



**Australian Government**

**Australian Transport Safety Bureau**

# Near collision involving Robinson R22, VH-JKH, and Cessna 182, VH-YKM

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

**ATSB Transport Safety Report**  
Aviation Occurrence Investigation  
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#### **Addendum**

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# Near collision involving Robinson R22, VH-JKH, and Cessna 182, VH-YKM

## What happened

On 22 April 2016, at about 1440 Eastern Standard Time (EST), an instructor and student were conducting circuit training in a Robinson R22 helicopter, registered VH-JKH (JKH), at Ballina Byron Gateway Airport, New South Wales. The helicopter was positioned about two thirds of the way down runway 06 (Figure 1) when the crew broadcast on the common traffic advisory frequency (CTAF) that they were rolling for take-off on runway 06.

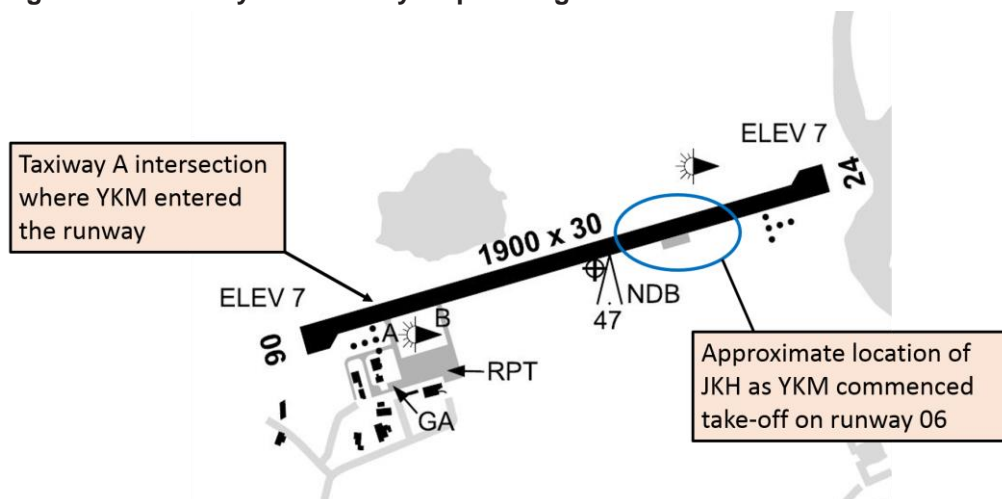
Very soon after that broadcast, the pilot of another helicopter operating at the aerodrome alerted the crew of JKH that there was an aircraft rolling for take-off on runway 06 behind them, and suggested that JKH expedite clearing the runway.

A Cessna 182 aeroplane, registered VH-YKM (YKM), had entered the runway at the intersection of taxiway A (Figure 1), and was taking-off on runway 06, towards the helicopter (which was still on the runway). The instructor in JKH took control of the helicopter from the student, rejected the take-off and vacated the runway to the northern grass, as the aircraft continued its take-off run.

Although the pilot of YKM was unaware at the time, their broadcasts on the CTAF prior to commencing take-off had not been successfully transmitted. As the aeroplane climbed through about 400 ft above ground level, the pilot sighted the helicopter (JKH) to their left over the grass.

The pilot of YKM later found that although the aircraft radio was on, and was set to the CTAF, the radio microphone was not fully plugged in. In this condition, none of their broadcasts on the CTAF had been successfully transmitted.<sup>1</sup> The pilot of YKM had not heard any broadcast from JKH and did not see the helicopter on the runway, despite checking to see that the runway was clear before entering.

**Figure 1: Ballina Byron Gateway Airport diagram**



Source: Airservices Australia – annotations by the ATSB

<sup>1</sup> An ATSB review of CTAF recording suggested that there was a number of attempted transmissions around six minutes prior to the incident. These transmissions were little more than a momentary carrier wave or microphone 'click', and they were followed by a 'beep-back' response from the aerodrome frequency response unit (AFRU). The ATSB could not ascertain if those transmissions were attempts by the pilot of YKM to broadcast on the CTAF.

### **Operator comment**

The operator of JKH commented that after the event, they checked from the position on the taxiway where YKM entered the runway to verify if they could see where the helicopter would have been. They established that they could – but advised that this needs to take into consideration that they knew what they were looking for.

### **ATSB comment**

The pilot of the helicopter who alerted the crew of JKH to the aircraft rolling for take-off on runway 06 is commended for their situational awareness, and speaking up when the potential for a collision became apparent. That pilot may have played an important role in averting a more serious occurrence.

### **Safety message**

Pilots are encouraged to check the performance of radio communications systems as part of their pre-flight procedures. Aerodrome frequency response units at non-towered aerodromes allow pilots to confirm that they have the correct frequency selected, and that their radio communications system is transmitting. Nonetheless, as this incident highlights, an AFRU does not necessarily provide an indication to a pilot that their transmissions are inaudible or otherwise ineffective. Additionally, this incident highlights the importance of a thorough lookout prior to entering a runway. Not hearing any broadcasts on the CTAF does not necessarily mean that other aircraft are not operating in the area.

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](#).



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 – 1440 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-YKM

Manufacturer and model:	Cessna Aircraft Company 182	
Registration:	VH-YKM	
Serial number:	18281374	
Type of operation:	Private – Pleasure/Travel	
Persons on board:	Crew – 1	Passengers – 0
Injuries:	Crew – 0	Passengers – 0
Aircraft damage:	Nil	

### Helicopter details: VH-JKH

Manufacturer and model:	Robinson Helicopter Company R22 Beta	
Registration:	VH-JKH	
Serial number:	1086	
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.