BEA
Bureau d'Enquêtes et d'Analyses
pour la sécurité de l'aviation civile

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INVESTIGATION REPORT

Accident to the Aquila AT01 registered D-ERLM on 08 May 2018 at Marnaves (Tarn)

Time	Around 15:00[1]
Operator	Private
Type of flight	General aviation, cross-country
Persons on board	Pilot and one passenger
Consequences and damage	Pilot and passenger fatally injured, aircraft destroyed
This is a courtesy translation by the BEA of the Final Report on the Safety Investigation published in November 2019. As accurate as the translation may be, the original text in French is the work of reference.	

[1]Unless otherwise stated, all times given in this report are in local time.

Collision with trees in adverse meteorological conditions, fire

1 - HISTORY OF THE FLIGHT

The pilot, accompanied by a passenger, took off from Troyes aerodrome around 12:10 for a VFR flight. The beginning of the flight took place at flight level 65. When abeam Guéret, the pilot descended to 2,500 ft. At 14:55, he contacted the Toulouse FIS frequency and announced that he was bound for Albi.

The last radio contact with the aeroplane was at 14:56.

The aeroplane was found on wooded terrain, approximately 15 NM from Albi airport.

Several witnesses said that there were deteriorated meteorological conditions at the time of the accident.

2 - ADDITIONAL INFORMATION

2.1 Examination of site and wreckage

The scars in the vegetation suggested that the aeroplane had collided with trees, with the engine operating, in descent with a high left bank angle. The aeroplane continued into the forest over around 40 metres, before coming to a halt, on its back.

A fire broke out after the impact and destroyed nearly all of the aeroplane. Despite the damage observed on the airframe, it was possible to examine the flight controls. They were continuous at the impact.

2.2 Pilot information

The pilot had a Private Pilot Licence since 2012. He had logged around 1,200 flight hours over six years. He did not have an IR rating.

2.3 Context of flight

Twenty-four pilots and passengers divided between ten planes left Germany on 7 May. The aim was to fly to Lasbordes aerodrome in order to visit the Airbus facilities. There was to be a four-day stay at Toulouse. The cross-country flight had been prepared by the pilot of D-ERLM. The choice of the route was left to the judgement of each pilot.

For logistical reasons, Albi airport had been chosen for refuelling all of the fleet. The pilot of D-ERLM had dealt with organising the stop at Albi.

2.4 Witness statements

Several witnesses present on the site described a low ceiling with clouds clinging to the hills. They said that there was drizzle.

One pilot, member of the team taking part in the cross-country flight but who had stopped at La Rochelle, arrived at Albi on an IFR flight plan at 14:30. He started the approach before deciding to divert to Toulouse Blagnac airport.

The majority of the pilots landed at Troyes to refuel. Several said that given the meteorological conditions on the route to Albi, they did not take-off again. Other pilots among those who had taken off again were confronted with low ceilings and poor visibility; some diverted and finished their journey by car.

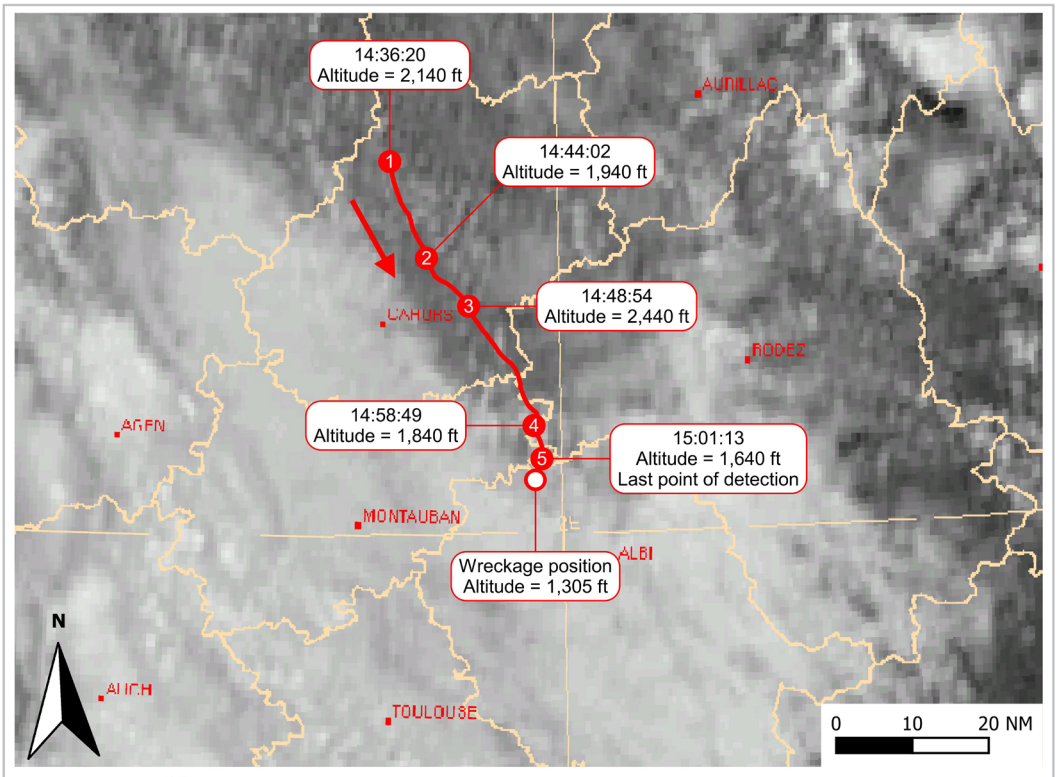
2.5 Meteorological information

In a north-westerly airflow, the air mass was unstable due to diurnal variations and thundery showers had broken out on the Massif Central.

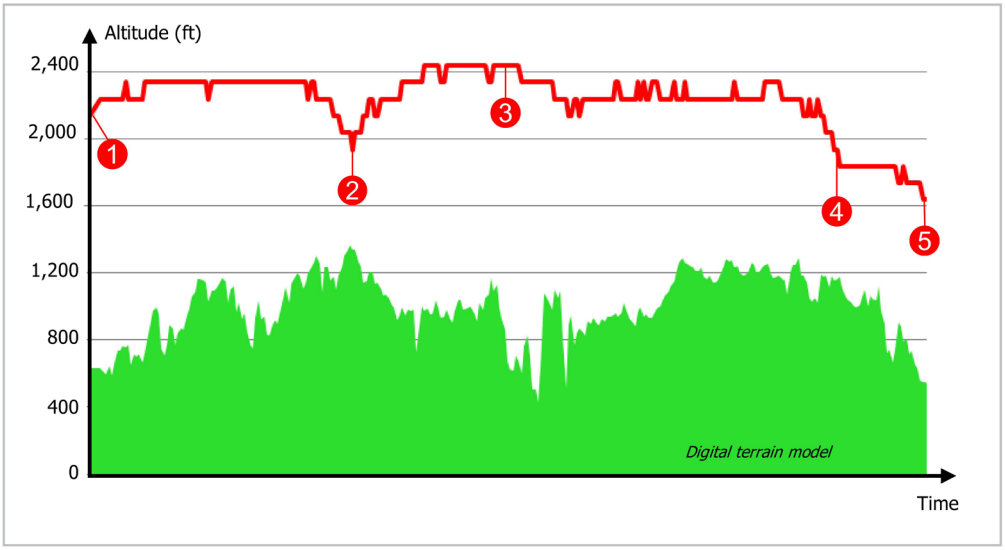
The estimated conditions on the site were:

- ❒ westerly wind of 10 kt;
- ❒ visibility above 10 km;
- ❒ clouds based at 1,500 ft;
- ❒ temperature 15 °C, dew point temperature 14 °C.

There were low cloud layers clinging to the high ground thus reducing visibility.



Map taken from : Météo France - satellite view of cloud masses at time of accident



Path of D-ERLM based on data from Auch secondary radar, from 14:36:20 to last point of detection

Times are given in local time

3 - LESSONS LEARNED AND CONCLUSION

After a flight time of 2 h 45 min and close to his destination, the pilot was confronted with low ceilings and poor visibility. He descended, probably to fly under the cloud layer in an area where there is high ground. The aeroplane then collided with the terrain.

The BEA has regularly observed that the obstinacy of pilots to undertake or continue a flight in adverse weather conditions was the cause of numerous accidents with often dramatic consequences. As this accident illustrates, it is interesting to observe that confronted with an identical situation, several pilots will make different strategic choices. Furthermore, as for this accident, a previous study into occurrences of this type found that the risk tends to increase as pilots get closer to their destination.

When confronted with adverse weather conditions for the continuation of the flight, a diversion or even a precautionary landing are alternatives which generally lead to a positive outcome. However, each pilot must be aware of the difficulties that may exist in envisaging such alternatives when the situation has already deteriorated: stress, fatigue or the pilot's concerns (notably his motivations or the constraints which he has fixed himself) are all factors which can affect the pilot's capacity of discernment and the accuracy of his actions.