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

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SAFETY INVESTIGATION REPORT

Accident to the TL-3000 Sirius identified **44AWF** on Thursday 18 November 2021 close to Meaux - Esbly aerodrome

Time	Around 16:00[1]
Operator	Private
Type of flight	Local
Persons on board	Pilot
Consequences and damage	Pilot fatally injured, microlight destroyed
This is a courtesy translation by the BEA of the Final Report on the Safety Investigation. As accurate as the translation may be, the original text in French is the work of reference.	

Attempted turn-around to departure aerodrome at low height, collision with an antenna in adverse meteorological conditions for flight under VFR

1 HISTORY OF THE FLIGHT

Note: the following information is principally based on recordings from the Dynon computer, statements, radio communication recordings and radar data.

The pilot had planned to carry out a flight from Meaux - Esbly aerodrome to La Ferté-Gaucher aerodrome. On the apron, he contacted the controller on the Meaux tower frequency to obtain instructions. The controller told him that runway 16R was in use, but that according to information in his possession, only Meaux had clear weather, Coulommiers was in cloud and visibility at Lognes was 200 m. He added that elsewhere the cloud layer stretched down to the ground, and specified that there was a risk of visibility at Meaux rapidly decreasing.

The pilot taxied to the holding point of runway 16R, carried out engine tests, and then reported that he was ready for departure on the tower frequency. He added that, given the weather conditions, he was going to fly in the vicinity of Disneyland Paris and the town of Meaux.

The pilot took off at 15:59 (see **Figure 1**, point 1), climbed on the runway axis to an altitude of 890 ft[2] (this would be the highest point of the flight), and then began a first LH turn.

At 16:00:28, he informed the controller that there was no ceiling, and that he was only going to fly around Meaux. The controller asked him to keep monitoring the frequency. The pilot then turned left towards the aerodrome (point 2); at this point he was at an altitude of 760 ft (a height of about 360 ft), and a speed of roughly 110 kt.

[1] Except where otherwise indicated, the times in this report are given in local time.
[2] The glossary of abbreviations and acronyms frequently used by the BEA can be found on its web site.

At 16 h 01 min 33 (point 3), the pilot was at an altitude of 630 ft (i.e. a height of about 230 ft), he indicated to the controller that visibility was very low.

At around 16:02, the microlight's last position was recorded (point 4), its altitude was 668 ft. A short time later, the microlight collided with a relay antenna, the top of which rises to an altitude of 653 ft[3].

The controller tried to contact the pilot several times, without success. He alerted the rescue services and the BTIV.

[3] The relay antenna is shown on the Meaux aerodrome VAC chart, and referenced in the AIP France, Part 2 ENR 5.4. It has a height of 200 ft agl and no lighting.

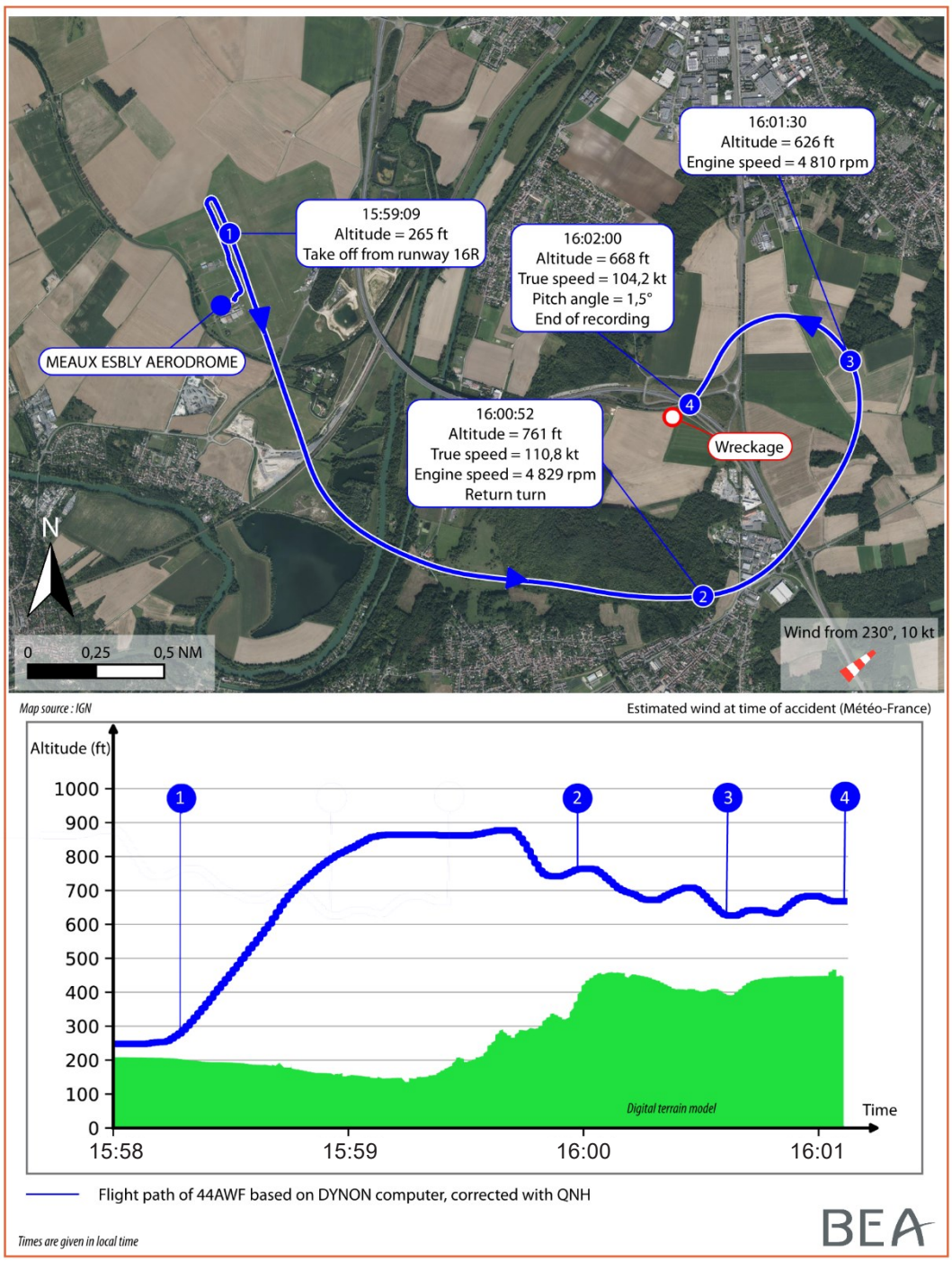

Figure 1: flight path of 44AWF taken from Dynon D-1000 computer

2 ADDITIONAL INFORMATION

2.1 Pilot information

The 66-year-old pilot held a microlight pilot licence along with the fixed-wing rating obtained in February 2019. It was not possible to determine the pilot's total and recent experience.

2.2 Microlight information

The TL-3000 Sirius is a powerful, high-fixed-wing microlight. According to the manufacturer, its cruise speed is between 180 and 220 km/h. 44AWF was equipped with a variable-pitch (constant speed) propeller, an airframe parachute and an autopilot. The pilot had regularly flown 44AWF since 2019.

2.3 Examination of site and wreckage

The wreckage was found at around 20 m from the antenna. There were numerous pieces of microlight debris scattered over a 50 m radius, and debris from the left wing wedged in the pylon.

The flight controls were examined. All the ruptures observed on the flight controls were consecutive to the accident.

2.4 Analysis of on-board Dynon data

44AWF was equipped with a Dynon D-1000 Skyview which displays and records the flight parameters and the engine parameters. This instrument is also capable of displaying a navigation chart, showing obstacles and providing terrain alerts. There was a database containing air navigation and obstacle information in the Dynon on 44AWF, it was not possible to determine if the pilot regularly used it and if he was using it at the time of the accident.

The last flight parameter recording at 16:02:01, indicated an altitude of 656 ft, a speed of 105 kt, a LH bank of approximately 10° and a pitch attitude of around +1°. This seems to indicate that the pilot had not lost control of the microlight.

It can be concluded from the analysis of the various engine data recorded that the engine was operating nominally at the time of the accident and providing power close to that expected for cruise flight. The recorded parameters also show that the pilot had correctly selected the QNH in the EFIS.

2.5 Meteorological information

Météo-France indicated that in Seine-et-Marne, the meteorological conditions were very heterogeneous, low clouds and fog were present in a large part of the county. Only the northern extremity of the county saw some sunny spells, with a temporary improvement in conditions before deteriorating in the late afternoon.

The 16:00 SIGWX chart showed that Meaux was at the limit between:

- an area of stratus clouds based between 1,000 and 1,500 ft, and localized fog with visibility between 1,500 and 5,000 m;
- an area of clear sky or few clouds.

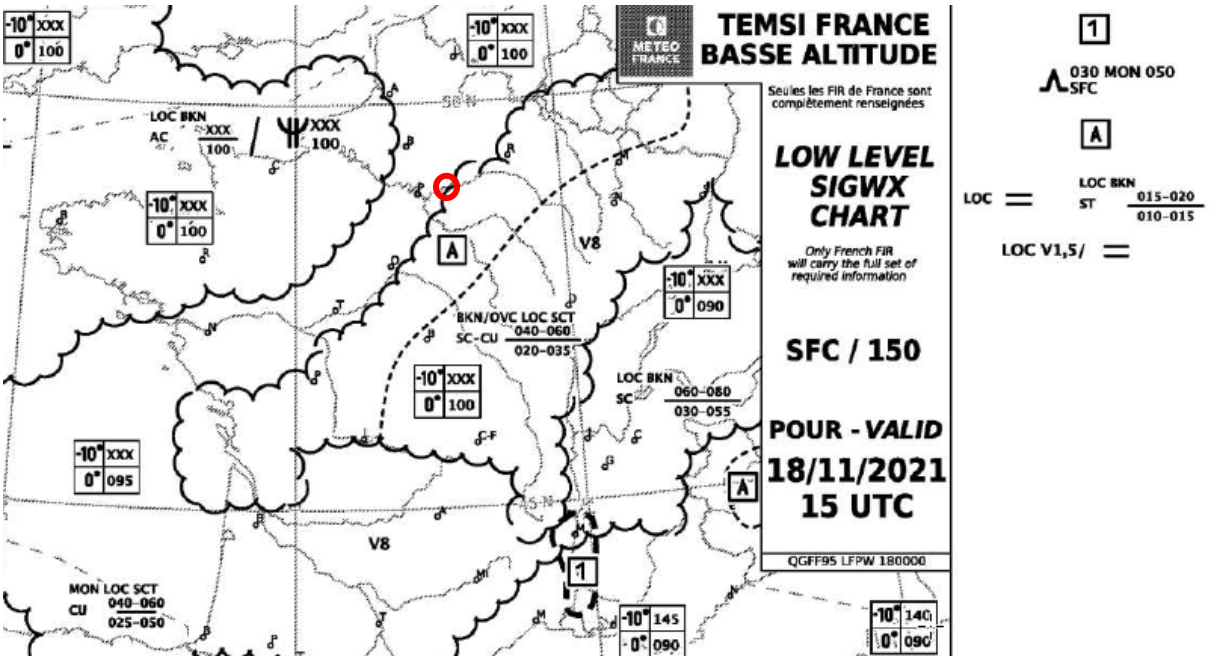

Figure 2: 16:00 SIGWX chart (source: Météo-France)

The 15:55 Meaux ATIS indicated wind from 180° of 6 kt, visibility 5 km, a QNH of 1032 hPa and a temperature of 8°C[4].

The 16:00 Roissy-Charles de Gaulle METAR indicated wind from 270° of 4 kt, CAVOK conditions, no significant clouds, a QNH of 1031 hPa, a temperature of 12°C and a dew point at 6°C.

The 16:00 Melun METAR indicated wind from 180° of 4 kt, visibility 650 m, the presence of fog, a QNH of 1032 hPa, a temperature of 7°C and a dew point at 7°C.

2.5.1 First Instructor's statement

A microlight instructor took off from Meaux at around 15:30, bound for Le Plessis - Belleville aerodrome and then Château-Thierry. He explained that the weather conditions substantially deteriorated during the flight between Le Plessis - Belleville and Château-Thierry. The ceiling was at an altitude of 800 ft in places, and visibility was very poor. He chose to climb above the cloud layer and turn back towards Meaux. On arrival at Meaux at around 16:15, visibility was very poor, he used a GPS to find his way.

2.5.2 Second instructor's statement

A second instructor was in his car close to the accident site a few minutes after the event. He explained that a fog bank was rolling in from the south, and that visibility was around ten meters in the vicinity of the antenna.

The instructor had flown with the pilot on several occasions during his training, notably on the Sirius. He added that the pilot was very familiar with the Sirius and had good command of its equipment (autopilot, EFIS). During training, the use of the parachute had been mentioned, and blind navigation is generally covered in a single flight session.

[4] The Meaux ATIS did not indicate the cloud cover or the dew point.

2.5.3 Meaux controller's statement

The tower controller in position at the time of the accident indicated that another pilot took off at 15:26 on board a DR400 to fly to Coulommiers; the weather conditions led this pilot to fly on top before abandoning the flight and returning to Meaux.

Given the weather conditions that he was able to observe and those reported by several pilots, the controller tried to dissuade the pilot of 44AWF from taking off.

3 CONCLUSIONS

The conclusions are solely based on the information which came to the knowledge of the BEA during the investigation.

Scenario

The pilot had planned to fly to La Ferté-Gaucher. Although the controller informed him of the degraded meteorological conditions around Meaux aerodrome, the pilot nevertheless undertook the flight, limiting himself to a local flight. The apparent ease of a local flight may have generated a feeling of confidence on the part of the pilot, who underestimated the risks associated with the weather conditions.

The pilot very probably encountered an area of fog, and no longer had reliable external visual references. Already low, he descended in an attempt to maintain sight of the ground. Although the pilot knew of this antenna, it is likely that he did not perceive it, or perceived it too late, due to the low visibility.

Safety lessons

Flight preparation and adapting flight to weather conditions

Despite the information provided by the controller, the pilot nevertheless decided to take off. In certain cases, a strong desire to fly can affect a pilot's reasoning, leading him to minimize identified or reported risks.

In its safety bulletin for microlight pilots, the FFPLUM suggests that pilots collect the most recent meteorological data (SIGWX, WINTEM, METAR, TAF) and only take off after a detailed analysis of the situation. In particular, local flights should not exempt pilots from rigorously preparing them. The FFPLUM also recommends that pilots inform themselves, in the traffic pattern, of any risks of aggravation.

The BEA investigations are conducted with the sole objective of improving aviation safety and are not intended to apportion blame or liabilities.