

Bolkow BO-105DBS-4, G-DCCH

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Category: 1.1

Aircraft Type and Registration:	Bolkow BO-105DBS-4, G-DCCH
No & Type of Engines:	2 Allison 250-C20B turboshaft engines
Year of Manufacture:	1986
Date & Time (UTC):	20 May 2001 at 1612 hrs
Location:	Dunchideock, near Exeter
Type of Flight:	Private
Persons on Board:	Crew - 3 - Passengers - None
Injuries:	Crew - Minor - Passengers - N/A
Nature of Damage:	Light damage to tail boom. Tail rotor detached. Heavy landing with skid damage
Commander's Licence:	Airline Transport Pilots Licence (Helicopters)
Commander's Age:	45 years
Commander's Flying Experience:	6,437 hours (of which 2,347 were on type) Last 90 days - 76 hours Last 28 days - 33 hours
Information Source:	Aircraft Accident Report Form submitted by the pilot

The helicopter was tasked by Ambulance Control to attend a road traffic accident in which a car had overturned and persons were believed to be trapped. The weather at the time was wind 180° at 08 to 10 kt with visibility in excess of 10km, cloud FEW at 3,000 feet and no precipitation. A land ambulance, the police, and fire service were also attending the scene. The exact location of the accident was not known but on arrival in the general area the pilot commenced a search in

conjunction with the land vehicle. The helicopter was operated on the Exeter QNH up to 1,500 feet and twice during the search Exeter ATC passed traffic information to the air ambulance. The ambulance radio was being used to liaise with the land vehicle and the pilot was also monitoring this. Some 12 minutes after departing its base the air ambulance located the accident vehicle on a minor road. It was resting on its roof. At the same time the land ambulance also arrived at the scene. The helicopter was flown in a left-hand orbit in order to avoid high ground to the right and to try and identify a landing site adjacent to the road. A suitable area was located which was in a large grass field alongside the road. The field sloped steeply downwards into a bowl, the bottom of which was sufficiently level for the helicopter to land on. A set of telephone wires ran alongside the road, which was orientated approximately north/south, on the western side of the field and a large isolated tree was noted on the western edge of the landing area. During the circuit, no obvious access between the road and the field was seen. The pilot commenced a slow (25-30 kt) approach from the north west with a gentle rate of descent into the south east corner of the bowl area of the field passing to the right of the isolated tree.

Due to the high volume of radio traffic, the pilot was unable to make a landing call to Exeter ATC. As the aircraft passed over the road the pilot once again noted the car was on its roof with people looking in and assumed that the persons inside were still trapped. The land ambulance transmitted that it also was on the scene and Exeter ATC passed more air traffic information. The pilot was looking along the hedgerow trying to identify an access route to the road and transmitted to acknowledge the traffic call from Exeter and call that he was landing. He felt a gust of wind yaw the aircraft tail to the left and immediately felt a heavy, high frequency vibration through the tail rotor control pedals. Suspecting a tail rotor strike the pilot applied right bank and more left pedal but no yaw correction was available. The tail rotor was felt to separate from the aircraft and the pilot immediately lowered the collective pitch control lever to stop a yaw to the right developing. The aircraft struck the ground heavily from about 35 feet in a slightly nose down attitude but remained upright, nose down the slope in a south-easterly direction. The pilot shut down both engines and isolated the fuel and electrical systems. He and the two 'paramedics' evacuated the aircraft through the normal exits. The emergency services were at the scene due to the road traffic accident and all three persons on board the helicopter were taken to hospital as a precautionary measure.

Just before the impact of the tail rotor with the tree, the paramedic in the front left seat saw the close proximity of the tree and tried to warn the pilot over the intercom. The pilot did not hear the warning due to the radio traffic and also the intercom was inhibited when the pilot made the radio transmission acknowledging the radio call from Exeter ATC. The pilot concluded that his attention was focussed on attempting to locate an access to the road through the hedge as well as responding to the air traffic information from Exeter ATC. Whilst doing this he did not notice the northerly drift taking the aircraft to the left towards the isolated tree which it struck with the tail rotor.

To prevent a recurrence of this accident the operator has placed a restriction when landing and below 200 feet on the use of both air traffic and ambulance radios.