



# **Air Accident Investigation Unit Ireland**

**PRELIMINARY REPORT**

**ACCIDENT**

**Rollason D.62B Condor, EI-BDX  
Duncormick, Co. Wexford  
6 October 2019**



**An Roinn Iompair  
Turasóireachta agus Spóirt  
Department of Transport,  
Tourism and Sport**

## Foreword

This safety investigation is exclusively of a technical nature and the Final Report reflects the determination of the AAIU regarding the circumstances of this occurrence and its probable causes.

In accordance with the provisions of Annex 13<sup>1</sup> to the Convention on International Civil Aviation, Regulation (EU) No 996/2010<sup>2</sup> and Statutory Instrument No. 460 of 2009<sup>3</sup>, safety investigations are in no case concerned with apportioning blame or liability. They are independent of, separate from and without prejudice to any judicial or administrative proceedings to apportion blame or liability. The sole objective of this safety investigation and Final Report is the prevention of accidents and incidents.

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

Extracts from this Report may be published providing that the source is acknowledged, the material is accurately reproduced and that it is not used in a derogatory or misleading context.

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<sup>1</sup> **Annex 13:** International Civil Aviation Organization (ICAO), Annex 13, Aircraft Accident and Incident Investigation.

<sup>2</sup> **Regulation (EU) No 996/2010** of the European Parliament and of the Council of 20 October 2010 on the investigation and prevention of accidents and incidents in civil aviation.

<sup>3</sup> **Statutory Instrument (SI) No. 460 of 2009:** Air Navigation (Notification and Investigation of Accidents, Serious Incidents and Incidents) Regulations 2009.



**AAIU Report No: 2019-011**  
**State File No: IRL00919054**  
**Report Format: Preliminary Report**  
**Published: 8 November 2019**

This Investigation is conducted in accordance with Annex 13 to the Convention on International Civil Aviation, Regulation (EU) No 996/2010 and the provisions of SI No. 460 of 2009. This Preliminary Report contains information, as known at this time, and does not contain analysis or conclusions. This information is therefore subject to change, and may contain errors; any errors in this Report will be corrected in the Final Report. The sole purpose of this Investigation is the prevention of aviation accidents and incidents. It is not the purpose of this Investigation to apportion blame or liability.

#### **AIRCRAFT INFORMATION**

<b>Aircraft Manufacturer:</b>	<b>Rollason Aircraft and Engines Ltd</b>
<b>Model:</b>	<b>Druine D.62B Condor</b>
<b>State of Manufacture:</b>	<b>United Kingdom</b>
<b>Registration:</b>	<b>EI-BDX</b>
<b>State of Registry:</b>	<b>Ireland</b>
<b>Serial Number:</b>	<b>RAE/608</b>
<b>Year of Manufacture:</b>	<b>1965</b>

**TYPE OF OPERATION:** **General Aviation**

**DATE / TIME (UTC)<sup>4</sup>:** **6 October 2019 @ 16.40 hrs**

**LOCATION / POSITION:** **Duncormick, Co. Wexford**

**PERSONS ON BOARD:** **Crew - 2** **Passengers - Nil**

**INJURIES:** **Crew - 2 (Fatal)** **Passengers - Nil**

**DAMAGE:** **Aircraft destroyed**

**INVESTIGATOR-IN-CHARGE:** **Paul Farrell**

<sup>4</sup> **UTC:** Co-ordinated Universal Time. All timings in this report are quoted in UTC; Local time was UTC + 1 hour.

**PRELIMINARY REPORT****1. NOTIFICATION AND RESPONSE**

On 6 October 2019 at 17.06 hrs, the AAIU duty Inspector was notified by the Irish Coast Guard Marine Rescue Coordination Centre, that a search was underway in the Duncormick area in Co. Wexford following reports of a possible aircraft accident. Subsequently, the Station Manager for the Irish Aviation Authority, Shannon Area Air Traffic Control Centre informed the AAIU Duty Inspector that wreckage had been located in the Duncormick area, near Giblestown, and that two fatalities had been confirmed. The AAIU Duty Inspector made contact with An Garda Síochána members at the accident site and four Inspectors of Air Accidents deployed to the site, arriving there at approximately 20.00 hrs.

**2. THE OCCURRENCE****2.1 History of Flight****2.1.1 Preamble**

The Accident flight was operated by a Pilot in the left-hand seat and an Instructor in the right-hand seat. The accident aircraft was operated on an earlier flight which involved the same Instructor and a different pilot. The earlier flight departed Taghmon Airfield (EIIF) at approximately 15.00 hrs, and was the first of a number of flights the other pilot planned to take as preparations for a licence flight (skill) test. The (other) pilot reported that his flight lasted approximately one hour and included *“a few tight turns, a few stalls and then mostly circuits”*. The aircraft handling and performance throughout this flight were reported to be normal and no anomalies were noticed. Following the flight, the aircraft returned to the airfield.

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**2.1.2 Occurrence Flight**

After the aircraft returned from its earlier flight it was scheduled to do another flight – the accident flight. Prior to the accident flight, the Instructor was heard to remark to the Pilot *“I suppose I better take the loose bits out of it”*. The pilot who had flown the aircraft earlier asked the Pilot about his intended flight, and he responded *“I’m going up to do spins”*. Later, in the same conversation, there was some general discussion about aerobatics, including a query about the maximum *“g”* that would be experienced during a barrel roll, which the Instructor opined he would expect not to be more than 2g.

The Pilot was observed walking around the aircraft doing what was described to the Investigation as a *“full outside check”*. Upon boarding the aircraft, and prior to engine start, the Pilot was observed to have a checklist in his hand. The aircraft taxied out to the northern end of the airfield and, at approximately 16.10 hrs, was observed to take off to the south, before turning to the south-west and circling back around, climbing all the time. The aircraft crossed to the north of the airfield and then turned south-west, continuing to climb and proceed in a south-westerly direction. The aircraft was observed from the airfield until it went out of sight and it was described as a *“complete normal takeoff, a complete normal climb”* to at least 3,000 ft.



The flight was operated in Class G airspace under Visual Flight Rules (VFR); consequently, no flight plan had been filed with ATC, nor was one required to be filed. The aircraft was not equipped with an ATC transponder and there was no interaction with ATC. A preliminary review of recordings, carried out by ATC, found no ATC recordings of the aircraft's track or communications.

At approximately 16.40 hrs, witnesses reported that the aircraft had emitted a loud noise and disintegrated in the air, in the Duncormick area of Co. Wexford. Local persons and emergency services proceeded to the scene and determined that both occupants had been fatally injured. The aircraft was destroyed. There was no fire.

### 3. THE AIRCRAFT

EI-BDX was constructed from wood and fabric by Rollason Aircraft and Engines Ltd, at Croydon Airport, Surrey, United Kingdom, in 1965, and powered by a Rolls-Royce O-200A engine (**Photo No. 1**). It had an enclosed cockpit with two seats, in a side-by-side configuration. The aircraft was a "tail wheel aircraft", meaning that it had two main undercarriage legs, one under each wing, and a steerable tail wheel (under the tail of the aircraft). A modification (WAR 160) was available to install wing flaps on the D.62B, but this modification had not been incorporated into EI-BDX.



**Photo No. 1:** The accident aircraft (file photo)

#### 3.1 Operational Arrangements

The "Operating Rules of the BDX Group" stated that EI-BDX was a non-EASA (Annex 2) aircraft, operated on an Irish Aviation Authority Flight Permit, which was administered by the Irish Light Aviation Society (ILAS), and based at EIIF. It was owned and operated by a five person trust. The stated aim of the trust was to "operate the aircraft for the promotion of recreational flying, the educational benefit of aviation and to preserve the aircraft for the enjoyment of future generations of pilots."

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The aircraft was registered to the trust and to the “BDX Group”. The BDX Group had a chief pilot, who was also a Chief Flying Instructor (CFI) with a Declared Training Organisation (DTO) based at EIIF; this DTO generally organised the booking of the aircraft.

According to the “Operating Rules of the BDX Group”:

*“17. The group’s aircraft will be operated in daylight, visual meteorological conditions and in sight of the surface at all times. No flight over unbroken cloud or beyond gliding distance from land.*

*18. The aircraft will also be operated in accordance with the conditions and limitations specified in the flight permit which will be kept on board the aircraft.*

*[...]*

*20. The group’s aircraft will be operated in accordance with the flight manual*

*[...]*

*21. The pilot in command of the group’s aircraft must be a member of the BDX Group and have authorisation from the Chief pilot for the operation of the aircraft. A list of members authorised to fly the Condor will be kept in the aircraft.*

*22. Members are required to ensure that they have provided the chief pilot with details of their current pilot licence and aviation medical certificate before acting as pilot in command of the group’s aircraft.*

*[...]*

*24. The Pilot in command will occupy the left hand seat unless s/he holds a valid flight instructor rating including authorisation from the Chief pilot to act in that capacity in the group’s aircraft.*

*25. A member of the BDX Group who has not flown an SPA (Single Pilot Aircraft), SEP (Single Engine Piston) or TMG (Touring Motor Glider) within the preceding 90 days will require re-authorisation from and possibly a check flight with the group’s chief pilot.*

*26. The group’s aircraft may be used for flight training including type familiarisation, tailwheel difference training and refresher training.*

*27. A member of the BDX group, authorised to operate the aircraft, may bring a guest as a passenger.*

*28. All members are required to sign for their copy of the pilots notes and to operate the aircraft in accordance with the procedures contains within that document. However intentional spinning is not approved unless accompanied by an instructor authorised by the chief pilot.”*

The approved Flight Manual for the aircraft states:

*“Operation is limited to normal flying manoeuvres and no aerobatic manoeuvres except spins are permitted. [...] The maximum positive acceleration i.e. load factors which the structure has been designed to withstand without permanent deformation are 4.4g for the pull-out from a spin (1400 lb) and for all normal flight (1475 lb) 3.0g and 2.0g with the wing flaps extended (if fitted). Intentional manoeuvres shall be confined to those with load factors below these values.”*



The Flight Permit was issued on 1 November 2016, with an expiry date of 31 October 2019. However, it required an annual permit inspection and extension sign off on a Validity Certificate; extensions had been signed off on the Validity Certificate on 14 November 2017 and 1 December 2018. The Flight Permit states “*Aerobatic manoeuvres are not allowed for this aircraft*”.

## **4. ACCIDENT SITE**

### **4.1 General**

The accident site was located near Duncormick, Co. Wexford, in the south-east of Ireland. The aircraft wreckage was spread over several agricultural fields.

### **4.2 Wreckage Examination on Site**

The main wreckage comprised the propeller, engine, instrument panel, right-hand wing and the root of the left-hand wing. The underwing fixed undercarriage legs were both still attached.

The two occupants were located approximately 50 metres (m) away from the main wreckage. The aircraft’s tailwheel was located in a ditch close to one of the occupants. A section of cockpit internal structure, complete with seatbelt harnesses and attachment points, was located nearby in a field; the entangled harnesses were observed to be fastened.

The wreckage was distributed across a number of agricultural fields.

## **5. WITNESS STATEMENTS**

The Investigation contacted a number of witnesses and obtained details of their observations of the aircraft, from a variety of vantage points, and at various stages of the accident flight. One witness observed the aircraft some minutes prior to the accident and noted that the aircraft executed a number of consecutive roll manoeuvres. In addition, several witnesses reported hearing waxing and waning engine sounds, as the aircraft manoeuvred. Other witnesses reported that immediately prior to the accident the aircraft executed three loop manoeuvres. During the descent from the apogee of the third loop, two loud noises (variously described as bangs or cracking sounds) were heard, parts were seen to separate from the aircraft, and the aircraft began spiralling downwards.

## **6. RECORDED DATA**

There were no devices on board the aircraft that were capable of recording flight data, nor were such devices required to be fitted. The aircraft was not equipped with a transponder and therefore it could not have been detected by ATC Secondary Surveillance Radar (SSR).

## 7. WEATHER INFORMATION

Met Éireann, the Irish meteorological service, was asked to provide details of the weather conditions prevailing in the Duncormick area at around the time of the accident. The report stated that regarding the meteorological situation, there was *'a weak high pressure ridge was across the country'*.

The report also stated that the surface wind was *'south to southwest 5-8KT [knots], isolated gusts 10-12KT'* and at 2,000 ft, the wind was *'southwest 15KT'*. It was also stated that between the surface and 300 ft, the conditions were stable and *'would have resulted in little variation in direction and speed in this layer'*. The visibility was reported to be *'greater than 25km [kilometres]'*. The cloud was recorded as *'few (1-2/8th oktas<sup>5</sup>) fair weather cumulus, with bases around 2,500-3,000ft and scattered (3-4/8th oktas) stratocumulus clouds with bases 3,000-4,000ft'*. The surface temperature/dew point was reported as *'14/09 degrees Celsius'*. The Mean Sea Level (MSL) pressure was *'1016 hPa<sup>6</sup>'* and the freezing level was *'9,000 feet'*.

The Investigation is on-going and a Final Report will be published in due course.

- END -

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<sup>5</sup> **Oktas:** Eights.

<sup>6</sup> **hPa:** Hectopascals.

In accordance with Annex 13 to the Convention on International Civil Aviation, Regulation (EU) No. 996/2010, and Statutory Instrument No. 460 of 2009, Air Navigation (Notification and Investigation of Accidents, Serious Incidents and Incidents) Regulation, 2009, the sole purpose of this investigation is to prevent aviation accidents and serious incidents. It is not the purpose of any such investigation and the associated investigation report to apportion blame or liability.

A safety recommendation shall in no case create a presumption of blame or liability for an occurrence.

Produced by the Air Accident Investigation Unit

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