

**LIMITED OCCURRENCE INVESTIGATION REPORT – FINAL**

<b>Reference Number</b>	CA18/3/2/1407						
<b>Classification</b>	Serious Incident	<b>Date</b>	7 March 2023	<b>Time</b>	1745Z		
<b>Type of Operation</b>	Private (Part 91)						
<b>Location</b>							
<b>Place of Departure</b>	Witbank Airport (FAWI), Mpumalanga Province		<b>Place of Intended Landing</b>	Ultimate Heliport, Gauteng Province			
<b>Place of Occurrence</b>	Esselen Park Substation, Kempton Park, Gauteng Province						
<b>GPS Co-ordinates</b>	Latitude	S 26°00'19"	Longitude	E 28°16'05"	Elevation	5040ft	
<b>Helicopter Information</b>							
Registration	ZT-RHB						
Make; Model; S/N	Robinson R66 (Serial Number: 0082)						
Damage to Helicopter	None		Total Helicopter Hours	1076			
<b>Pilot-in-command</b>							
Licence Type	Commercial Pilot Licence (CPL) Helicopter		Gender	Male	Age	36	
Licence Valid	Yes	Total Hours	4747.1	Total Hours on Type	1400		
Total Hours Past 30 days	12		Total Hours on Type Past 90 days	42.4			
<b>People On-board</b>	2+1	<b>Injuries</b>	0	<b>Fatalities</b>	0	<b>Other (on ground)</b>	0
<b>What Happened</b>							
<p>On Thursday, 7 March 2023, two pilots and a passenger on-board a Robinson R66 helicopter with registration ZT-RHB were on a private flight from Witbank Airport (FAWI) in Mpumalanga province with the intention to make a stop at Ultimate Heliport in Gauteng province before they proceed to Rand Airport (FAGM) for a full stop landing. The passenger was to be dropped off at Ultimate Heliport. Visual meteorological conditions (VMC) by night prevailed at the time of the flight. The flight was conducted under visual flight rules (VFR) by night and under the provisions of Part 91 of the Civil Aviation Regulations (CAR) 2011 as amended.</p> <p>According to the pilot, the helicopter was cleared by O.R. Tambo International Airport (FAOR) tower control on frequency 118.1-Megahertz (MHz) at 1745Z to cruise on the northern side of FAWI at an altitude of 6000 feet (ft) whilst en route to Ultimate Heliport. When the helicopter was flying over Barnstormers Model Flying Club in Kempton Park, an unidentified object collided with the helicopter. The pilot flying stated that all the occupants in the helicopter did not see the object as its navigation lights were not switched on. The crew reported the incident to FAOR tower control. The FAOR tower control stated that they were not aware of any remotely piloted aircraft (RPA) presence in that area, that is, if the object was an RPA. Upon reaching Ultimate Heliport to drop off the passenger, the crew</p>							

inspected the helicopter and found yellow paint markings on the front of the lower cowling. There was no damage to the helicopter and no persons were injured. The crew continued with the flight to FAGM.



**Figure 1:** Yellow markings on the front of the lower cowling. (Source: Operator)

## Findings

1. The pilot was issued a Commercial Pilot Licence (CPL) on 6 May 2022 with an expiry date of 31 May 2023. His Class 1 medical certificate was issued on 30 January 2023 with an expiry date of 31 January 2024 with no medical restrictions.
2. The mandatory periodic inspection (MPI) on the helicopter was carried out on 9 November 2022 at 1032 airframe hours. The next scheduled MPI was due on 9 November 2023 or at 1132 airframe hours, whichever occurs first. The helicopter was operated for 44 hours after the last MPI.
3. The helicopter was originally issued a Certificate of Airworthiness (C of A) on 5 May 2017 with an expiry date of 31 May 2023.
4. The helicopter was not damaged during the incident. It only sustained yellow markings on the airframe (see Figure 1).
5. The elevation at Barnstormers is 5040ft, meaning that the collision occurred at 960ft above ground level (AGL).

6. The investigator-in-charge has notified the Aviation Security Division.
<b>Probable Cause</b>
An unidentified object collided with the helicopter in a controlled airspace.
<b>Contributing Factors</b>
None.
<b>Safety Action</b>
None.
<b>Safety Message and/or Safety Recommendation/s</b>
None.
<b>About this Report</b>
<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 desk top enquiries 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>
<b>Purpose</b>
<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>
<b>Disclaimer</b>
<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**