

**LIMITED OCCURRENCE INVESTIGATION REPORT – FINAL**

<b>Reference Number</b>	CA18/2/3/10389						
<b>Classification</b>	Accident	<b>Date</b>	15 November 2023		<b>Time</b>	1625Z	
<b>Type of Operation</b>	Training (Part 141)						
<b>Location</b>							
Place of Departure	Brakpan Aerodrome (FABB), Gauteng Province		Place of Intended Landing		Bethlehem Aerodrome (FABM), Free State Province		
Place of Occurrence	Runway 26 at Bethlehem Aerodrome (FABM), Free State Province						
GPS Co-ordinates	Latitude	28°14'55.38"S	Longitude	28°20'37.04"E	Elevation	5424 ft	
<b>Aircraft Information</b>							
Registration	ZS-ESU						
Make; Model; S/N	Piper-28-140 (Serial Number: 28-22011)						
Damage to Aircraft	Substantial			Total Aircraft Hours	4290.3		
<b>Pilot-in-command</b>							
Licence Type	Private Pilot Licence (PPL)		Gender	Male		Age	21
Licence Valid	Yes	Total Hours	160.7		Total Hours on Type	127.5	
Total Hours 30 Days	5.7		Total Flying on Type Past 90 Days	66.5			
<b>People On-board</b>	2+0	<b>Injuries</b>	0	<b>Fatalities</b>	0	<b>Other (on ground)</b>	0
<b>What Happened</b>							
<p>On Wednesday afternoon, 15 November 2023, two pilots on-board the Piper-28-140 aircraft with registration ZS-ESU took off on a night visual flight rules (VFR) navigational training flight from Brakpan Aerodrome (FABB) in Gauteng province to Bethlehem Aerodrome (FABM), Free State province, with the intention to return to the same take-off aerodrome. The flight was conducted under visual meteorological conditions (VMC) by night and under the provisions of Part 141 of the Civil Aviation Regulations (CAR) 2011 as amended.</p> <p>The accident was reported by the operator on 16 November 2023. The pilot flying stated that the flight from FABB to FABM progressed as expected. Upon arrival at FABM, the pilot intended to use Runway (RWY) 11 for touch-and-go circuits before returning to FABB. The pilot joined the circuit without following the unmanned joining procedure. After the aircraft touched down, the pilot applied full power to execute a go-around and, during the take-off roll, the aircraft struck a bird and the pilot decided to abort take-off. Because of the forward momentum the aircraft was already in, the pilot could not bring the aircraft to a stop on the runway; thus, the aircraft overran the runway and impacted a concrete pole supporting the perimeter fence before it stopped in the farm next to the aerodrome.</p>							

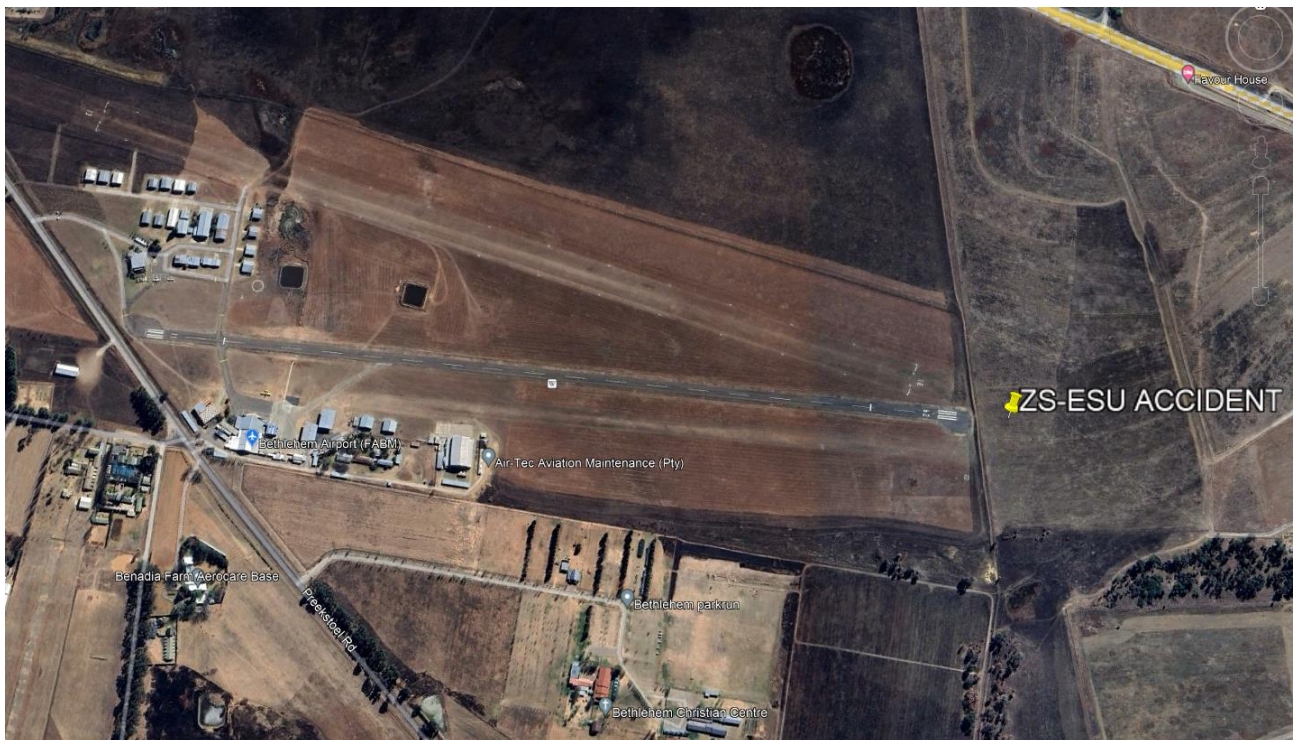
The aircraft sustained damage to the left wing. The two occupants were not harmed. According to the pilot questionnaire, the weather was fine at FABM at the time of the flight.



**Figure 1:** Bird strike mark on the aircraft. (Source: Operator)



**Figure 2:** Damage to the left wing of the aircraft. (Source: Operator)



**Figure 3:** The aircraft landed on RWY 11 and came to a stop 56m beyond the threshold. (Source: Google Earth)

The following unmanned joining procedure was extracted from the training organisation's Standard Operating Procedures (SOP).

The PIC of an aircraft operated on or in the vicinity of an aerodrome, shall be responsible for compliance with the following rules:

- observe other aerodrome traffic for the purpose of avoiding collision.
- conform with or avoid the pattern of traffic formed by other aircraft in operation.
- make all turns to the left when approaching for a landing and after taking off, unless otherwise instructed by an ATSU, or unless a right-hand circuit is in force:
- land and take off, as far as practicable, into the wind unless safety, the runway configuration or air traffic considerations dictate that a different direction is preferable or unless otherwise instructed by an ATSU; and
- fly across the aerodrome or its environs at a height of not less than 2 000 feet above the level of such aerodrome: Provided that if circumstances require such PIC to fly at a height of less than 2 000 feet above the level of the aerodrome, he or she shall conform with the traffic pattern at such aerodrome.

**Figure 4:** Training organisation's SOP. (Source: Operator)

## Findings

1. The pilot was last issued a Private Pilot Licence (PPL) on 2 December 2022 with an expiry date of 30 November 2023.
2. The pilot's Class 2 medical certificate was issued on 3 August 2022 with an expiry date of 3 August 2027 with no limitations.
3. The aircraft's last annual inspection was conducted on 19 October 2023 at 6529.53 Tachometer hours, after which a Certificate of Release to Service (CRS) was issued with an expiry date of 18 October 2024 or at 6629.53 Tachometer hours, whichever comes first.
4. The Certificate of Airworthiness (C of A) was originally issued on 26 October 2016; the renewed C of A was issued on 20 April 2023 with an expiry date of 20 April 2024.
5. The Certificate of Registration (C of R) was issued to the present owner on 13 March 2023.
6. The unmanned joining procedure, according to the training organisation and the Civil Aviation Regulations (CAR) Part 91.06.12 (e) states: "*fly across the aerodrome or its environs at a height of not less than 2 000 ft above the level of such aerodrome: Provided that if circumstances require such PIC to fly at a height of less than 2 000 ft above the level of the aerodrome, he or she shall conform with the traffic pattern at such aerodrome.*"
7. The pilot admitted that he did not follow the unmanned joining procedure which would have allowed him to fly low over the runway and likely scare off animals (wildlife) on the runway.

8. Following the touch-and-go landing and whilst on the take-off roll, the aircraft collided with a bird and the pilot aborted the flight. Due to the insufficient remaining runway surface, the pilot could not bring the aircraft to a safe stop, and it overran the runway and impacted the concrete pole supporting the perimeter fence.
9. FABM RWY 11 dimensions are 1175 metres (m) long and 15m wide. It is likely that the aircraft landed deep and, following the aborted take-off, the remaining runway was insufficient to bring the aircraft to a safe stop and it overran the runway and impacted the concrete pole supporting the perimeter fence.

**Probable Cause(s)**

It is likely that the aircraft landed deep and, following the aborted take-off, the remaining runway length was insufficient to bring the aircraft to a safe stop and, thus, the aircraft overran the runway and impacted the concrete pole that supported the perimeter fence.

**Contributing Factor(s)**

Failure to complete an unmanned joining procedure.  
Collision with a bird during the take-off run.

**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**