PRELIMINARY ACCIDENT REPORT

Accident and Incident Investigations Division

Accident
- Preliminary Report -
AIID Ref No: CA18/2/3/10611

Figure 1: A file picture of the ZU-RAL aircraft. (Source: FlightZone Aviation Photography)

Description:

On Sunday morning, 26 October 2025, a pilot and two passengers on-board an Alouette II helicopter with registration ZU-RAL were engaged in a private flight from Elandsvlakte Farm in Danielskuil District, Northern Cape province, to a farm near Olifantshoek in the same province. The purpose of the flight was to reposition the helicopter to a game farm near Olifantshoek that was to be used in a game capture operation, which involved aerial darting.

After take-off, the helicopter flew over a flat terrain and headed westerly toward higher grounds. Later, it struck vegetation on a mountainous terrain and careered down a ravine; it came to rest on its right side. A post-impact fuel-fed fire erupted and destroyed most of the airframe as well as ignited the surrounding vegetation.

According to a farm worker and his wife, they saw the helicopter flying low and, later, noticed smoke from a distance. The farm worker went on foot to investigate; after confirming that an accident had occurred, he returned to the farm and called the farm owner via a cellphone, who then notified the local authorities. Another farmer also reported seeing smoke and had also driven to the accident site.

According to local authorities, the blaze had engulfed the accident site by the time they arrived; therefore, they had to extinguish the fire first before rescue efforts could begin. The pilot and the two passengers were fatally injured during the accident sequence. The helicopter was destroyed.

Occurrence Details

Reference Number	**:** CA18/2/3/10611
Occurrence Category	**:** Accident (Category 1)
Type of Operation	**:** Private (Part 94)
Name of Operator	**:** Hunky Dory Investments 15 (Pty) Ltd
Aircraft Registration	**:** ZU-RAL
Aircraft Make and Model	**:** Aerospatiale Industries, Alouette II (SE3130)
Nationality	**:** South African
Place	**:** Honderd en Elf Farm, Danielskuil District, Northern Cape Province
Date and Time	**:** 26 October 2025 at 0752Z
Injuries	**:** Three fatalities
Damage	**:** Destroyed

Purpose of the Investigation

In terms of Regulation 12.03.1 of the Civil Aviation Regulations (CAR) 2011, 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.
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.

Investigation Process

The Accident and Incident Investigations Division (AIID) was notified of an accident involving an Alouette II helicopter which occurred at Honderd en Elf Farm, Danielskuil in Northern Cape province on 26 October 2025. The occurrence was classified as an accident according to the CAR 2011 Part 12 and the International Civil Aviation Organisation (ICAO) STD Annex 13 definitions.

The AIID has appointed an investigator-in-charge to conduct a full investigation. Investigators were dispatched to the accident site. A notification was sent to the State of Design and Manufacturer in accordance with the CAR 2011 Part 12 and the ICAO Annex 13 Chapter 4. The State had appointed an accredited representative. The AIID will lead the investigation and issue the final report of this accident in accordance with the CAR 2011 Part 12 and the ICAO Annex 13.

The information contained in this preliminary report is derived from the information gathered during the ongoing investigation into the occurrence. Later, an interim or final report may contain altered information in case new evidence is found during the ongoing investigation that requires changes to the information depicted in this report.

The AIID reports are made available to the public at:
https://www.caa.co.za/industry-information/accidents-and-incidents/

Notes:
1. *Whenever the following words are mentioned in this report, they shall mean the following:*
   Accident — this investigated accident
   Helicopter — the Alouette II involved in this accident
   Investigation — the investigation into the circumstances of this accident
   Pilot — the pilot involved in this accident
   Report — this accident report

2. *Photos and figures used in this report were taken from different sources and may have been adjusted from the original for the sole purpose of improving clarity of the report. Modifications to images used in this report were limited to cropping, magnification, file compression, or enhancement of colour, brightness, contrast, or addition of text boxes, arrows, or lines.*

Disclaimer

Table of Contents

Abbreviation	Description
°	Degrees
°C	Degrees Celsius
AGL	Above Ground Level
AIID	Accident and Incident Investigations Division
AMO	Aircraft Maintenance Organisation
AP	Approved Person
ATF	Authority-to-Fly
CAA	Civil Aviation Authority
CAR	Civil Aviation Regulations
CAVOK	Ceiling and Visibility OK
C of R	Certificate of Registration
CRS	Certificate of Release to Service
CVR	Cockpit Voice Recorder
FDR	Flight Data Recorder
FAKM	Kimberley Aerodrome
FASS	Sishen Aerodrome
FAWB	Wonderboom Aerodrome
Ft	feet
GPS	Global Positioning System
hPa	Hectopascal
IIC	Investigator-in-Charge
Kt	knots
M	metres
METAR	Meteorological Aerodrome Report
MTOW	Maximum Take-off Weight
Nm	nautical miles
NTCA	Non-Type Certified Aircraft
POH	Pilot's Operating Handbook
PPL	Private Pilot Licence
QNH	Barometric Pressure Adjusted to Mean Sea Level
SACAA	South African Civil Aviation Authority
SAWS	South African Weather Service
TBO	Time Between Overhaul
UTC	Co-ordinated Universal Time
VFR	Visual Flight Rules
VMC	Visual Meteorological Conditions
Z	Zulu (Term for Universal Co-ordinated Time - Zero Hours Greenwich)

1. FACTUAL INFORMATION

1.1 History of Flight

1.1.1 On Sunday morning, 26 October 2025, a pilot, a veterinarian and a veterinary assistant on-board an Alouette II helicopter with registration ZU-RAL were engaged in a private flight from Elandsvlakte Farm in Danielskuil District, Northern Cape province, to a game farm near Olifantshoek in the same province. 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.

1.1.2 The helicopter was engaged in a game capture operation, which included aerial darting of animals (*a veterinarian would shoot tranquiliser darts from the helicopter, and a ground team would subsequently capture the animals*). The game capture operation was initially set to take place at Elandsvlakte Farm in Danielskuil District between 25 and 28 October 2025. However, on the morning of 26 October 2025, the helicopter was redirected to another game farm near Olifantshoek. The owner of Elandsvlakte Farm, where the helicopter was parked and who had accompanied the crew on 25 October 2025 during the game capture activities on his farm, stated that the helicopter had been refuelled to capacity before take-off from his farm with the three occupants on-board.

1.1.3 At the time of the flight, the weather was described as clear skies with a south-westerly wind blowing in the area. *There are no air traffic control services in this remote area*.

1.1.4 As the helicopter flew towards higher ground after taking off from a flat terrain, it impacted the vegetation on the top of a mountainous terrain. Following the initial impact, the pilot lost control and the helicopter careered down a ravine and came to rest on its right side. The veterinarian and the veterinary assistant were ejected from the cabin, but the pilot remained secured by a four-point harness. A post-impact fuel-fed fire erupted and consumed most of the helicopter; it also set the surrounding vegetation alight. *A closer look at the accident site showed that it had impacted both the vegetation and the rocky ground*. Two of the three main rotor blades (red in colour) tips were found at the scene whilst the third blade (with its tip) was still attached to the helicopter; the blades were all bent. There was a noticeable strike mark on a rock from one of the main rotor blades. The rotor system was still connected to the main rotor gearbox through the main rotor driveshaft. The aft part of the tail boom had broken off but showed no signs of fire damage, and one of the tail rotor blades (yellow in colour) was not located. The engine remained intact, although it was heavily scored.

1.1.5 There were no direct eyewitnesses to the accident. However, a farm worker and his wife stated that they had spotted the helicopter flying low from east to west. Not long after, they noticed smoke rising at a distance. The farm worker made his way to the site on foot, which was several kilometres from the farm. After confirming that an accident had occurred, he jogged back to the farm to inform the farm owner via a cellphone, who then contacted the local authorities. Another farmer had also witnessed the smoke and had

driven to the accident scene.

1.1.6 The accident occurred during daylight at Global Positioning System (GPS) co-ordinates determined to be 28°00’57.30” South 023°33’52.34” East, at approximately 5 410 feet (ft).

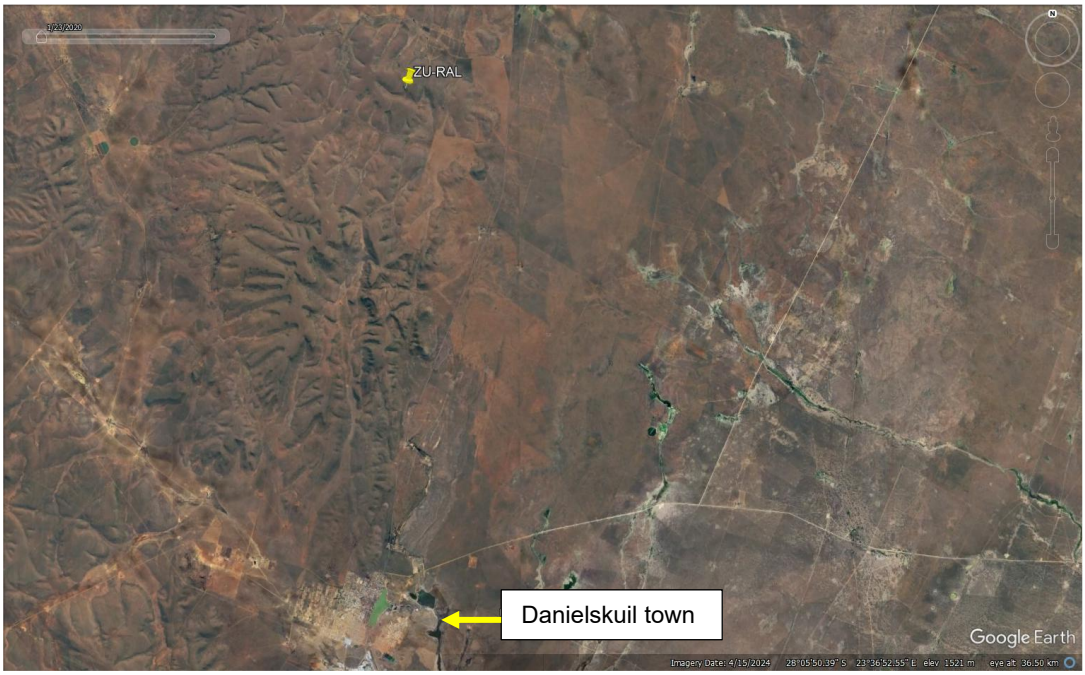

Figure 2: The yellow pin indicates the accident site in relation to the town. (Source: Google Earth)

1.2 Injuries to Persons

Injuries	Pilot	Crew	Pass.	Total On-board	Other
Fatal	1	-	2	3	-
Serious	-	-	-	-	-
Minor	-	-	-	-	-
None	-	-	-	-	-
Total	**1**	**-**	**2**	**3**	**-**

Note: Other means people on the ground.

1.3 Damage to Aircraft

1.3.1 The helicopter was destroyed by a post-impact fuel-fed fire that erupted during the accident sequence.

Figure 3: The wreckage of ZU-RAL.

1.4 Other Damage

1.4.1 The post-impact fire set the veld alight, and a substantial area of vegetation was destroyed.

1.5 Personnel Information

1.5.1 Pilot-in-Command (PIC)

Nationality	South African	Gender	Male	Age	23
Licence Type	Private Pilot Licence (PPL)				
Licence Valid	Yes	Type Endorsed	No		
Ratings	None				
Medical Expiry Date	31 January 2027 (Class 2)				
Restrictions	None				
Previous Accidents	None				

Note: Previous accidents refer to past accidents the pilot was involved in, when relevant to this accident.

Flying Experience:

Total Hours	447.4
Total Past 24 Hours	Unknown
Total on Type Past 90 Days	Unknown
Total on Type	Unknown

1.5.2 According to the available records, the pilot had a Private Pilot Licence (PPL) Helicopter. His licence was initially issued by the Regulator (SACAA) on 21 April 2022 with an expiry date of 30 June 2026. The Alouette II type helicopter was not endorsed on his licence, and he did not have a Game/Cull rating.

1.5.3 On 30 June 2025, the pilot conducted his skills test (PPL test) in accordance with the Regulator (SACAA) using Form CA 61-04.4 at an approved training organisation (ATO) at Wonderboom Aerodrome (FAWB); a Robinson R44 helicopter was used for the skills test. Copies of his pilot logbook that were sent through to the Regulator with his application indicated a total of 447.4 hours of flight time at that stage. The investigators had not received an original pilot logbook at the time of publication of this preliminary report.

1.5.4 According to available information, the pilot had a Class 2 aviation medical certificate that was issued on 10 January 2022 with an expiry date of 31 January 2027; he had no medical restrictions.

1.6 Aircraft Information

1.6.1 Alouette II SE-3130 Helicopter
(Source: https://en.wikipedia.org/wiki/A%C3%A9rospatiale_Alouette_II#References)

The Aérospatiale Alouette II is a French light helicopter, incorporating many innovations of its time. It is powered by a single Turbomeca Artouste II turboshaft engine capable of generating a maximum output of 300 kW (400 hp). The speed of the main rotor is controlled by an automated fuel supply governor, eliminating the necessity of a twist-grip throttle and a conventional link between the throttle and the collective pitch. Instead, the Alouette II uses a simple control lever arrangement, which acts to directly regulate the collective-pitch and actuate the governor while immediately and automatically applying the correct level of power to conform with flight conditions. Without a clutch, the transmission is considerably simplified in both design and maintenance aspects. The Alouette II is capable of accommodating a seating arrangement for up to five personnel, including the pilot; access to the cabin is provided via a pair of side-hinged doors. The

compact cockpit is provided with a dome-shaped windscreen, which provides for excellent levels of external visibility.

Airframe:

Manufacturer/Model	Aerospatiale Industries/Alouette II SE 3130	
Serial Number	147	
Year of Manufacture	1959	
Total Airframe Hours (at time of accident)	Unknown	
Last Inspection (Hours & Date)	8 971.6	23 January 2025
Hours Since Last Inspection	Unknown	
CRS Issue Date	23 January 2025	
ATF (Issue Date & Expiry Date)	12 May 2025	30 May 2026
C of R (Issue Date) (Present Owner)	4 October 2006	
MTOW	1 500kg (3 300lbs)	
Type of Fuel Used	Jet A1	
Operating Category	Part 94	
Previous Accident/Incident	The helicopter was involved in an accident and incident since its registration in South Africa. *On 25 August 2003, the helicopter was involved in an accident when the pilot entered an out-of-ground-effect hover in a mountainous terrain, and a high rate of descent followed, with the main rotor blades striking several trees. AIID reference number CA18/2/3/7692.* *On 7 September 2010, the helicopter was involved in a hard landing incident when the engine failed while the helicopter was in a 15-foot hover. According to available information, the helicopter was repaired, the engine was overhauled, and the helicopter was flown again for the first time on 12 January 2023. This occurrence was not reported to the SACAA – AIID.*	

Note: Previous accidents refer to past accidents the aircraft was involved in, when relevant to this accident.

Engine:

Manufacturer/Model	Turbomeca Artouste II C5
Serial Number	2289
Hours Since New	3 430.4
Hours Since Overhaul	79.4

1.6.2 The helicopter had a valid Authority-to-Fly Certificate that was issued by the Regulator on 12 May 2025 with an expiry date of 30 May 2026.

1.6.3 The last maintenance inspection of the helicopter was conducted and certified on 23 January 2025 at 8 971.6 airframe hours (531.5 Hobbs) after which a Certificate of Release to Service (CRS) was issued with an expiry date of 22 January 2026 or at 9 071.6 airframe hours, whichever comes first.

1.6.4 The airframe and engine hours entered in the tables above were recorded during the last maintenance inspection as the flight folio was in the helicopter at the time of the flight, according to the owner. The flight folio and Hobbs meter found next to the instrument panel were destroyed during the post-impact fire.

1.7 Meteorological Information

1.7.1 The weather information below was obtained from the Meteorological Aerodrome Report (METAR) that was issued for Kimberley Aerodrome (FAKM) by the South African Weather Service (SAWS) on 26 October 2024 at 0800Z. The accident site is 78 nautical miles (nm) south-east of FAKM.

FAKM 260800Z 22007KT CAVOK 23/04 Q1017 NOSIG=

Wind Direction	220°	Wind Speed	7 kt	Visibility	9999m
Temperature	23°C	Cloud Cover	Nil	Cloud Base	Nil
Dew Point	4°C	QNH	1017 hPa		

1.7.2 The following METAR was issued by SAWS for Sishen Aerodrome (FASS) on 26 October 2025 at 0800Z. The accident site is 37nm north-west of FASS.

METAR for FASS 260800Z AUTO 21008KT //// // ////// 20/01 Q1018=

Wind Direction	210°	Wind Speed	8 kt	Visibility	9999m
Temperature	20°C	Cloud Cover	Nil	Cloud Base	Nil
Dew Point	1°C	QNH	1018 hPa		

1.7.3 The accident occurred during visual meteorological conditions (VMC) by day.

1.8 Aids to Navigation

1.8.1 The helicopter was equipped with standard navigational equipment as approved by the Regulator. There were no records indicating that the navigational equipment was unserviceable before the flight.

1.9 Communication

1.9.1 The helicopter was equipped with a standard communication system as approved by the Regulator. There were no recorded defects with the communication system before the flight.

1.10 Aerodrome Information

1.10.1 This accident did not occur at, or near, an aerodrome.

1.11 Flight Recorders

1.11.1 The helicopter was neither equipped with a flight data recorder (FDR) or a cockpit voice recorder (CVR), nor was it required by regulation to be fitted to the helicopter type.

1.12 Wreckage and Impact Information

1.12.1 The helicopter struck vegetation on the top of a mountainous terrain and careered down a ravine; it came to rest on its right side. The aft section of the tail boom, with the tail rotor assembly still attached, broke off on impact and was not damaged by the post-impact fire. The cabin and centre section were consumed by the fire. The engine, main rotor gearbox, main rotor driveshaft and head assembly were heavily scored. The three main rotor blades were still attached to the main rotor, with all three blades displaying evidence of bending. Two of the three blade tips broke off but were accounted for at the accident site; the third blade tip was still attached to its blade. The outer section of one of the tail rotor blades was severed (see Figure 6) and was not located.

Figure 4: The wreckage and accident site.

Figure 5: The wreckage after the fire was put out.

Figure 6: The aft tail boom with the tail rotor assembly still attached.

1.13 Medical and Pathological Information

1.13.1 To be discussed in the final report.

1.14 Fire

1.14.1 A post-impact fuel-fed fire consumed the helicopter and set the veld alight.

1.15 Survival Aspects

1.15.1 The accident was considered not survivable. The intensity of the post-impact fire associated with the impact sequence and the remoteness of the area limited the survivability of the occupants.

1.16 Tests and Research

1.16.1 To be discussed in the final report.

1.17 Organisational and Management Information

1.17.1 This was a private flight, operated under the provisions of Part 94 of the CAR 2011.

1.18 Additional Information

1.18.1 On 24 October 2025 at 0901Z, an approved person (AP) received a WhatsApp message from the pilot asking what type of oil he could use to top up the tail rotor gearbox. The AP replied: *Mobil Gear oil 823*. He asked if that was aviation or normal oil. The AP replied: *Aviation*. He then asks what alternative oil he could use as he was in the Kalahari at the time. There was no further communication.

1.18.2 There was no air traffic control or radar coverage in the area. The wreckage discovery was delayed due to the remoteness of the accident site.

1.19 Useful or Effective Investigation Techniques

1.19.1 None.

2. FINDINGS

2.1 General

From the available evidence, the following preliminary findings were made with respect to this accident. These shall not be read as apportioning blame or liability to any organisation or individual.

To serve the objective of this investigation, the following sections are included in the conclusions heading:

- **Findings —** are statements of all significant conditions, events, or circumstances in this accident. The findings are significant steps in this accident sequence, but they are not always causal or indicate deficiencies.

2.2 Findings

Pilot

2.2.1 The pilot had a Private Pilot Licence (PPL) that was initially issued by the Regulator (SACAA) on 21 April 2022. The Alouette II helicopter type was not endorsed on his licence, and neither was a Game/Cull rating.

2.2.2 The pilot had a Class 2 aviation medical certificate that was issued on 10 January 2022 with an expiry date of 31 January 2027.

2.2.3 The flight was conducted by day during visual flight rules (VFR) conditions.

Helicopter

2.2.4 The last maintenance inspection of the helicopter was conducted and certified on 23 January 2025 at 8 971.6 airframe hours. It could not be determined how many hours were flown with the helicopter since the said inspection due to the destruction of the helicopter by the post-impact fire.

2.2.5 The Certificate of Registration (C of R) was issued to the present owner on 4 October 2006.

2.2.6 The helicopter was issued an Authority-to-Fly (ATF) Certificate on 12 May 2025 with an expiry date of 31 May 2026.

2.2.7 The Certificate of Release to Service (CRS) was issued on 23 January 2025 and was valid until 22 January 2026 or at 9 071.6 airframe hours, whichever comes first.

2.2.8 According to the helicopter owner, the flight folio was in the helicopter at the time of the accident flight. It could, therefore, not be determined how many hours were flown with the helicopter following the last maintenance inspection that was certified on 23 January 2025. The Hobbs meter was also destroyed by the post-impact fire.

2.2.9 This helicopter was registered as a Non-Type Certified Aircraft (NTCA) which requires that all maintenance be conducted under the provisions of Part 44 of the CAR 2011.

2.2.10 On 24 October 2025 at 0901Z, the approved person (AP) received a WhatsApp message from the pilot asking what type of oil he could use to top up the tail rotor gearbox; the AP replied that Mobil Gear oil 823 should be used. The pilot further enquired if that was an aviation or normal oil, to which the AP replied, Aviation. The pilot also enquired if there was an alternative oil to use as he was in the Kalahari at the time.

2.2.11 The helicopter type requires that the main rotor and tail rotor heads, as well as the tail rotor drive shaft be greased every 5 hours of operation.

Meteorological Information

2.2.12 Fine weather conditions prevailed at the time of the flight, with the wind blowing from the south-west.

Time of Accident

2.2.13 The time of the accident (0752Z) was obtained from the cellphone (iPhone) of the veterinarian; the cellphone, which was found on site, had the Crash Detection function activated.

3. ON-GOING INVESTIGATION

3.1 The AIID investigation is ongoing, and the investigators will investigate other aspects of this accident which may or may not have safety implications.

4. SAFETY RECOMMENDATIONS

4.1 General

The safety recommendations listed in this report are proposed according to paragraph 6.8 of Annex 13 to the Convention on International Civil Aviation and are based on the conclusions listed in heading 3 of this report. The AIID expects that all safety issues identified by the investigation are addressed by the receiving States and organisations.

4.2 Safety Recommendation/s

4.2.1 None.

5. APPENDICES

5.1 None.

This report is issued by:

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