



## AIRCRAFT ACCIDENT REPORT AND EXECUTIVE SUMMARY

				Reference:	CA18/2/3/8998	
<b>Aircraft Registration</b>	ZU-DDO	<b>Date of Accident</b>	06 January 2012		<b>Time of Accident</b>	1600Z
<b>Type of Aircraft</b>	Bantam B22J		<b>Type of Operation</b>		Private	
<b>Pilot-in-command Licence Type</b>		Microlight	<b>Age</b>	33	<b>Licence Valid</b>	Yes
<b>Pilot-in-command Flying Experience</b>		Total Flying Hours	35,4		Hours on Type	35,4
<b>Last point of departure</b>		Roodedam farm, Thabazimbi, North West Province				
<b>Next point of intended landing</b>		Roodedam farm, Thabazimbi, North West				
<b>Location of the accident site with reference to easily defined geographical points (GPS readings if possible)</b>						
Open field on Roodedam farm, Thabazimbi, North West						
<b>Meteorological Information</b>		Surface wind: 120° / 3 kt; Visibility: CAVOK; Temperature: 24°C				
<b>Number of people on board</b>	1 + 0	<b>No. of people injured</b>	1	<b>No. of people killed</b>	0	
<b>Synopsis</b>						
<p>The pilot, who was the sole occupant on board, took off from a private airstrip on Roodedam farm in the Thabazimbi district to search for animals reported to be roaming on the property. After spotting the animals, he executed a slow, steep turn at low altitude for a closer look. During the manoeuvre, the aircraft's nose and propeller struck a tree and the microlight came down on an open area of grassy veld.</p> <p>The pilot sustained serious injury to his left ankle. The nose section, propeller and engine of the aircraft were damaged.</p>						
<b>Probable Cause</b>						
<p>The pilot executed a poor technique steep turn manoeuvre at a low altitude which resulted in the aircraft colliding with a tree.</p>						
<b>IARC Date</b>				<b>Release Date</b>		



## AIRCRAFT ACCIDENT REPORT

**Name of Owner/Operator** : Naude and Nel Partnership  
**Manufacturer** : Micro Aviation, New Zealand  
**Model** : Bantam B22J  
**Nationality** : South African  
**Registration Marks** : ZU-DDO  
**Place** : Roodedam farm, Thabazimbi district  
**Date** : 6 January 2012  
**Time** : 1600Z

*All times given in this report is 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 The pilot, who was the sole occupant on board, took off from a private airstrip on Roodedam farm in the Thabazimbi district to search for animals reported to be roaming on the property. After spotting the animals, he executed a slow, steep turn at low altitude for a closer look. During the manoeuvre, the aircraft's nose and propeller struck a tree and the microlight came down on an open area of grassy covered surface.

1.1.2 The aircraft sustained damage to the nose section, propeller and engine. The pilot suffered serious injury to his left ankle.

### 1.2 Injuries to Persons

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

### 1.3 Damage to Aircraft

1.3.1 The nose section, propeller and engine were damaged during the impact.

#### 1.4 Other Damage

1.4.1 None.

#### 1.5 Personnel Information

Nationality	South African	Gender	Male	Age	33
Licence Number	0279008247	Licence Type	Microlight		
Licence valid	Yes	Type Endorsed	Yes		
Ratings	None				
Medical Expiry Date	30 September 2013				
Restrictions	None				
Previous Accidents	Nil				

#### Flying Experience

Total Hours	35,4
Total Past 90 Days	13,3
Total on Type Past 90 Days	13,3
Total on Type	35,4

#### 1.6 Aircraft Information

Airframe:

Type	Bantam B22J	
Serial No.	03-0230	
Manufacturer	Micro Aviation, New Zealand	
Date of Manufacture	2003	
Total Airframe Hours (At time of Accident)	385,7	
Last Annual (Date & Hours)	17 December 2011	372,4
Hours since Last Annual Inspection	13,3	
Authority To Fly (Issue Date)	21 December 2011	
Authority To Fly (Expiry Date)	16 December 2012	
C of R (Issue Date) (Present owner)	21 December 2011	
Operating Categories	Private Authority To Fly	

#### Engine :

Type	Jabiru 2200
Serial No.	22A1607
Hours since New	385,7
Hours since Overhaul	Not yet reached*

\* Time between engine overhaul (TBO) is 2 000 hours.

## Propeller:

Type	Jabiru JJ4
Serial No.	JJ4-2422 LC
Hours since New	385,7
Hours since Overhaul	N/A



PICTURE1: SHOWING SIMILAR BANTAM B22J DURING FLIGHT

- 1.6.1 Although classified as a microlight, the Bantam B22J is not a kit-built aircraft but a factory-built and tested machine. It is also more like a conventional light aircraft in its design, being a three-axis, high-wing monoplane with side-by-side seating. It has a fuel capacity of 50 l. The undercarriage is a fixed tricycle-type.
- 1.6.2 The aircraft is fitted with a Jabiru 85 hp engine that runs on avgas and operates at between 2 600 rpm and 2 800 rpm, producing a cruise speed of 60 knots to 65 knots. Fuel burn is 14 to 17 l/hr.
- 1.6.3 The engine is fitted with a two-blade, laminated wood, fixed pitch propeller.
- 1.6.4 According to the pilot's Operating handbook (POH), the stall speed with power off and no flaps (flaperons) is 35 kt indicated air speed (IAS). With power on and full flaps, the stall speed is 34 kt IAS.

## 1.7 Meteorological Information

1.7.1 According to the pilot's questionnaire, the weather conditions at the time and place of the accident were as follows:

Wind direction	120°	Wind speed	3 kts	Visibility	CAVOK
Temperature	24°C	Cloud cover	None	Cloud base	10 000'
Dew point	Unknown				

## **1.8 Aids to Navigation**

1.8.1 The aircraft was equipped with standard navigational equipment as approved by the regulator for the type. No defects to the equipment were recorded before or during the flight.

## **1.9 Communications**

1.9.1 The aircraft was equipped with standard communication equipment as approved by the regulator for the type. No defects were recorded prior to or during the flight.

1.9.2 The pilot did not communicate with an a(ATC) Air Traffic Controller at the time of the occurrence as the aircraft was operating on a farm outside controlled airspace.

## **1.10 Aerodrome Information**

1.10.1 The accident occurred at an open stretch of veld on the farm Roodedam in the Thabazimbi district, North West.

## **1.11 Flight Recorders**

1.11.1 The aircraft was not equipped with a Flight Data Recorder (FDR) or a Cockpit Voice Recorder (CVR) nor was either required by the regulations.

## **1.11 Wreckage and Impact Information**

1.11.1 During a slow and very steep turn, the aircraft struck a tree with its nose before coming to rest on a stretch of grassy veld.

1.11.2 The aircraft's nose section, propeller and engine were substantially damaged.

## **1.13 Medical and Pathological Information**

1.13.1 Not applicable.

## **1.14 Fire**

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

## **1.1 Survival Aspects**

1.1.2 The accident was considered survivable as the aircraft was flying at a low forward speed during the steep turn. The impact force when it struck the tree was low and no damage was caused to the cockpit area.

1.1.3 The pilot was properly restrained by the safety harness fitted to the aircraft.

## **1.16 Tests and Research**

1.16.1 None considered necessary.

## **1.17 Organizational and Management Information**

1.17.1 The aircraft was operated privately by the student pilot, who was also its owner.

1.17.2 The aircraft was maintained by an approved person (AP 122) who was duly authorised by the Aero Club of SA for the Annual inspections and maintenance of the aircraft.

## **1.18 Additional Information**

1.18.1 This was an off-site investigation.

## **1.19 Useful or Effective Investigation Techniques**

1.19.1 None considered necessary.

## **2. ANALYSIS**

2.1 The pilot spotted animals below him and executed a slow, very steep turn at low altitude to have a closer look. During this manoeuvre, the aircraft's nose struck a tree and the microlight came down on an open stretch of grassy covered surface.

2.2 According to available information, the aircraft was serviceable prior to the accident and no malfunctions were reported.

2.3 There was a sufficient amount of fuel in the fuel tank for the flight.

2.4 Fine weather conditions prevailed at the time of the accident and did not contribute to or cause the accident.

## **3. CONCLUSION**

### **3.1 Findings**

3.1.1 This was a private flight conducted by the student pilot, who was also the owner of the aircraft.

3.1.2 The aircraft had a valid private Authority to Fly Certificate. It was classified as a non-type certificated aircraft (NTCA).

3.1.3 The student pilot was in possession of a valid micro light pilot's licence and medical certificate at the time of the accident.

- 3.1.4 The aircraft's nose section, propeller and engine were substantially damaged during the impact sequence with the tree and ground.
- 3.1.5 The pilot sustained serious injuries to his left ankle during the accident.
- 3.1.6 The last annual inspection prior to the accident was certified on 17 December 2011 at a total of 372,4 hours. The aircraft flew a further 13, 3 hours until the accident.
- 3.1.7 The aircraft was maintained by an approved person (AP 122), who was duly authorised by the Aero Club of SA.
- 3.1.8 Fine weather conditions prevailed at the time and did not contribute to the accident.

### **3.2 Probable Cause/s**

- 3.2.1 The pilot executed a poor technique steep turn manoeuvre at a low altitude which resulted in the aircraft colliding with a tree.

## **4. SAFETY RECOMMENDATIONS**

- 4.1 None.

## **5. APPENDICES**

- 5.1 None.