**Accident**

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| **Aircraft Type and Registration:** | Westland Scout AH1, G-BWHU |
| **No & Type of Engines:** | 1 Rolls-Royce Nimbus Mk 10501 turboshaft engine |
| **Year of Manufacture:** | 1964 (Serial no: F9517) |
| **Date & Time (UTC):** | 24 April 2026 at 1225 hrs |
| **Location:** | Turweston Aerodrome, Buckinghamshire |
| **Type of Flight:** | Training |
| **Persons on Board:** | Crew - 2 Passengers - None |
| **Injuries:** | Crew - 2 (Minor) Passengers - N/A |
| **Nature of Damage:** | Significant damage to skids, tail cone, tail rotor transmission and tail rotor |
| **Commander's Licence:** | Commercial Pilot's Licence |
| **Commander's Age:** | 67 years |
| **Commander's Flying Experience:** | 5,500 hours (of which 352 were on type)<br>Last 90 days - 79 hours<br>Last 28 days - 36 hours |
| **Information Source:** | Aircraft Accident Report Form submitted by the pilot |

## Synopsis

The helicopter was lifting off having been refuelled at Turweston Aerodrome. As the pilot commenced a pedal turn to the left, the helicopter rapidly rotated to the right. The pilot took immediate action to counter the rotation but with no effect. The helicopter landed heavily and its main rotors struck the tail boom causing substantial damage to the tail rotor drive train. The exact cause of the loss of control could not be determined.

## History of the flight

The helicopter was on a repositioning and revision flight with its owner and an instructor, conducting a Scout type rating course. The aircraft had landed at Turweston to refuel. There was an estimated 5 to 8 kt wind from 090° and the helicopter had been positioned 90° out of wind to enable ease of refuelling from the bowser. With refuelling complete, pre-flight checks were carried out and the instructor noted the position of another fixed wing aircraft in front and to the right of the helicopter. The instructor advised the pilot that a vertical takeoff would be appropriate and then to move sideways away from the parked aircraft observing the downwash during the manoeuvre.

The pilot did as suggested, and gently lifted into the hover, and as planned, there was no observable effect on the parked aircraft. However, to further reduce perceived risk the instructor took control of the helicopter and slowly moved it to the left to then turn into wind.

The instructor then commenced a pedal turn to the left and as he did so, the helicopter suddenly rotated in the opposite direction to the right. The rate of rotation increased. He applied full left yaw which appeared to have no effect. Thinking there was a problem with the tail rotor he closed the throttle and as the helicopter settled, he raised the collective to cushion the landing.

The helicopter landed heavily damaging the skids and causing the main rotors to droop whilst rotating and strike the tail boom (Figure 1). This resulted in significant disruption to the tail rotor drive system shafts and support bearings. The pilot and instructor were uninjured.

**Figure 1**

G-BWHU immediately after landing

## Aircraft examination

The aircraft was examined onsite and the extensive damage to the structure surrounding the tail rotor drive shafts and transmission system was indicative of the main rotor blades striking the tail boom. It was also found that the tail rotor blades had also contacted the ground sustaining damage during the landing, shock loading and further damaging the drive train. There was no evidence of pre-existent faults or malfunctions that could have contributed to this accident. Foreign object or an external control restriction was also considered but no evidence was found.


**Figure 2**

Tail rotor drive system and fairing blade strike location

## Analysis

The instructor and pilot of the aircraft were perplexed as to the cause of the accident as the takeoff had been benign in calm weather conditions with no obvious factors that could have led to a loss of control. To assist in their understanding of the accident, they presented the circumstances to a rotary wing test pilot and instructor with experience on a range of helicopters including the Westland Wasp and Scout. A summary of observations and analysis are as follows.

In the absence of a technical malfunction and taking into consideration the relatively calm and unchallenging conditions at the time, along with the simplicity of the manoeuvre, an obvious cause was not clear. The vigorous yaw of the helicopter and its apparent failure to react to corrective inputs, seemed to suggest the characteristics of a loss of tail rotor effectiveness. However, in service experience with the Wasp and Scout helicopter does not show they were prone to this sort of occurrence.

Further discussion between the pilot and another experienced Scout pilot suggested that slightly different but lesser known tail rotor effect, called tail rotor breakaway, may have been a contributory factor. Tail rotor breakaway was considered to be more akin to blade stall under certain combinations of light airflows.

However, faced with the rapid yaw, the instructor took actions in accordance with the Scout emergency procedures in the Flight Reference Cards. He correctly closed the throttle to reduce torque and slow the yaw and then cushion the landing by raising the collective. The proximity to the ground left very little time to react and resulted in the unavoidable heavy landing.

**Conclusion**

The helicopter was being flown within its capabilities in unchallenging conditions when the loss of control occurred. In the absence of a technical fault or malfunction, the exact cause of the loss of control could not be identified. However, it appeared to demonstrate the characteristics of a loss of tail rotor effectiveness, but this was considered to have been unusual in this type of helicopter. Similarly the concept of tail rotor breakaway was also considered but could not be postively determined.