

LIMITED OCCURRENCE INVESTIGATION REPORT – FINAL

Reference Number	CA18/2/3/10467						
Classification	Accident	Date	23 June 2024		Time	1130Z	
Type of Operation	Private (Part 91)						
Location							
Place of Departure	Eva's Airfield in Hilton, KwaZulu-Natal Province		Place of Intended Landing		Margate Aerodrome (FAMG), KwaZulu-Natal Province		
Place of Occurrence	Eva's Airfield, approximately 11 nautical miles (nm) north-west of Pietermaritzburg Airport (FAPM), KwaZulu-Natal Province						
GPS Co-ordinates	Latitude	29° 29'35.0" S	Longitude	030° 16'24.0" E	Elevation	3 540ft	
Aircraft Information							
Registration	ZS-RUM						
Make; Model; S/N	Bell Textron: B206L-3 Long Ranger III; (Serial Number: 51357)						
Damage to Aircraft	Substantial			Total Aircraft Hours	6 091.30		
Pilot-in-command							
Licence Type	Private Pilot Licence (PPL) - Helicopter		Gender	Male		Age	63
Licence Valid	Yes	Total Hours	1 821.6		Total Hours on Type	1 269.0	
Total Hours 90 Days	12.6		Total Hours on Type Past 90 days		12.6		
People On-board	1 + 1	Injuries	2	Fatalities	0	Other (on ground)	0
What Happened							
<p>On Sunday morning, 23 June 2024, a pilot and a passenger on-board a Bell Textron B206L Long Ranger III helicopter with registration ZS-RUM were on a private flight from Eva's Airfield in Hilton, KwaZulu-Natal province to Margate Aerodrome (FAMG) in the same province. The flight was conducted under visual meteorological conditions (VMC) by day and under the provisions of Part 91 of the Civil Aviation Regulations (CAR) 2011 as amended.</p> <p>The pilot stated that he conducted a pre-flight inspection of the helicopter and no abnormalities were found. The engine start-up was normal. The pilot reported that his attention was drawn to the traffic that was landing on the runway as he waited for the engine to warm-up. After lift-off, the helicopter transitioned backward which was the pilot's blind spot and the main rotor blades struck the branches of a tall tree near the take-off zone. One of the main rotor blade tips was severed which caused substantial imbalance on the rotor disk. The pilot lost control of the helicopter and the skid landing gears impacted the ground hard; this caused substantial structural damage to the helicopter. The two occupants sustained serious injuries and were transported to the hospital for medical attention. The pilot stated that there were no mechanical deficiencies with the helicopter that would have precluded normal operation.</p>							

The accident occurred during daylight at Global Positioning System (GPS) co-ordinates determined to be 29°29'35.0" South 030°16'24.0" East, at an elevation of 3 540 feet (ft).

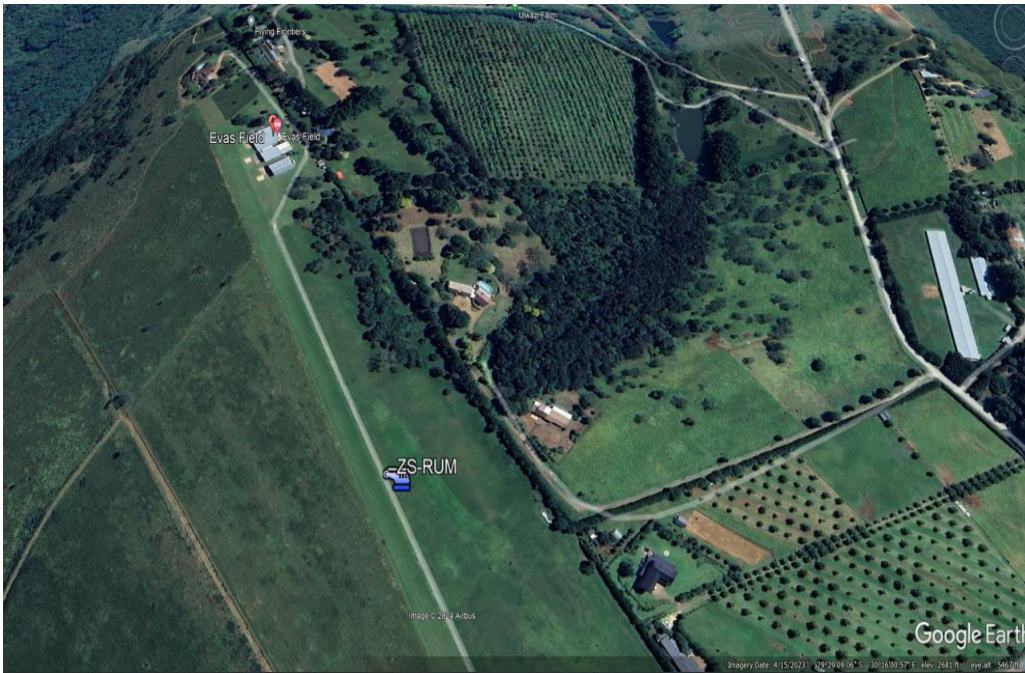


Figure 1: A view of the airfield and the accident site. (Source: Google Earth)



Figure 2: The helicopter at the accident site. (Source: Pilot)



Figure 3: The helicopter and the tree branches struck by the main rotor blades. (Source: Pilot)



Figure 4: The severed main rotor blade tip. (Source: Pilot)

Meteorological Information

The weather information in the table below was obtained from the South African Weather Service (SAWS) meteorological aerodrome report (METAR) for FAPM on 23 June 2024 at 1100Z. Eva's Field is located approximately 11 nautical miles north-west of FAPM.

FAPM 231100Z 11005KT CAVOK 22/09 Q1029=

Wind Direction	110°	Wind Speed	05kts	Visibility	10km
Temperature	22°C	Cloud Cover	None	Cloud Base	CAVOK
Dew Point	09°C	QNH	1029 hPa		

The weather was not a contributory factor to this accident.

Findings

1. Personnel Information

- 1.1 The pilot was initially issued a Private Pilot Licence (PPL) on 8 August 2007. The licence was reissued on 19 February 2024 with an expiry date of 31 March 2026. The helicopter type was endorsed on his licence.
- 1.2 The pilot had a Class 2 aviation medical certificate that was issued on 20 February 2024 with an expiry date of 28 February 2025, with a restriction to wear suitable correction lenses. The pilot was adequately qualified and experienced to conduct the flight.

2. Aircraft Information

- 2.1 The helicopter had a valid Certificate of Airworthiness (C of A) that was initially issued on 24 October 1996. The C of A was renewed on 5 November 2023 with an expiry date of 31 October 2024.
- 2.2 The helicopter's Certificate of Registration (C of R) was issued to the present owner on 11 November 2010.
- 2.3 The last mandatory periodic inspection (MPI) of the helicopter was certified on 9 November 2023 at 6 056.2 airframe hours. The helicopter had accrued 35.1 hours after the said inspection.

2.4	The Certificate of Release to Service (CRS) was issued on 10 November 2023 at 6 056.2 airframe hours with an expiry date of 10 November 2024 or at 6 156.2 airframe hours, whichever comes first.
2.5	The helicopter was maintained by an aircraft maintenance organisation (AMO) with an AMO Certificate that was issued by the Regulator (SACAA) on 24 May 2024 with an expiry date of 31 May 2025.
2.6	The pilot lost control of the helicopter after the main rotor blades struck the tree branches during lift-off. This necessitated an emergency landing, which resulted in a hard impact to the ground and substantial structural damage to the helicopter.
Probable Cause(s)	
The main rotor blades struck the tree branches during lift-off and one of the blade tips broke, resulting in an imbalance of the rotor disc. Consequently, the pilot lost control and the helicopter impacted the ground hard on its skid landing gears which caused substantial structural damage to the helicopter.	
Contributing Factor(s)	
Inadequate situational awareness and hazard assessment.	
Safety Action(s)	
None.	
Safety Message and/or Safety Recommendation/s	
None.	
About this Report	
<p><i>The decision to conduct a limited investigation is based on factors, including whether the cause is known and the evidence supporting the cause is clear, the level of safety benefit likely to be obtained from an investigation, and that will determine the scope of an investigation. For this occurrence, a limited investigation has been conducted, and the Accident and Incident Investigations Division (AIID) has relied on the information submitted by the affected person/s and organisation/s to compile this limited report. The report has been compiled using information supplied in the initial notification, as well as from follow-up desktop inquiries to bring awareness of potential safety issues to the industry in respect of this occurrence, as well as possible safety action/s that the industry might want to consider in preventing a recurrence of a similar occurrence.</i></p> <p><i>All times given in this report are Co-ordinated Universal Time (UTC) and will be denoted by (Z). South African Standard Time is UTC plus 2 hours.</i></p>	
Purpose	
<i>In terms of Regulation 12.03.1 of the Civil Aviation Regulations (CAR) 2011 and ICAO Annex 13, this report was compiled in the interest of the promotion of aviation safety and the reduction of the risk of aviation accidents or incidents and not to apportion blame or liability.</i>	

Disclaimer

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**This report is issued by:
Accident and Incident Investigations Division
South African Civil Aviation Authority
Republic of South Africa**