Australian Government
Australian Transport Safety Bureau

Near collision involving Robinson R22, VH-MFH, and Lancair, VH-XCG

Ballina Byron Gateway Airport, New South Wales, 22 April 2016

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Aviation Occurrence Investigation
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Addendum

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What happened

On 22 April 2016, an instructor and student were conducting flight training in a Robinson R22 helicopter, registered VH-MFH (MFH), at Ballina Byron Gateway (Ballina) Airport, New South Wales (NSW). The lesson involved practising transitioning from hovering to forward flight.

On the same morning, the pilot of a Lancair aeroplane, registered VH-XCG (XCG), was conducting a private flight under the instrument flight rules (IFR),[1] from Wedderburn Airport, NSW, to Ballina Airport, with one passenger on board.

At about 1006 Eastern Standard Time (EST), the instructor of MFH broadcast on the Ballina common traffic advisory frequency (CTAF) that they were established on runway 24 and would be conducting low-level operations on the runway for the next 15 minutes.

At about the same time, XCG was approaching Ballina via an area navigation (RNAV) approach to runway 24. The pilot reported that their attention was focused on the newly installed electronic instrumentation and associated navigation system. When the aircraft was descending through about 500 ft on final approach, the pilot sighted a helicopter (MFH) ahead on the runway threshold, and realised they had omitted to select the CTAF and to broadcast an inbound call.

At about 1012, MFH was stationary on the threshold of runway 24, facing along the runway to the south-west. The instructor of MFH communicated with the pilot of another helicopter operating at the aerodrome to arrange mutual separation. Soon after, the pilot of the other helicopter broadcast 'the plane coming in on runway 24, your intentions?' There was no response to this transmission.

That call alerted the instructor of MFH to the aeroplane approaching runway 24 (XCG). The instructor looked out of the helicopter door, and sighted XCG, which was behind them on final approach to runway 24, and estimated the aircraft to be about 200 to 500 m away. The instructor immediately took control of the helicopter from the student and vacated the runway to the grassed area north of the runway.

After initially sighting MFH on the runway, the pilot of XCG considered conducting a go-around, but then observed MFH lift off and move to the grass area north of the runway. The pilot of XCG elected to continue the approach, and landed on runway 24.

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-towered aerodromes.

Pilots are encouraged to prioritise their attention carefully and appropriately as they near non-towered aerodromes. An effective lookout for other aircraft, supported by communication with traffic in the vicinity, should be a high priority.

The ATSB report *Limitations of the See-and-Avoid Principle* outlines the major factors that limit the effectiveness of un-alerted see-and-avoid. Insufficient communication between pilots operating in the same area is the most common cause of safety incidents near non-controlled aerodromes.

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[1] Instrument flight rules permit an aircraft to operate in instrument meteorological conditions (IMC), which have much lower weather minimums than visual flight rules. Procedures and training are significantly more complex as a pilot must demonstrate competency in IMC conditions, while controlling the aircraft solely by reference to instruments. IFR-capable aircraft have greater equipment and maintenance requirements.

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 publication *A pilot's guide to staying safe in the vicinity of non-towered aerodromes*, stated that a large number of the conflicts between aircraft involved:

- ineffective communication between pilots operating in close proximity
- the incorrect assessment of other aircraft's positions and intentions
- relying on the radio as a substitute for an effective visual lookout
- failure to follow published procedures.

General details

Occurrence details

Date and time:	22 April 2016 – 1015 EST	
Occurrence category:	Serious incident	
Primary occurrence type:	Near collision	
Location:	Ballina Byron Gateway Airport, New South Wales	
	Latitude: 28° 50.03' S	Longitude: 153° 33.75' E

Aircraft details: VH-XCG

Manufacturer and model:	Amateur Built Aircraft Lancair IV	
Registration:	VH-XCG	
Serial number:	LIV-188	
Type of operation:	Private – Pleasure/Travel	
Persons on board:	Crew – 1	Passengers – 1
Injuries:	Crew – 0	Passengers – 0
Aircraft damage:	Nil	

Helicopter details: VH-MFH

Manufacturer and model:	Robinson Helicopter Company R22 Beta	
Registration:	VH-MFH	
Serial number:	2266	
Type of operation:	Flying training – Dual	
Persons on board:	Crew – 2	Passengers – 0
Injuries:	Crew – 0	Passengers – 0
Aircraft 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 operations involving the travelling public.

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.