

AIRCRAFT ACCIDENT REPORT AND EXECUTIVE SUMMARY

				Reference:	CA18/2/3/9003	
Aircraft Registration	ZU-BGD	Date of Accident	18 January 2012		Time of Accident	1700Z
Type of Aircraft	Windlass Aquilla		Type of Operation	Private		
Pilot-in-command Licence Type		Microlight Private	Age	54	Licence Valid	yes
Pilot-in-command Flying Experience		Total Flying Hours	127.3		Hours on Type	45.3
Last point of departure		Uitenhage aerodrome, Eastern Cape				
Next point of intended landing		Uitenhage aerodrome, Eastern Cape				
Location of the accident site with reference to easily defined geographical points (GPS readings if possible)						
Near Uitenhage at a GPS position determined as S 33°44' 45,75" E025°7' 48.23" at an elevation of 285m ASL						
Meteorological Information		Witnesses reported that fine weather conditions prevailed with variable wind at less than 5 kts, CAVOK A conditions, no cloud and temperature at 20°C				
Number of people on board	1+0	No. of people injured	1	No. of people killed	0	
Synopsis		<p>On 18 January 2012 the pilot flew locally in the general flying area of Uitenhage.</p> <p>Approximately 10 minutes after take-off the pilot passed approximately 15m underneath some high tension conductors spanning a valley. Here-after he turned around and again passed underneath the high tension conductors, turned back another time, climbed 15m and then collided with the high tension conductors. After colliding with the high tension conductors the aircraft nose-dived into the terrain.</p>				
Probable Cause						
Collision with high tension conductors						
IARC Date				Release Date		

AIRCRAFT ACCIDENT REPORT

Name of Owner/Operator : Griessel Familie Trust
Manufacturer : Solo Wings CC
Model : Windlass Aquilla
Nationality : South Africa
Registration Marks : ZU-BGD
Place : Uitenhage
Date : 18 January 2012
Time : 1700Z

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 of the Investigation :

*In terms of Regulation 12.03.1 of the Civil Aviation Regulations (1997) 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 establish legal liability.***

Disclaimer:

This report is given without prejudice to the rights of the CAA, which are reserved.

1. FACTUAL INFORMATION

1.1 History of Flight

- 1.1.1 On 18 January 2012 the pilot was flying locally in the general flying area of Uitenhage with ZU-BGD.
- 1.1.2 After take-off the pilot flew in a westerly direction. After approximately 10 minutes he passed approximately 15m underneath some high tension conductors spanning a valley. The high tension conductors was estimated to be 250m above the valley.
- 1.1.3 After passing underneath the high tension conductors, the pilot turned left, back into an easterly direction, again passing approximately 15m underneath the high tension conductors. Shortly there-after he turned right into a westerly direction again, climbing slightly and flew towards the high tension conductors once again. However, this time he collided with the high tension conductors and the aircraft nose-dived to the ground.
- 1.1.4 The accident occurred during daytime conditions at a GPS position determined as S 33°44' 45,75" E025°7' 48.23" at an elevation of 285m ASL.

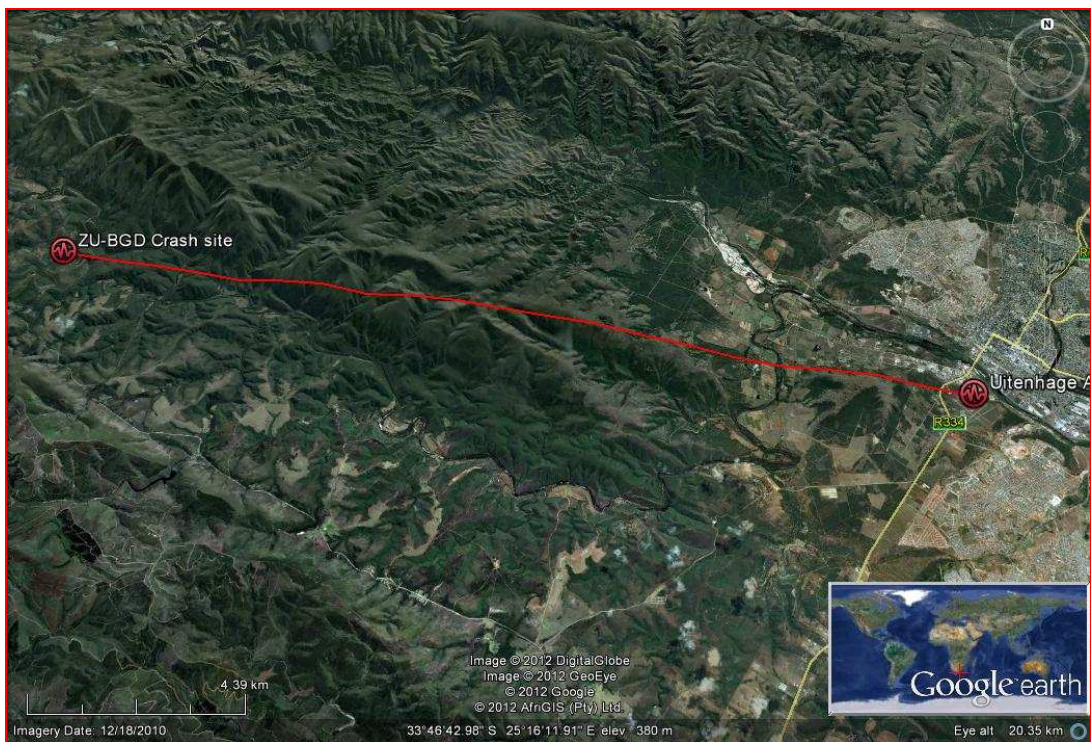


Fig 1: Accident site in relation to Uitenhage Aerodrome



Fig 2: Accident site

1.2 Injuries to Persons

Injuries	Pilot	Crew	Pass.	Other
Fatal	-	-	-	-
Serious	1	-	-	-
Minor	-	-	-	-
None	-	-	-	-

1.3 Damage to Aircraft

1.3.1 The aircraft sustained substantial damage.



Fig 3: Aircraft wreckage on site

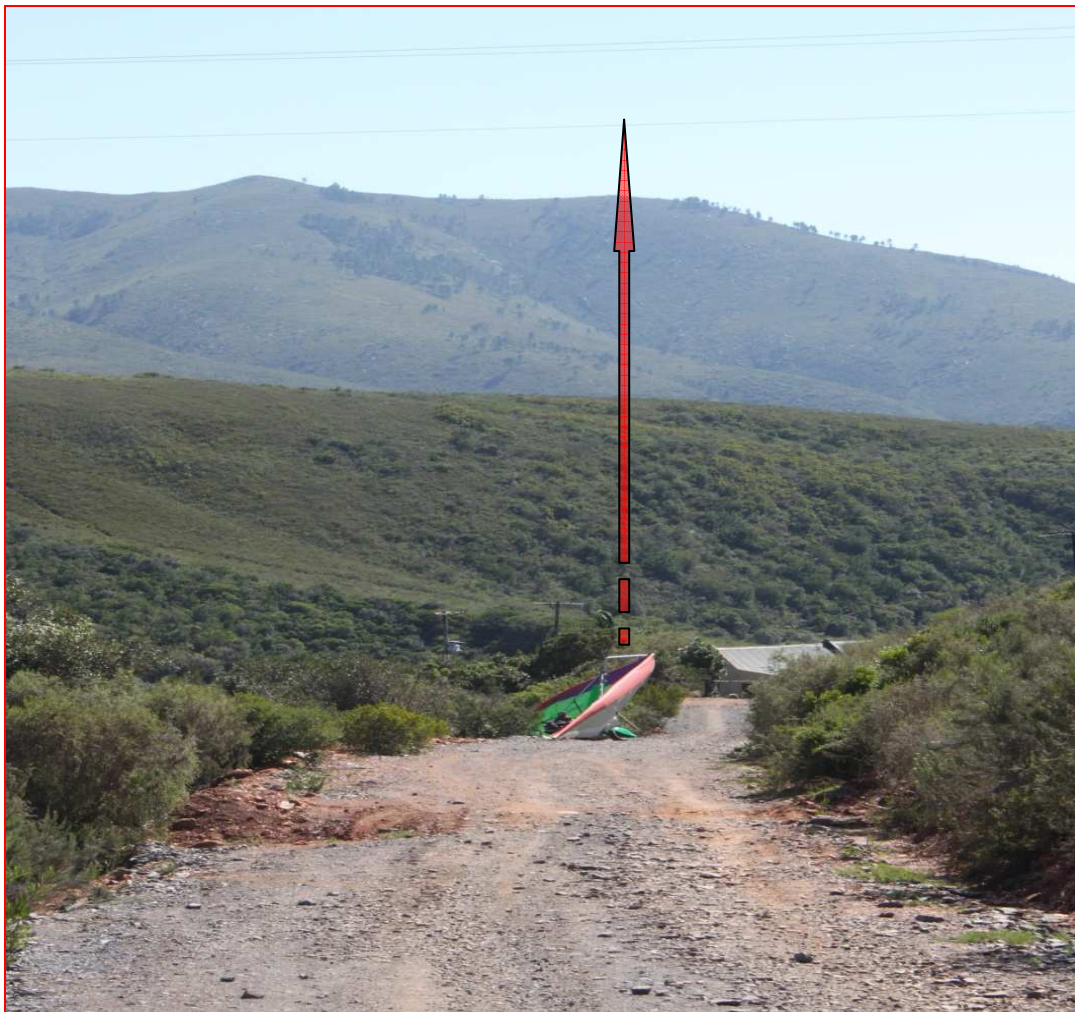


Fig 4: View of the High Tension Conductors directly above the wreckage

1.4 Other Damage

1.4.1 There was no further damage.

1.5 Personnel Information

Nationality	South Africa	Gender	Male	Age	54
Licence Number	0271061459	Licence Type	Microlight (Private)		
Licence valid	Yes	Type Endorsed	Yes		
Ratings	Nil				
Medical Expiry Date	31 July 2013				
Restrictions	Nil				
Previous Accidents	None				

Flying Experience :

Total Hours	127.3
Total Past 90 Days	15.45
Total on Type Past 90 Days	15.45
Total on Type	45.3

1.6 Aircraft Information

Airframe :

Type	Windlass Aquilla	
Serial Number	WA608	
Manufacturer	Solo Wings CC	
Date of Manufacture	1997	
Total Airframe Hours (At time of Accident)	391.55	
Last Annual Inspection (Date & Hours)	26 February 2011	342.15
Hours since Last Annual Inspection	49.4	
Authority to Fly (Issue Date)	23 March 2011	
C of R (Issue Date)	10 April 1997	
Operating Categories	NTCA - Private Category	

Engine :

Type	ROTAX 503UL
Serial Number	4837729
Hours since New	391.55
Hours since Overhaul	TBO not reached yet

Propeller :

Type	P Prop S472
Serial Number	N1521
Hours since New	391.55
Hours since Overhaul	On condition item

- 1.6.1 The mass and centre of gravity of the aircraft were within the prescribed limits and there was no evidence of airframe failure or system malfunction prior to the accident.
- 1.6.2 The aircraft was in possession of a valid Authority to Fly which was issued on 23 March 2011 and expired on 22 March 2012.

1.7 Meteorological Information

- 1.7.1 Witnesses stated that the following weather conditions prevailed at the time of the accident:

Wind direction	Variable	Wind speed	>5 kts	Visibility	CAVOK
Temperature	20°C	Cloud cover	Nil	Cloud base	Nil
Dew point	Unknown				

1.8 Aids to Navigation

- 1.8.1 The aircraft was equipped with standard navigation equipment as approved by the regulator for the aircraft type. No defects were reported prior to the flight.

1.9 Communications.

- 1.9.1 The aircraft was equipped with standard communication equipment (handheld VHF radio) as approved by the regulator for the aircraft type. No defects were reported prior to the flight.

1.10 Aerodrome Information

- 1.10.1 The accident happened at an area away from an aerodrome.

1.11 Flight Recorders

- 1.11.1 The aircraft was not equipped with a flight data recorder (FDR) or a cockpit voice recorder (CVR) and neither recorder were required by the relevant aviation regulations.

1.12 Wreckage and Impact Information

- 1.12.1 The aircraft collided with high tension conductors spanning a valley and then crashed next to a dirt road.
- 1.12.2 The impact with the terrain was almost vertical below the collision point with the high tension conductors with very little to no forward motion.
- 1.12.3 The aircraft sustained substantial damage during the accident sequence.

1.13 Medical and Pathological Information

1.13.1 The pilot was the holder of a valid medical certificate as a microlight pilot. The certificate was valid until 31 December 2013.

1.14 Fire

1.14.1 There was no evidence of pre- or post impact fire.

1.15 Survival Aspects

1.15.1 This accident was survivable, because shrubs cushioned the impact with the terrain.

1.15.2 The pilot was properly restraint using the safety harness fitted to the aircraft.

1.16 Tests and Research

1.16.1 None.

1.17 Organizational and Management Information

1.17.1 Information available showed that the aircraft was maintained as per the requirements of the manufacturer.

1.17.2 This was a private flight.

1.18 Additional Information

1.18.1 In order to determine whether the pilot was blinded by the sun information about the sun azimuth and altitude was obtained from the South African Astronomical Observatory. The official Sunset time at Port Elizabeth on 18 January 2012 was at 19h31 (1731Z).

1.18.2 The azimuth and altitude of the sun at the accident site was as follows:

S25°07'; E 33°44'	18 January 2012; 2 Hrs East of Greenwich	
Time: 19h00	Altitude: -5.0°	Azimuth 244.5°

1.18.2.1 **Azimuth** is the angle along the horizon, with 0° degrees corresponding to North and increasing in a clockwise fashion. Thus, 90° = East, 180° = South and 270° = West.

1.18.2.2 **Altitude** is the angle along the horizon, with 0° degrees corresponding to the horizontal, increasing upwards and decreasing downwards. Thus a positive figure donates the sun above the horizon and a negative figure donates the sun below the horizon.

- 1.18.3 The azimuth and altitude values are for the centre of the Sun. The altitude value includes the effect of standard atmospheric refraction when the sun is above the horizon. The azimuth value is computed with respect to true north (not magnetic).
- 1.18.4 The pilot was flying in a westerly direction at the time of colliding with the high tension conductors. The above information indicates that the sun was 25.5° to the left of the pilot with reference to true north and the centre of the sun 5° below the horizon.

1.19 Useful or Effective Investigation Techniques

- 1.19.1 None.

2. ANALYSIS

- 2.1 On 18 January 2012 the pilot flew locally in the general flying area of Uitenhage. Approximately 10 minutes after take-off the pilot passed approximately 15m underneath some high tension conductors spanning a valley. Here-after he turned around and again passed underneath the high tension conductors, turned back another time, climbed 15m and then collided with the high tension conductors. After colliding with the high tension conductors the aircraft nose-dived into the terrain. The above scenario clearly indicates that the pilot demonstrated a blatant disregard for aviation safety. This is further exacerbated by the fact that he was flying into the setting sun.
- 2.2 The pilot was correctly licensed and rated on the aircraft type to conduct the flight and was the holder of a valid medical certificate as a microlight pilot.
- 2.3 The aircraft was correctly maintained as required by the manufacturer, was equipped with standard navigation- and communication equipment, the mass and centre of gravity of the aircraft were within the prescribed limits and there was no evidence of airframe failure or system malfunction prior to the accident. The aircraft was in possession of a valid Authority to Fly.
- 2.4 Fine weather conditions prevailed at the time of the accident.
- 2.5 Although not over a build-up area, the pilot was flying at only approximately 250m above the valley. He passed two times underneath the high tension conductors and the 3rd time collided with the high tension conductors. This implies that he probably flew underneath the high tension conductors deliberately and misjudged his altitude during the 3rd time when he collided with the high tension conductors or that he did not observe the high tension conductors which suggest that he failed to look-out for possible obstructions.
- 2.6 In addition to the above, he flew into the setting sun which might have blinded him resulting in him failing to observe the high tension conductors.

3. CONCLUSION

3.1 Findings

3.1 Findings

3.1.1 On 18 January 2012 the pilot flew locally in the general flying area of Uitenhage.

3.1.2 Approximately 10 minutes after take-off the pilot passed approximately 15m underneath some high tension conductors spanning a valley. Here-after he turned around and again passed underneath the high tension conductors, turned back another time, climbed 15m and then collided with the high tension conductors. After colliding with the high tension conductors the aircraft nose-dived into the terrain.

3.1.3 The pilot was correctly licensed and rated on the aircraft type to conduct the flight and was the holder of a valid medical certificate as a microlight pilot.

3.1.4 The aircraft was correctly maintained as required by the manufacturer, was equipped with standard navigation- and communication equipment, the mass and centre of gravity of the aircraft were within the prescribed limits and there was no evidence of airframe failure or system malfunction prior to the accident. The aircraft was in possession of a valid Authority to Fly.

3.1.5 Fine weather conditions prevailed at the time of the accident.

3.2 Probable Cause/s

3.2.1 Collision with high tension conductors

3.3 Contributory factor(s):

4. SAFETY RECOMMENDATIONS

4.1 Not applicable.

5. APPENDICES

5.1 None

Compiled by:

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For: Director of Civil Aviation

Date: 14 March 2012

Investigator-in-charge: J.J. du Plessis

Date: 14 March 2012

Co-Investigator: None

Date: Not applicable