McDonnell Douglas Hughes 369E, G-JIVE

AAIB Bulletin No: 10/2002	**Ref: EW/G2002/05/08**	**Category: 2.3**
Aircraft Type and Registration:	McDonnell Douglas Hughes 369E, G-JIVE	
No & Type of Engines:	1 Allison 250-C20B turboshaft engine	
Year of Manufacture:	1991	
Date & Time (UTC):	17 May 2002 at 1300 hrs	
Location:	Nelson, Lancashire	
Type of Flight:	Private	
Persons on Board:	Crew - 2	Passengers - None
Injuries:	Crew - 1 Serious	Passengers - N/A
	1 Minor	
Nature of Damage:	One damaged main rotor blade	
Commander's Licence:	Private Pilots Licence (Helicopters)	
Commander's Age:	42 years	
Commander's Flying Experience:	350 hours (of which 80 were on type)	
	Last 90 days - 30 hours	
	Last 28 days - 15 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot and further enquiries by AAIB	

The aircraft had landed at a private site to drop off two passengers. The engine power was reduced to flight idle, while the crew member in the right hand seat (who was also an experienced helicopter pilot) climbed out to assist the passengers to disembark from the rear seats. Having successfully done so, he was climbing back into the helicopter when he struck his head on the door frame. He sustained a cut that started to bleed profusely, so he disembarked and walked out to the front of the main rotor disc.

The pilot, in the left seat, seeing that his colleague's head wound was bleeding heavily, decided to shut down the engine and go to his assistance. The helicopter was not fitted with a rotor brake.

While the main rotor was still slowing down, the pilot disembarked and walked towards his colleague, who was standing ahead and just to the right of the nose of the helicopter. As the pilot approached the edge of the rotor disc, he was struck on the back of the head by a main rotor blade and sustained a serious head injury.

The pilot reported that the aircraft had landed heading directly into a 20 kt easterly wind. Approximately 20 metres ahead of the aircraft, there was an earth mound, which was about four feet high. The pilot considered that the presence of the mound, combined with the strong surface wind, caused turbulence which resulted in the main rotor blades 'sailing' as they slowed. It is worthy of note that, although the helicopter was fitted with high skids which normally give a nominal rotor tip height of 10 feet above the ground, considerably less rotor tip clearance was available during shut down in this case.

In the light of this experience, both occupants expressed the opinion that no person should enter or leave a helicopter until the main rotor has stopped. Guidance on Helicopter Airmanship is given in the CAA General Aviation Safety Sense Leaflet Number 17B.