

LIMITED ACCIDENT INVESTIGATION REPORT

Reference Number	CA18/2/3/10027						
Classification	Accident	Date	4 August 2021	Time	1230Z		
Type of Operation	Private (Part 127) Helicopter aerial work and other air service operations						
Location							
Place of Departure	Brakpan Airfield (FABB)		Place of Intended Landing		Elim Game Farm Hertzogville, Free State Province		
Place of Accident	Elim Game farm, near Hertzogville Free State Province						
GPS Co-ordinates	Latitude	S 29°08'27.3"	Longitude	E 30°23'27.7"	Elevation	5400ft	
Aircraft Information							
Registration	ZS-RHD						
Model/Make	Robinson 44 (Serial Number: 0242)						
Damage to Aircraft	Destroyed		Total Aircraft Hours		3999.0		
Pilot-in-command							
Licence Valid	Yes	Gender	Male		Age	50	
Licence Type	Commercial Pilot Licence (Helicopter)						
Total Hours on Type	642.2		Total Flying Hours		773.1		
People On-board	1+0	Injuries	0	Fatalities	0	Other (On Ground)	0
What Happened							
<p>On 4 August 2021, a Robinson 44 helicopter with registration ZS-RHD was engaged in game capture operation at Elim Game Farm in the Free State. The pilot was the sole occupant on-board the helicopter. The pilot stated that during game capture operation, he was flying parallel to a fence and the powerlines when he observed an animal running from his right-side to the left-side (towards the fence). The pilot then tried to prevent the animal from running into the fence by banking left towards the fence. During this manoeuvre, the helicopter flew into the powerlines, got entangled, and remained suspended about 1 metre off the ground. The pilot was able to jump out of the suspended helicopter without injuring himself. Moments later, the helicopter caught alight, and the pilot was unable to secure his fire extinguisher from the burning helicopter, fearing that he might be electrocuted as the helicopter was suspended on live electrical wires.</p>							

The pilot was in possession of a Commercial Pilot Licence issued on 25 May 2012. The pilot did his proficiency on 30 March 2021 with an expiry date of 31 March 2022. The pilot was in possession of a Class 1 aviation medical certificate which was issued on 29 March 2021 with an expiry date of 31 March 2022. The game capturing rating was endorsed on his licence.

Civil Aviation Regulations (CAR) 2011, Part 91.07.2 Minimum flight altitudes

(1) No pilot shall operate an aircraft at altitudes below—

(a) altitudes, established by the owner or operator, which provide the required terrain clearance, taking into account the operating limitations referred to in Subpart 8; and

(b) the minimum altitudes referred to in Subpart 6;

except when necessary for take-off and landing.

(2) The method of establishing minimum flight altitudes referred to in subregulation (1) (a) is prescribed in Document SA-CATS 91.

(3) Where the minimum flight altitudes established by the appropriate authority of a foreign State are higher than the minimum flight altitudes prescribed in this regulation, the minimum flight altitudes established by such appropriate authority shall apply in respect of a South African registered aircraft flying in the airspace of the foreign State concerned.

Civil Aviation Regulation (CAR) 2011, Part 127.07.6 Minimum flight altitudes requires the following:

(1) The operator shall establish minimum flight altitudes for all operations carried out in accordance with IFR and the methods to determine such minimum flight altitudes for all route segments to be flown which provide the required terrain clearance, taking into account the performance operating limitations referred to in Subpart 8 of this Part and the minimum altitudes prescribed in regulation 91.06.32.

(2) The operator shall take into account, when establishing minimum flight altitudes—

(a) the accuracy with which the position of the helicopter can be determined;

(b) the possible inaccuracies in the indications of the altimeters used;

(c) the characteristics of the terrain along the routes or in the areas where operations are to be conducted;

(d) the probability of encountering unfavourable meteorological conditions; and

(e) possible inaccuracies in aeronautical charts.

(3) The operator shall specify in its operations manual the procedures used to determine the minimum altitudes to be flown in order to meet the obstacle clearance requirements specified in regulation 91.06.32 (2).

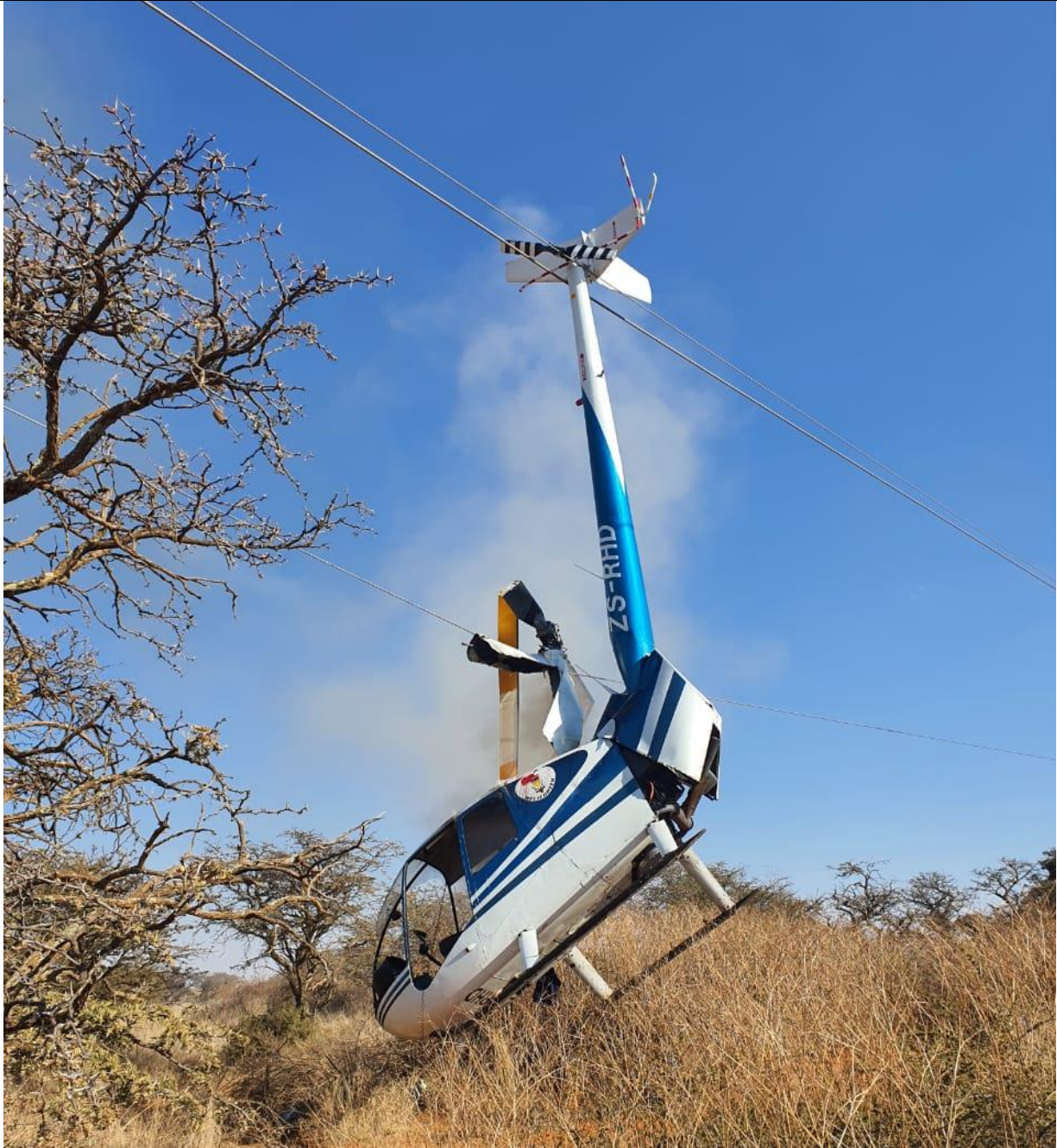


Figure 1: The helicopter suspended by live electrical wires before it caught fire.



Figure 2: The helicopter engulfed in flames during the accident.

Probable cause:

The helicopter was being flown at a low height and it collided with the powerlines that spanned along its flight path during a left bank. The helicopter was suspended on the powerlines before it caught alight.

Contributing factor

Pilot's failure to look out (for obstacles) during a low-level flight.

Safety Action/s

None.	
Safety Message	
Pilots are advised to always operate the helicopters and aircraft within the regulatory prescripts to prevent injury and damage to property.	
Purpose of the Investigation	
<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 not to apportion blame or liability.</i>	
About this Report	
<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>	
Disclaimer	
<i>This report is produced without prejudice to the rights of the AIID, which are reserved.</i>	

This report is issued by:

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