



## PRELIMINARY ACCIDENT REPORT

This is preliminary information, subject to change, and may contain errors. Any errors in this Report will be corrected when the Final Report has been completed. The sole purpose of this Investigation is the prevention of aviation accidents and incidents. It is not the purpose of the Investigation to apportion blame or liability.

<b>Report No:</b>	2009-021
<b>1. AIRCRAFT MANUFACTURER:</b>	Pilatus
<b>Model:</b>	PC-9M
<b>State of Registry:</b>	Ireland (Military)
<b>Registration:</b>	265
<b>Serial Number:</b>	660
<b>Year of Manufacture:</b>	2004
<b>2. OPERATOR:</b>	Irish Air Corps
<b>3. TYPE OF OPERATION:</b>	Military training
<b>4. DATE / TIME:</b>	12 October 2009 @ 16.57 hrs UTC <sup>1</sup>
<b>5. POSITION OF OCCURRENCE:</b>	Crumlin East, Cornamona, Co. Galway, Ireland N53° 32.2', W009° 30.4'
<b>6. PERSONS ON BOARD:</b>	Crew: 2
<b>7. INJURIES:</b>	Crew: 2 (fatal)
<b>8. DAMAGE:</b>	Aircraft destroyed
<b>9. INVESTIGATOR-IN-CHARGE:</b>	Paddy Judge

The Minister for Transport and the Minister for Defence have agreed and directed, pursuant to Regulation 27 (1) of Statutory Instrument No. 205 of 1997, Air Navigation (Notification and Investigation of Accidents and Incidents) Regulations, 1997, that these Regulations will apply to the investigation of this accident. Consequently, the Chief Inspector of Air Accidents, on 13 Oct 2009, appointed Mr. Paddy Judge as the Investigator-in-Charge to carry out a Formal Investigation into this Accident. The Minister for Transport appointed three Irish Air Corps (IAC) Officers as Inspectors of Air Accidents for the duration of this Investigation.

The aircraft was conducting a Visual Flight Rules (VFR) navigational cross-country training exercise from Casement Aerodrome, Baldonnel Co. Dublin (EIME) via Carrigallen (Co. Cavan) and Maum (Co. Galway) to Galway Airport (EICM). The crew consisted of a student pilot in the front and an instructor pilot in the rear of the tandem seated aircraft.

<sup>1</sup> UTC; Coordinated Universal Time is used in this report (local time minus one hour).

The aircraft departed EIME at 16.20 hrs, followed by two other PC-9M aircraft on the same navigational training exercise, at intervals of 15 minutes. The aircraft reported to Shannon ATC at 16.39 hrs that it was over Carrigallen at 1,500 ft and setting course for Maum, the final planned waypoint before refuelling at EICM. It was last recorded by Shannon radar over Lower Lough Mask at 16.55 hrs at an altitude of 1,300 ft on course to Maum.

The Air Accident Investigation Unit (AAIU) was informed at 17.10 hrs by the Fire Station Officer, Castlebar, Co. Mayo, of a report made by a resident of Crumlin Valley that she had heard an aircraft crash nearby. Shannon ATC, who had also been notified, contacted the second PC-9M aircraft and requested it to search for a missing aircraft. It initially searched the general vicinity but, due to a lowering cloud base and deteriorating visibility, terminated the search and later proceeded to EICM.

Local residents commenced a search and shortly afterwards located the wreckage and its fatally injured occupants on the mountainside. These residents directed An Garda Síochána and the Emergency Services to the accident site, which was then secured.

The aircraft was fitted with armed ejection seats, which had not been activated by the crew; therefore access to the wreckage was restricted until the seats' explosive devices were made safe. This could not be achieved during the hours of darkness. Consequently, Investigation team members from the IAC and the AAIU, who had travelled from Dublin the previous night, commenced the investigation at first light the following morning.

The accident site, which is locally known as Maum Dearg, is located in Crumlin East on the northern slopes of Crumlin Valley at an altitude of approximately 800 ft. It is less than one nautical mile north of the intended navigational track. The valley is enclosed on three sides by high ground (circa 1,500 ft), has an east/west orientation and is open to the east. At the time of impact, the aircraft was travelling in a northwesterly direction. It was destroyed on impact on the crest of the second and lowest of a series of three ridges. The debris trail was distributed along a 300 foot down slope and was characteristic of a high-speed impact.

After the ejection seats were made safe, the remains of the crew were recovered. On completion of the on-site examination, the wreckage was removed from the mountain by an IAC helicopter and subsequently transported under escort by road to the AAIU investigation facility in Gormston, Co. Meath.

Witnesses in the valley, who were interviewed by the Investigation, reported seeing the aircraft travelling east down the valley, making a steep turn to the north and then climbing. They also reported rapidly changing cloud height and visibility at that time.

The memory unit of the combined Cockpit Voice and Flight Data Recorder (CVFDR), which had separated from the recorder chassis, was located in the debris field and taken to the original equipment manufacturer in the USA where its data was successfully downloaded under the supervision of an AAIU Inspector. This data is currently being examined by the AAIU. Preliminary analysis indicates that the crew were attempting to navigate to their next planned reporting point at Maum.

At this point in the Investigation, no technical defects have been identified. Further investigation is ongoing and a Final Report will be published in due course.

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