

LIMITED OCCURRENCE INVESTIGATION REPORT – FINAL

Reference Number	CA18/2/3/10201						
Classification	Accident	Date	9 August 2022		Time	0520Z	
Type of Operation	Private (Part 94)						
Location							
Place of Departure	Kaalfontein Farm, Victoria West District, Northern Cape Province			Place of Intended Landing	Kaalfontein Farm, Victoria West District, Northern Cape Province		
Place of Occurrence	Kaalfontein Farm, Victoria West District in the Northern Cape Province						
GPS Co-ordinates	Latitude	31° 07' 03" S	Longitude	023° 09' 06" E	Elevation	4094 feet	
Aircraft Information							
Registration	ZU-EKY						
Make; Model; S/N	Microlight; Windlass Aquilla (Serial Number: WA1150)						
Damage to Aircraft	Substantial			Total Aircraft Hours	456.3		
Pilot-in-command							
Licence Type	National Pilot Licence (NPL)		Gender	Male		Age	52
Licence Valid	Yes	Total Hours	65.8		Total Hours on Type	65.8	
Total Hours 30 Days	1.8		Total Flying on Type Past 90 Days	24.4			
People On-board	1 + 1	Injuries	1	Fatalities	0	Other (on ground)	0
What Happened							
<p>On the morning of 9 August 2022 at approximately 0445Z, a pilot and a passenger on-board a Windlass Aquilla Microlight aircraft with registration ZU-EKY took off from Kaalfontein Farm in Victoria West District, Northern Cape province, with the intention to land back at the take-off farm. The pilot and the passenger's intention was to fly around the Victoria West District area. Visual meteorological conditions (VMC) by day prevailed at the time of the flight, which was conducted under the provisions of Part 94 of the Civil Aviation Regulations (CAR) 2011 as amended.</p> <p>The microlight's base is at Microland Airfield in Gauteng province. The passenger stated that a week prior to the accident, the aircraft was towed from Pretoria to Kaalfontein Farm using a trailer. The aircraft was to be used in a hunting excursion. The aircraft was parked out in the open at the farm. The plan was to use the dirt road that ran from the west to the east at the farm for take-off.</p> <p>On the day of the accident, the pilot had difficulty starting the engine of the aircraft. He also noticed that the temperature was 3°C that morning. After several attempts, the engine started, and the pilot let it idle for a while whilst monitoring the engine parameters to ensure that they were within the required limitations. The pilot then took off from the gravel road, but shortly after the aircraft got airborne whilst approximately 1 metre (m) from the ground, he noticed that the right wing was low (less lift); this caused the aircraft to drift to the right-side. In an attempt to avoid colliding with a</p>							

telephone pole, the pilot turned the aircraft more to the right, but it was losing height. Subsequently, the nose gear contacted the ground and the aircraft flipped over and came to rest in that position.

The passenger managed to unlatch himself and evacuated the aircraft, he then made his way to the pilot's side to assist him out of the aircraft. The pilot was injured during the accident sequence. The passenger then telephoned the farmer for help using a mobile phone. The farmer's house was approximately 2.7 miles from the accident site. The farmer alerted the De Aar medical services who dispatched to the accident scene. The medical personnel stabilised the pilot whom later, together with the passenger, were taken to a hospital in De Aar. After his condition was assessed at the hospital, the pilot was airlifted by Emergency Medical Services (EMS) helicopter to a hospital in Kimberley in the Northern Cape province for further medical treatment. The pilot was later transferred to a hospital in Benoni in Gauteng province where he underwent further medical treatment. The aircraft was substantially damaged during the accident sequence.

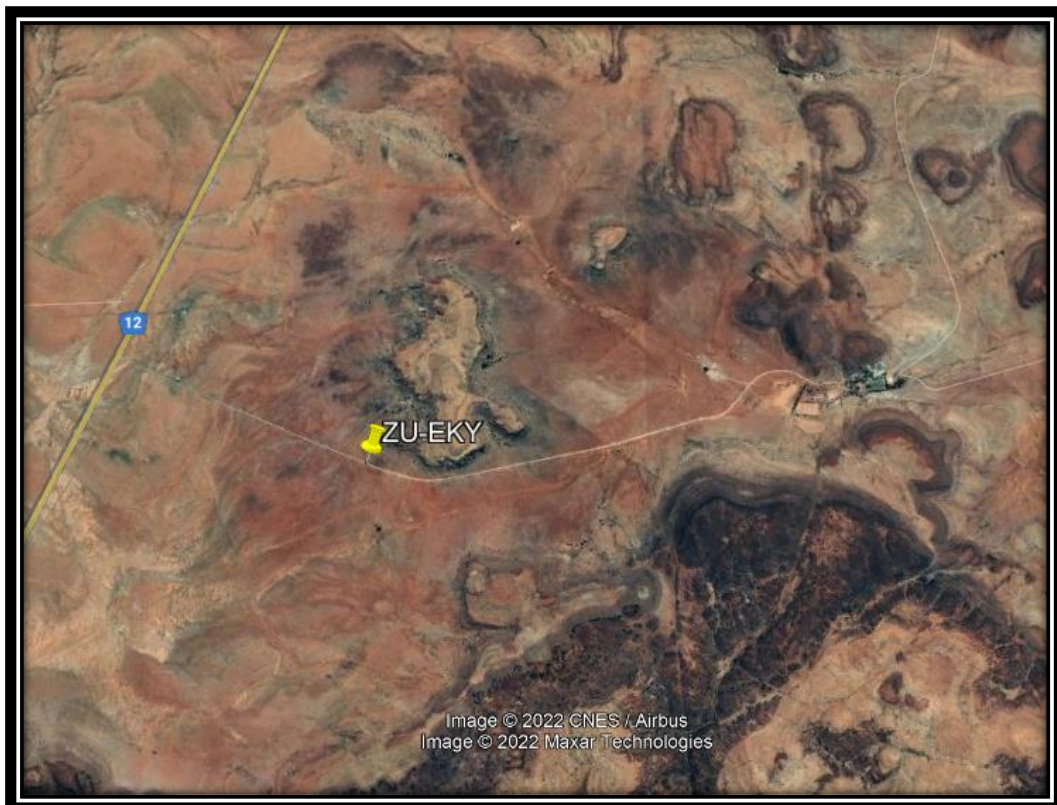


Figure 1: The yellow pin points to the area from where the pilot took off. (Source: Google Earth)



Figure 2: The aircraft at its resting position. (Source: Pilot)



Figure 3: The dirt road on Kaalfontein private farm. (Source: Pilot)

Table 1: Weight and balance

Empty Weight	195 kg
Pilot	90 kg
Passenger	87 kg
Fuel	40 kg
Total	412 kg
MTOW	450 kg

According to the weight and balance above, the aircraft was within Maximum Takeoff Weight (MTOW).

The weather information below was obtained from the Meteorological Aerodrome Report (METAR) that was issued by the South African Weather Service (SAWS), recorded at De Aar Aerodrome (FADA) and at Van Wykslei in the Northern Cape province on 9 August 2022. The Significant Weather (SigWX) low-level chart that was valid for 0500Z showed that there were low-level clouds forecasted to the far south-east of the accident site.

De Aar (FADA)

Wind Direction	130°	Wind Speed	6kt	Visibility	>10km
Temperature	3°C	Cloud Cover	Nil	Cloud Base	Nil
Dew Point	2°C	QNH	1024hPa		

Van Wykslei

Wind Direction	Light and Variable	Wind Speed	0kt	Visibility	>10km
Temperature	5°C	Cloud Cover	Nil	Cloud Base	Nil
Dew Point	2°C	QNH	1025hPa		

Findings

- The pilot was issued a National Pilot Licence (NPL) on 9 September 2020 with an expiry date 3 March 2023.
- The pilot was issued a Class 4 aviation medical certificate on 8 September 2020 with an expiry date of 30 September 2022.

- The pilot had accumulated 65.8 hours on the aircraft type. The pilot accumulated 24.4 hours in the past 90 days prior to the accident flight.
- The aircraft had a valid Certificate of Registration (C of R) issued on 6 October 2020.
- The aircraft's last annual inspection was carried out on 18 January 2022 at 435 hours. It was flown a further 21.3 hours since the last annual inspection. The aircraft had a valid Certificate of Release to Service (CRS) that was issued on 18 January 2022 at 435 hours with an expiry date of 18 January 2023 or at 534.3 hours, whichever comes first. The aircraft had accumulated 456.3 hours at the time of the accident flight.
- The aircraft had a valid Authority to Fly (ATF) which was initially issued on 21 August 2017. The ATF was renewed on 25 March 2022 after which the certificate was issued with an expiry date of 31 March 2023.

Probable Cause

The pilot lost control of the aircraft after take-off from a dirt road, and it veered off to the right-side before it flipped over.

Contributing Factor(s)

None.

Safety Action(s)

None.

Safety Message and/or Safety Recommendation/s

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 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.

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

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This report is issued by:

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