Australian Government
Australian Transport Safety Bureau

Airspace related event involving Bombardier DHC-8-402, VH-QOB and Robinson R22, VH-HLY

Cloncurry, Queensland, 18 April 2013

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Aviation Occurrence Investigation
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Addendum

Page	Change	Date

Airspace related event between Bombardier DHC-8-402, VH-QOB and Robinson R22, VH-HLY

What happened

On 18 April 2013, a Robinson R22 helicopter registered VH-HLY (HLY), was being ferried from Cloncurry, Queensland to a property 200 km to the north.

The pilot conducted the pre-flight checks including checking that the radio was switched on and adjusted the squelch[1]. At about 1640 Eastern Standard Time,[2] the pilot broadcast his intentions and commenced taxiing from outside the hangar on a direct heading of 355°, in the direction of the property (Figure 1). About 2 minutes later, while taxiing towards the runway intersection, he looked ahead and to the left along the main runway, expecting that any arriving aircraft would be landing on runway 12 at Cloncurry.

At the same time, a Bombardier DHC-8 aircraft, registered VH-QOB (QOB) and operated by Sunstate Airlines, was conducting a scheduled service from Townsville, Queensland to Cloncurry. The pilot in command (PIC) of QOB made inbound broadcasts at 30, 10 and 3 NM on the common traffic advisory frequency (CTAF). The crew did not hear any acknowledgment from other aircraft or the taxi broadcast from HLY. The crew had elected to conduct a straight-in approach to land on runway 30.

As the helicopter crossed the runway at a height of about 100 feet, the pilot realised that he had not heard a response from the aerodrome frequency response unit (AFRU) on the CTAF (see explanation below). Simultaneously, he heard a call from QOB, which was in the landing flare for runway 30, stating that he should get off the runway.

The pilot of HLY then looked to his right and observed QOB on the runway. He realised he had been broadcasting on the incorrect ultra-high frequency (UHF) although he could hear calls on the very high frequency (VHF) CTAF.

The pilot of HLY estimated that, when QOB had touched down, the distance between the aircraft and HLY was about 1,000 m horizontally. The PIC of QOB estimated that the horizontal separation reduced to about 200 m.

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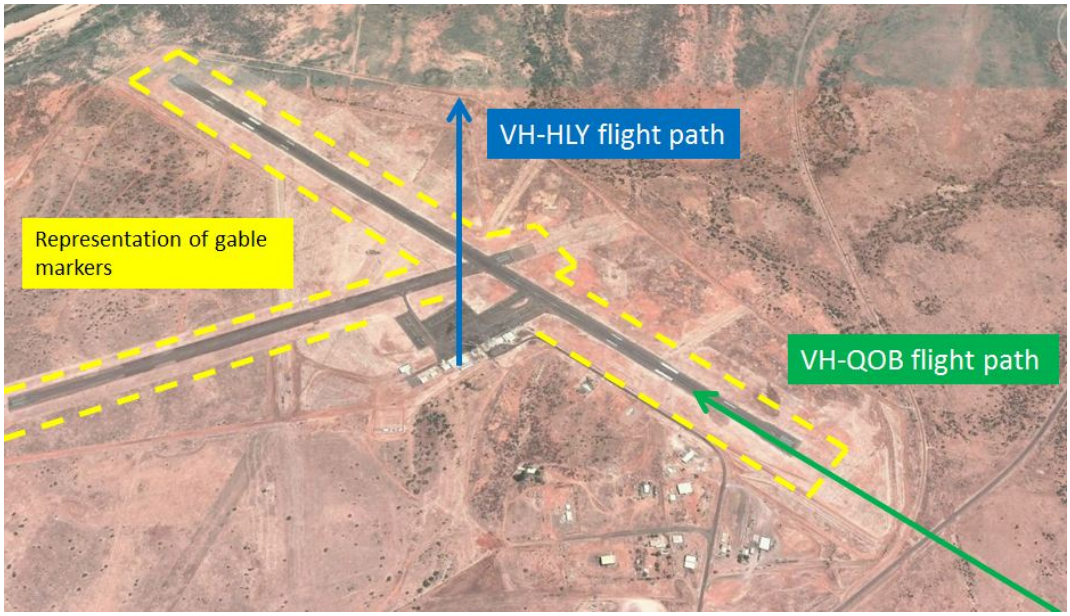
1 Pilot control of volume or signal/noise ratio.

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

Figure 1: Cloncurry aerodrome showing relative positions of VH-HLY and VH-QOB



Source: Google Earth

Pilot of VH-HLY comments

The pilot of HLY reported that he had been operating at Cloncurry in Robinson helicopters for 10 years. He stated that it was the first time he had not checked the radio switch during his pre-flight checks to make sure it was selected to transmit on VHF.

Due to the prevailing wind conditions, and the location of the aircraft loading bay at Cloncurry, he reported that most aircraft movements used runway 12 and he had not expected the arrival of an aircraft on runway 30. The pilot reported that the wind was from the south and he took off with a slight tailwind component to expedite his track to the north.

The pilot stated that the number of scheduled flights to Cloncurry had increased significantly over the last few years and that greater vigilance was required by the pilots who had been used to operating in the area without the higher traffic volume.

Pilot of VH-QOB comments

The PIC of QOB observed HLY in QOB's missed approach path. As the PIC did not want to conduct low-level manoeuvring, he considered that continuing with the landing was the safest action.

The PIC of QOB reported that they usually operate on runway 12, but as the aerodrome weather information service (AWIS) reported the wind from 210^{o}, he elected to conduct a straight-in approach to runway 30.

AFRU operation and radio transmissions

An AFRU assists in indicating selection of the correct VHF frequency at non-towered aerodromes by automatically responding with either a pre-recorded voice message if no transmission has been received in the last five minutes or otherwise a 'beep-back', on the CTAF. The pilot of HLY had made a radio broadcast, but as he was inadvertently transmitting on UHF, received no AFRU response.

The pilot of HLY did not hear any of the inbound broadcasts from QOB. VHF transmissions are line-of-sight transmissions. The location of the hangars at Cloncurry may have shielded the transmissions of the aircraft approaching runway 30.

The pilot of HLY reported that only a minute or two had elapsed after engine start prior to his departure, and he probably commenced listening on the CTAF after the 3 NM broadcast from QOB. The helicopter had crossed the runway within the time QOB took to approach and land from there.

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 action in response to this occurrence.

Helicopter operator

As a result of this occurrence, the helicopter operator has advised the ATSB that they are taking the following safety action:

Pre-takeoff hover

Helicopter pilots will hover at the gable markers prior to entering the runway and conduct a full visual inspection for aircraft.

Safety message

While experience and familiarity with operations are invaluable, they can also lead to complacency. It is therefore important that pilots with experience, familiarity and comfort with the aircraft and location, continue to do all checks thoroughly. The ATSB publication, *Avoidable Accidents No. 6 - Experience won't always save you,* is available at www.atsb.gov.au/publications/2012/avoidable-6-ar-2012-035.aspx.

Most occurrences reported to the ATSB at non-towered aerodromes involve conflicts between aircraft, or between aircraft and ground vehicles. In particular, active runways should be approached with caution. The ATSB has released *A pilot's guide to staying safe in the vicinity of non-towered aerodromes*, AR-2008-044 (1), available at www.atsb.gov.au/publications/2008/ar-2008-044(1).aspx.

General details

Occurrence details

Occurrence category:	Incident	
Primary occurrence type:	Airspace related event	
Location:	Cloncurry, Queensland	
	Latitude: 20° 40.12' S	Longitude: 140° 30.27' E

Robinson R22, VH-HLY

Manufacturer and model:	Robinson R22	
Registration:	VH-HLY	
Type of operation:	Private	
Persons on board:	Crew – 1	Passengers – Nil
Injuries:	Crew – Nil	Passengers – Nil
Damage:	Nil	

Bombardier DHC-8-402, VH-QOB

Manufacturer and model:	Bombardier DHC-8-402	
Registration:	VH-QOB	
Operator:	Sunstate Airlines (Qld)	
Type of operation:	Air transport – high capacity	
Persons on board:	Crew – 4	Passengers – 36
Injuries:	Crew – Nil	Passengers – Nil
Damage:	Nil	

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.