

LIMITED OCCURRENCE INVESTIGATION REPORT – FINAL

Reference Number	CA18/2/3/10492						
Classification	Accident	Date	14 September 2024	Time	1035Z		
Type of Operation	Private (Part 94)						
Location							
Place of Departure	Petit Aerodrome (FARA), Gauteng Province		Place of Intended Landing	Zandspruit Aerodrome, Limpopo Province			
Place of Occurrence	To the left of Runway 35 at Zandspruit Aerodrome						
GPS Co-ordinates	Latitude	24°22'15.32" S	Longitude	030°55'33.13" E	Elevation	1 617 feet	
Aircraft Information							
Registration	ZU-IJC						
Make; Model; S/N	Kitplanes for Africa; Bushbaby (Serial Number: 32)						
Damage to Aircraft	Substantial			Total Aircraft Hours	403.4		
Pilot-in-command							
Licence Type	National Pilot Licence (NPL)		Gender	Male		Age	40
Licence Valid	Yes	Total Hours	82.2		Total Hours on Type	28.7	
Total Hours Past 30 Days	2.3		Total Hours on Type Past 90 Days	2.3			
People On-board	1 + 1	Injuries	0	Fatalities	0	Other (on ground)	0
What Happened							
<p>On Saturday, 14 September 2024, a pilot and a passenger on-board a Bushbaby aircraft registered ZU-IJC took off on a private flight from Petit Aerodrome (FARA) in Gauteng province to Zandspruit Aerodrome near Hoedspruit in Limpopo province. The flight was 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>As the aircraft approached Zandspruit Aerodrome, the pilot communicated with Hoedspruit Approach who reported the wind to be light and variable. Upon arrival whilst overhead Zandspruit Aerodrome, the pilot conducted a runway inspection (to ensure the absence of wild animals) and assessed the windsock at the northern threshold of the runway which indicated a light northerly wind. The windsock on the southern part, which is positioned next to a hangar 220 metres (m) from the threshold of Runway 35, was tangled up (see Figure 6) and, thus, the pilot could not use it to assess the wind velocity. The pilot opted to land on Runway 35 which was 1000m long and 10m wide. He stated that on approach, he encountered turbulent conditions. As he eased the aircraft down for a three-point landing (tail dragger aircraft) with the main wheels approximately 30 centimetres (cm) above the runway and the stick well back, a sudden gust of wind lifted the right wing. The pilot attempted to recover from the condition by opting to perform a go-around; he then applied full power. However, the aircraft drifted to the left, the left wing contacted the ground, and the pilot lost control of the aircraft</p>							

(whilst trying to avoid impacting the hangar). The aircraft careered into the bush terrain and came to rest in a nose-down attitude next to a tree. The aircraft sustained substantial structural damage. No person was injured. A video footage of the approach and the accident sequence was obtained from a closed-circuit television (CCTV) camera mounted on a hangar and facing south. *The camera was at a distance from where the accident occurred and, therefore, no screenshots of the video footage could be used in this report.* The description of the occurrence is in line with the footage.

The accident occurred during daylight at Global Positioning System (GPS) co-ordinates determined to be 24°22'15.32" South 030°55'33.13" East, at an elevation of 1 617 feet (ft).

The pilot was involved in a serious incident with the same aircraft at the same aerodrome on 22 June 2024 on which he lost directional control of the aircraft during landing; the aircraft veered off the runway. In this serious incident, the damage to the aircraft was limited to the left wing.



Figure 1: Windssocks in yellow circles. The blue arrow depicts a gust of wind from the east.
(Source: Google Earth)



Figure 2: The aircraft as it came to rest next to the runway. (Source: Pilot)



Figure 3: The aft view of the aircraft. (Source: Pilot)



Figure 4: The front view of the aircraft. (Source: Pilot)



Figure 5: The side view of the aircraft. (Source: Pilot)



Figure 6: The tangled-up windssock. (Source: Pilot)

Meteorological Information

The weather information in the table below was obtained from the pilot questionnaire.

Wind Direction	Northerly	Wind Speed	3 knots	Visibility	9999 m
Temperature	32°C	Cloud Cover	CAVOK	Cloud Base	Nil
Dew Point	Unknown	QNH	1018hPa		

The meteorological aerodrome report (METAR) was obtained from the South African Weather Service (SAWS) website, issued on 14 September 2024 at 1100Z for Hoedspruit Aerodrome (FAHS) which is at an Air Force Base. FAHS is located 7.3 nautical miles (nm) east of Zandspruit Aerodrome. This METAR was obtained 25 minutes after the accident.

FAHS 141100Z AUTO 04008KT //// // ///// 40/09 Q1016=

Wind Direction	040°	Wind Speed	8 knots	Visibility	9999 m
Temperature	40°C	Cloud Cover	CAVOK	Cloud Base	Nil
Dew Point	9°C	QNH	1016hPa		

Findings

1. Personnel Information

- 1.1 The pilot had a National Pilot Licence (NPL) that was initially issued by the Regulator (SACAA) on 13 October 2021. The pilot's NPL was reissued on 23 November 2022 with an expiry date of 22 November 2024. The pilot had flown a total of 82.2 hours, of which 28.7 hours were flown on the aircraft type.
- 1.2 The pilot was issued a Class 2 aviation medical certificate on 27 July 2022 with an expiry date of 29 November 2025.
- 1.3 The pilot was involved in a serious incident with the same aircraft on which he lost directional control during landing at Zandspruit Aerodrome on 22 June 2024. The issued AIID reference number is CA18/3/2/1452.

2. Aircraft Information

- 2.1 The last annual inspection of the aircraft before the accident flight was certified on 21 August 2024 at 401.1 airframe hours. The aircraft accrued 2.3 hours since the last annual inspection.
- 2.2 The aircraft had a valid Authority to Fly (ATF) that was initially issued on 21 November 2018. The latest issued ATF had an expiry date of 30 November 2024.
- 2.3 The aircraft's Certificate of Registration (C of R) was issued to the present owner on 6 December 2023.
- 2.4 The aircraft was issued a Certificate of Release to Service (CRS) on 20 August 2024 with an expiry date of 30 November 2024 or at 500.0 airframe hours, whichever occurs first.

3. Meteorological Information

- 3.1 The prevailing wind was from the east when the pilot joined overhead Zandspruit Aerodrome and opted to land on Runway 35. The temperature was 40°C, which contributed to thermal turbulent conditions that could render a stable approach problematic.

Probable Cause

A sudden gust of wind from the right (east) lifted the right wing shortly before touchdown and the left wing contacted the ground, the pilot lost control of the aircraft.

Contributing Factor
The pilot was unable to obtain an accurate wind indication based on the windsock on the southern side of the aerodrome (near the threshold of Runway 35) as it was tangled up.
Safety Action(s)
None.
Safety Message and/or Safety Recommendation/s
It is recommended that the Zandspruit Bush and Aero Estate Homeowners' Association (HOA) service the windsocks regularly to avoid a similar situation in which a windsock is tangled up. The windsocks provide essential information to pilots when planning their approach and landing phases for either Runway 17 or 35.
About this Report
<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 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.</i>
<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>
Purpose
<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>
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**