil	Passengers – Nil
Damage:	Nil	

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.