



**Australian Government**

**Australian Transport Safety Bureau**

# Collision with terrain involving a Rockwell International 114, VH-WMM

1 km north of Redcliffe Aerodrome, Queensland, on 19 December 2021

**ATSB Transport Safety Report**

Aviation Occurrence Investigation (Defined)

AO-2021-053

Preliminary – 28 February 2022

Released in accordance with section 25 of the *Transport Safety Investigation Act 2003*

#### Publishing information

**Published by:** Australian Transport Safety Bureau  
**Postal address:** PO Box 967, Civic Square ACT 2608  
**Office:** 12 Moore Street Canberra, ACT 2601  
**Telephone:** 1800 020 616, from overseas +61 2 6257 2463  
Accident and incident notification: 1800 011 034 (24 hours)  
**Email:** [atsbinfo@atsb.gov.au](mailto:atsbinfo@atsb.gov.au)  
**Website:** [www.atsb.gov.au](http://www.atsb.gov.au)

© Commonwealth of Australia 2022



#### Ownership of intellectual property rights in this publication

Unless otherwise noted, copyright (and any other intellectual property rights, if any) in this publication is owned by the Commonwealth of Australia.

#### Creative Commons licence

With the exception of the Coat of Arms, ATSB logo, and photos and graphics in which a third party holds copyright, this publication is licensed under a Creative Commons Attribution 3.0 Australia licence.

Creative Commons Attribution 3.0 Australia Licence is a standard form licence agreement that allows you to copy, distribute, transmit and adapt this publication provided that you attribute the work.

The ATSB's preference is that you attribute this publication (and any material sourced from it) using the following wording: *Source:* Australian Transport Safety Bureau

Copyright in material obtained from other agencies, private individuals or organisations, belongs to those agencies, individuals or organisations. Where you want to use their material you will need to contact them directly.

#### Addendum

Page	Change	Date

# 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

On 19 December 2021, at about 0908 Eastern Standard Time,<sup>1</sup> a Rockwell International 114, registered VH-WMM, departed Redcliffe Aerodrome, Queensland, for a private scenic flight under visual flight rules. On board were the pilot and 3 passengers. The weather conditions were fine, with light winds from the east.

A number of witnesses located at the aerodrome, on the water in pleasure craft, and in other aircraft, observed VH-WMM (Figure 1). Witnesses at the aerodrome stated that, after VH-WMM took off from runway 07,<sup>2</sup> the landing gear was retracted and, a short time later, the engine ran rough for a brief period before stopping completely.

Another pilot was on their final approach for runway 07 and observed VH-WMM airborne. As that pilot was making their landing, they heard the pilot of VH-WMM broadcast on the radio that they were returning to the aerodrome.<sup>3</sup>

According to witnesses, the pilot of VH-WMM made 2 left turns, which were consistent with manoeuvring the aircraft back toward the western end of runway 07. During the return to the aerodrome, the pilot extended the landing gear. Description of the flight from the witnesses was consistent with controlled flight during this period.

As the aircraft neared the mangrove tree line to the north of the aerodrome, it was observed to descend and ditch into the water, about 170 m from the shoreline. During the ditching, the aircraft flipped over, coming to rest inverted in about 2 m of water.

Witnesses at the aerodrome and on board nearby boats, contacted emergency services and the Australian Volunteer Coast Guard. After being notified by one of the witnesses, a nearby vessel made its way to the aircraft, arriving about 5 minutes after the accident. The vessel's occupants stated there was low visibility in the water and the fuselage was resting inverted on the seabed. This led to difficulty for first responders identifying how to open the aircraft doors.

The pilot of another aircraft flying overhead observed VH-WMM ditch in the water and contacted air traffic control (ATC) to advise them of the accident. That pilot remained overhead the accident site while boats arrived at the scene, and relayed information to ATC. A Coast Guard vessel arrived onsite; however, the crew were also unable to gain access into the aircraft's cabin.

Queensland Police Service divers arrived a number of hours later, confirming that the pilot and 3 passengers had been fatally injured. The aircraft was destroyed.

<sup>1</sup> Eastern Standard Time (EST) is Universal Time Coordinated (UTC) +10 hours.

<sup>2</sup> Runway number: the number represents the magnetic heading of the runway. In this case, 07 equates to 70°.

<sup>3</sup> Radio communications on the common traffic advisory frequency at Redcliffe Aerodrome were not recorded.

**Figure 1: Redcliffe Aerodrome and VH-WMM approximate flight path and accident site**



Source: Google Earth, annotated by the ATSB

## Context

### ***Pilot information***

The pilot held a valid Private Pilot Licence (Aeroplane) with the last flight review in July 2021, and a Class 2 Aviation Medical Certificate, valid until February 2023. The pilot held single and multi-engine aeroplane ratings and endorsements for manual propeller pitch control, retractable undercarriage and formation flying. At the time of the accident, the pilot had about 504 hours total aeronautical experience.

### ***Aircraft information***

#### ***General information***

The Rockwell International 114 is a 4-seat, single-engine aeroplane with fully-retractable landing gear. It is powered by a 6-cylinder Lycoming IO-540 fuel-injected engine, and is fitted with a 3-blade constant-speed propeller.

VH-WMM was manufactured in the United States in 1977 and was first registered in Australia in May 2013. The last periodic inspection was conducted on 7 July 2021. At the time of the accident, VH-WMM had accrued a total time in service of 3,431.4 hours and had flown about 11 hours since the last inspection.

The aircraft type has 2 doors for pilot and passenger access, one on each side at the front of the aircraft cabin (Figure 2).

**Figure 2: VH-WMM**



Source: Nathen Sieben, modified by the ATSB

***Site and wreckage information***

The wreckage was located about 1 km north of the Redcliffe Aerodrome, on a tidal flat (Figure 3). The accident occurred about 40 minutes before high tide, and the water depth at the time of the accident was about 2 m.

The aircraft had impacted the water in a slight nose-down and upright attitude with the landing gear in the extended position. After contacting the water, the aircraft flipped over in the direction of travel, resulting in the aircraft being inverted.

The impact had torn the engine from its mounts and there was structural damage to the fuselage underside and right wing. Fuel was leaking from the right underwing fuel vent, and a strong fuel smell was evident at the site. The flaps were in a retracted position at the time of the accident.

**Figure 3: VH-WMM accident site at low tide**



Source: ATSB

***Wreckage examination***

A marine salvage company recovered the aircraft the following morning on high tide and, after floating the wreckage to the Scarborough boat ramp, it was transported to a secure storage facility for a detailed examination (Figure 4). Removal of the rear fuselage and engine was carried out to necessitate transportation by road.

The examination revealed:

- all components of the aircraft were accounted for at the accident site
- no pre-impact defects were identified
- a quantity of fuel was removed from the aircraft
- the engine and propeller were able to be rotated.

**Figure 4: VH-WMM recovered for examination**



Source: ATSB

### Further investigation

To date, the ATSB has:

- recovered and examined the aircraft wreckage
- conducted witness interviews
- conducted a disassembly and examination of the engine
- examined the maintenance history of the aircraft
- examined security camera footage from the aerodrome.

The investigation is continuing and will include:

- a disassembly of the propeller
- testing of retained engine components
- analysis of data recorded from onboard systems
- a review of mobile phone footage.

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.

# General details

## Occurrence details

Date and time:	19 December 2021 – 0910 EST	
Occurrence class:	Accident	
Occurrence categories:	Collision with terrain	
Location:	1 km north of Redcliffe Aerodrome, Queensland	
	Latitude: 27° 11.85' S	Longitude: 153° 3.95' E

## Aircraft details

Manufacturer and model:	Rockwell International 114	
Registration:	VH-WMM	
Operator:	Private	
Serial number:	14229	
Type of operation:	Private	
Activity:	General aviation – Sport & pleasure flying – Pleasure and personal transport	
Departure:	Redcliffe Aerodrome	
Destination:	Redcliffe Aerodrome	
Persons on board:	Crew – 1	Passengers – 3
Injuries:	Crew – 1 (fatal)	Passengers – 3 (fatal)
Aircraft damage:	Destroyed	