AAIB Bulletin No: 9/93 Ref: EW/G93/05/26 Category: 2c

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

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

Year of Manufacture: 1989

Date & Time (UTC): 29 May 1993 at 1010 hrs

Location: Kirtons Farm, Reading, Berkshire

Type of Flight: Private

Persons on Board: Crew - 1 Passengers - 1

Injuries: Crew - None Passengers - Minor

Nature of Damage: Aircraft damaged beyond economic repair

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

Commander's Age: 37 years

Commander's Flying Experience: 195 hours (all on type)

Last 90 days - 1 hour Last 28 days - 1 hour

Information Source: Aircraft Accident Report Form submitted by the pilot,

and further enquiries by the AAIB

The pilot stated that he had taken off from the private landing site at Kirtons Farm at 0952 hrs, in order to take photographs and video recording of the site, and of the water skiing competition event that was taking place at that location. He stated that he had positioned over the water towards the northern end of the lake and had commenced to "hover taxi" the helicopter southwards to the helipad, "avoiding overflying people and buildings", estimating his airspeed to be approximately 20 mph. The accident occurred when the helicopter was flying towards the water ski-jump ramp, abeam a line of spectators. The helicopter was observed to bank to the left, and the front of the left skid touched the surface of the water. The helicopter then rolled left and pitched down, coming to rest inverted in the water. Both occupants, who had been wearing lap and diagonal harnesses, quickly vacated the helicopter, surfaced and made their way ashore. The pilot estimated that the wind velocity at the time was south westerly at 15 kt, with some gusts.

The passenger, a camera operator for BBC Television, was filming for an outside broadcast of the water skiing event. The producer in charge of the coverage stated that he had been offered the opportunity for the aerial photography by the pilot, as had been the case at this event in previous years. It was agreed between the pilot and the passenger that both doors should be removed from the

helicopter to facilitate filming. The passenger stated that he stowed the recording equipment in the footwell of the helicopter, and bound the recorder to the seatbelt anchorage point. He was offered the opportunity to be seated sideways, with his legs on the left skid, but elected to position himself in a normal seating position, in the left seat, holding the camera viewfinder just outside the helicopter cockpit. The pilot elected not to remove the collective lever from the left side of the left seat. The passenger was sure that he did not obstruct the flying controls at any time during the flight.

The passenger stated that several passes over the site were made in different directions, while a ski-jump competition was in progress. The pilot asked the passenger if he would like to obtain a "skier's eye" view of the ski-jump, to which the passenger agreed. Once one competitor had completed an attempt at the ski-jump, the helicopter was flown low over the water towards the jump, with the passenger filming out of the left door opening. The accident occurred during this run in.

There were many witnesses to the accident amongst the spectators on the embankment, including several police officers who rendered assistance after the event. They observed that the helicopter was flying level at a height of some 3 to 4 feet above the surface of the water, some 25 metres away from the embankment, and observed that it banked sharply to the left putting the front of the left skid into the water. Another BBC Television camera filmed the last portion of the helicopter's run in, and analysis of this recording shows that the helicopter had marked left sideslip, with left bank and the left skid very close to the water just prior to impact. The video tape was recovered from the on-board camera, dried and replayed. It showed some 10 minutes of filming from the helicopter flying over and around the site and making runs following water skiing competitors. On the accident run, the helicopter was noted descending in a left turn prior to the low run in, and the descent appeared to be arrested at a low altitude. The video tape was damaged whilst being retrieved from the camera, and did not show the final impact.

The passenger reported that after the event he had asked the pilot what was the cause of the accident, and that the pilot had replied that he had tried to "get the power on" but that nothing had happened.

The pilot held a Private Pilot's Licence (Helicopters) and was type rated on the Robinson R22. He had completed his most recent flight test for a renewal of the Certificate of Test on 14th May 1992, and stated that he had flown one hour in the 90 days preceding the accident, including 0.5 hours within 24 hours of the accident. His medical certificate was a Class 3 issued in September 1986, and was valid until September 1991. It contained the limitation that approved correction to vision should be worn while exercising the privileges of the licence, and the passenger confirmed that the pilot was wearing spectacles at the time of the accident.

The helicopter was being operated under a Certificate of Airworthiness in the Private Category.