Australian Government
Australian Transport Safety Bureau

# Wirestrike and collision with terrain involving a Robinson R44, VH-HXY

90 km N of Hughenden, Queensland, on 14 February 2016

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**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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# Wirestrike and collision with terrain involving a Robinson R44, VH-HXY

## What happened

On 14 February 2016, the pilot of a Robinson R44 helicopter, registered VH-HXY, conducted a local private flight from a property about 90 km north of Hughenden, Queensland.

After operating for about 1 hour, the pilot landed near a water trough to check a float. During the approach and landing, the pilot sighted powerlines strung across the trough, and manoeuvred to remain clear of them.

While the helicopter was on the ground, the wind veered from a south-west to a southerly direction, so that to take off into wind, the helicopter would track perpendicular to the powerlines. After completing the pre-take-off checks, the pilot turned his attention to a mob of cattle, to ensure the noise of the helicopter would not send them through a fence.

The helicopter lifted off initially parallel to the powerlines, and the pilot then turned the helicopter to manoeuvre around a tree and climbed to about 20 ft above ground level. The tree momentarily obscured the powerlines and the pilot's attention was on the cattle.

As the helicopter rounded the tree, at an airspeed of about 50 kt, the skids struck the powerlines. The pilot heard the wires contact the helicopter and it decelerated rapidly. The pilot lowered the collective[1] and pulled back on the cyclic[2] control, but the helicopter rolled forwards over the wires, descended rapidly, and collided with the ground left side down in a nose-down attitude.

The wire was hooked on the helicopter's right skid, with electrical power still running through it. After the blades stopped turning, the pilot exited the helicopter. The pilot was not injured and the helicopter was destroyed (Figure 1).

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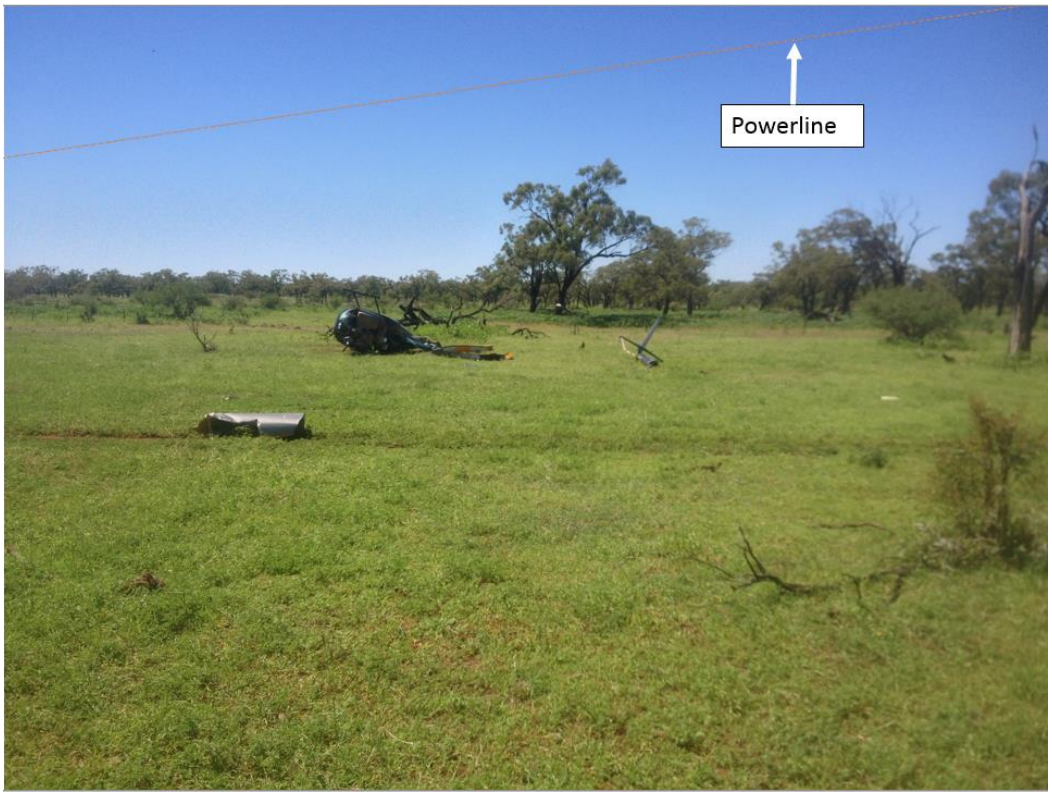
1 A primary helicopter flight control that simultaneously affects the pitch of all blades of a lifting rotor. Collective input is the main control for vertical velocity.

2 A primary helicopter flight control that is similar to an aircraft control column. Cyclic input tilts the main rotor disc varying the attitude of the helicopter and hence the lateral direction.

**Figure 1: Accident site of Robinson R44 helicopter, registered VH-HXY**




Source: Helicopter owner

## Safety message

ATSB research indicates that in 63 per cent of reported wirestrike incidents, pilots were aware of the position of the wire before they struck it. In this instance, the pilot was aware of the powerline however, they were unable to see the wires from the helicopter's position on the ground due to a tree. The pilot's attention was then diverted to the cattle and did not maintain awareness of the wires.

The Aerial Agricultural Association of Australia suggests a way to keep focus is to ask yourself:

- Where is the wire now?
- What do I do about it?
- Where am I in the paddock?

For further risk management strategies for agricultural operations, refer to the Aerial Application Pilots Manual.

The ATSB publication *Avoidable Accidents No. 2 – Wirestrikes involving known wires: A manageable aerial agricultural hazard*, explains strategies to help minimise the risk of striking wires while flying. Pilots are reminded to avoid unnecessary distractions and to refocus when distracted. Distraction, combined with difficulty in seeing wires makes them extremely hard to avoid at the last minute.

# General details

## *Occurrence details*

| | | |
|---|---|---|
| Date and time: | 14 February 2016 – 1521 EST | |
| Occurrence category: | Accident | |
| Primary occurrence type: | Wirestrike | |
| Location: | near Hughenden, Queensland | |
| | Latitude: 20° 48.90' S | Longitude: 144° 13.52' E |

## *Helicopter details*

| | |
|---|---|
| Manufacturer and model: | Robinson Helicopter Company R44 |
| Registration: | VH-HXY |
| Serial number: | 0350 |
| Type of operation: | Private |

# 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.