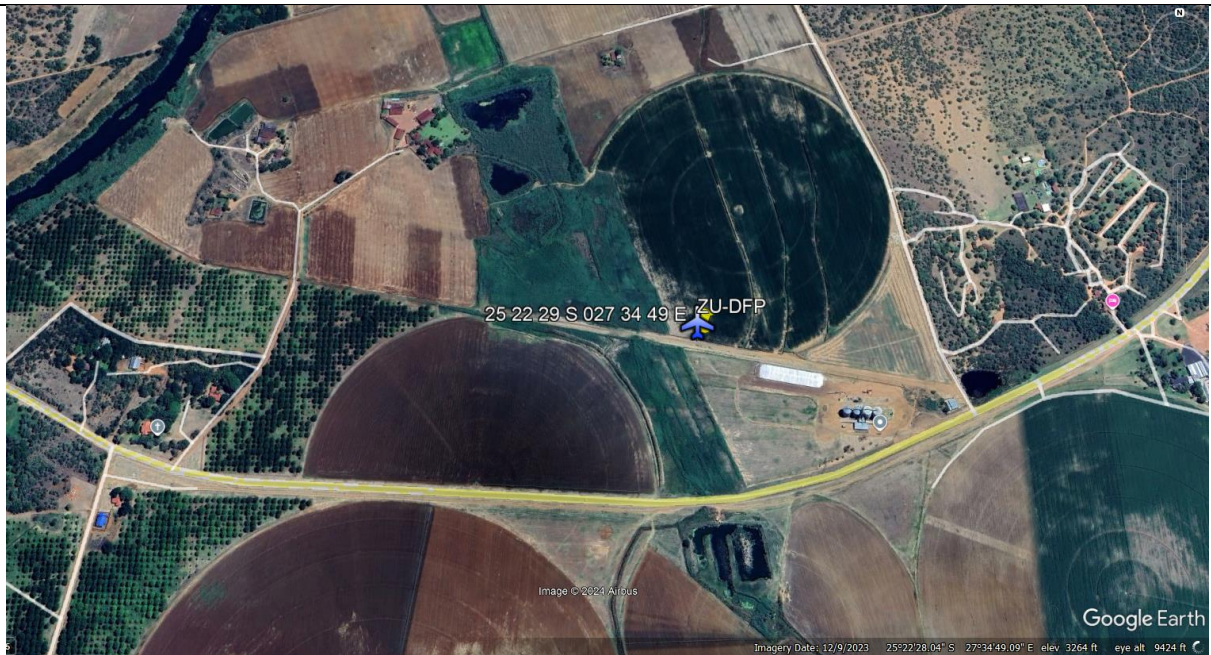


**LIMITED OCCURRENCE INVESTIGATION REPORT – FINAL**

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                             |                    |                                          |                                  |                                                                             |                          |       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|--------------------|------------------------------------------|----------------------------------|-----------------------------------------------------------------------------|--------------------------|-------|
| <b>Reference Number</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | CA18/2/3/10502                                                              |                    |                                          |                                  |                                                                             |                          |       |
| <b>Classification</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Accident                                                                    |                    | <b>Date</b>                              | 29 September 2024                |                                                                             | <b>Time</b>              | 1500Z |
| <b>Type of Operation</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Private (Part 94)                                                           |                    |                                          |                                  |                                                                             |                          |       |
| <b>Location</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                             |                    |                                          |                                  |                                                                             |                          |       |
| <b>Place of Departure</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Bush n Buck Private Airstrip in Beestekraal near Brits, North West Province |                    |                                          | <b>Place of Intended Landing</b> | Bush n Buck Private Airstrip in Beestekraal near Brits, North West Province |                          |       |
| <b>Place of Occurrence</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Bush n Buck Private Airstrip in Beestekraal near Brits                      |                    |                                          |                                  |                                                                             |                          |       |
| <b>GPS Co-ordinates</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>Latitude</b>                                                             | 25° 22' 29.00" S   | <b>Longitude</b>                         | 027° 34' 49.00" E                | <b>Elevation</b>                                                            | 3 800 ft                 |       |
| <b>Aircraft Information</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                             |                    |                                          |                                  |                                                                             |                          |       |
| <b>Registration</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | ZU-DFP                                                                      |                    |                                          |                                  |                                                                             |                          |       |
| <b>Make; Model; S/N</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Jabiru; J400 (S/N: 109)                                                     |                    |                                          |                                  |                                                                             |                          |       |
| <b>Damage to Aircraft</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Substantial                                                                 |                    |                                          | <b>Total Aircraft Hours</b>      | 3977.7                                                                      |                          |       |
| <b>Pilot-in-command</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                             |                    |                                          |                                  |                                                                             |                          |       |
| <b>Licence Type</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Private Pilot Licence (PPL)                                                 |                    | <b>Gender</b>                            | Male                             |                                                                             | <b>Age</b>               | 70    |
| <b>Licence Valid</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Yes                                                                         | <b>Total Hours</b> | 600                                      |                                  | <b>Total Hours on Type</b>                                                  | 20.3                     |       |
| <b>Total Hours 30 Days</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 8                                                                           |                    | <b>Total Flying on Type Past 90 Days</b> |                                  |                                                                             | 20                       |       |
| <b>People On-board</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 1 + 0                                                                       | <b>Injuries</b>    | 0                                        | <b>Fatalities</b>                | 0                                                                           | <b>Other (on ground)</b> | 0     |
| <b>What Happened</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                             |                    |                                          |                                  |                                                                             |                          |       |
| <p>On Sunday morning, 29 September 2024, a pilot on-board a Jabiru J400 aircraft with registration ZU-DFP was conducting circuits at Bush n Buck private airstrip in Beestekraal near Brits, North West province, when the accident occurred. 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 reported that he conducted the pre-flight checks with no anomalies noted. He then took off from Runway 22 and executed three uneventful touch-and-go landings. The pilot then elected to make the fourth circuit a full-stop landing. The aircraft approached at a speed of 65 knots (kts) with flaps set at 30 degrees. The pilot initiated the flare too high, which resulted in a stall and a hard landing. As a result, the nose gear and the right main landing gear failed and, subsequently, the propeller, engine cowling and right wing were damaged. The aircraft came to a stop on the runway. The pilot was unharmed during the accident sequence.</p> |                                                                             |                    |                                          |                                  |                                                                             |                          |       |



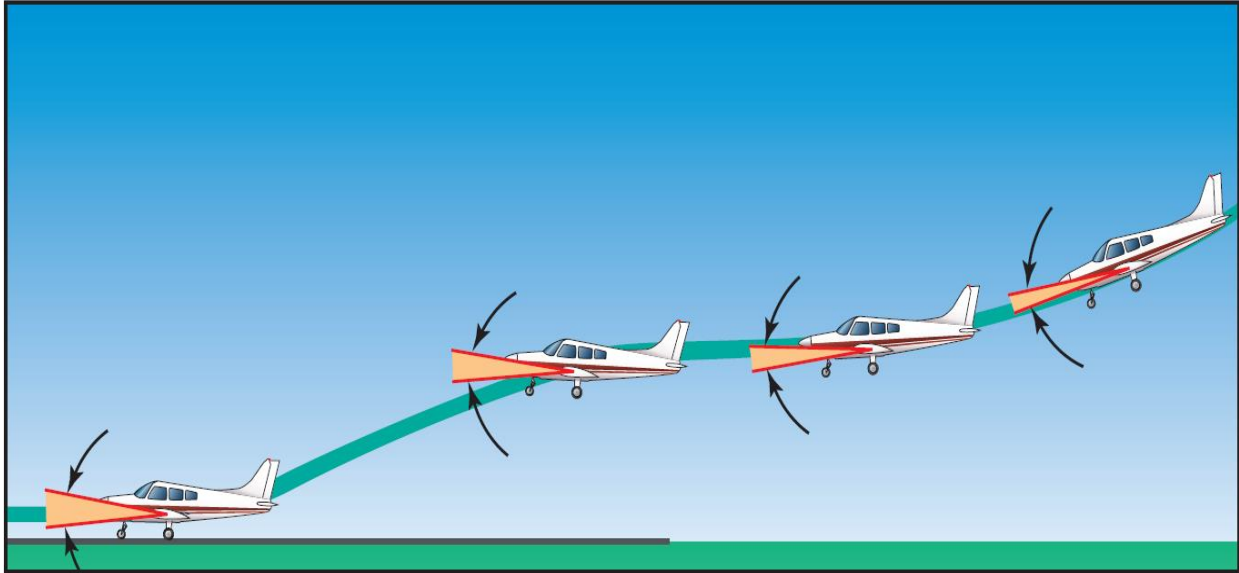
**Figure 1:** An overview of the accident site. (Source: Google Earth)



**Figure 2:** The aircraft as it came to rest. (Source: Pilot)

## High Round-out (flare) (Source: FAA-8083-3A)

*Sometimes when the airplane appears to temporarily stop moving downward, the round out has been made too rapidly and the airplane is flying level, too high above the runway. Continuing the round out would further reduce the airspeed, resulting in an increase in angle of attack to the critical angle. This would result in the airplane stalling and dropping hard onto the runway.*



**Illustration 1:** High round illustration. (Source: FAA-8083-3A)

## Findings

### 1. Personnel Information

1.1 The pilot had a Private Pilot Licence (PPL) that was initially issued on 29 January 1998. The PPL was reissued on 9 March 2023 with an expiry date of 30 April 2025.

1.2 The pilot was issued a Class 2 aviation medical certificate on 19 July 2024 with an expiry date of 31 July 2025 with no restrictions. The pilot was adequately qualified and licensed to conduct the flight.

### 2. Aircraft Information

2.1 The last 100-hour inspection of the aircraft was conducted and certified on 8 July 2024 at 3 972.7 hours. The aircraft had accrued 5 hours since the last inspection.

2.2 The aircraft had a valid Authority-to-fly (ATF) Certificate that was initially issued on 12 July 2022. The ATF was renewed on 5 August 2024 with an expiry date of 31 July 2025. The



aircraft's Certificate of Registration (C of R) was issued to the present owner on 21 December 2021.

2.3 This aircraft was previously involved in an accident after a runway excursion at Krugersdorp Aerodrome (FAKR) on 24 January 2022. The AIID reference number CA18/2/3/10106 was issued for this accident.

2.4 The aircraft was issued a Certificate of Release to Service (CRS) on 8 July 2024 with an expiry date of 7 July 2025 or at 4 072.7 airframe hours, whichever occurs first.

2.5 The aircraft was maintained by an approved person (AP) with an AP Certificate that was issued by the Regulator (SACAA) on 24 February 2023 with an expiry date of 23 February 2025.

2.6 It is likely that the aircraft's height on approach was high, and the pilot reduced the engine power and flared the aircraft. This caused the aircraft to drop on the runway and touch down hard, which damaged the aircraft.

### 3. Environment

Good weather prevailed at the time of the flight; the weather was not an attribute to this accident.

#### **Probable Cause(s)**

It is likely that the aircraft's height on approach was too high, and the pilot reduced the engine power and flared the aircraft. This caused the aircraft to drop on the runway and touch down hard, which damaged the aircraft.

#### **Contributing Factor(s)**

Poor landing technique.

#### **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.*

|                                                                                                                                                                                                                                                                                              |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <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>                                                                                                                                     |
| <b>Purpose</b>                                                                                                                                                                                                                                                                               |
| <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> |
| <b>Disclaimer</b>                                                                                                                                                                                                                                                                            |
| <i>This report is produced without prejudice to the rights of the AIID, which are reserved.</i>                                                                                                                                                                                              |

**This report is issued by:**

**Accident and Incident Investigations Division  
South African Civil Aviation Authority  
Republic of South Africa**