

**Aviation Safety Investigation Report  
199701447**

**Hughes Helicopters  
Hughes 300**

**05 May 1997**

Readers are advised that the Australian Transport Safety Bureau investigates for the sole purpose of enhancing transport safety. Consequently, Bureau reports are confined to matters of safety significance and may be misleading if used for any other purposes.

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**NOTE: All air safety occurrences reported to the ATSB are categorised and recorded. For a detailed explanation on Category definitions please refer to the ATSB website at [www.atsb.gov.au](http://www.atsb.gov.au).**

The Bureau did not conduct an on scene investigation of this occurrence. The information presented below was obtained from information supplied to the Bureau.

**Occurrence Number:** 199701447      **Occurrence Type:** Accident  
**Location:** 105km ESE Derby, Aerodrome  
**State:** WA      **Inv Category:** 4  
**Date:** Monday 05 May 1997  
**Time:** 1645 hours      **Time Zone:** WST  
**Highest Injury Level:** Minor  
**Injuries:**

	Fatal	Serious	Minor	None	Total
Crew	0	0	1	0	1
Ground	0	0	0	0	0
Passenger	0	0	1	0	1
<b>Total</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>2</b>

**Aircraft Manufacturer:** Hughes Helicopters  
**Aircraft Model:** 269C  
**Aircraft Registration:** VH-NLK      **Serial Number:** 700947  
**Type of Operation:** Charter      Passenger  
**Damage to Aircraft:** Destroyed  
**Departure Point:** Blina Station WA  
**Departure Time:** 1700 WST  
**Destination:** Blina Station WA

**Crew Details:**

<b>Role</b>	<b>Class of Licence</b>	<b>Hours on Type</b>	<b>Hours Total</b>
Pilot-In-Command	Commercial	450.0	1300

**Approved for Release:** Wednesday, June 25, 1997

The pilot of the helicopter was conducting a familiarisation flight for the wife of the station owner who had contracted the helicopter. It was late afternoon, with the sun low on the horizon and the fine weather with no cloud or wind. End of daylight was approximately 1745. The homestead, from which the helicopter departed, was located to the west of a swamp. The swamp's water depth was approximately 1 m and the surface was reported as being mirror-flat at the time of the accident. There were two islands located in the swamp and their foliage had a maximum height of approximately 3 m.

The helicopter departed at approximately 1700 and tracked north, climbing to approximately 800 ft AGL before completing a counterclockwise circuit towards the swamp. The pilot decided to make a shallow, northerly approach to the southern island. The island's southern shore was approximately 500 m from the mainland approaching from the south. As the helicopter crossed the mainland-shore on the final approach, the pilot assessed his height as being 20 to 30 ft.

Late in the approach the pilot decided that a landing on the island was impractical and he commenced a go-around. He stated that he placed the helicopter in an accelerative-attitude and commenced a slight right turn to avoid a bird. The passenger, sitting in the right seat, stated that she thought that the helicopter was at about 10 ft from the surface of the water as the turn commenced. She recalled a spray of water from the front right side just before the helicopter impacted the water.

The occupants remained secured to their seats and the helicopter remained substantially intact although the canopy bubble imploded, the tail rotor gearbox was flung clear and the main rotor system and fuselage were substantially deformed. The wreckage spread and passenger report indicate that it is likely that the main rotor struck the surface of the water causing the helicopter to cartwheel before coming to rest upright.

After the impact, the occupants released themselves from the wreckage and waded ashore. They reached the shore at approximately 1725.

The pilot later reported that he was unaware of the difficulties associated with visually judging height over calm water. Lacking a radio altimeter, the final approach starting altitude and shallow angle was inappropriate in the prevailing conditions. It is likely that, when the pilot selected the accelerative-attitude and commenced the right turn, the helicopter descended slightly causing the main rotor to strike the surface of the water. The smooth water surface, failing light and low foliage height probably caused the pilot to underestimate the helicopter's height above the water and not perceive a slight descent during the go-around.

