

LIMITED OCCURRENCE INVESTIGATION REPORT – FINAL

Reference Number	CA18/2/3/10266						
Classification	Accident	Date	13 February 2023		Time	0525Z	
Type of Operation	Private (Part 94)						
Location							
Place of Departure	Paradise Beach Aerodrome (FAPX), Eastern Cape Province		Place of Intended Landing		Paradise Beach Aerodrome (FAPX), Eastern Cape Province		
Place of Occurrence	Runway 26 Paradise Beach Aerodrome (FAPX), Eastern Cape Province						
GPS Co-ordinates	Latitude	34° 06' 08.22" S	Longitude	024° 52' 56.77" E	Elevation	15ft	
Aircraft Information							
Registration	ZU-COD						
Make; Model; S/N	Windlass Aquilla Trike (Serial Number: WA 936)						
Damage to Aircraft	Substantial			Total Aircraft Hours	482.2		
Pilot-in-command							
Licence Type	National Pilot Licence (NPL)		Gender	Male		Age	62
Licence Valid	Yes	Total Hours	29.54		Total Hours on Type	29.54	
Total Hours 30 Days	5.6		Total Flying on Type Past 90 Days		14.7		
People On-board	1+1	Injuries	1	Fatalities	0	Other (on ground)	0
What Happened							
<p>On Monday, 13 February 2023, a pilot and a passenger on-board a Windlass Aquilla Trike with registration ZU-COD took off on a private local flight from Paradise Beach Aerodrome (FAPX) in the Eastern Cape province to Jeffreys Bay in the same province, before returning to FAPX. 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>The pilot stated that the flight to Jeffreys Bay for touch-and-go exercises was uneventful. After approximately 30 minutes, the pair flew back to FAPX for a full stop landing. The pilot followed the unmanned aerodrome approach procedure and broadcasted his intentions on frequency 124.8-Megahertz (MHz). After assessing the windsock to determine the wind conditions, which he noted to be calm as the windsock hanged by the pole, the pilot decided to land on Runway 26. However, during the final approach at 43 miles per hour (mph) (37 knots), the pilot noticed that the microlight was slightly aligned to the left of Runway 26 centreline. As he corrected the microlight's attitude, the airspeed decayed; and during the flare, the microlight stalled and impacted the ground hard before it veered off to the left side of the runway and into the vegetation and impacted the tree before it</p>							

came to a stop. The pilot switched off the engine and disembarked from the microlight. The pilot sustained injury to his right ear, and the passenger was not injured. The aircraft's undercarriage, aft wing beam, instrument pod, engine propeller blades and the fabric on the left-wing were damaged.

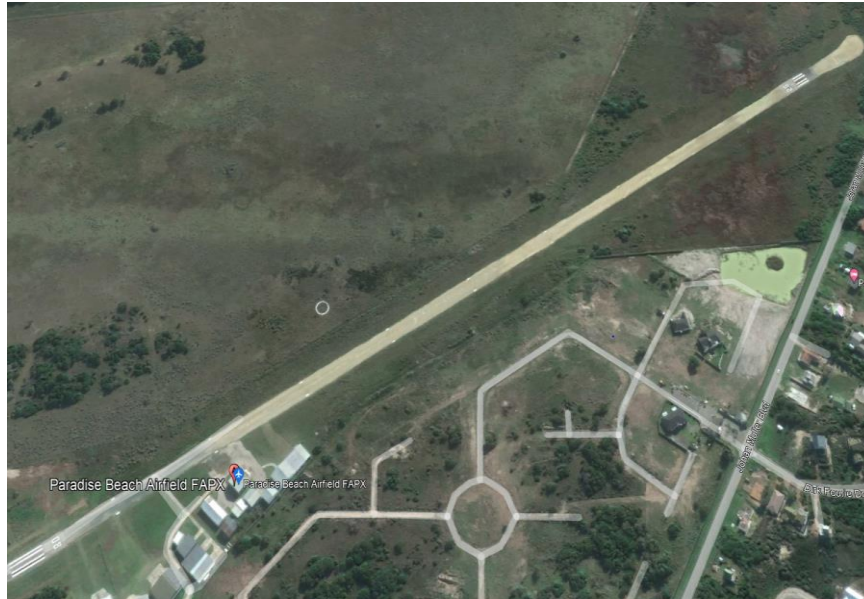


Figure 1: Paradise Beach Airfield layout. (Source: Google Earth)

Landing speed (Source: Pilot's Operating Handbook [POH])

Table 12 Section 4. Decent Check

4.8.8 Landing

Hand Throttle	Off	
Airspeed	STREAK	49 KIAS
	CRUZE	45 KIAS
Directional Control	Nose Wheel Steering Straight	
Braking	Off Then as required	

- According to the microlight POH, the landing speed is 45 knots.
- In the pilot questionnaire, the pilot stated that on final approach, the speed was 43 miles per hour (mph) (37 knots) which meant that the microlight was 8 knots below the recommended 45 knots as per the POH.
- The POH states the microlight crosswind component as 12 knots.

Descent, approach and landing (Source: POH)

The aircraft should be flown on final approach at or above the nominated safety speed. The additional airspeed allows for wind gradient, and to provide greater controllability in the rough

air that may lie close to the ground. Maintaining airspeed on final is very important for engine-off landings, allowing a margin for round out before touchdown. The trike is designed to land with the rear wheels touching down slightly before the nose wheel. Once firmly on the ground aerodynamic braking may be achieved by pulling in the control bar, then applying the front nose wheel brake.

WARNING

NEVER STALL THE AIRCRAFT WITH THE NOSE PITCHED UP BEYOND 45 DEGREES. MANOEUVRES BEYOND THIS ARE DANGEROUS AND CAN RESULT IN A TAIL SLIDE FOLLOWED BY A SEVERE TUMBLE. REFER TO SECTION 3.3.12 OF THIS FLIGHT MANUAL FOR DETAILS OF THE PROCEDURES FOR RECOVERY FROM UNUSUAL ATTITUDES.

- According to the report from the South African Weather Service (SAWS), there is no automatic weather station at FAPX as it is an unmanned aerodrome. Therefore, the Meteorological Aerodrome Report (METAR) is not issued for FAPX. Observational weather data from stations in proximity to FAPX are used to infer a picture of prevailing weather over FAPX.
- The weather information below was obtained from the SAWS, issued for Port Elizabeth Aerodrome (FAPE) on the day of the accident. FAPE is approximately 68 kilometres (km) east of FAPX.

Wind Direction	260°	Wind Speed	4kt	Visibility	10km
Temperature	22°C	Cloud Cover	Nil	Cloud Base	CAVOK
Dew Point	19°C	QNH	1015		

- FAPX consists of two runways – Runway 08 and Runway 26. Runway 08 has a 085° heading and Runway 26 has a 265° heading, both with an elevation of 15 feet (ft) above mean sea level (AMSL). This implies that the runways have an orientation of north-east and south-west, thus, crosswinds will either be south-east or north-west. No observations of automatic weather service (AWS) or METAR indicated a crosswind factor, but only winds mostly along the runways with no significant wind gusts.



Figure 2: The final resting position of the microlight. (Source: Pilot)



Figure 3: The damaged instrument pod and nose gear. (Source: Pilot)

Findings

1. The pilot was issued a National Pilot Licence (NPL) on 22 November 2022 with an expiry date of 8 October 2023.

<ol style="list-style-type: none"> 2. The pilot was issued a Class 4 medical certificate on 12 February 2021 with an expiry date of 28 February 2024, with no medical restrictions. 3. The microlight's last annual inspection was carried out on 14 June 2022 at 457.5 airframe hours, after which a Certificate of Release to Service (CRS) was issued with an expiry date of 13 June 2023 or at 557.5 hours, whichever comes first. 4. The Authority to Fly (ATF) was issued on 19 July 2022 with an expiry date of 31 July 2023. 5. The microlight's Certificate of Registration (C of R) was issued to the present owner on 20 June 2018. 6. The microlight's speed on approach was slow at 37 knots, and it stalled during the flare. Thereafter, it landed hard on the runway and veered off to the right before it crashed into a tree.
<p>Probable Cause(s)</p> <p>The microlight's speed was too low during the flare which led to a stall, followed by a hard landing and runway excursion to the right before it crashed into a tree.</p>
<p>Contributing Factor</p> <p>None.</p>
<p>Safety Action(s)</p> <p>None.</p>
<p>Safety Message and/or Safety Recommendation/s</p> <p>Pilots are urged to be vigilant during critical phases of the flight such as take-offs and landings. This accident could have been avoided if the pilot had monitored the microlight's approach and landing speed.</p>
<p>About this Report</p> <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>
<p>Purpose</p> <p><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></p>

Disclaimer

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**This report is issued by:
Accident and Incident Investigations Division
South African Civil Aviation Authority
Republic of South Africa**