

No: 2/85

Ref: EW/C886

Aircraft type and registration: Bell 206B Jet Ranger G-BGGY (light single engine helicopter)

Year of Manufacture: 1979

Date and time (GMT): 13 September 1984 at approximately 1255 hrs

Location: Eastnor Deer Park, Near Ledbury, Herefordshire

Type of flight: Commercial — display

Persons on board: Crew — One Passengers — None

Injuries: Crew — One (fatal) Passengers — None

Nature of damage: Aircraft destroyed

Commander's Licence: Airline Transport Pilot's Licence (Helicopters)

Commander's Age: 44 years

Commander's total flying experience: 3747 flying hours (of which 1255 were on type)

Information Source: AIB Field Investigation

The aircraft was taking part in a display to promote a small 4-wheel all terrain vehicle (ATV) which weighed approximately 500 lb. The display was held in an open air arena in the deer park adjacent to Eastnor Castle near Ledbury.

The aircraft arrived at Eastnor during the afternoon of the day before the display. The pilot was briefed by the organisers and, after he had completed a practice flight to ensure that the ATV behaved safely as an underslung load and that the aircraft had sufficient power margin, he took part in a dress rehearsal for the display. At the start of the rehearsal the helicopter positioned the ATV on the top of an adjacent hill out of sight of the arena. The driver of the ATV sat in the front left hand seat of the helicopter. On receipt of a signal from the arena the ATV was hooked onto the aircraft and the aircraft flew down the hill to the arena. After the ATV had been placed in the centre of the arena and the lifting strop released the aircraft landed alongside and the vehicle driver disembarked. The pilot then flew the helicopter to a spot approximately 400 yards to the south where it landed out of sight of the arena just beyond a low ridge. It remained with rotors turning while the vehicle display continued.

At the completion of the vehicle display the helicopter took off and flew back to the arena on a northerly heading. It flew at a height of 10 to 15 feet across the arena between the display vehicles and the spectators. On reaching the far side it pulled up into a steep turn over a tree and flew back across the arena on a reciprocal track also at a height of 10 to 15 feet. On leaving the southern boundary of the arena the helicopter crossed a ditch and approached ground rising with a slope of about 5°. It started a gentle left turn at moderate speed maintaining approximately the same ground clearance while flying around some trees on its left. The turn continued through 270° until the helicopter had flown around the trees and was now travelling down the slope and back into the arena, where it landed and parked for the night.

The following day the display followed the same pattern. As the helicopter, with the ATV underslung, was approaching the arena a black object was seen to fall to the ground. This was later found to be the seat of the ATV and was of no significance during the accident. When the ATV had been placed in the arena the helicopter flew to its landing site to wait until the vehicle display had finished. At the completion of the vehicle display it took off, flew across the arena, turned and flew on a reciprocal track as on the previous day at a height of 10 to 15 feet. It crossed the ditch apparently flying level towards the rising ground and not gaining height with the contours. At this point it was seen to bank steeply to the left. The main rotor struck the ground and the three feet outboard section of one main rotor blade was subsequently found to have detached at this time. The helicopter levelled briefly and continued to travel up the slope for another 56 metres before the main rotor struck the ground again. Shortly afterwards the fuselage impacted the ground coming to rest 42 metres later, some 143 metres from the initial rotor strike. There was no fire but the pilot died instantly in the impact.

A detailed examination of the wreckage showed that all failures within the control system were consistent with the effects of ground impact. No evidence of defect was found associated with the remainder of the helicopter or its engine which could have been contributory to the accident.