



<b>LIMITED ACCIDENT INVESTIGATION REPORT</b>
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<b>Reference Number</b>	CA18/2/3/10137						
<b>Classification</b>	Accident	<b>Date</b>	18 March 2022	<b>Time</b>	1220Z		
<b>Type of Operation</b>	Private (Part 91)						
<b>Location</b>							
Place of Departure	Lumarie Game Farm Airstrip, North West Province		Place of Intended Landing	Lumarie Game Farm Airstrip, North West Province			
Place of Accident	Koedoeskop Farm, North West province						
GPS Co-ordinates	Latitude	S 24° 54' 84"	Longitude	E 27° 32' 06"	Elevation	4 257ft	
<b>Aircraft Information</b>							
Registration	ZS-HJJ						
Make/Model	Bell 206B (Serial Number: 3152)						
Damage to Aircraft	Substantial		Total Aircraft Hours	5656.5			
<b>Pilot-in-command</b>							
Licence Valid	Yes	Gender	Male	Age	26		
Licence Type	Private Pilot Licence (PPL) Helicopter						
Total Hours on Type	299.3		Total Flying Hours	351.9			
People On-board	1 + 1	Injuries	0	Fatalities	0	Other (On Ground)	0
<b>What Happened</b>							
<p>On 18 March 2022, a pilot and a passenger on-board a Bell 206B helicopter with registration mark ZS-HJJ were engaged in an aerial search flight along the Crocodile River in Koedoeskop Farm, North West province. The flight was conducted in 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 one of the residents in the nearby area had asked for his assistance to go search for an individual that had gone missing along the Crocodile River. While the pilot was flying at approximately 25 feet (ft) above ground level (AGL) along the river, he spotted 'something' in the river and he momentarily looked down; however, when he looked up again, he spotted power lines in his flight path and decided to fly underneath them to avoid impact. One of the main rotor blades impacted the power lines and the pilot performed a precautionary landing. The pilot was able to land the helicopter safely without any further damage to the helicopter.</p>							

The helicopter sustained damage to one of the main rotor blades and its pitch link. Both occupants were not injured during the accident.



**Figure 1:** The aircraft as found on site. (Source: Pilot)

**What was found:**

- The pilot was issued a Private Pilot Licence (PPL) Helicopter on 22 February 2022 with an expiry date of 28 February 2024; the aircraft type was endorsed on his licence. His Class 2 medical certificate was issued on 12 October 2021 with an expiry date of 31 October 2022, and with corrective lenses and hearing aid restrictions.
- The mandatory periodic inspection (MPI) carried out on the helicopter prior to the accident flight was on 26 October 2021 and was certified at 5629.1 airframe hours. The aircraft was issued a Certificate of Release to Service (CRS) on 26 October 2021 with an expiry date of 25 October 2022 or at 5729.1 hours of flight time, whichever occurs first unless the aircraft is involved in an accident or becomes unserviceable.
- The aircraft was initially issued a Certificate of Airworthiness (C of A) on 3 January 1983 with an expiry date of 31 January 2023.

- The aircraft maintenance engineer (AME) who assessed the helicopter found that one of the main rotor blades was damaged and the accompanying pitch link was bent during impact with the power line.



**Figure 2:** Damage to the main rotor blade and the bent pitch link. (Source: AME)

- The power line was severed during the accident sequence.



**Figure 3:** The power line that the main rotor blade impacted. (Source: Pilot)

**Extract: CAR 2011 Part 91.06.32 Minimum Heights**

*(1) Except when necessary for taking off, or landing, or except with prior written approval of the Director, no aircraft—*

*(a) shall be flown over congested areas or over an obvious open-air assembly of persons at a height less than 1 000 ft above the highest obstacle, within a radius of 2 000 ft from the aircraft;*

*(b) when flown elsewhere than specified in paragraph (a), shall be flown at a height less than 500 ft above the ground or water, unless the flight can be made without hazard or nuisance to persons or property on the ground or water and the PIC operates at a height and in a manner that allows safe operation in the event of an engine failure; and*

*(c) shall circle over or do repeated overflights over an obvious open-air assembly of persons at a height less than 3 000 ft above the surface.*

*2) A helicopter shall be permitted to be flown at heights less than those prescribed in sub-regulation (1) (a), provided that—*

*(a) the operation is conducted without unnecessary nuisance or hazard to persons and property on the ground or water; and*

*(b) the PIC operates at a height and in a manner that allows safe operation in the events of an engine failure.*



<p><b>Probable cause:</b></p> <p>The pilot was flying low level and the helicopter's main rotor blade impacted a power line. The pilot performed a precautionary landing without any further damage.</p>	
<p><b>Contributory Factor:</b></p> <p>Lack of situational awareness.</p>	
<p><b>Safety Action</b></p>	
<p>None.</p>	
<p><b>Safety Message</b></p>	
<p>All pilots operating aerial work are encouraged to always observe the requirements as stated in the CAR 2011 as amended.</p>	
<p><b>Purpose of the Investigation</b></p>	
<p><i>In terms of Regulation 12.03.1 of the Civil Aviation Regulations (CAR) 2011, 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 <b>not to apportion blame or liability.</b></i></p>	
<p><b>About this Report</b></p>	
<p><i>Decisions regarding whether to investigate, 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, no 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 brief report. The report has been compiled using information supplied in the initial notification, as well as follow-up information 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 accident.</i></p> <p><i>This report provides an opportunity to share safety message/s in the absence of an investigation.</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>	
<p><b>Disclaimer</b></p>	
<p><i>This report is produced without prejudice to the rights of the AIID, which are reserved.</i></p>	

**This report is issued by:**

**Accident and Incident Investigations Division  
South African Civil Aviation Authority  
Republic of South Africa**