ACCIDENT

Aircraft Type and Registration:	Robinson R44 Raven, G-CEDG	
No & Type of Engines:	1 Lycoming O-540-F1B5 piston engine	
Year of Manufacture:	2006 (Serial no: 1639)	
Date & Time (UTC):	25 February 2015 at 1050 hrs	
Location:	Aspley Guise, Bedfordshire	
Type of Flight:	Private	
Persons on Board:	Crew - 1	Passengers - 2
Injuries:	Crew - None	Passengers - 1 (Minor)
Nature of Damage:	Damaged beyond economic repair	
Commander's Licence:	Private Pilot's Licence	
Commander's Age:	69 years	
Commander's Flying Experience:	1,632 hours (of which 902 were on type) Last 90 days - 4.9 hours Last 28 days - 2.7 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot and additional enquiries by the AAIB	

Synopsis

The helicopter had settled into a cruise climb shortly after takeoff when the engine rpm started to increase and to hunt. The pilot switched off the governor to control the speed manually and initiated a precautionary landing. However, he believes the engine then failed and, during the subsequent autorotative landing, the helicopter rolled onto its side. At the time of writing, there is no hard evidence of an engine or governor fault but it was noted that the weather conditions were consistent with a risk of serious carburettor icing at any power.

History of the flight

The day before the accident, the owner/pilot collected the helicopter from Sywell Aerodrome to reposition it to a private strip near Salford, Bedfordshire. However, upon starting the engine, the governor increased the engine rpm to above normal value, so he shut it down and sought engineering advice. When the engine was restarted, everything seemed normal and he decided to continue with the flight to Salford, which proved uneventful.

The next day, as planned, he boarded the helicopter with two passengers and a small amount of baggage for a flight to a hotel near Forest Row, East Sussex. The engine start and takeoff were both uneventful and the pilot established a cruise climb profile as he set off en route. At 800 ft, the governor increased the engine rpm beyond the green arc on the gauge and was also hunting, so the pilot switched off the governor and tried to control the rpm manually. He initiated a precautionary landing by lowering the collective lever and

commencing a descent but the low rotor rpm warning sounded and he lowered the lever fully. An attempt to raise it again resulted in the horn sounding, so he assumed the engine had now failed and entered autorotation towards a field some 2 km south of where he had taken off.

On touchdown, the helicopter slid forward about 3 m before the skids dug into the ground and it rolled onto its left side. The pilot and one of his passengers exited via the right side doors whilst the other passenger kicked a hole in the windscreen.

In his statement, the pilot considered that he had had a governor failure followed by an engine failure. At the time of preparation of this report, it is not known whether any investigation work is planned on the engine and governor system, but it was noted that the weather conditions were conducive to 'serious icing – any power' according to the official chart on risk of carburettor icing published by the CAA. The pilot does not recall whether he had applied carburettor heat as he reduced power but probably had not done so due to the rapid development of events.