



## MINISTRY OF INFRASTRUCTURE

### STATE COMMISSION ON AIRCRAFT ACCIDENT INVESTIGATION

# FINAL REPORT

## Serious Incident No: 404/07

*This report is a document presenting the position of the State Commission on Aircraft Accident Investigation concerning circumstances of the air occurrence, its causes and safety recommendations.*

*The report is the result of the investigation carried out in accordance with the applicable domestic and international legal provisions for prevention purposes only.*

*The investigation was conducted without the need of application of legal evidential procedure.*

*In connection with the Article 134 of the "Aviation Law" Act (Journal of Laws 2006, No. 100, item. 696 with amendments), the wording used in this report may not be considered as an indication of the person guilty or responsible for the occurrence.*

*The Commission makes no judgments about fault and responsibility.*

*In connection with the above, any form of use of this report for any purpose other than air accidents and serious incidents prevention, can lead to wrong conclusions and interpretations.*

*This report was drawn up in Polish. Other language versions may be drawn up for information purposes only.*

**Warsaw 2011**

**1. Date and time of the incident :**

13 September 2007, 13:41 UTC

**2. Place of take off and planned destination:**

2.1. Aerospatiale AS350BA helicopter – ADEP: Jelenia Góra (EPJG)

DEST: Jelenia Góra (EPJG)

2.2. British Aerospace Avro RJ85 (DLH3UV) airplane: ADEP: Wrocław Strachowice (EPWR)

DEST: Munich (EDDM).

**3. Place of the occurrence:**

West of GIGAL navigational point nearby terminal controlled area (TMA) of Wrocław Strachowice (EPWR) aerodrome,

**4. Type, model, registration marks, owner of aircraft:**

**Aerospatiale AS350BA helicopter**

Registration marks: F-GECM

User: VISUAL TV

Serial number: 1792

Year of manufacture: 1984

Maximum Take off Weight (MTOW): 2100 kg.

**British Aerospace Avro RJ85 airplane**

Registration marks: D-AVRB

User: Lufthansa Citiline

Serial number: E2253

Year of manufacture: 1994

Maximum Take off Weight (MTOW): 43998 kg.

**5. Type of operation:**

Commercial flight

**6. Phase of flight:**

F-GECM en route flight.

D-AVRB – initial climb.

**7. Flight rules:**

F-GECM - VFR; day.

D- AVR B - IFR; day.

**8. Weather factor:**

No influence.

**9. Flight organizer:**

F-GECM – Trans Helicopter Service

D- AVR B - Lufthansa CityLine

## **10. Flight crews information:**

### **Helicopter pilot:**

- Man , age 40;
- Flight time on AS350BA: 350 hrs;
- Flight time over the last 28 days: 56 hrs 15 min;
- Flight time over the last 24 hrs: 6 hrs 5 min.

Helicopter pilot was certified to perform air activities.

### **Airplane crew**

Lack of data.

## **11. Course and circumstances of the occurrence:**

On 22 August 2007 Trans Helicopter Service company submitted to President of the Civil Aviation Office a written request to carry out air operations with two helicopters on the territory of Poland in order to transmit "live" Tour de Pologne cycling race.

The request contained a description of the project, together with places at different stages of the race, helicopters data and their equipment, the planned flight altitudes (F-GKYG WESCAM 500ft AMSL, F-GECM RELAY 3000ft AMSL), and the pilots names and their licenses serial numbers.

On 29 August President of the Civil Aviation Office approved the planned air operations and specified the conditions for their performance in accordance with Annex 2 to the Convention on International Civil Aviation (item 4.6 a, b ) and the Polish air regulations related to flights over densely populated cities.

On 13 September 2007 Aerospatiale AS350BA helicopter, registration marks F-GECM, took off from Jelenia Góra (EPJG) in the direction of WOŁÓW town in order to transmit Tour de Pologne cycling race.

The helicopter served as a transmitter of „live” television picture. This task required to fly just over motorcycles which transmitted a signal to the helicopter.

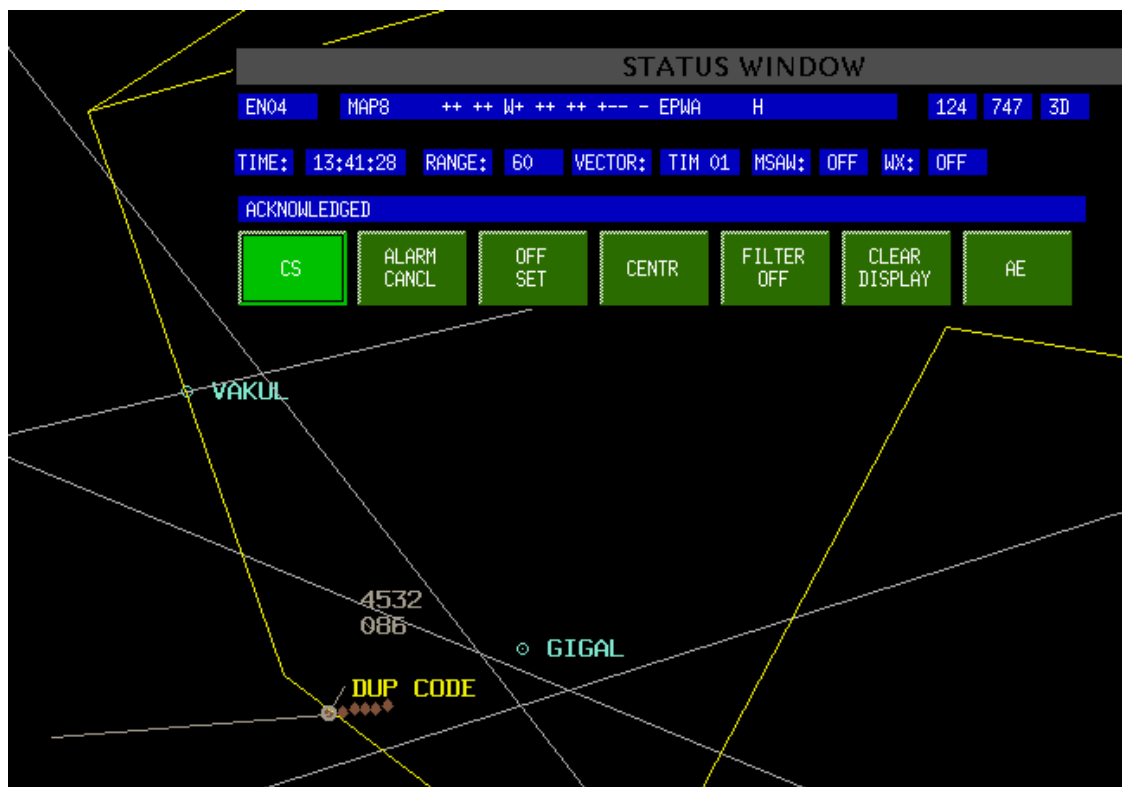
A technician - TV operator, who was on board of the helicopter, monitored radio communication. The pilot had a display which presented simplified cartography and motorcycles.

The flight was carried out at varying altitude between 2000ft AMSL and FL95, dependent on the need of transmission and route segments.

According to the pilot statement that flight was a heavy workload for him because of the strong wind at the flight altitude and varying speed of motorcycles as well as changing distance between the motorcycles.

At 13:36 UTC CitiLine RJ85 Lufthansa airplane, flight DLH3UV, took off from Wrocław-Strachowice (EPWR) directing to Munich (EDDM). The airplane took off on the basis of air

traffic control clearance issued at 13:31:10 UTC. The clearance did not contain any conditions related to the flight level at the time of crossing TMA boundary. DLH3UV continued climbing according to the received clearance directly to the UVSOV navigation point and crossed FL86 exactly at TMA boundary.



DLH3UV airplane was flying for 40 seconds in the airspace class „G” (from passing TMA boundary to crossing FL100 - re-entry into the controlled airspace class "C") and within this time limits, at 13:41:35, the flight crew reported very dangerous proximity to another aircraft.

Within the same period of time the technician - TV operator informed the helicopter pilot that he had spotted a four-engine white airplane in the climbing phase.

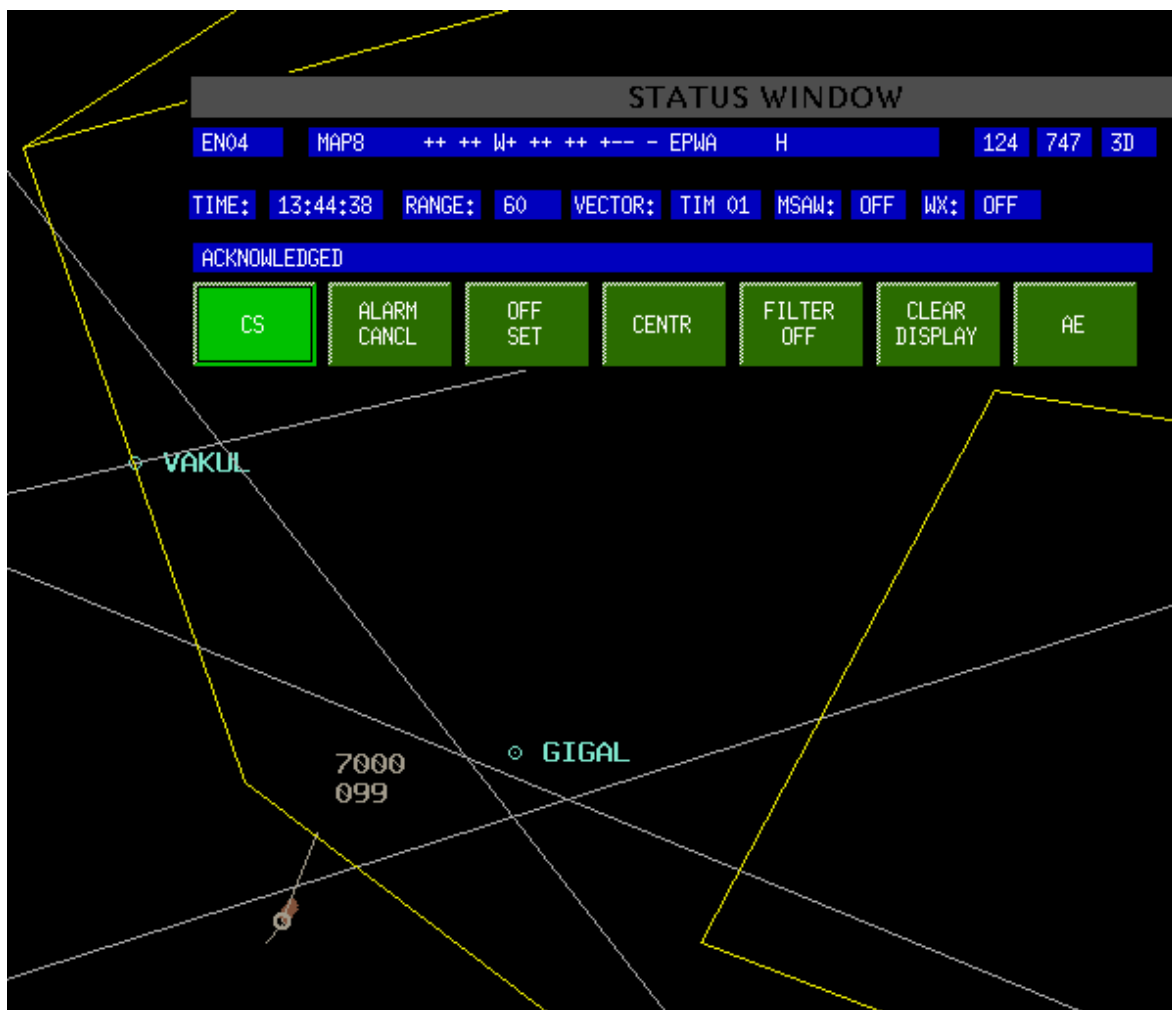
According to the statement of helicopter pilot *"We were not able to determine its identity (carrier color), because it was pretty far away, at a distance difficult to assess"*.

According to the report of DLH3UV pilot at FL95 the distance between his airplane and a helicopter, similar to Robinson 44, was 20 meters.

After DLH3UV crew report a controller attempted to determine the type and identification marks of the helicopter involved in the incident. He called to FIS Poznań and ACC Warszawa and was informed that no aircraft except DLH3UV was observed on the secondary radars in that area at the time of the occurrence.

The helicopter pilot stated that after the incident he had checked his location on the navigation map and realized that he was in close proximity to the boundary of terminal controlled area class "C" (TMA WROCLAW), approximately 20 NM West of EPWR aerodrome.

The helicopter involved in the incident with DLH3UV was identified as F-GECM only after the flight crew turned on the transponder code 7000 (radar screen below) at 13:44:10 UTC. The helicopter pilot established communication with FIS Poznań at 13:46:36 UTC. No Flight Plan was submitted prior to the helicopter flight in question.

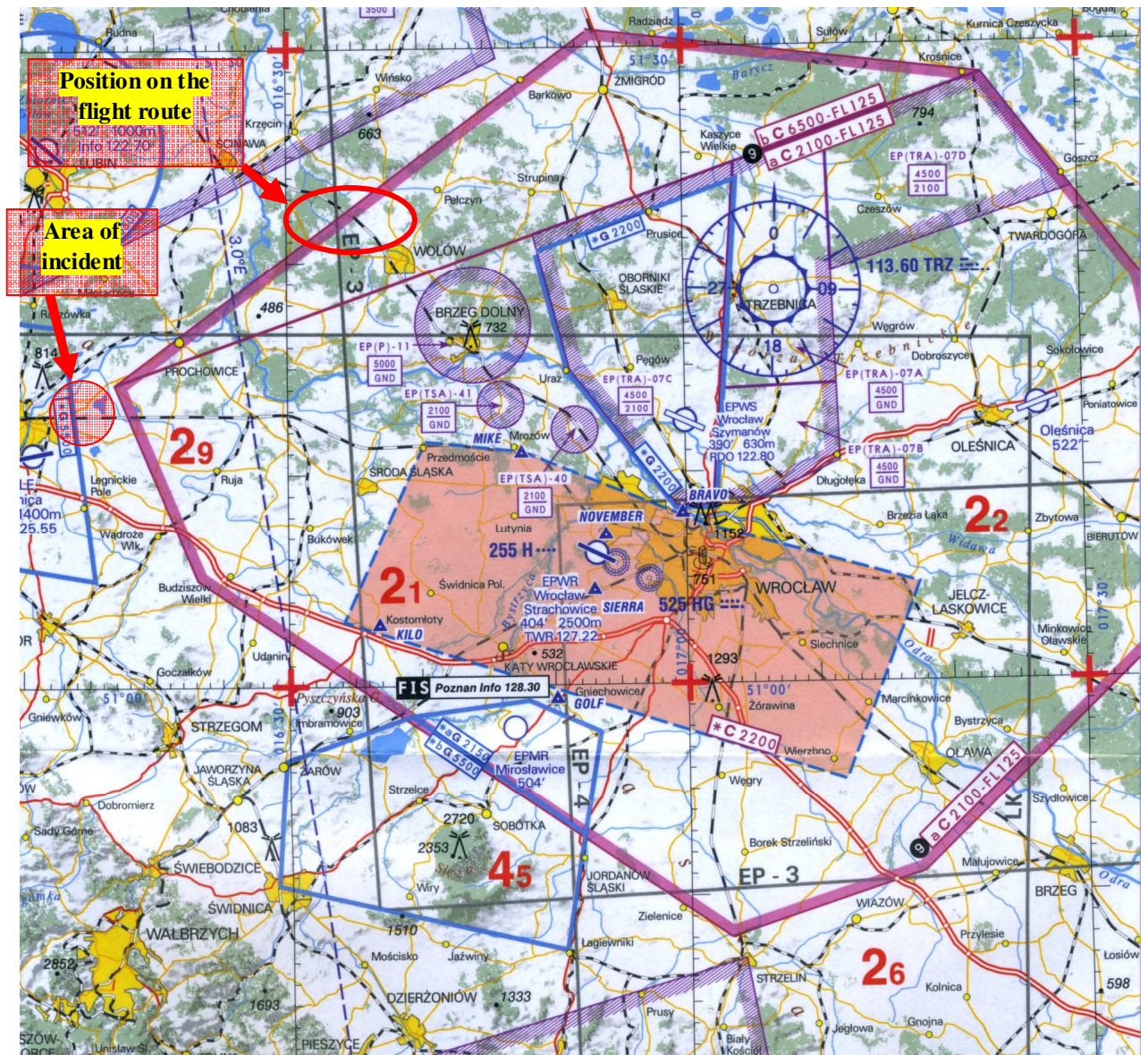


Due to lack of objective sources of information (the helicopter transponder was turned off during the occurrence which resulted in lack of radar record of its position) the Commission could not determine the actual distance between the two involved aircraft at the time of incident.

The helicopter pilot violated the following procedures related to the flight in question:

Firstly, he did not submit a Flight Plan (in accordance with the Polish Rules of the Air in relation to the class "G" airspace it was not necessary, however in this concrete case the clearance for helicopter operator was granted under the condition that all flights must be preceded by a Flight Plans.

Secondly, the pilot planned to fly over Wołów town, which was within the upper sector ("b") of EPWR TMA (from 6500ft AMSL to FL125), and about 50 meters from the boundary of the lower sector ("a") of EPWR TMA (from 2100 ft AMSL to FL125). In spite of the obligation under VFR, the pilot performing flight in close proximity of controlled airspace did not establish communication with EPWR air traffic control unit to set altimeter.



### ***EPWR TMA (Jeppesen)***

Thirdly, the pilot did not turned on secondary radar transponder (according to the applicable procedure under VFR in Polish airspace it was required to set A7000 code, unless the competent air traffic authority assigned another code). Lack of the transponder signal caused that the helicopter could not be observed by secondary radars, as well as on DLH3UV ACAS indicator. As a result, the airplane flight crew maneuvered to avoid collision only after visual detection of the helicopter.

Violation of the above procedures led to a very dangerous situation which could have ended with a collision in the air if not quick reaction of the airplane flight crew.

Furthermore, on the basis of documents received from the French side the Commission determined that the helicopter pilot executing the flight was not specified in the request addressed to President of the Civil Aviation Office. This fact did not have influence on the occurrence.

## 12. Causes of the air incident:

1. Failure by the pilot to observe immediate airspace during VFR flight, which led to the displacement of the helicopter in the immediate vicinity of the EPWR controlled area and dangerous air proximity.
2. Failure by the pilot to establish communication with the air traffic control unit of EPWR aerodrome. The flight was performed in close proximity of controlled airspace and communication with EPWR was necessary to set altimeter.
3. Failure by the pilot to comply with the procedure of secondary radar transponders usage. This procedure obliges to turn on transponder (code 7000), regardless of airspace in which a flight is performed.
4. Failure by the pilot to comply with conditions of the clearance received from the President of the Civil Aviation Office. This clearance specified that Flight Plan should had been submitted for each flight.
5. TWR EPWR controller clearance for RJ85 flight crew, which not included an order to cross FL100 within EPWR TMA.

## 13. Safety recommendations:

### Polish Air Navigation Services Agency.

1. Introduce to INOP of EPWR TWR (and other bodies working in similar structures of airspace) requirement to use the phraseology: „*cross TMA boundary above FL 100*”.

### Civil Aviation Office

2. Consider introducing a provision concerning airplanes and helicopters VFR flights that in airspace class "G" above the altitude of 6500ft/2000m AMSL stóp/2000 pilots would be obliged to submit Flight Plans and/or maintain communication with the competent Flight Information Services sector.

### Air Authorities of the French Republic.

3. Remind Trans Helicopter Service pilots of obligation to comply with foreign countries aviation regulations and the conditions of clearances issued.

**THE END**

Investigator-in-Charge

MSc.Eng. Bogdan Fydrych

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