

Aircraft Type and Registration:	AS332 L2 Super Puma, G-WNSB
No & Type of Engines:	2 Turbomeca Makila 1A2 turboshaft engines
Year of Manufacture:	2002 (Serial No: 2582)
Location:	Approximately 1.5 nm west of Sumburgh Airport, Shetland Islands
Date & Time (UTC):	23 August 2013 at 1717 hrs
Type of Flight:	Commercial Air Transport (Passenger)
Persons on Board:	Crew - 2 Passengers - 16
Injuries:	Crew - 1 (Serious) Passengers - 4 (Fatal)
Nature of Damage:	Helicopter destroyed
Commander's Licence:	Airline Transport Pilot's Licence (Helicopters)
Commander's Age:	51 years
Commander's Flying Experience:	To be advised
Information Source:	AAIB Field Investigation

The investigation

At 1717 hrs UTC on 23 August 2013, an AS332 L2 Super Puma helicopter, with 18 persons on board, crashed into the sea whilst on approach to Sumburgh Airport in the Shetland Islands. Four of the passengers were fatally injured.

The AAIB immediately despatched a team of investigators and support staff to Aberdeen and the Shetland Islands. In accordance with the normal protocols, the AAIB invited representatives from the French accident investigation authority (the Bureau d'Enquêtes et d'Analyses pour la Sécurité de l'Aviation civile (BEA)), the helicopter manufacturer, and the engine manufacturer to participate in the investigation.

Representatives from the European Aviation Safety Agency (EASA) and the UK Civil Aviation Authority (CAA) were also invited to participate.

History of the flight

The flight, which was the third leg of a four-leg rotation out of Aberdeen, was between the Borgsten Dolphin semi-submersible drilling platform and Sumburgh Airport. As it approached Sumburgh the helicopter was given radar vectors to intercept the final approach course for the LOC/DME/RWY 09 approach (non-precision Localiser and DME approach) to Runway 09 at Sumburgh. The helicopter struck the surface of the sea approximately 1.5 nm west of the airport.

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Weather

The weather conditions recorded at Sumburgh Airport at 1720 UTC were: wind from 140° at 17 knots, visibility 2,800 metres in mist, scattered cloud at 200 feet and broken cloud at 300 feet.

Wreckage recovery

The tail boom, containing the Combined Voice and Flight Data Recorder (CVFDR), and other significant parts of wreckage were successfully recovered from the sea. The latter included both engines and the main rotor gearbox, complete with the main rotor head attached. The wreckage was transported to the AAIB's headquarters at Farnborough.

Recorded data

After a period of 48 hours of drying the CVFDR in controlled conditions, the recorded data was successfully downloaded on the evening of 01 September 2013.

Preliminary analysis of the recorded data indicates that the autopilot localizer and vertical speed modes were engaged for the approach.

The recorded data show that at three miles from the runway threshold the helicopter was on the published horizontal and vertical profile of the approach to Runway 09, with the airspeed decreasing steadily. At about two miles from the runway threshold the helicopter was approximately 240 feet below the vertical approach profile, with a rate of descent of about 500 feet per minute, and an airspeed of 68 knots.

The airspeed continued to reduce to below 30 knots and as it did so the helicopter pitched increasingly nose-up. The rate of descent remained constant for a period, before increasing rapidly. Shortly thereafter the helicopter, which was intact, struck the sea in a near level pitch attitude with a slight right bank. Both engines were delivering power until impact.

Summary

To date, no evidence of a causal technical failure has been identified; however, detailed examination of the CVFDR data and the helicopter wreckage is continuing.

Published 5 September 2013

AAIB investigations are conducted in accordance with Annex 13 to the ICAO Convention on International Civil Aviation, EU Regulation No 996/2010 and The Civil Aviation (Investigation of Air Accidents and Incidents) Regulations 1996.

The sole objective of the investigation of an accident or incident under these Regulations is the prevention of future accidents and incidents. It is not the purpose of such an investigation to apportion blame or liability.

Accordingly, it is inappropriate that AAIB reports should be used to assign fault or blame or determine liability, since neither the investigation nor the reporting process has been undertaken for that purpose.

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