LIMITED OCCURRENCE INVESTIGATION REPORT – FINAL

Reference Number	CA18/3/2/1492										
Classification	Serious Incident		**Date**	05 August 2025			**Time**	0910Z			
Type of Operation	ZS-RMU: Commercial (Part 127); ZS-STF: Private (Part 94)										
Location											
Place of Departure	Virginia Airport (FAVG), KwaZulu-Natal Province			Place of Intended Landing			Virginia Airport (FAVG), KwaZulu-Natal Province				
Place of Occurrence	Final approach Runway 05 at Virginia Airport (FAVG), KwaZulu-Natal Province										
GPS Co-ordinates	Latitude	S29°46'.31"		Longitude	E31°03'.20"		Elevation	20 feet			
Aircraft Information											
Registration	ZS-RMU and ZU-STF										
Make; Model; S/N (ZS-RMU)	Robinson; R44 (Serial Number: 0992)										
Make; Model; S/N (ZU-STF)	The Airplane Factory; Sling 2 (Serial Number: 245)										
Damage to Aircraft (ZS-RMU)	None			Total Aircraft Hours			2658.6				
Damage to Aircraft (ZS-STF)	None			Total Aircraft Hours			3011.2				
Pilot-in-command											
Licence Type ZS-RMU	Commercial Pilot Licence (CPL) Helicopter					Gender	Male		Age	27	
Licence Type ZU-STF	Private Pilot Licence (PPL) Aeroplane					Gender	Male		Age	21	
Licence Valid (ZS-RMU)	Yes		Total Hours	246.1		Total Hours on Type				34.2	
Licence Valid (ZU-STF)	Yes		Total Hours	105.4		Total Hours on Type				33.9	
Total Hours Past 30 Days (ZS-RMU)	12.5			Total Hours on Type Past 90 Days						26.8	
Total Hours Past 30 Days (ZU-STF)	8.3			Total Hours on Type Past 90 Days						18.9	
People On-board (ZS-RMU)	1 + 2	**Injuries**	0	**Fatalities**	0	**Other (on ground)**	0				
People On-board (ZU-STF)	2 + 0	**Injuries**	0	**Fatalities**	0	**Other (on ground)**	0				

What Happened

On Tuesday morning, 5 August 2025 at 0910Z, a pilot and two passengers on-board a Robinson R44 helicopter with registration ZS-RMU departed on a scenic flight from Virginia Airfield (FAVG) in KwaZulu-Natal province with the intention to land back at the same airfield. Meanwhile, a Sling 2 aircraft with registration ZU-STF had taken off earlier from FAVG and had returned to the airfield to conduct take-off and landing exercises before making a full-stop landing. Visual meteorological conditions (VMC) by day prevailed at the time of the flights which were conducted under the provisions of Part 127 (ZS-RMU) and Part 94 (ZU-STF) of the Civil Aviation Regulations (CAR) 2011, as amended.

Clear weather conditions with clear visibility prevailed at the time of the flights. According to the ZS-RMU pilot, whilst he was on a seaward track abeam the pond at the end of Beachwood Golf Course and at approximately 500 feet (ft), he observed a yellow and blue fixed-wing (Sling 2, ZU-STF) aircraft as it appeared from his 11 o'clock position. He estimated it to be approximately 20 to 30 metres (m) away and at the same altitude on a

descending heading (to fly across and beneath the helicopter's [ZU-RMU] 5 o'clock position). The pilot deduced that the ZS-STF was turning from base leg on to final approach for Runway 05. To avoid a potential mid-air collision, the ZS-RMU pilot initiated an immediate avoidance manoeuvre and climbed to 530 ft whilst ZU-STF continued to turn final approach Runway 05. This action successfully created separation between the helicopter and the aircraft. According to the ZS-RMU pilot, he did not recall receiving any direct traffic advisory from the air traffic control (ATC) personnel regarding the conflict, and no subsequent communication or acknowledgement of the event was communicated.

The ZS-STF pilot stated that he entered the FAVG circuit after his return from Pietermaritzburg Airport (FAPM), KwaZulu-Natal province, with the intention to land after completing a few circuits on the airfield. Whilst turning base leg to final approach on his second-to-last circuit, he became aware of the helicopter traffic (ZS-RMU) routing south bound at 500 ft.

According to the ATC recording, four aircraft were in the circuit in the following sequence: ZS-SBX, ZS-RMU, ZS-RKL and ZU-STF. The ZU-STF pilot reported his position: "*STF right downwind Runway 05. Closer to Umngeni. We can see the helicopter traffic at our two o'clock"* and confirmed they were number four in the queue after the ATC's instruction. The ZS-RMU pilot transmitted immediately after to report he was on final for Runway 05 and enquired from the ATC personnel if the aircraft that was on the runway had vacated. The ATC personnel confirmed runway clear and surface wind, and that he should reposition for the helipad and report safe. The near miss between the two aircraft occurred as ZU-STF was turning from base leg to final approach for Runway 05 at 500 ft whilst ZS-RMU was also at 500 ft on final approach with a horizontal separation of approximately 20 to 30m.

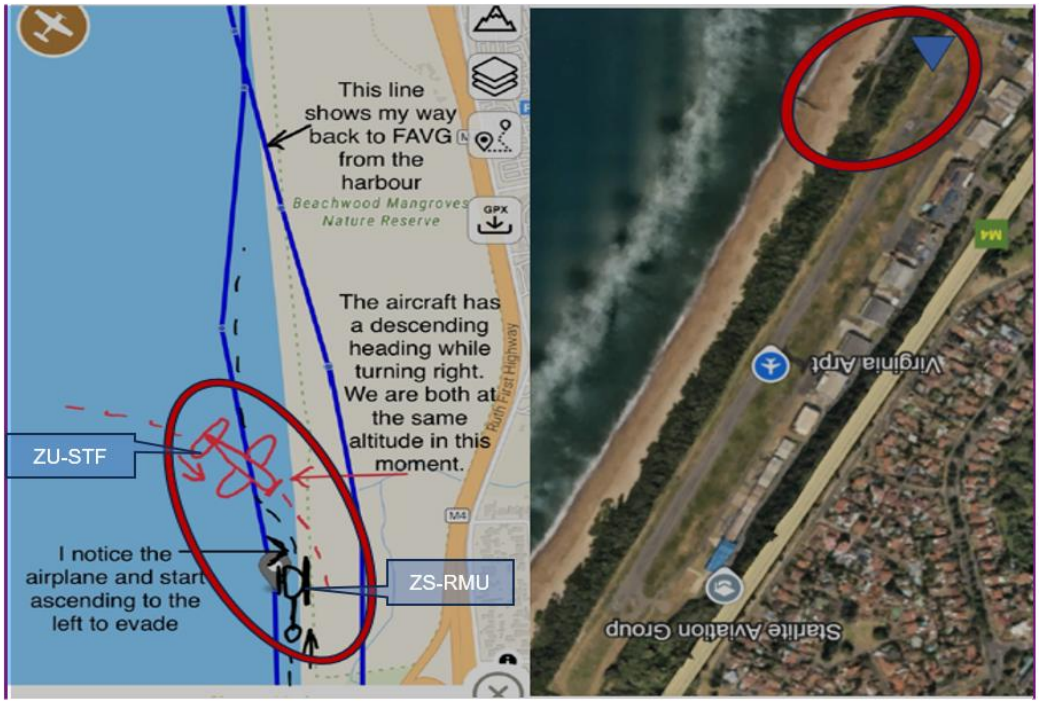

Figure 1: The position of the ZS-STF and ZS-RMU at the time the avoidance manoeuvre was executed; the ZS-RMU ascended on final approach for Runway 05. (Source: ZS-RMU pilot)

The figure above illustrates the reported airspace conflict at FAVG. The blue marking on the right-side shows the approximate area where the serious incident occurred.

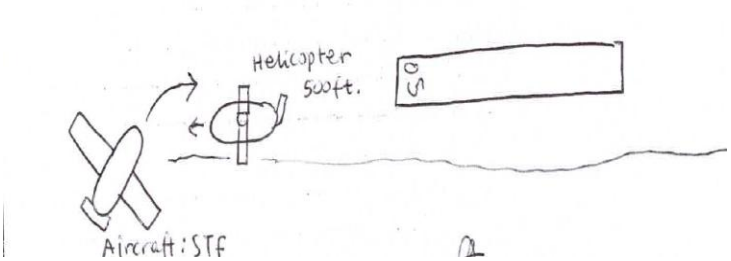

Illustration 1: A sketch of the positions when the serious incident occurred. (Source: ZU-STF pilot)

Reduced Separation (Source: CAA Standards & Procedures (ATCIs) Manual, dated 8 February 2013)

Standard separation may be reduced when authorised by the Civil Aviation Authority and published in the station standing instruction manual.

1. *In the vicinity of aerodromes, the standard separation minima may be reduced if:*
   a) Adequate separation can be provided by the aerodrome controller when each aircraft is continuously visible to this controller.
   b) Each aircraft is continuously visible to flight crews of the other aircraft concerned, and the pilots thereof report that they can maintain their own separation.
   c) In the case of one aircraft following another, the flight crew of the succeeding aircraft reports that the other aircraft is in sight and separation can be maintained.

   The SACAA Standards and Procedures Manual, Section 6 - Separation Methods and Minima, Chapter 2 – Vertical Separation, Paragraph 1.2 – Vertical separation Minima, prescribes that:

   Vertical separation exists when the vertical distance between aircraft is never less than the prescribed minimum. The vertical separation minima are:
   a) 1000 ft up to FL 290 between all aircraft;
   And
   The SACAA Standards and Procedures Manual, Section 6 - Separation Methods and Minima, Chapter 6 – ATS Surveillance Systems Separation Minima, Paragraph 1.1 – General, prescribes that:
   1.1 (a) The horizontal separation minimum based on ATS surveillance information shall be:
   (i) 5 NM; or
   (ii) if a higher minimum applies under Section 6, Chapter 5 (ATS Surveillance System -Wake Turbulence Separation Minima)— that higher minimum.

   The Standards and Procedures Manual, Section 2, Chapter 1, Paragraph 6.1.3, Approach maintaining VMC state that:

c) During a VMC Approach the ATSU shall remain responsible to provide separation between all aircraft as stipulated below:
BY DAY: Standard separation may be reduced, subject to the agreement of all pilots involved. When such a reduction is permitted, essential traffic information shall be passed, and the pilot is responsible for his own separation.

The Standards and Procedures Manual, Section 3, Chapter 1, Paragraph 2, Responsibilities state that: Aerodrome control shall be responsible for issuing information and instructions to aircraft under its control to achieve a safe, orderly and expeditious flow of air traffic on and in the vicinity of an aerodrome and to assist pilots in preventing collisions between:
a) Aircraft flying in, and in the vicinity of, the aerodrome traffic zone;
b) Aircraft taking off and landing;
c) Aircraft and vehicles, obstructions and other aircraft on the manoeuvring area

The Standards and Procedures Manual, Section 3, Chapter 1, Paragraph 6, Essential Local Traffic Information state that:
6.2.1 Information on essential local traffic shall be issued in a timely manner, either directly or through the unit providing approach control service when, in the judgment of the aerodrome controller, such information is necessary in the interests of safety, or when requested by aircraft.
6.2.2 Essential local traffic shall be considered to consist of any aircraft, vehicle or personnel on or near the manoeuvring area or traffic operating in the vicinity of the aerodrome, which may constitute a hazard to the aircraft concerned.
6.2.3 Essential local traffic shall be described so as to be easily identified.

According to the SACAA CAR Part 91.06.7, Right of Way:

91.06.7 *(1) An aircraft which has the right-of-way, shall maintain its heading and speed, but nothing in these provisions shall relieve the PIC of an aircraft from the responsibility of taking such action as will best avert collision, including collision avoidance manoeuvres based on resolution advisories provided by ACAS equipment.*
(2) An aircraft which is obliged, by the provisions of this Subpart, to keep out of the way of another aircraft, shall avoid passing over or under the other aircraft, or crossing ahead of such aircraft, unless passing well clear, taking into account the effects of wake turbulence.
(3) When two aircraft are approaching head-on or approximately so and there is danger of collision, each aircraft shall alter its heading to the right.
(4) When two aircraft are converging at approximately the same level, the aircraft which has the other aircraft on its right, shall give way, except in the following circumstances—
power-driven heavier-than-air aircraft shall give way to airships, gliders and balloons;

According to the SACAA CAR Part 91.06.12, Operation on and in vicinity of aerodrome:

91.06.12 *(1) The PIC of an aircraft operated on or in the vicinity of an aerodrome, shall be responsible for compliance with the following rules—*

observe other aerodrome traffic for the purpose of avoiding collision.

conform with or avoid the pattern of traffic formed by other aircraft in operation.

ATC Information (Source: A TNS Mandatory Occurrence Report (MOR)

The ATC prescribed reduced separation in the vicinity of an aerodrome as this was the normal operating procedures at FAVG where visual flight rules (VFR) traffic is not separated by the standard 1000 ft and 5 nautical miles (nm). The conditions at FAVG on the day of the event allowed for this as the weather was visual meteorological conditions (VMC) during daytime. To achieve reduced separation in the vicinity of the aerodrome and to ensure that the pilots are able to adequately ensure their own separation, the ATC personnel had issued instructions and information to the aircraft under their control to achieve a safe flow of traffic by communicating essential local traffic information to all the aircraft under their control, particularly all four (including ZS-RMU at position two and ZS-STF at position four) aircraft within the circuit area. One of the aircraft reported on the used frequency that they had sight of each other, particularly the aircraft ahead of them, after the traffic information was communicated. This gave the ATC personnel the required assurance that the reduced separation in the vicinity of the aerodrome would be effected and that the pilots would ensure they maintain a safe distance from one another.

FAVG Aerodrome

FAVG AD 2.17 ATS Airspace

Aircraft flying in this aerodrome traffic zone (ATZ) must comply with the noise abatement procedures applicable in the FAVG circuit: (a) All circuits to be made seawards, thus when Runway 23 is in use, left-hand side circuits must be flown, and when Runway 05 is in use, right-hand side circuits must be flown. (b) All aircraft other than those piloted by pupils under training must veer seawards of the line of flight immediately after take-off. (c) Aircraft being piloted by pupils under training must start veering seawards on reaching a height of 400 ft above sea level.

FAVG AD 2.22 Flight Procedures

The following deemed separation between arriving and departing instrument flight rules (IFR) flights at King Shaka International Airport (FALE) and FAVG is based upon a Safety Assessment conducted by Air Traffic Navigation Services (ATNS) and has been implemented to enhance efficiency as well as to ensure a safe, orderly and expeditious flow of air traffic within the FALE/FAVG area of responsibility. FAVG's geographical position is 3nm east of the approach/take-off path of Runway 06/24 at FALE and, as such, restricts IFR traffic to and from both airports. This procedure will require IFR traffic departing from or arriving at FAVG, to have ATC clearances to remain seaward of the coastline on headings and will be deemed to be separated from IFR departing and arriving traffic at FALE. This deemed separation will only be applicable when Surveillance Radar is in operation at FALE. In the absence of an Instrument Approach Procedure (IAP) for Instrument Flying Rules aircraft (IFR ACFT) into FAVG, the following procedure applies when weather (WX) minima restricts visual meteorological condition (VMC) descents into FAVG: inbound IFR ACFT to FAVG shall be accommodated on the instrument

landing system (ILS) or variable omnidirectional range (VOR) IAP to FALE to a minimum of 1000 ft altitude (ALT). Should the ACFT not become VMC by 1000 ft ALT, the pilot will be requested to land at FALE.
Circuit: All circuits to be flown at 800 ft and must be conducted seawards. Downwind legs over land are not permitted.

Findings

Pilot (ZS-RMU)

1.1 The ZS-RMU pilot had a Commercial Pilot Licence (CPL) Helicopter that was initially issued by the Regulator (SACAA) on 25 February 2025 with an expiry date of 31 March 2026. The pilot had flown a total of 246.1 hours of which 34.2 hours were on the aircraft type.

1.2 The pilot had a Class 1 aviation medical certificate that was issued on 20 June 2025 with an expiry date of 30 June 2026.

Pilot (ZU-STF)

1.3. The ZU-STF pilot had a valid Private Pilot Licence (PPL) Aeroplane that was initially issued by the Regulator on 11 September 2023. The licence was reissued on 5 February 2025 with an expiry date of 31 January 2027. The pilot had flown a total of 105.4 hours of which 33.9 hours were on the aircraft type.

1.4. The pilot had a Class 2 aviation medical certificate that was issued on 22 January 2025 with an expiry date of 31 January 2027.

Aircraft Information (ZS-RMU)

2.1. The aircraft had a valid Certificate of Airworthiness (C of A) that was issued by the Regulator on 20 February 2001 with the latest expiry date being 29 May 2026. The aircraft Certificate of Registration (C of R) was issued to the present owner on 11 May 2023.

2.2. The aircraft's annual inspection was conducted and certified by an approved person (AP) after which the Certificate of Release to Service (CRS) was issued on 28 May 2025 at 2580.9.2 airframe hours with an expiry date of 27 May 2026 or at 2680.9 airframe hours, whichever comes first.

Aircraft Information (ZU-STF)

2.3. The aircraft was issued an Authority-to-Fly (ATF) Certificate by the Regulator on 7 March 2019 with an expiry date of 31 March 2026. The Certificate of Registration (C of R) was issued to the current owner on 21 January 2022.

2.4. The aircraft's annual inspection was conducted and certified by an approved person (AP) after which the Certificate of Release to Service (CRS) was issued on 24 July 2025 at 3004.8 airframe hours with an expiry date of 24 July 2026 or at 3114.8 airframe hours, whichever comes first.

2.5. Both aircraft were in a good state of airworthiness and did not have any reported defects related to any of the systems, including radio communication systems. All communication was conducted through aircraft radios using frequency 120.6-Megahertz (MHz) at FAVG airspace. The pilots on both aircraft were in communication with the ATC FAVG.

Environment

3.1. Clear weather conditions prevailed at the time of flights; the weather did not contribute to the serious incident.

Mission

ZS-RMU

4.1. The aircraft was number two in the circuit at 500 ft. The pilot had to perform an avoidance manoeuvre by climbing to avoid a mid-air collision as ZU-STF turned base leg at FAVG for Runway 05 at 500 ft.

ZU-STF

4.2. The aircraft was number four in the circuit at FAVG; it was on its second-to-last circuit turning base leg at 500ft when it had a near miss with ZS-RMU.

4.3. All aircraft within the FAVG-controlled airspace circuit transmitted on radio frequency 120.6-MHz and were aware of each other's positions. The ZS-RMU and ZU-STF near miss was due to failure to look out as well as lack of situational awareness by the ZU-STF crew who overtook both number three and number two traffic that was already in the circuit.

Probable Cause

The (helicopter) ZS-RMU and (aircraft) ZU-STF had a near miss which was due to failure to look out as well as lack of situational awareness by the ZU-STF crew who overtook both number three and number two traffic that was already in the circuit.

Contributing Factors

None.

Safety Message

None.

Safety Recommendation

None.

About this Report
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. *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.*
Purpose
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 apportion blame or liability.
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This report is issued by:

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