

ACCIDENT

Aircraft Type and Registration:	Rotorway Executive 90, G-BVTV	
No & Type of Engines:	1 Rotorway RI 162 piston engine	
Year of Manufacture:	1995 (Serial no: 5243/6599)	
Date & Time (UTC):	4 November 2020 at 1030 hrs	
Location:	Landmead Farm Airfield, Oxfordshire	
Type of Flight:	Private	
Persons on Board:	Crew - 1	Passengers - None
Injuries:	Crew - 1 (Minor)	Passengers - N/A
Nature of Damage:	Main rotor blades destroyed and rotor mast bent; damage to the fuselage and landing gear	
Commander's Licence:	Private Pilot's Licence	
Commander's Age:	58 years	
Commander's Flying Experience:	1,674 hours (of which 142 were on type) Last 90 days - 28 hours Last 28 days - 6 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot	

Synopsis

Following some manoeuvres in the low hover, the pilot intended to join the circuit but elected to land briefly in order to adjust his headset. As the helicopter touched down it continued to roll to the left, damaging the rotor blades and coming to rest on its left side. The pilot was able to self-evacuate from the helicopter with minor injuries.

History of the flight

The pilot prepared the helicopter for flight with the intention of conducting some circuits. The weather was good, with a light and variable wind from the west. After lifting into the hover, he checked the temperatures and pressures were acceptable, and then hover taxied across the airfield. En route the pilot performed some practice manoeuvres in the low hover. He then taxied to the south side of the airfield with the intention of joining the circuit, but decided to adjust his headset prior to departure. The pilot touched down on flat ground, but reported that the helicopter felt as though it was touching down on sloping ground, and it continued to roll over to the left. The pilot was unable to counter this before the rotor blades touched the ground and the helicopter came to rest on its left side.

The pilot was able to exit the aircraft without assistance and suffered only minor injuries. There were no witnesses to the accident.

Accident site

The pilot provided a sketch of the crash site relative to the departure point, shown in Figure 1.



Figure 1

Flightpath and crash site location sketch provided by the pilot

The photograph of the helicopter after the accident shown in Figure 2 was also provided by the pilot.



Figure 2

Image of the helicopter post-accident

Aircraft information

The pilot reported that the helicopter had been involved in a run-on landing following an engine off, forced landing two weeks prior to the accident. He highlighted the possibility that the landing gear may have been compromised during this event. However, the maintenance provider who inspected the helicopter following this incident reported that there was no evidence of any damage.

Aircraft examination

The aircraft was recovered to a maintenance facility after the accident but was considered an insurance loss, so detailed examination of the airframe was not carried out. The main damage to the helicopter can be seen in Figure 2. The left skid was distorted and had fractured. The rear landing gear leg on the left side was also completely fractured close to the mounting point with the fuselage. The maintenance provider inspected the fracture surface of the leg tube and advised that there was no evidence to suggest that the fracture had progressed over a period of time, rather than being an immediate overload failure.

Conclusion

The sketch provided by the pilot and the damage to the helicopter were both consistent with a dynamic rollover having occurred. This was likely to have been initiated by the rear tip of the left landing gear skid catching the ground, while there was still sideways motion of the helicopter to the left. Based on the limited evidence available, it was considered unlikely that there was pre-existing damage to the landing gear leg which had contributed to this.