



Australian Government

Australian Transport Safety Bureau

Collision with terrain involving Bell Helicopter 206B, VH-PHP

6 km east-north-east of Maitland Airport, New South Wales on 6 October 2022

ATSB Transport Safety Report

Aviation Occurrence Investigation (Short)

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Addendum

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Preliminary report

This preliminary report details factual information established in the investigation's early evidence collection phase, and has been prepared to provide timely information to the industry and public. Preliminary reports contain no analysis or findings, which will be detailed in the investigation's final report. The information contained in this preliminary report is released in accordance with section 25 of the *Transport Safety Investigation Act 2003*.

The occurrence

About 1350 local time on 6 October 2022, the pilot of a Bell 206 JetRanger helicopter, registered VH-PHP, departed Casino Airport, New South Wales for a ferry flight to Warnervale, New South Wales. The helicopter was in the process of being returned to its owner after a long-term repair to correct hail damage and exchange life-expired items. The pilot was the only person onboard. The aircraft tracked south-south-west, approximately 30-60 km inland of the coast (Figure 1).

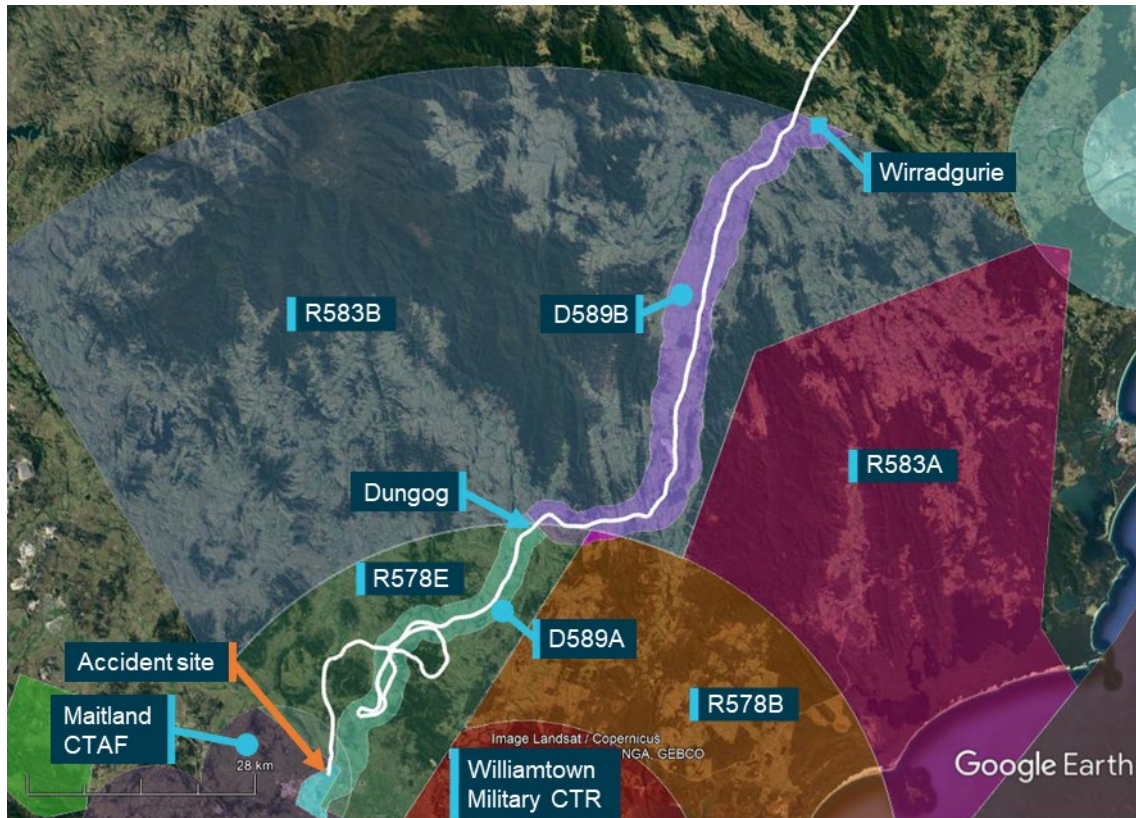
Figure 1: VH-PHP flight track



Source: Google Earth and OzRunways, annotated by the ATSB

Recorded data indicated that at tracking point Wirradgurie, the pilot followed the inland visual flight rules (VFR) route west of Williamtown Airport through restricted areas R583B and R578E (Figure 2).¹ The VFR lane, designated D589B and D598A, is a 2-3 NM wide corridor under the restricted airspace from ground level to 2,500 ft above mean sea level (AMSL) and ground level to 1,600 ft AMSL, respectively. The VFR lane enables pilots to visually fly under the restricted airspace without requiring permission or monitoring by Williamtown airspace controllers. The VFR route follows the east coast rail line where it passes through the mountainous region between Gloucester and Maitland.

Figure 2: VH-PHP flight track through Williamtown VFR Route D589B and D589A

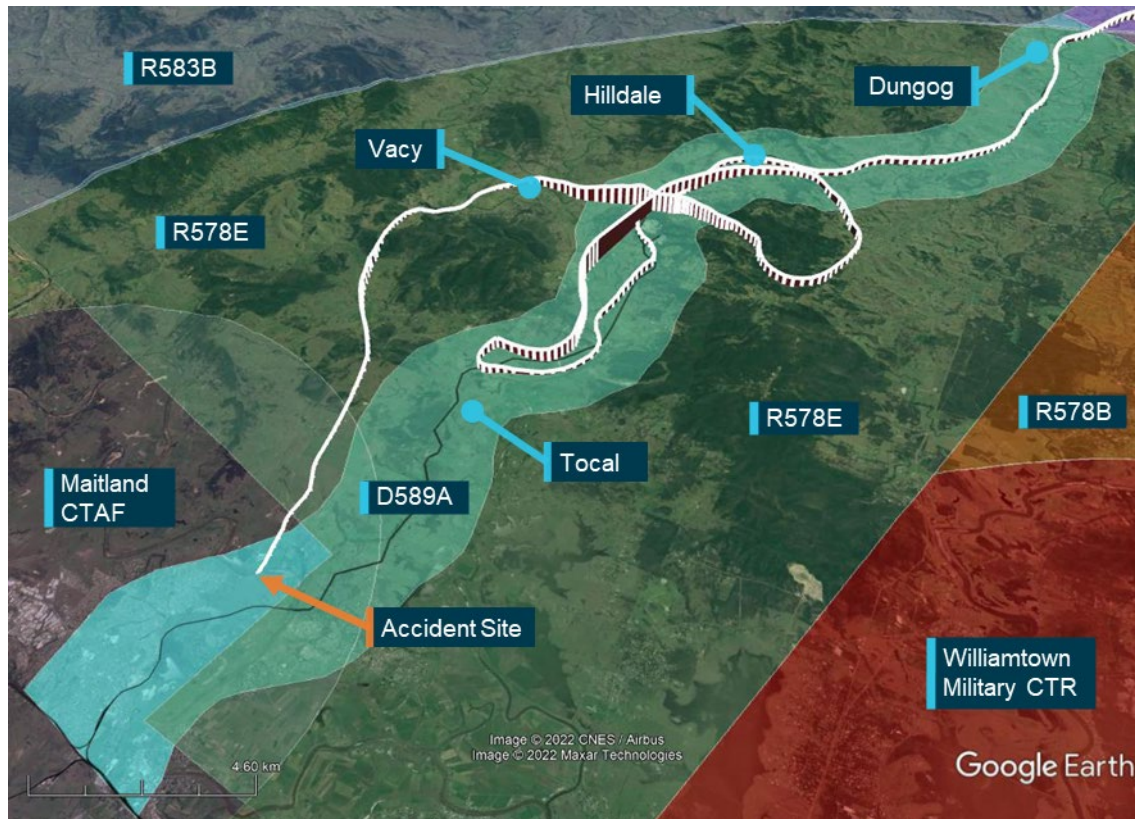


Source: Google Earth and OzRunways, annotated by the ATSB

At 1547 approaching Dungog, the pilot received a telephone call from a relative enquiring as to their progress. The pilot reported the aircraft was flying well, operations were normal, and they were 5 minutes from Maitland and 20 minutes from Warnervale.

¹ These restricted zones cover from ground level to an altitude of 10,000 ft radially around Williamtown Airport and are used by military aircraft.

Figure 3: VH-PHP flight track through Williamstown VFR Route D589A



Source: Google Earth and OzRunways, annotated by the ATSB

At 1556 approaching Total, approximately 4 NM from the end of the lane, the aircraft started to climb and then conducted a right 180° turn to backtrack northbound. After approximately 2 minutes the helicopter transitioned through the upper limit of the VFR lane and continued climbing to 3,100 ft. The helicopter then descended to 1,100 ft, back into D589A and continued to follow the lane northbound until Hilldale when the aircraft again made a right turn. This time the pilot flew outside the lateral bounds of the lane by conducting a gradual climbing orbit around a hill before crossing from the east to the west of the lane, reaching 2,900 ft during the transition.

The helicopter then descended over the town of Vacy, flying as low as 120 ft above ground level (AGL) before climbing and heading south. The aircraft then descended to low levels travelling parallel to, but just outside, the VFR lane western boundary until it exited the southern border of R578E at Maitland Vale.

At approximately 1616, the helicopter cleared a ridge by approximately 200 ft and descended gradually toward the Hunter River.

After clearing the ridge, the helicopter was observed by 6 witnesses. Common features of these reports were that the helicopter was heading towards the river, descending slightly, possibly initiating a turn when the helicopter rolled markedly and descended rapidly, colliding with the riverbank. The aircraft came to rest on a muddy river flat approximately 2 m from, and 0.5 m above, the water's edge. The helicopter was destroyed, and the pilot was fatally injured.

Context

Helicopter information

The accident helicopter was a Bell 206 manufactured in 1970 as an 206A model. The helicopter was first registered in Australia in May 1986. In 1988, the helicopter was rebuilt and converted to a 206B model with fitment of a Rolls Royce/Allison 250-C20 turboshaft engine and the associated uprated transmission, rotor head and other changes.

A maintenance test flight associated with the replacement of components was conducted in Casino the day before the accident flight.

Site and wreckage examination

An initial assessment of the aircraft was conducted in situ after which, due to rising river levels, the wreckage was moved to higher ground and the principal components were moved to a secure location for further examination.

All major aircraft components were accounted for at the accident site. Examination of the aircraft's flight controls, engine and aircraft structure did not identify any pre-existing defects. Fuel was found spilled at the accident site and fuel in the fuel filter bowl showed no evidence of contamination with water. Multiple sources of evidence indicating engine rotation at impact were identified.

The helicopter struck a tree on the riverbank, prior to impacting the ground. The tree and wreckage damage indicated the helicopter impacted the ground at approximately 80° right angle of bank and 60° nose down pitch.

Several aircraft components were retained by the ATSB for further detailed analysis.

Meteorological information

At 1600 the Bureau of Meteorology Meteorological Terminal Air Report (METAR)² for Maitland Airport reported 8 kt of wind with scattered cloud at 4,000 ft and 4,500 ft and overcast cloud at 7,800 ft above the airport.

Witnesses reported the weather at the time and location of the accident to be a mid to high level overcast cloud with no rain. A retired airline pilot reported that the 'Weather was suitable for VFR. A general base layer at 5,000 ft. Scattered cloud with patches to the South'.

Pilot qualifications

The pilot held a Commercial Pilot Licence (helicopter), a valid Class 1 Medical Certificate, a valid flight review, and a low-level helicopter rating.

Further investigation

To date, the ATSB has assessed the aircraft wreckage, interviewed witnesses and collected external data sources related to weather, air traffic communications, and flight tracking.

The investigation is continuing and will include further review and examination of:

- aircraft maintenance documentation and operational records
- recorded data
- weather information
- air traffic communications
- pilot medical records, qualifications and experience.

² METAR: A meteorological report for an aerodrome at a routine time (half hourly) when conditions are better than specified thresholds

Should a critical safety issue be identified during the course of the investigation, the ATSB will immediately notify relevant parties so appropriate and timely safety action can be taken.

A final report will be released at the conclusion of the investigation.

Acknowledgements

The ATSB would like to acknowledge the accident site property owners and their extended family for the significant assistance they provided the ATSB with moving, handling and storage of the wreckage away from the rapidly rising floodwaters.

General details

Occurrence details

Date and time:	6 October 2022 – 1616 Eastern Daylight-saving Time	
Occurrence class:	Accident	
Occurrence categories:	Operational	
Location:	6 km east-north-east of Maitland Airport, New South Wales	
	Latitude: 32° 41.272' S	Longitude: 151° 33.311' E

Aircraft details

Manufacturer and model:	Bell Helicopter 206B	
Registration:	VH-PHP	
Operator:	Australian Native Landscapes Pty. Ltd.	
Serial number:	607	
Type of operation:	Private	
Activity:	Ferry	
Departure:	Casino Airport, New South Wales	
Destination:	Intended destination Warnervale, New South Wales	
Persons on board:	Crew – 1	Passengers – 0
Injuries:	Crew – 1	Passengers – 0
Aircraft damage:	Destroyed	