

Bell 206B, G-BXLI

AAIB Bulletin No: 7/2002 **Ref:** EW/G2002/04/16 **Category:** 2.3

INCIDENT

Aircraft Type and Registration: Bell 206B, G-BXLI

No & Type of Engines: 1 Allison 250-C20J turboshaft engine

Year of Manufacture: 1989

Date & Time (UTC): 22 April 2002 at 1715 hrs

Location: Battersea Heliport

Type of Flight: Private

Persons on Board: Crew - 1 Passengers - 1

Injuries: Crew - Minor Passengers - None

Nature of Damage: None apart from scoring of the gearbox isolation mount

Commander's Licence: Airline Transport Pilot's Licence (Helicopters) with Instructor's Rating

Commander's Age: 47 years

Commander's Flying Experience: 6,890 hours (of which 680 were on type)

Last 90 days - 110 hours

Last 28 days - 52 hours

Information Source: Aircraft Accident Report Form submitted by the pilot and subsequent AAIB enquiries

The aircraft was on a private flight to Battersea Heliport. On final approach to Runway 21 the pilot estimates that he was 1,400 metres from the runway at a height of 1,000 feet when he heard loud popping and banging noises coming from the engine, accompanied by a loss of power. He lowered

the collective lever to enter auto rotation and transmitted a MAYDAY call. During the descent, the turbine outlet temperature was seen to be between 950 and 1,000 °C.

At between 200 and 300 feet height the pilot needed to extend the range of the aircraft and so he raised the collective lever but there was no response from the engine. The resultant loss in rotor speed at this point caused the low rotor RPM warning horn to sound and the aircraft arrived over the landing platform at a height of approximately 10 feet. A flare was initiated in order to prevent the aircraft overrunning the runway, and the collective lever was raised fully to cushion the touchdown. By then, the rotor RPM were very low and the aircraft fell vertically from about 5 feet achieving a very firm zero-speed landing.

The heliport emergency services had been alerted by the unusual noise coming from the engine and were in attendance immediately the aircraft had landed. There was no damage to the aircraft other than to the engine and gearbox isolation mount. Subsequent inspections have shown that the compressor bleed valve had failed in the closed position inducing a compressor stall.

The pilot is familiar with Battersea heliport and the successful outcome of the autorotation can be attributed to the steep approach flown commensurate with that type of landing site. He suffered a back strain and a pulled leg muscle during the firm landing.