

No: 11/92 **Ref:** EW/G92/09/14 **Category:** 2c

Aircraft Type and Registration: Robinson R22 Beta, G-EXOR

No & Type of Engines: 1 Lycoming O-320-B2C piston engine

Year of Manufacture: 1990

Date & Time (UTC): 13 September 1992 at 1650 hrs

Location: 3 nm north-west of Winter Hill, near Bolton

Type of Flight: Private

Persons on Board: Crew - 1 Passengers - 1

Injuries: Crew - None Passengers - None

Nature of Damage: Buckled tail boom, main rotor and rotor mast. Distortion of bulkhead and cabin roof; left side cabin door broken

Commander's Licence: Private Pilot's Licence (Helicopters)

Commander's Age: 42 years

Commander's Flying Experience: 202 hours (of which 127 were on type)
Last 90 days - 56 hours
Last 28 days - 19 hours

Information Source: Aircraft Accident Report Form submitted by the pilot plus telephone enquiries

The pilot had been flying for much of the day and had gone up into the hills to practice quickstops. On the way home he practiced an engine-off landing in open moorland country. In the practice area, which was about 1200 feet agl, the ground sloped gently upwards towards the south-east and the surface was covered with coarse grass tussocks and heather. The weather conditions were fine and the wind was 270°/10-15 kt. The pilot intended to terminate the autorotation with a full flare followed by a powered recovery into the hover. The helicopter's all-up weight was 90 lb below maximum landing weight.

Autorotation was established from a normal practice entry and indicated airspeed was stabilised at 60 kt. The flare was commenced at about 40 feet agl whereupon the rotor RPM increased to between 106% and 108%; the forward speed and rate of descent decreased as expected. At about 10 to 15 feet agl the collective lever was raised to stop the descent and forward speed; at this stage the engine and rotor RPM needles were matched at 100%. As the collective lever was raised further to establish a hover, the low rotor RPM warning horn sounded. The pilot lowered the collective lever to

restore RPM but the aircraft sank and the left skid bounced off a grass tussock. During the bounce the aircraft yawed and on the second contact with the ground it rolled over and came to rest on its left side. There were no injuries and the occupants left the aircraft through the right side cabin door. The pilot summoned help using his portable telephone.

The pilot attributed the accident to his selection of an unsuitable practice area.