



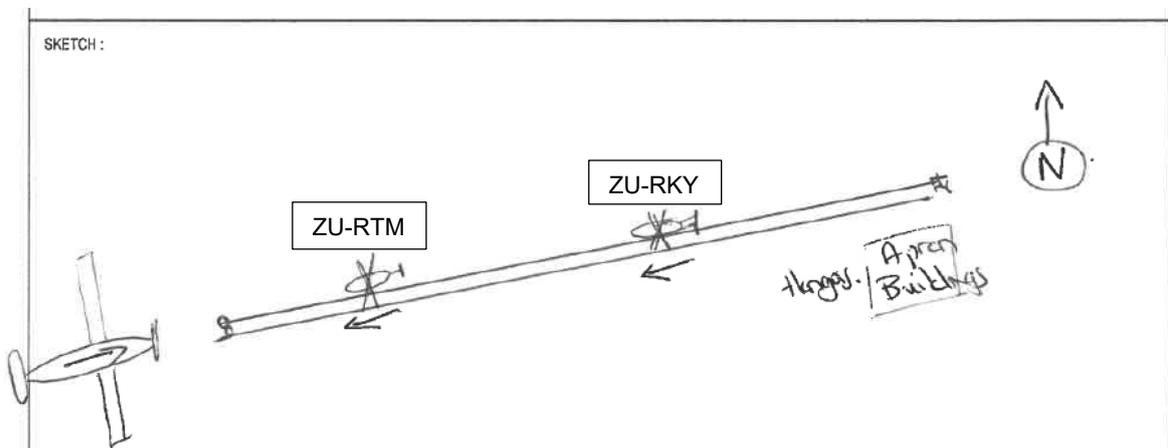
## LIMITED OCCURRENCE INVESTIGATION REPORT – FINAL

<b>Reference Number</b>	CA18/3/2/1494						
<b>Classification</b>	Serious Incident	<b>Date</b>	10 August 2025		<b>Time</b>	0832Z	
<b>Type of Operation</b>	Private (Part 91)						
<b>Location</b>							
Place of Departure	Wonderboom Aerodrome (FAWB), Gauteng Province		Place of Intended Landing	Malelane Aerodrome (FAMN), Mpumalanga Province			
Place of Occurrence	Runway 27 at Malelane Aerodrome (FAMN), Mpumalanga Province						
GPS Co-ordinates	Latitude	25°28'19.74" S	Longitude	031°34'14.72" E	Elevation	1 155 feet	
<b>Aircraft Information</b>							
Registration	ZS-APS						
Make; Model; S/N	Pilatus PC12/47 (Serial Number: 771)						
Damage to Aircraft	None		Total Aircraft Hours	3 521.0			
<b>Pilot-in-command</b>							
Licence Type	Commercial Pilot Licence		Gender	Male		Age	64
Licence Valid	Yes	Total Hours	16306		Total Hours on Type	902	
Total Hours Past 30 Days	25.6		Total Hours on Type Past 90 Days	72			
<b>People On-board</b>	3 + 7	<b>Injuries</b>	0	<b>Fatalities</b>	0	<b>Other (on ground)</b>	0
<b>What Happened</b>							
<p>On Sunday morning, 10 August 2025, two pilots on-board their respective Calidus gyrocopters with registrations ZU-RTM and ZU-RKY took off from Runway 27 at Malelane Aerodrome (FAMN) in Mpumalanga province to Kitty Hawk Aerodrome (FAKT) in Gauteng province. The flights were conducted under visual meteorological conditions (VMC) by day and under the provisions of Part 94 of the Civil Aviation Regulations (CAR) 2011 as amended.</p> <p>Meanwhile, another aircraft, a Pilatus PC12/47 with registration ZS-APS had taken off at 0745Z on a planned instrument flight from Wonderboom Aerodrome (FAWB) in Gauteng province; routing directly to FAMN after having requested flight level (FL) 190 (19 000 feet). There were three crew members and seven passengers on-board the aircraft.</p> <p>The lead pilot on-board ZU-RTM broadcasted her intentions on the Malelane Special Rules Area (SRA) frequency 129.35-Megahertz (MHz) and, thereafter, took off. As she rotated, she spotted an aircraft (ZS-APS) on short final approach for Runway 09, which conflicted with Runway 27. She immediately alerted the pilot on-board ZU-RKY to take an evasive action to prevent a midair collision. Therefore, both pilots on-board the gyrocopters took evasive actions as the ZS-APS aircraft remained at low level and maintained the runway heading. The ZS-APS then positioned for a left</p>							

downwind and continued to land on Runway 09. The ZU-RTM pilot made several attempts to communicate with the ZS-APS crew. The ZS-APS crew neither broadcasted their intentions on the allocated radio frequency when inbound for FAMN, nor did they follow the unmanned aerodrome joining procedure. Instead, they opted for a straight-in approach for Runway 09.

The ZS-APS crew stated that they were communicating with the air traffic control (ATC) personnel at Kruger Mpumalanga International Aerodrome (FAKN) on frequency 130.35-MHz whilst also listening in on frequency 129.35-MHz (Malelane SRA frequency). They later muted the Malelane SRA frequency to listen in on FAKN frequency. They approached FAMN from the west via Area Navigation (RNAV) point Mnifi for a visual approach. The crew stated that as they had not flown to FAMN for some time, they had planned to overfly the aerodrome to inspect the runway, check the windsock, and observe any possible game on the runway. Approximately 3 nautical miles (nm) from the runway, the crew spotted two aircraft that were departing from FAMN; they found it strange that there was no broadcast on the Malelane SRA frequency 129.35-MHz. However, that is when they noticed that they did not unmute Comm 2, tuned to frequency 129.35-MHz. As soon as they un-muted the frequency, they heard the ZU-RTM pilot stating that they did not follow the unmanned aerodrome joining procedures. The ZS-APS pilot-in-command (PIC) stated that it was an honest mistake from their side for not unmuting the intercom box. They acknowledged their mistake and the possibility of what might have happened.

The serious incident occurred during daylight at Global Positioning System (GPS) position determined to be 25°28'19.74" South 031°34'14.72" East, at an elevation of 1 155 feet (ft).



**Figure 1:** A sketch of the two gyrocopters taking off and the ZS-APS aircraft approaching to land.  
(Source: ZU-RTM pilot)

#### Meteorological Information

The weather information entered in the table below was obtained from the ZU-RTM pilot via the pilot questionnaire.

Wind Direction	315°	Wind Speed	7 mph	Visibility	>10km
Temperature	29°C	Cloud Cover	N/A	Cloud Base	N/A
Dew Point	10°C	QNH	1022hPa		

FAKN is located 47 nautical miles (nm) north-west of FAMN.

The FAKN meteorological aerodrome report (METAR) on 10 August 2025 at 1000Z was as follows:

FAKN 101000Z 27004KT 9999 FEW035 24/07 Q1022 NOSIG=

Wind Direction	270°	Wind Speed	4kt	Visibility	9999m
Temperature	24°C	Cloud Cover	1 to 2 oktas	Cloud Base	3 500ft
Dew Point	7°C	QNH	1022hPa		

### FAMN Aerodrome

FAMN is a licensed, unmanned aerodrome with a single asphalt runway oriented 09/27. The runway is 1 248 metres (m) long and 18m wide with an elevation of 1 155 ft above mean sea level (AMSL).



**Figure 2:** Overview of FAMN. (Source: Google Earth)

Johannesburg Flight Information Region (FAJA)

Malelane Special Rules Area (SRA)

(Source: Aeronautical Information Regulation and Control (AIRAC) AIP Supplement S030/23 issued by SACCA on 20 April 2023)

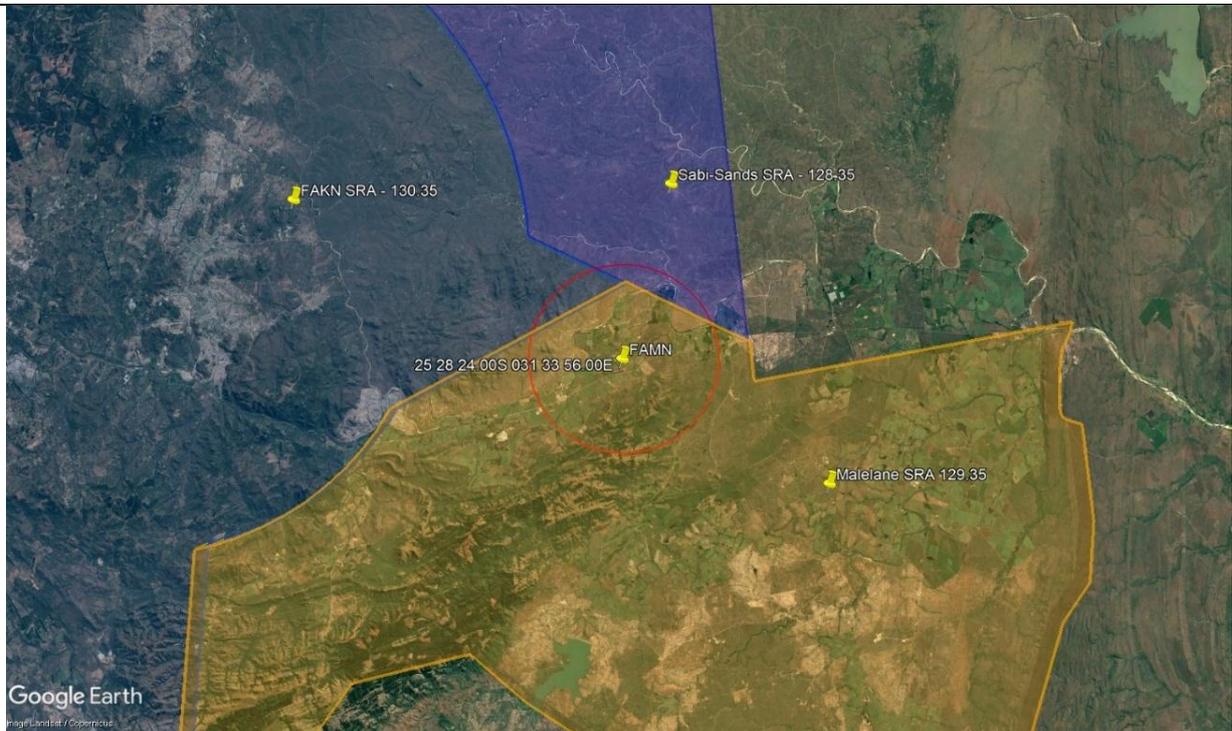
*A portion of the airspace below the Kruger Mpumalanga Terminal Control Area (TMA) F extending eastwards towards the South African and Mozambique International Boundary and southwards along the Matsapha TMA boundary is declared as a Special Rules Area and will be known as the Malelane SRA.*

*Rules Applicable Within Malelane SRA*

- 1. Malelane SRA is established to promote safety, efficiency and orderly operations in the Lowveld areas of Malelane and surrounds as defined.*
- 2. Avoid controlled airspace unless otherwise authorised by ATC.*
- 3. All aircraft operating in the Malelane special rules area shall maintain a listening watch and broadcast regular position reports on frequency 129.35-MHz.*
- 4. All aircraft outbound from Malelane must establish contact with FAKN TWR/APP on frequency 119.20-MHz, before airborne.*
- 5. Pilots are requested to squawk transponder code #2000 at all times with altitude selected. Helicopters to squawk #2600 with altitude selected.*
- 6. Pilots to observe SA CARs semi-circular rules and minimum heights requirements within the Malelane SRA.*
- 7. Pilots to ensure to obtain joining clearances from adjacent ATSUs prior to entering respective controlled and information airspaces, i.e., FAKN TWR/APP, FDSK TWR/APP, LASS, and FQMA TWR/APP.*
- 8. Pilots operating in the SRA should ensure that they do not exceed the applicable altitude restrictions as defined.*

**Vertical limits:** GND – FL105

**Frequency:** 129.35-MHz

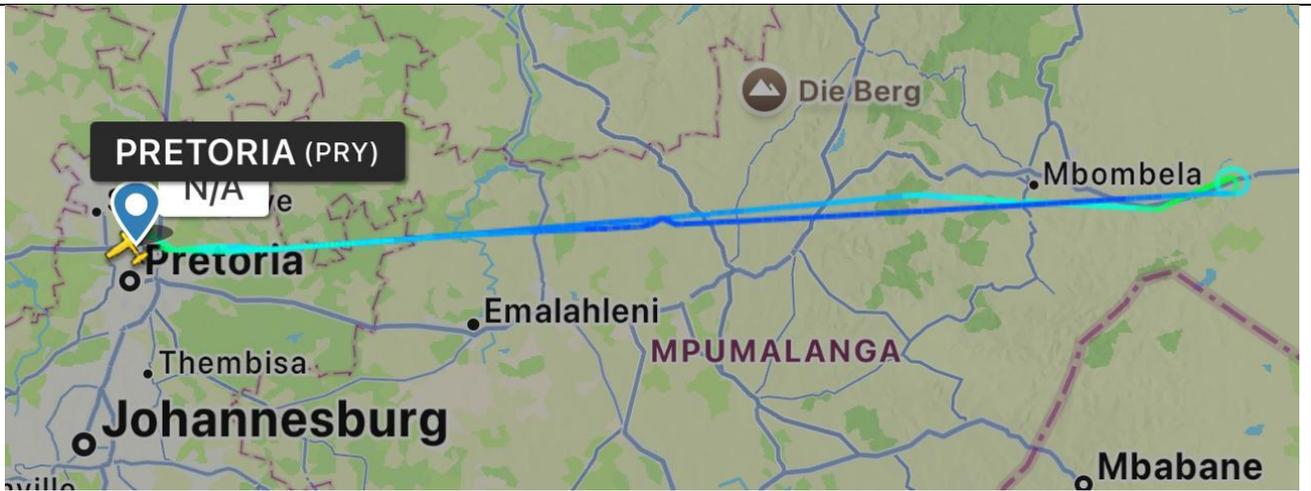


**Figure 3:** Overview indicating Malelane Special Rules Area and FAMN. (Source: Google Earth)

#### Radar Track

Based on the ZS-APS radar track, the crew departed from FAWB Runway 29 and flew to FAMN (in a straight line). They approached FAMN from the west for a straight-in landing on Runway 09. Only after the pilot of ZU-RTM had broadcasted on the radio that they were in conflict with their take-off direction did the crew abort the approach and flew a circuit, positioning the aircraft on a left downwind for Runway 09.

The inbound flight to FAMN is indicated by the blue line, which changes to light blue and then green as the aircraft approaches FAMN (see Figure 4). Based on the radar track flown by ZS-APS, the aircraft entered the Malelane SRA 13nm west of the aerodrome, but only realised the frequency was muted when they were about to land on Runway 09.



**Figure 4:** The radar track of the inbound and outbound flight of ZS-APS into FAMN.  
 (Source: FlightRadar24.com)

The Aircraft



**Figure 5:** The file picture of the ZS-APS aircraft. (Source: [www.jetphotos.com](http://www.jetphotos.com))



**Figure 6:** The file picture of the ZU-RTM gyrocopter. (Source: Owner/pilot)



**Figure 7:** The file picture of the ZU-RKU gyrocopter. (Source: Owner)

An extract from the Civil Aviation Regulations 2011 as amended states:

*Endangering safety*

*Part 91.01.10 (1) No person shall, through any act or omission—*

- (a) endanger the safety of an aircraft or person therein; or*
- (b) cause or permit an aircraft to endanger the safety of any person or property.*

*Duties of Pilot-in-Command (PIC) regarding flight operations*

*Part 91.02.8 (1) The PIC of an aircraft shall, whether manipulating the controls or not, be responsible*

*for—*

- (a) the operation, safety and security of the aircraft, crew members, passengers, and cargo in accordance with these regulations while he or she is in command;*
- (b) operational control of the aircraft unless otherwise provided for in terms of Part 93, 121, 127 or 135 under an approved operational control system*

## **Findings**

### 1. Personnel Information

#### Pilot (ZU-RTM)

- 1.1 The ZU-RTM pilot had a National Pilot Licence (NPL) that was initially issued by the Regulator (SACAA) on 30 August 2010. The latest NPL was valid until 20 August 2026.
- 1.2 The pilot had a valid Class 4 aviation medical certificate that was issued on 14 October 2024 with an expiry date of 17 October 2026.
- 1.3 The pilot stated that the two aircraft which took off before them had also made use of Runway 27 as the prevailing wind was from the west.

#### Crew (ZS-APS)

- 1.4 The pilot-in-command (PIC) on-board ZS-APS had a Commercial Pilot Licence (CPL) that was initially issued by the Regulator (SACAA) on 3 April 1992. The PIC had accumulated a total of 16 306.0 flying hours of which 902.0 hours were on the aircraft type.
- 1.5 The PIC had a valid Class 1 aviation medical certificate that was issued on 3 June 2025 with an expiry date of 31 December 2025.
- 1.6 The first officer (FO) on-board ZS-APS had a Commercial Pilot Licence (CPL) that was initially issued by the Regulator on 29 March 2010. The renewed CPL was valid until 31 March 2026. The FO had accumulated a total of 2 374.9 flying hours of which 536.2 hours were on the aircraft type.
- 1.7 The FO had a valid Class 1 aviation medical certificate that was issued on 21 October 2024 with an expiry date of 31 October 2025.
- 1.8 The ZS-APS crew had filed an instrument flight plan from FAWB to FAMN and had requested FL190. The aircraft departed from FAWB at 0745Z.

2. Aircraft Information

ZU-RTM

2.1 The gyrocopter was issued an Authority-to-fly (ATF) Certificate by the Regulator on 14 May 2025 with an expiry date of 31 March 2026.

2.2 The gyrocopter Certificate of Registration was issued to the present owner on 1 August 2023.

ZS-APS

2.3 The aircraft is defined as a State aircraft; it was maintained by a Pilatus-approved aircraft maintenance organisation.

3. Meteorological Information

3.1 Fine weather conditions prevailed at the time of the flight with the wind blowing from the west; hence, the two gyrocopter pilots opted to take off into the wind from Runway 27.

4. Aerodrome Information

4.1 FAMN is a licensed unmanned aerodrome with a single asphalt runway oriented 09/27.

4.2 The two gyrocopters had used Runway 27 for take-off as the prevailing wind was from the west.

5. Malelane Special Rules Area (SRA)

5.1 On 20 April 2023, the SACAA issued an Aeronautical Information Regulation and Control (AIRAC) AIP Supplement S030/23, which states: *“A portion of the airspace below the Kruger Mpumalanga TMA F extending eastwards towards the South African and Mozambique International Boundary and southwards along the Matsapha TMA boundary is declared as a Special Rules Area and will be known as the Malelane SRA.”*

5.2 The document further states: *“All aircraft operating in the Malelane Special Rules Area shall maintain a listening watch and broadcast regular position reports on frequency 129.35-MHz.”*

5.3 The Malelane SRA vertical limits are from ground level to flight level 10 500ft (FL105).

5.4 The departing aircraft did not contact FAKN TWR prior to getting airborne as per SRA.

6. Communication

6.1 The radio communication transcript between the ZS-APS crew and the air traffic control (ATC) at Kruger Mpumalanga International Aerodrome (FAKN) was requested. The crew contacted FAKN ATC when they were 43nm inbound and cleared to descend to 9000ft and, shortly thereafter, 8000ft. There was no further communication.

**Probable Cause**

The ZS-APS crew did not follow the unmanned aerodrome joining procedures and failed to broadcast their intentions on the Malelane SRA frequency as they flew a straight-in approach with the intention to land on Runway 09 at FAMN. As a result, the ZU-RTM and ZU-RKY pilots took evasive actions to avoid a midair collision with ZS-APS aircraft.

**Contributing Factors**

1. The prevailing wind at the time was from the west; hence, the two gyrocopter pilots opted to take off from Runway 27, as well as the two aircraft that departed ahead of them. The ZS-APS crew had visual of the aircraft during their approach to FAMN.
2. The ZS-APS crew was on an instrument flight plan and had tuned in to FAKN frequency 130.35-MHz during approach instead of the Malelane SRA frequency 129.35-MHz.
3. The ZU-RTM pilot tried to establish radio contact with the crew of ZS-APS on the Malelane SRA frequency 129.35-MHz, but the crew failed to unmute the frequency until they were on short final approach for Runway 09.
4. The ZS-APS crew stated that it had been a long time since they had flown to FAMN.
5. The ZS-APS aircraft is designed with short take-off and landing (STOL) capabilities; this led to pilots being overly reliant on the technology and, therefore, deviated from good airmanship. They conducted a straight-in approach irrespective of the prevailing wind conditions as presented in this serious incident report.

**Safety Message**

Pilots flying out of unmanned aerodromes (especially licensed aerodromes) must always be vigilant and keep a proper lookout for other aircraft that might deviate from following the unmanned aerodrome joining procedures or omit to communicate their intentions on the correct frequency.

**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 to apportion blame or liability.*

**Disclaimer**

*This report is produced without prejudice to the rights of AIID, which are reserved.*

**This report is issued by:**

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