SOUTH AFRICAN CIVIL AVIATION AUTHORITY

Section/division **Accident and Incident Investigations Division** Form Number: CA 12-57

LIMITED ACCIDENT INVESTIGATION REPORT

Reference Number	CA18/2/3/10171						
Classification	Accident	**Date**	11 June 2022	**Time**	1105Z		
Type of Operation	Private (Part 94)						
Location							
Place of Departure	Richmond Airfield, KwaZulu-Natal Province	Place of Intended Landing	Bingelela Private Airstrip, KwaZulu-Natal Province				
Place of Accident	200m from the end of Runway 33 at Bingelela Private Airstrip						
GPS Co-ordinates	Latitude	S 28º42'30"	Longitude	E 29º19'35"	Altitude	3789 feet (ft)	
Aircraft Information							
Registration	ZU-IBX						
Model/Make	RV 9, Vans Aircraft (Serial Number: 91877)						
Damage to Aircraft	Substantial	Total Aircraft Hours	576.9				
Pilot-in-command							
Licence Type	Private Pilot Licence (PPL)	Gender	Male	Age	63		
Licence Valid	Yes						
Total Hours on Type	576	Total Flying Hours	1610				
People On-board	1+1	Injuries	2	Fatalities	0	Other (on ground)	0

What Happened

On 11 June 2022 at 1020Z, a pilot and a passenger on-board a Raven RV9 with registration ZU-IBX were engaged in a navigational flight from Richmond Airfield to Bingelela Private Airstrip, both situated in KwaZulu-Natal province. The flight was conducted during daylight meteorological conditions and under the provisions of Part 94 of the Civil Aviation Regulations (CAR) 2011 as amended.

The pilot stated that he conducted a pre-flight check and had 120 litres (L) of fuel on-board the aircraft at departure. The take-off and climb to cruise level were uneventful. The duo routed directly to Bingelela Private Airstrip. During approach for landing, the aircraft's speed was between 65 and 70 knots (kt) with full flaps. The pilot indicated that at touchdown, the aircraft bounced and floated for some time. On the second touchdown, the pilot realised that he had limited runway length for a safe landing stop, therefore, he elected to initiate a go-around. He further indicated that the go-

around was initiated towards the last part of the runway with the intention to clear the hill at the end of the runway. The pilot had selected 20º take-off flaps but due to the steep angle of attack, the aircraft could not achieve a positive rate of climb to clear the inclined terrain ahead. Upon deducing that the aircraft was not going to clear the hill, the pilot decided to fly the aircraft as close to a stall as possible until it impacted the hill. It came to a stop 20 metres (m) from the point of first impact. Both occupants sustained minor injuries during the accident sequence. The aircraft's undercarriage, flaps, engine cowling and the propeller were damaged.

	Weight (lbs)	**Arm**	**Moment**
Aircraft	1040	77.78	80891.2
Fuel	189.6	76.75	14551.8
Pilot	220	92.7	20394
Passenger	191.4	92.7	17742.78
Fwd. baggage	22	122	2684
Aft baggage	22	142	3124
Total	1701.32	**81,9**	139387.78

Table 1: The take-off weight of 1701lbs was below the maximum take-off weight of 1750lbs and its centre of gravity (CoG) of 81.9 was within range at 77.95 to 84.84, which was acceptable.

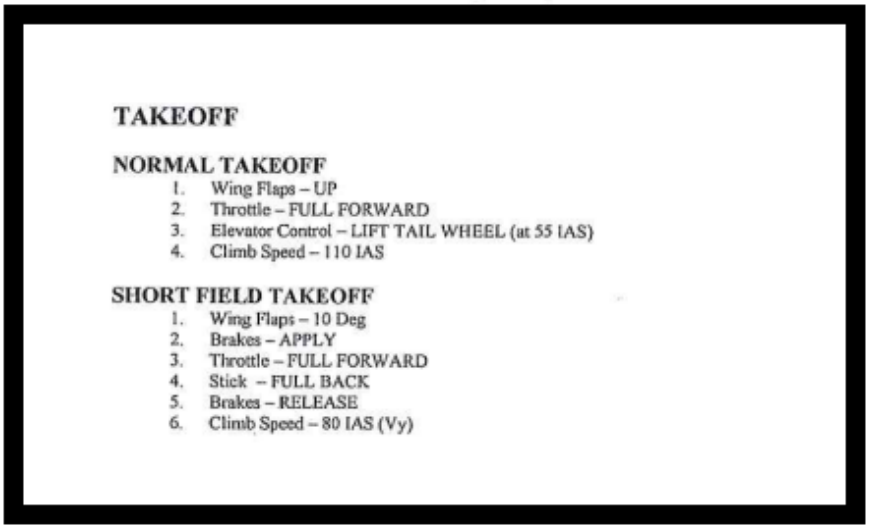

Figure 1: The short field take-off configuration to clear a 50-feet obstacle. (Source: Owner)

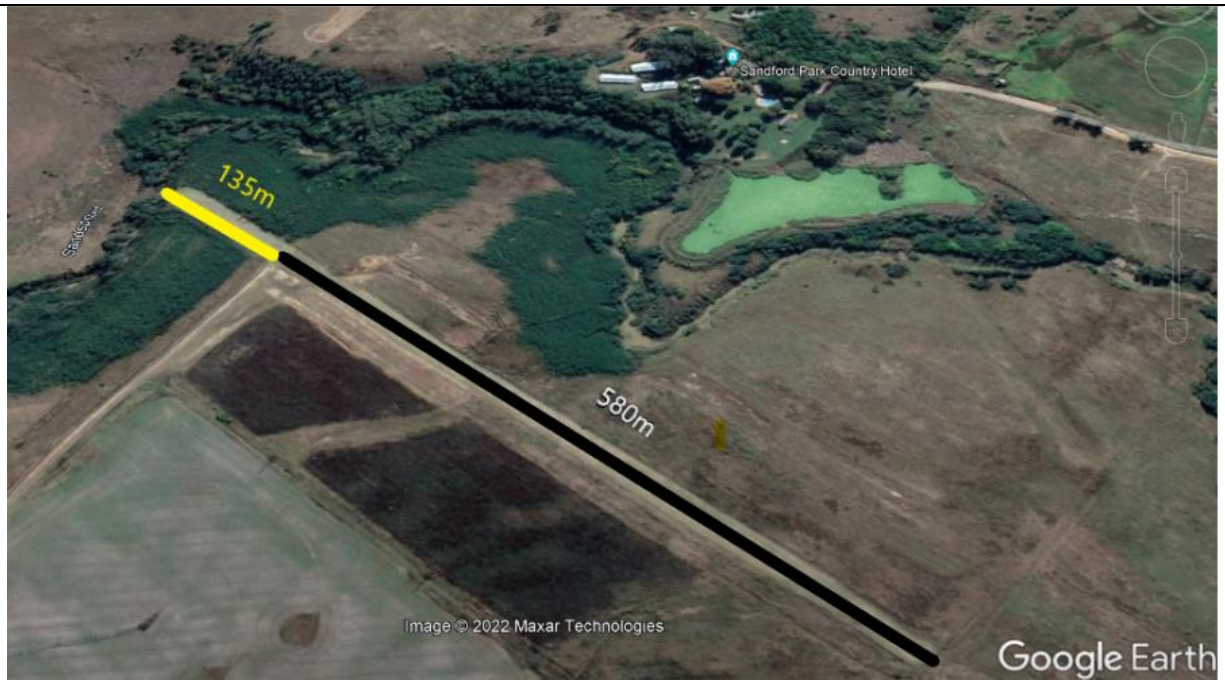

Figure 2: The runway length was adequate as for the aircraft could stop in 410ft (128m). (Source: Google Earth)

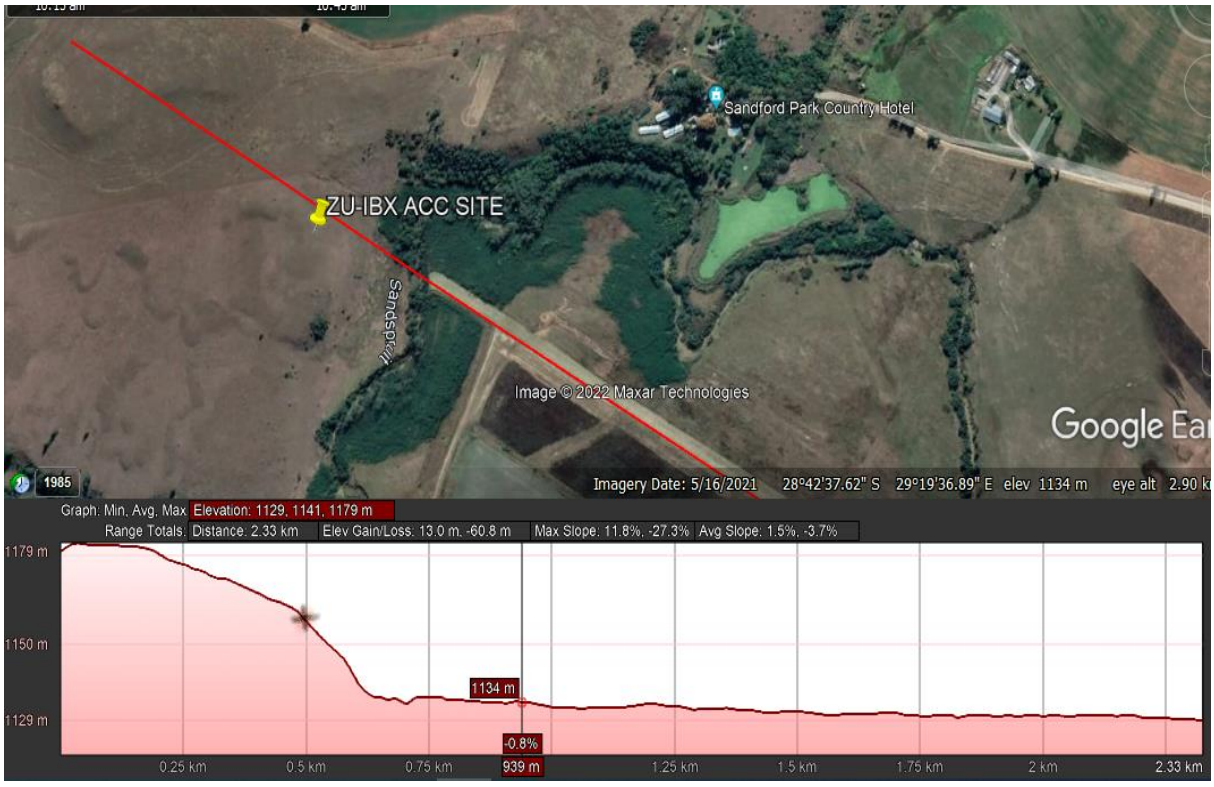

Figure 3: The aircraft was unable to clear the inclined terrain ahead of the runway, and it impacted the terrain at 67.2 feet above ground level. (Source Google Earth)

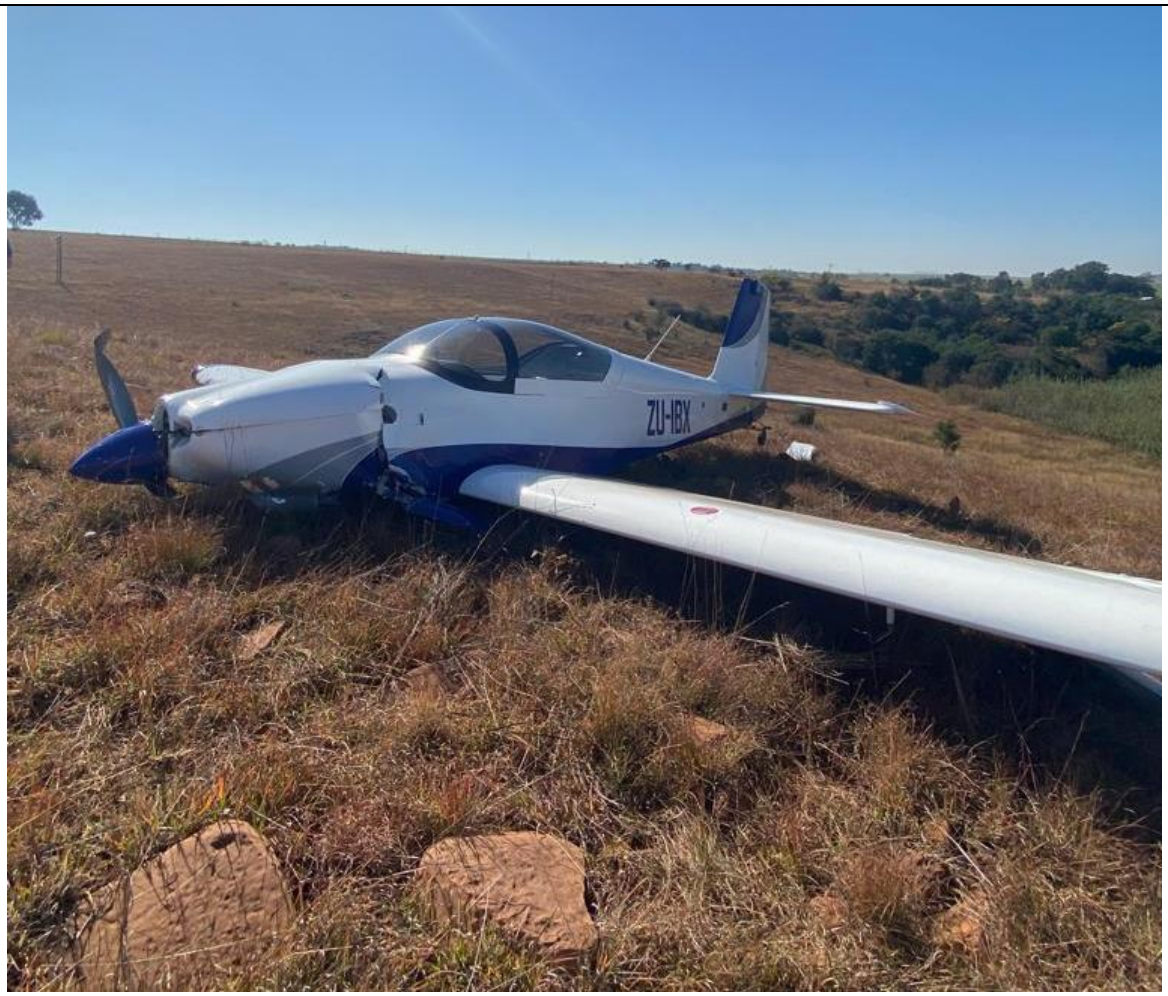

Figure 4: The aircraft as it came to rest on the hill. (Source: Owner)

The investigation found:

- The Pilot's Operating Handbook (POH) states that the airspeed should be below 90 miles per hour (mph) to lower flaps for approaches; however, the degrees of the flap setting are not specified. The flaps are electrically operated.

- The current owner of the aircraft was issued a Certificate of Registration on 3 September 2018. The aircraft was initially issued a Certificate of Airworthiness (C of A) with the current owner on 19 February 2019 with an expiry date of 28 February 2023.

- The South African Weather Service supplied terminal area forecast information on 26 June 2022.

- The pilot's licence was issued on 15 November 2021 with an expiry date of 14 November 2022. His medical certificate was issued on 10 November 2021 with an expiry date of 10 November 2026 with no restrictions.

- The last mandatory periodic inspection (MPI) was carried out on the aircraft prior to the accident flight on 26 August 2021 at 535.7 Tachometer hours; and the aircraft had accumulated a total of 40.3 hours since the last inspection.

- The aircraft's approach was not stable as evidenced by the bounce and the subsequent float, which led the pilot to attempt to land the aircraft deep. However, the aircraft was still floating, and the pilot elected to perform a go-around. During the go-around, the pilot realised that the aircraft would not clear a rising terrain on his flight path and increased the nose to a steep angle, which resulted in the airspeed being depleted and the aircraft losing height and crashing on the high-rise terrain.

Probable cause:

The aircraft was landed at a high-speed, resulting in the aircraft floating and the pilot executing an unsuccessful go-around due to the rising terrain and, subsequently, crashed.

Safety Action/s

None.

Safety Message

Pilots are reminded to always opt for a go-around when the aircraft is not stable during approach for landing.

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****.*

About this Report

Decisions regarding whether to investigate, and the scope of an investigation are based on many factors, including the level of safety benefit likely to be obtained from an investigation. For this occurrence, no 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 brief report. The report has been compiled using information supplied in the initial notification, as well as follow-up information 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 accident.

This report provides an opportunity to share safety message/s in the absence of an investigation.

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.

Disclaimer	
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This report is issued by:

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