

## FINAL REPORT

**AAIU Synoptic Report No: 2007-028**

**AAIU File No: 2007/0011**

**Published: 03/12/2007**

**In accordance with the provisions of SI 205 of 1997, the Chief Inspector of Air Accidents, on 27 March 2007, appointed Mr. Leo Murray as the Investigator-in-Charge (IIC) to carry out an Investigation into this Accident and prepare a Synoptic Report.**

<b>Aircraft Type and Registration:</b>	A/C No.1	Eurocopter EC120B, N526AG
	A/C No.2	Hughes OH-6A, N239MY
<b>No. and Type of Engines:</b>	A/C No.1	1 x Turbomeca TM 319 Arrius 2F
	A/C No.2	1 x Allison T63-A-5A
<b>Aircraft Serial Number:</b>	A/C No.1	1397
	A/C No.2	49-1132
<b>Year of Manufacture:</b>	A/C No.1	2005
	A/C No.2	1968
<b>Date and Time (UTC):</b>		13 October 2006 @ 15.00 hrs
<b>Location:</b>		Tougher Business Park, Co. Kildare
<b>Type of Flight:</b>	A/C No.1	Private
	A/C No.2	Private
<b>Persons on Board:</b>	A/C No.1	Crew - One
	A/C No.2	Crew - One
		Passengers – Nil
		Passengers – Nil
<b>Injuries:</b>	A/C No.1	Crew - Nil
	A/C No.2	Crew - Nil
<b>Nature of Damage:</b>	A/C No.1	No damage
	A/C No.2	Damage to main rotor and tail boom
<b>Commander's Licence:</b>	A/C No.1	Private Pilot's Licence (H) (CAA)
	A/C No.2	Commercial Pilot's Licence (H) (FAA)
<b>Commander's Details:</b>	A/C No.1	Male, aged 52 years
	A/C No.2	Male, aged 44 years
<b>Commander's Flying Experience:</b>	A/C No.1	321 hours, of which 39 were on type
	A/C No.2	3,000 hours, of which 120 were on type
<b>Notification Source:</b>		This Accident was not reported to the AAIU by either pilot. Subsequently reported to the AAIU by an IAA Inspector.
<b>Information Source:</b>		AAIU Field Investigation.

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## SYNOPSIS

On 13 October 2006, a Eurocopter EC120B, registration N526AG, operated a short flight between Carlow and Newbridge landing at a private site at Tougher Business Park. While positioning to land, N526AG passed in close proximity to a parked helicopter and caused significant damage as a result of rotor downwash. There were no injuries.

## 1. FACTUAL INFORMATION

### 1.1 History of the flight

On 13 October 2006, N526AG departed from a site in Carlow at 16.40 hrs for a 20 minute flight to a private site at Tougher Business Park, near Newbridge. The Pilot of N526AG, the sole occupant, was familiar with the intended landing site as he had visited it several times over the previous two months. The landing site consisted of a level grass field at an elevation of approximately 350 feet above mean sea level (AMSL). The pilot of N526AG came to a hover in an open area to the east of the intended landing site, where he observed a helicopter on the ground '*with main rotor almost stopped*'. N526AG approached from this hover position on the eastern side of the intended landing area, passed to the left of the other helicopter and landed some distance beyond.

The parked helicopter, a Hughes OH-6A<sup>1</sup>, registration N239MY had landed at the site some minutes previously. The pilot of N239MY had exited the helicopter, and observed N526AG approaching. He attempted to wave off as it drew closer. N239MY was subjected to rotor downwash from N526AG as it passed in close proximity, causing a blade of the main rotor on N239MY to impact its tailboom. As the main rotor of the Hughes OH-6A is not equipped with a rotor brake it is free to rotate in the effect of downwash. Damage was caused to the tailboom, a main rotor blade, and its associated rotor damper.

### 1.2 Licensing information

Both helicopters were USA registered and operated in Ireland. The pilot of N239MY possessed a US Commercial Pilot's Licence (Helicopter) issued by the Federal Aviation Administration (FAA). The Pilot of N526AG possessed a Joint Airworthiness Authority (JAA) Private Pilot's Licence (Helicopter) issued by the United Kingdom Civil Aviation Authority (CAA) on 28 September 2004, and a current Medical Certificate Class II issued by the Irish Aviation Authority on 26 July 2006. He was rated and current on Robinson R44 and Eurocopter EC120 types.

Federal Aviation Regulations<sup>2</sup> Part 61.3 (Requirement for certificates, ratings and authorizations) state the following: '*A person may not act as pilot in command or in any other capacity as a required pilot flight crewmember of a civil aircraft of US registry unless that person- (1) has a valid certificate or special purpose pilot authorization issued under this part in that persons physical possession or readily accessible in the aircraft when exercising the privileges of that pilot certificate or authorization. However, when the aircraft is operated within a foreign country, a pilot license issued by the country in which the aircraft is operated may be used'*

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<sup>1</sup> **Hughes OH-6A:**

A military derivative of the Hughes Model 369 built for the US Army, this example was serial 68-17172.

<sup>2</sup> **Federal Aviation Regulations:**

Regulations issued by the Federal Aviation Administration (FAA), Department of Transportation, United States of America.

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An extract from the Irish Aviation Authority (IAA) Personnel Licensing Order S.I. 333 of 2000 states the following: '*A person shall not, within the territorial limits of the state, act as a flight crew member of an aircraft registered in any other state unless- (b) in the case of a private aircraft that person is the holder of an appropriate licence, issued or validated by the competent licensing authority of the state in which the aircraft is registered or by the Authority (the IAA), or a JAA licence*'.

The pilot of N526AG although flying a USA registered helicopter in Ireland with a UK PPL(H) was properly licensed for the flight concerned.

**1.3**

### **Beneficial owner and Trustee**

Under USA Law only American citizens are permitted to own USA registered general aviation aircraft. To comply with this requirement and yet still facilitate a non-USA citizen owning such an aircraft there is a widespread practice whereby the aircraft is registered with the FAA in the name of a *Trustee*. The non-USA citizen, or *beneficial owner*, (known as the Trustor) then enters an agreement with that Trustee. N526AG was registered to Southern Aircraft Consultancy, a Trustee based in the United Kingdom. It was operated in Ireland by the beneficial owner.

**2.**

### **DISCUSSION**

A helicopter main rotor under power produces significant downwash, the effects of which can be seen when a helicopter is manoeuvring close to the surface. Local winds, especially if gusting, affect this downwash pattern, as will any obstacles in the nearby area such as trees, buildings or uneven terrain. The downwash has the effect of spreading loose debris, stones and dust from under the helicopter posing a hazard. Also, if operating in close proximity to other aircraft or helicopters, it can deflect control surfaces and rotor blades causing damage. A parked helicopter with stationary or low rpm rotating blades is especially susceptible to damage with the stationary or low rpm blade "flapping" down and striking the tailboom assembly or the cockpit canopy.

In this particular case it is clear that the proximity of the manoeuvring helicopter was such that it was sufficient to cause damage to the parked helicopter. Helicopter pilots should make themselves aware of the downwash pattern associated with the type in which they operate and must ensure that adequate clearance is given to other parked helicopters and aircraft while manoeuvring.

**3.**

### **SAFETY RECOMMENDATIONS**

This Report does not sustain any Safety Recommendations.

**- END -**