



**REPUBLIC OF KENYA**

**MINISTRY OF TRANSPORT, INFRASTRUCTURE, HOUSING, URBAN**

**DEVELOPMENT AND PUBLIC WORKS**

**STATE DEPARTMENT FOR TRANSPORT**

**AIRCRAFT ACCIDENT INVESTIGATION**

**PRELIMINARY AIRCRAFT ACCIDENT REPORT TO**

**BEECHCRAFT KINGAIR 200**

**REGISTRATION 5Y-NJS AT**

**NGONG RACECOURSE NAIROBI**

**ON 26 MARCH 2021**

## SUMMARY OF THE ACCIDENT

OPERATOR/OWNER	:	West Wind Aviation Ltd
AIRCRAFT TYPE/ MANUFACTURER	:	Be200 (Raytheon Ac.Co.)
YEAR OF MANUFACTURE	:	1980
AIRCRAFT REGISTRATION	:	5Y-NJS
AIRCRAFT SERIAL NUMBER	:	BB-837
DATE OF REGISTRATION	:	10 April 2018
NUMBER AND TYPE OF ENGINE	:	Two-PT6A-42
DATE OF OCCURRENCE	:	26 March 2021
TIME OF OCCURRENCE	:	1630pm (1330Z)
LOCATION OF OCCURRENCE	:	Ngong Racecourse
TYPE OF FLIGHT	:	Private
PHASE OF FLIGHT	:	Approach
PERSONS ONBOARD	:	3
INJURIES	:	Nil
NATURE OF DAMAGE	:	Destroyed
CATEGORY OF OCCURRENCE	:	Accident
PIC'S FLYING EXPERIENCE	:	ATPL/6589 hours

*All times given in this report is Coordinated Universal Time (UTC), with East African Local Time in Parenthesis*

## **OBJECTIVE**

This report contains factual information which has been determined up to the time of publication. The information in this report is published to inform the aviation industry and the public of the general circumstances of the accident.

This investigation has been carried out in accordance with The Kenya Civil Aviation (Aircraft Accident and Incident Investigation) Regulations, 2018 and Annex 13 to the ICAO Convention on International Civil Aviation.

The sole objective of the investigation of an accident or incident under these Regulations shall be the prevention of accidents and incidents. It shall not be the purpose of such an investigation to apportion blame or liability.

## **Investigation Process**

The accident involving the C208B type of aircraft, registration 5Y-NJS was notified to the Aircraft Accident Investigation Department (AAID), State Department for Transport (SDT) of the Ministry of Transport, Infrastructure, Housing, Urban development, and Public Works through a phone call by Westwind Aviation Ltd.

Under the provisions of Annex 13 to the Convention on International Civil Aviation, Kenya civil aviation act, and regulations, a team of AAID investigators was sent to the accident site on 27 March 2021 for initial onsite investigation and witness interviews.

After the initial on-site investigation phase, the occurrence was classified as an ‘Accident’ owing to the extent of injuries to the occupants and nature of damage to the Aircraft.

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## **LIST OF ABBREVIATIONS/GLOSSARY OF TERMS**

AAID	-	Air Accident Investigation Department
AGL	-	Above Ground level
AOC	-	Air Operation Certificate
ASL	-	Air Service License
ATC	-	Air Traffic Services
ATPL	-	Airline Transport Pilot License
EGPWS	-	Enhanced Ground Proximity Warning System
FL	-	Flight Level
GPS	-	Global Positioning System
HKEL	-	Eldoret Airport
HKKI	-	Kisumu Airport
HKNW	-	Nairobi Wilson
ICAO	-	International Civil Aviation Organization
KCAA	-	Kenya Civil Aviation Authority
NM	-	Nautical Miles
VOR	-	Omnidirectional Radio Range

## **SYNOPSIS**

On 26<sup>th</sup> March 2021, the Air Accident Investigation unit at the Ministry of Transport, Infrastructure and Urban Development was notified of an accident involving a Beechcraft Kingair 200 type of aircraft, registration 5Y-NJS operated by Westwind Aviation Ltd at Ngong Racecourse. The flight with two onboard was on a private mission to Kisumu, Eldoret and back to Nairobi. The aircraft departed Wilson Airport (HKNW) at 0420Z and landed at Kisumu Airport (HKKI) at 0502Z. It then departed HKKI to HKEL at 1142Z and landed at 1200Z where it picked one passenger.

The flight then departed HKEL to HKNW with three onboard at 1247Z with an estimated flight time of 40 minutes. According to the preliminary information obtained from the Captain, the aircraft attained flight level 250 42NM from Eldoret VOR. The flight was then cleared to fly direct to GV VOR by Nairobi Area Control Centre. During descend to flight level 100 they encountered bad weather whereby the wings developed heavy icing. The Captain deployed de-icing systems on the wings but the problem persisted. The situation prompted the Captain to request Wilson Control to descend to “Monstry fix” for landing at HKNW which was approved. As the flight continued descending the left engine went off. The Captain requested Wilson Tower for assistance. After 30 seconds, the right engine also went off. The Captain elected to make an emergency landing at Ngong Racecourse. On landing along, the left wing collided with trees and broke-off and separated together with the left engine and the left main landing gear. The turned clockwise through 180° and faced the opposite direction. All three onboard escaped unhurt but the aircraft was destroyed.

# 1. FACTUAL INFORMATION

## 1.1. History of the Flight



**Figure 1:** Photograph showing the accident site

On 26<sup>th</sup> March 2021, the Air Accident Investigation unit at the Ministry of Transport, Infrastructure Urban Development and Public Works was notified of an accident involving a Beechcraft Kingair 200 type of aircraft, registration 5Y-NJS operated by Westwind Aviation Ltd at Ngong Racecourse. The flight with two onboard was on a private mission to Kisumu, Eldoret and back to Nairobi. The aircraft departed Wilson Airport (HKNW) at 0420Z and landed at Kisumu Airport (HKKI) at 0502Z. It then departed HKKI to HKEL at 1142Z and landed at 1200Z where it picked one passenger.

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aircraft attained flight level 250 42NM from Eldoret VOR. The flight was then cleared to fly direct to GV VOR by Nairobi Area Control Centre. During descend to flight level 100 they encountered bad weather whereby the wings developed heavy icing. The Captain deployed de-icing systems on the wings but the problem persisted. The situation prompted the Captain to request Wilson Control to descend to “Monstry fix” for landing at HKNW which was approved. As the flight continued descending the left engine went off. The Captain requested Wilson Tower for assistance. After 30 seconds, the right engine also went off. The Captain elected to make an emergency landing at Ngong Racecourse. On landing, the left wing collided with trees, broke-off and separated together with the left engine and the left main landing gear. The turned clockwise through 180° and faced the opposite direction. All three onboard escaped unhurt but the aircraft was destroyed.

## 1.2 Injuries to Persons

**Table 1:** Injury chart

<b>Injuries</b>	<b>Crew</b>	<b>Passenger</b>	<b>Others</b>	<b>Total</b>
<b>Fatal</b>	0	0		0
<b>Serious</b>	0	0		0
<b>Minor/none</b>	0	0		0
<b>Total</b>	1	2		3

## 1.3 Damage to Aircraft

The aircraft was destroyed

## 1.4 Other Damages

Destruction of a fence, trees and vegetation.

## 1.5 Personnel Information

### 1.5.1. Captain

The Captain of the flight was 39 years old, he held valid medical class one certificate with no limitations issued on 25<sup>th</sup> February 2021 and an Airline Transport Pilot License (ATPL) valid until 23<sup>rd</sup> February 2022. He held ratings for BE200, B737-200 and DC-9 aeroplanes. He had a total of 4600 hours on BE200 and a total of 6500 hours.

## 1.6 Aircraft Information



**Figure 2;** Photograph showing the aircraft before the accident.

The accident aircraft registration 5Y-NJS, BE200 type was constructed by Raytheon Aircraft Co in 1980. It has a valid certificate of registration issued on 10<sup>th</sup> April 2018 and valid certificate of airworthiness expiring on 10<sup>th</sup> December 2021.

The aircraft is a twin-engine Pratt & Whitney PT6A-42 turboprop with a minimum of one crew. It had a seating capacity of 15 passengers. Its airframe had a total of 12,177.8 hours since

new. It had five composite swept propeller blades Hartzell designed with a total of 2562 hours since new and 92.5 hours since total overhaul. The engines 1 and 2 had a total of 438.9 hours since new and a total of 429 cycles since new. It had a maximum take-off weight of 5670kgs.

## **1.7. Meteorological Information.**

### **1.7.1 General**

Dry weather was expected over most parts of the country with partly cloudy conditions with a chance of showers on few places.

### **1.7.2 Significant weather prognosis below FL 250 within the vicinity of Nairobi**

**Table 2:** Wind speed at different flight levels

<b>FL</b>	<b>Direction</b>	<b>Speed</b>
240	100	20
180	080	200
140	020	15
100	049	25
50	130	15

## **1.8 Aids to Navigation**

The aircraft was equipped with ATC transponder and was in touch with Nairobi area ATC, GPS and EGPWS

## **1.9 Communication**

It had onboard radio equipment make dual Bendix/King Model KTR 905 approved by Communication Authority of Kenya

## 1.10 Aerodrome Information



**Figure 3;** Photograph showing Wilson airport

Wilson airport (HKNW) elevation is 1,690 m above sea level. It has two asphalt runways: Runway 1 (heading 07/25) measures 1,462 m long and 22 m wide; Runway 2 (heading 14/32) measures 1,540 m) long and 23 m wide. It is a manned airport with air traffic controllers managing all flights in and out of HKNW and its vicinity.

## 1.11. Flight Recorders

The aircraft was not equipped with flight recorders nor was it required to be fitted by KCAA regulations

## 1.12. Wreckage and Impact Information



**Figure 4:** Photograph showing the accident aircraft on the accident site





**Figure 5:** Photograph showing the left engine on the accident site

On touch-down, the left wing collided with trees along the fence of horse racecourse after which it broke off and separated together the left engine and the left main landing gear. The aircraft went into 180° right-turn and stopped facing opposite direction. The right wing, engine and the left main landing gears got battered but remained attached to the main fuselage. The nose wheel got dented but remained attached to the assembly. The main fuselage got dented on several parts but remained intact. The cabin remained intact with no significant damage. The windscreen and the cabin windows remained intact and un-shattered.

The engine propeller blades got twisted but remained attached to main assembly on both engines. Few parts of fuselage broke and separated but remained within the accident site.

### **1.13 Medical and Pathological Information**

The report is yet to be notified

#### **1.14 Fire**

There was no post fire after impact

#### **1.15. Survival Aspects**

The accident was survivable due to the following:-

- i. All onboard were on safety belt
- ii. The landing ground surface was gentle, lacked hard surface and was clear of obstacles apart from the aircraft moving to the left side which lead into the left wing contacting trees on the fence.
- iii. The aircraft had reduced speed after touch down due to the fact that both engines were out.
- iv. The aircraft cabin experienced minimal collision with external objects/trees.

#### **1.16. Tests and Research.**

Not applicable

#### **1.17. Organization and Management Information**

Westwind Aviation Ltd is an air operator organization with a valid Air Service License (ASL) and Air Operator Certificate (AOC) authorized by KCAA for commercial air operation. It operates for non-scheduled air services and aerial work. It operates a number of aircraft fleet ranging from B737, B727, BE20, C208, AS350 H25B, PC12, AW139 and EC130. It operates in East Africa, West Africa, Central Africa, Southern Africa, East Asia and Middle East

#### **1.18. Additional Information**

Not applicable

#### **1.19 useful or effective investigation techniques**

Not applicable

## **2. CONCLUSION**

Investigation is ongoing to establish cause of the accident.

**M.A.Ombasa**

**Investigator In Charge**

**10/04/2021**