



**Accident** to the Skyranger 95B  
identified **63ASS**  
on 19 June 2022  
at Égletons (Corrèze)

<b>Time</b>	Around 15:00 <sup>1</sup>
<b>Operator</b>	Private
<b>Type of flight</b>	Cross-country
<b>Persons on board</b>	Pilot
<b>Consequences and damage</b>	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.

## Loss of control during initial climb, collision with ground

### 1 HISTORY OF THE FLIGHT

*Note: the following information is principally based on statements and images from a security camera.*

The pilot took off from paved runway 07 at Égletons aerodrome. During the initial climb, the microlight oscillated in roll. As its attitude increased, the microlight turned left and stalled. It made a full spin and collided with the ground behind a line of trees bordering the aerodrome with a steep nose-down attitude.

<sup>1</sup> Except where otherwise indicated, the times in this report are in local time.

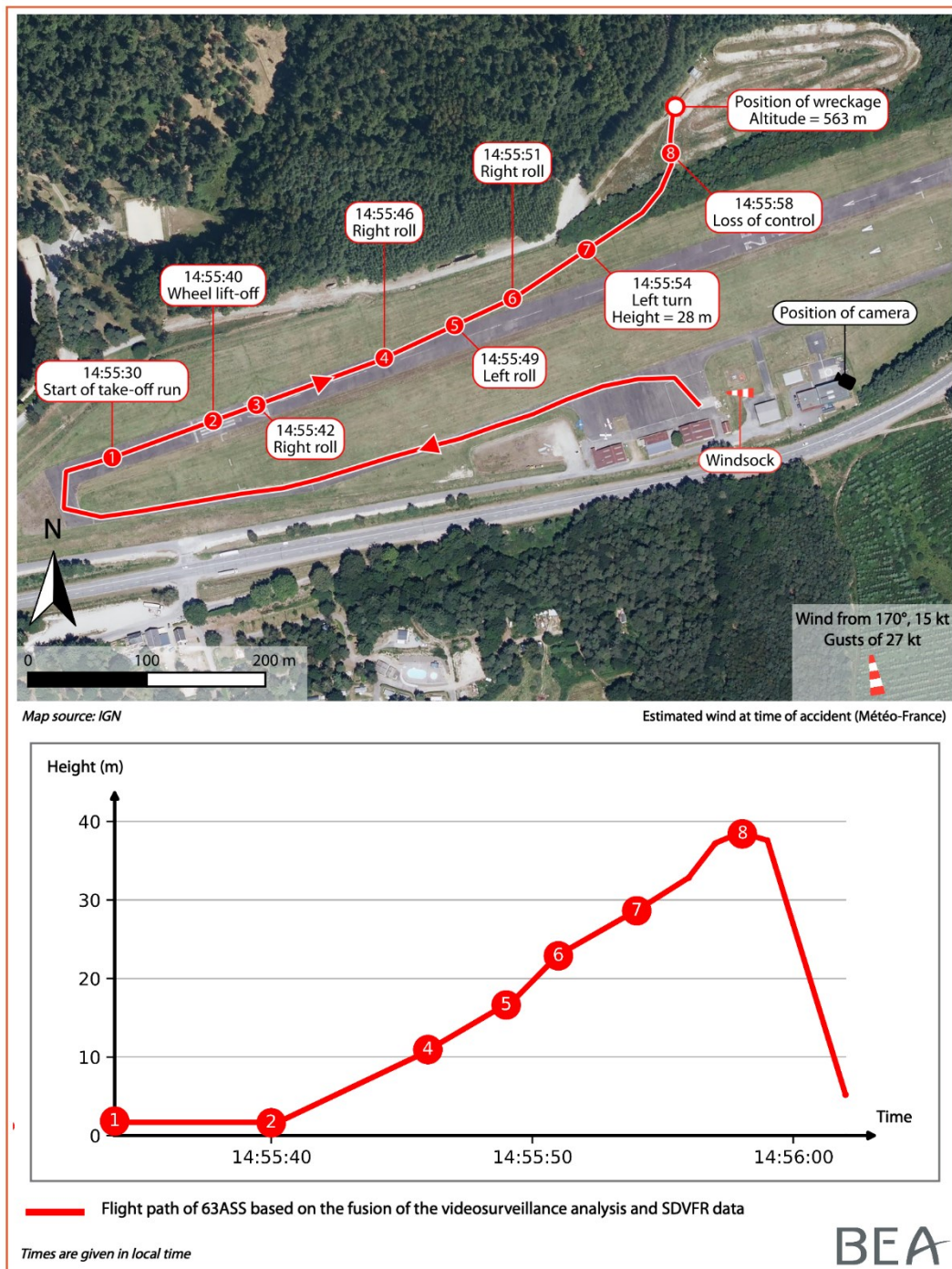


Figure 1: flight path of the microlight

## 2 ADDITIONAL INFORMATION

### 2.1 Site and wreckage

The wreckage, which was complete, was located around 100 metres to the left of the aerodrome's runway 07. Observations of the wreckage showed that the microlight made a high-energy impact with the ground with a steep nose-down angle. They also showed that the flight control linkages were continuous prior to the impact with the ground. The flap operating mechanism was found in the "retracted" position.

The microlight was equipped with an emergency parachute. This was not triggered by the pilot or on impact with the ground. It was present, activated and not triggered during the emergency services' operation. Explosive ordnance disposal officers were contacted and took action before the BEA arrived at the accident site.

## 2.2 Microlight information

The microlight, based at Montpezat (Lot-et-Garonne), entered into service in 1998. It was equipped with a Rotax 912 engine delivering a maximum power of 80 hp, as well as with electric flaps. It was modified on 29 April 2007 with the addition of an emergency parachute.

The pilot added 45 litres of fuel before the event flight. Taking into account the pilot's weight, the luggage and 60 litres of fuel, the take-off weight was 450 kg.

According to the descriptive sheet of the modified microlight, the reference empty weight is 282 kg and the maximum weight is 472.5 kg. The tank capacity is 60 litres and the hourly consumption is 10 l/h. The stall speed (VSO) indicated on the descriptive sheet is 65 km/h<sup>2</sup>. According to the generic operation manual, the stall speed in the full flaps configuration at a weight of 450 kg is 62 km/h and the minimum speed at which level flight can be maintained without flaps is 72 km/h at maximum weight.

According to the generic manual, take-off is performed with one flap detent position; the recommended rotation speed is 75 km/h; a level-off manoeuvre should be performed to gain speed just after rotation, as close to the ground as possible, until the speed reaches 90 km/h. The recommended speed afterwards is 100 km/h or 90 km/h for the best rate of climb and 85 km/h at maximum vertical speed. These speeds should be increased by 10 km/h in turbulent air.

Lastly, the demonstrated maximum crosswind is 15 kt.

## 2.3 Pilot information

The 70-year-old pilot held a microlight pilot certificate issued in February 2010. The investigation was unable to determine his microlight flying experience. The pilot also held a Private Pilot Licence - Aeroplanes (PPL(A)) issued in April 1996 and had logged more than 300 flight hours on aeroplanes.

## 2.4 Meteorological information

The meteorological conditions estimated by Météo-France at the accident site at 15:00 were as follows: surface wind from 170° of 15 kt gusting up to 27 kt, CAVOK, temperature 32 °C.

The six-minute mean wind, recorded from 12:54 to 13:00 UTC at Égletons station<sup>3</sup>, was 170° for 13 to 15 kt.

The weather reports at Brive-Souillac airport, located 30 NM away to the south-west, indicated a wind varying from 100° to 250°.

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<sup>2</sup> In the full flaps configuration at maximum weight.

<sup>3</sup> The station is located around 2.5 km south to south-west of the aerodrome.

## 2.5 Aerodrome information

Égletons aerodrome has two runways 07-25, one paved and the other grass. The paved runway measures 819 m long.

The VAC chart for the aerodrome indicates that when there is no noticeable wind, QFU 07° should be selected for take-off, due to the terrain and to minimise noise nuisance.

The aerodrome's VAC chart indicates the possible presence, with a south or south-westerly wind, of downdrafts and turbulence in the climb-out areas.

The windsock is located in the parking area near the buildings (see *Figure 1*). Given the environment of the aerodrome, it is possible that, in a southerly wind, it does not represent the actual wind conditions at all points of the aerodrome and its constraints (including in the climb-out and landing areas).

## 2.6 Examination of computers

The microlight was equipped with a GPSMAP 60GSx and the pilot used a tablet computer.

The GPSMAP 60GSx is a portable GNSS system which records 3D tracks. The recorded data was downloaded using the manufacturer's software. Three tracks recorded on the day of the event were retrieved, including the track corresponding to the event flight.

The SDVFR application used for flight planning and GNSS navigation was running in the background on the tablet. It contained recordings for several flights. The event flight was identified.

The data was used to produce the path in *Figure 1*.

## 2.7 Examination of the security camera

One of the buildings at the aerodrome was equipped with a security camera recording the parking area and runways 07 opposite the take-off direction. The video was analysed to complete the path in *Figure 1*. Key points were identified for the different flight phases. In particular, the microlight's speed during these phases could be estimated based on this video. Variations were also observed in the windsock located in the camera's range.

Between points 2 and 3, just after wheel lift-off, the average ground speed was around 70 km/h<sup>4</sup>. The windsock indicated no wind.

Between points 3 and 4, during the acceleration phase, the average ground speed increased to around 105 km/h. The windsock began to inflate with a right-hand tailwind relative to the microlight's path.

Between points 4 and 5, at the start of the climb, the average ground speed decreased towards 90 km/h, and the windsock indicated a right-hand tailwind of around 5 kt relative to the microlight's path.

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<sup>4</sup> All speeds were rounded to the nearest 5 km/h to take into account the measurement inaccuracy.

Between points 5 and 6, the average ground speed was estimated to be around 100 km/h. The windsock indicated the same wind as previously.

Between points 6 and 7, the average ground speed remained around 100 km/h. The windsock indicated the same wind as previously.

## 2.8 Statements

The pilot's daughter indicated that he set off the day before from Montpezat, heading for Chambord (Loir-et-Cher) and then Vierzon (Cher). On the day of the accident, he planned to fly over the Châteaux of the Loire Valley before returning to Montpezat. He did not plan to stop at Égletons.

The president of the Égletons club explained that the pilot told him that he did not have enough fuel to fly to Montpezat due to the headwind component, which reduced his ground speed to 50 km/h, and that he therefore made a stop at Égletons to add fuel. The president explained that the pilot added 45 litres of fuel. The president did not know if this corresponded to a complete refuelling. After starting up, he saw the microlight stop near the windsock for a few minutes before taxiing towards paved runway 07 and taking off. He specified that the wind was not really established. The microlight was not stable on the roll axis from rotation. The president indicated that there was a  $\frac{3}{4}$  right-hand tailwind at this point. He specified that he then saw the microlight's attitude increase. The microlight's nose then turned left and the microlight stalled.

The president of the club specified that the wind that day was mainly blowing from the south. Given the possible presence of downdrafts and turbulence in the climb-out areas, the club members avoided flying in such conditions. The president of the club added that locally, the southerly wind seems to offer more often, even if weak, a headwind component on runway 25, which is confirmed by a good rate of climb from the first left-hand turn.

## 3 CONCLUSIONS

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

### Scenario

The pilot was making a cross-country flight over several days between his base at Montpezat and the Châteaux of the Loire Valley. During the flight bound for Montpezat, he encountered southerly wind conditions that forced him to make an unplanned stop to add fuel. He landed at Égletons aerodrome to do this.

On take-off from runway 07, shortly after rotation, the microlight began to oscillate in roll. The information gathered seems to indicate that there was a tailwind component at this point. After a level-off phase close to the ground to accelerate, the pilot adopted a climb attitude, then the microlight turned left. During the turn, the microlight stalled, it made a full spin and collided with the ground.

### Contributing factors

The following factors may have contributed to the loss of control:

- a take-off without flaps, which is a configuration that increases the stall speed;
- a speed increase that was probably not sufficient given the southerly wind and the resulting turbulent air conditions at this aerodrome.

Before take-off, the windsock showed no significant wind. The VAC chart recommended taking off from runway 07 in the absence of significant wind. The pilot was aware that there was a more or less established southerly wind, since it was this wind that had forced him to make this stop. The VAC chart drew pilots' attention to the risks of downdrafts and turbulence in the climb-out areas in these conditions, without making any particular distinction between the two QFUs. The investigation was unable to determine to what extent the pilot was aware of the aerological conditions in which he was about to take off, especially given the specific characteristics of this aerodrome.

### Safety lessons

The French Aeronautical Federation (FFA) publishes ICARUS<sup>5</sup> sheets, which summarise, for each aerodrome and as a complement to the information published on the VAC charts, the identified threats likely to have an impact on flight safety at local level. These sheets are drawn up based on information provided by local points of contact and are, as far as possible, kept up to date.

The sheet for Égletons aerodrome reminded pilots of the possible presence of turbulence and downdrafts in the climb-out areas with south and south-westerly wind. The president of the Égletons club was considering proposing an amendment to the sheet to indicate that, because of the aerodrome's environment, in such conditions (southerly wind), the wind is generally not identical at all points of the aerodrome and its obstacle free zone (including in the climb-out and landing areas) and that, consequently, the windsock provides partial information on the wind conditions likely to be encountered by pilots, in particular during the take-off and landing phases.

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

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<sup>5</sup> [Informations Complémentaires d'AéRodrome Utiles à la Sécurité \(additional aerodrome safety information\)](#).