



**Accident** to the EVEKTOR AEROTECHNIK - EV97 - Eurostar  
registered **G-SJES**  
on 24 July 2019  
at Larche (Alpes-de-Haute-Provence)

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

<b>Time</b>	Around 09:50 <sup>(1)</sup>
<b>Operator</b>	North East Aviation Limited
<b>Type of flight</b>	Cross-country
<b>Persons onboard</b>	Pilot and one passenger
<b>Consequences and damage</b>	Pilot and passenger fatally injured, ultralight destroyed

This is a courtesy translation by the BEA of the Final Report on the Safety Investigation published in April 2020. As accurate as the translation may be, the original text in French is the work of reference.

**Loss of control while turning around,  
in mountainous region**

**1 - HISTORY OF THE FLIGHT**

<sup>(2)</sup>System which alerts pilots of a potential collision risk. The FLARM is a "cooperative" system which transmits/receives the GNSS position to/from nearby aircraft which are equipped with it.

*Note: the following information is principally based on statements, and data from the Evektor's FLARM<sup>(2)</sup>.*

The pilot was carrying out a cross-country flight from Eshott aerodrome (United Kingdom) bound for Malta on a hired Evektor EV97, registered G-SJES. He was accompanied by three friends each flying their Taylor Monoplane. A person on the ground transported their luggage by road with two other people who took turns being a passenger on the Evektor EV97.

The day before, they landed at Gap Tallard aerodrome (Hautes-Alpes) where they met French pilots. The latter briefed them about the meteorological conditions forecast for the following day, and the departure and arrival procedures for Barcelonnette aerodrome (Hautes-Alpes), the first leg of the flight planned for the next day to Castelnuovo Don Bosco microlight strip (Italy). They also gave them a few good practices concerning mountain flight, in particular to fly on the right in the valleys, and to pay attention to cables and sun in their eyes.

In the morning, the four pilots took off at around 08:00 bound for Barcelonnette aerodrome (Hautes-Alpes) accompanied by a French pilot following them onboard his Vans RV4. At Barcelonnette, the pilots refuelled the Monoplanes and reviewed the rest of the cross-country flight that they had prepared the previous evening. They took off from Barcelonnette bound for Castelnuovo Don Bosco at around 09:30. The pilot of the RV4 who had initially planned to return to Gap, finally decided to continue his flight in the same direction as them. They headed north-east.

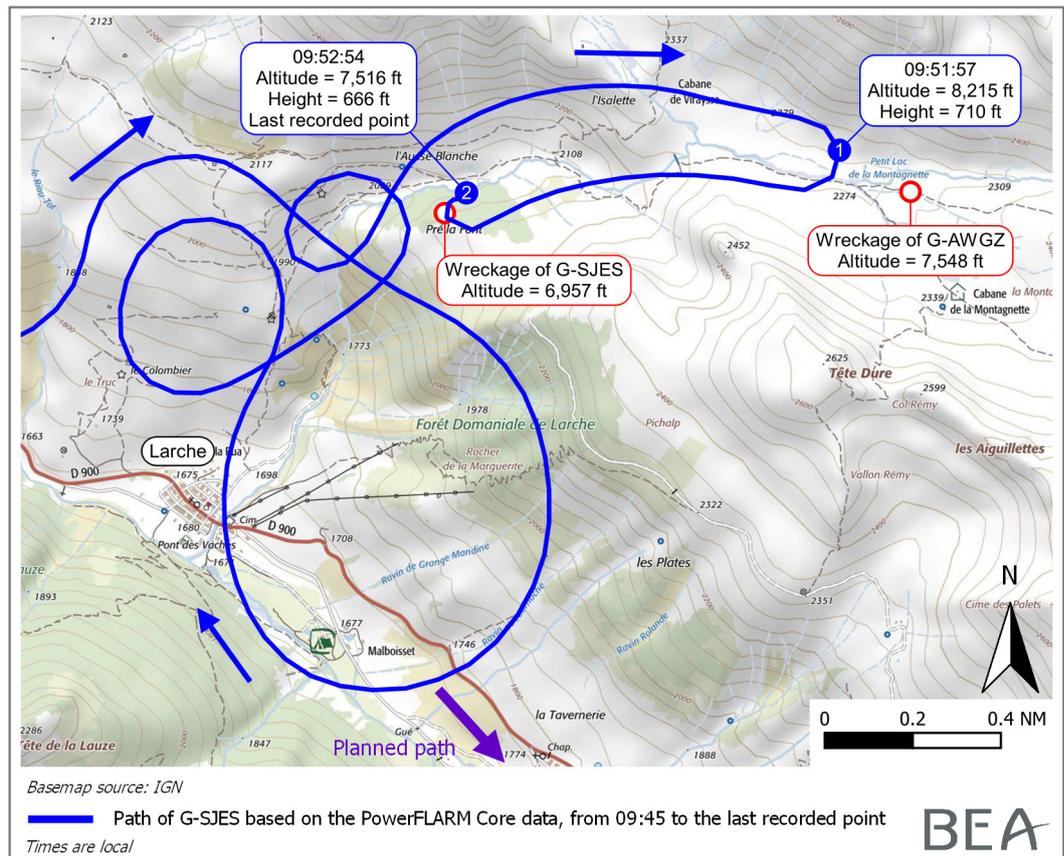


Figure 1: path of G-SJES based on FLARM data

<sup>(3)</sup>Monoplanes have a lower climb performance than the Evktor.

On arriving overhead Larche (a village in Alpes-de-Haute-Provence), the pilots started circling to allow the Monoplanes to gain altitude and join the Evktor<sup>(3)</sup> at the minimum altitude of 7,000 ft that they had determined during the flight preparation, in order to cross the Col de Larche pass, situated south-east of the village. Once all the aircraft had reached this altitude, the pilots decided by radio to continue their cross-country flight. The pilot of the ultralight, G-SJES, entered the valley situated east of Larche first, followed by the three aeroplanes. After flying for around 30 seconds in the valley, they saw, after a bend, that they could not clear the terrain in front of them. In the meantime, the pilot of the RV4, who was flying at a higher altitude, saw them and told them several times by radio, that they had taken the wrong valley. The pilots realised their error and one of them announced by radio that they must turn around. The pilot of G-SJES and two of the Monoplane pilots managed to turn around. The pilot of the third Monoplane, registered G-AWGZ, who was not at a sufficient altitude to turn around, decided to carry out a forced landing and announced by radio, "I'm going to crash." During the landing, the aeroplane struck a mound, bounced and then turned over. The pilot managed to evacuate the aeroplane unharmed.

As the ultralight, G-SJES, returned to the beginning of the valley, one of the Monoplane pilots saw it make a steep turn, enter a spin and then collide with the ground (point 2 of figure 1). No message from the ultralight pilot was heard on the radio by the other pilots.

## 2 - ADDITIONAL INFORMATION

### 2.1 Pilot information

The pilot of the Monoplane which made a forced landing, had a Private Pilot Licence (aeroplane) (PPL(A)) since 2009 and had logged around 150 flight hours. The two other Monoplane pilots each held a Private Pilot Licence (aeroplane) (PPL(A)) since 2013; one of the pilots had logged 300 flight hours of which 100 hours on ultralights and the other pilot had logged 400 flight hours of which 200 hours on ultralights.

The pilot of the ultralight G-SJES held a Light Aircraft Pilot Licence (LAPL) since August 2018. He had logged approximately 70 flight hours according to the other pilots. It was not possible to determine the number of flight hours logged by the pilot on the Evektor. The autopsy carried out on the pilot did not reveal any element likely to explain the accident.

None of the pilots had experience in mountain flight.

### 2.2 Meteorological information

The Monoplane pilots said that the sky was clear the day of the accident and that there was no wind or turbulence.

### 2.3 Witness statements

The Monoplane pilots explained that they were used to following the Evektor during this cross-country flight because the latter was better equipped and had better performance. They had prepared the cross-country flight together the evening before using the Skydemon application and had identified the route to be followed and the associated safety altitudes that they had marked on their charts. They all had a tablet onboard with the Skydemon application and the aeronautical charts. They did not understand why the pilot of the Evektor had turned into the wrong valley. One of them thought that he may have been disorientated after circling above Larche and that he mistook the valley. They specified that the Monoplane cockpits are cramped and that it is not practical to look at the charts in flight. For this reason, they relied on the Evektor pilot and followed him.

The pilot of the Monoplane which made a forced landing explained that when he and his friends realized that they were not in the planned valley, he did not have enough height or speed to turn around. He did not have any other choice but to continue straight on and control the aeroplane to contact with the ground. When he had managed to get out of his aeroplane after the accident, he wanted to send a radio message to reassure his friends but he subsequently learnt that his radio was no longer operational.

The two other Monoplane pilots were able to turn around as they were flying at a greater height, their aeroplanes having slightly better performance. One of the pilots said that he saw the Evektor enter a spin. It seemed to him that initially the turn was controlled but he considered that the ultralight was flying slowly and that the turn was steep. He thought that the Evektor pilot had wanted to turn around again to go and check on the Monoplane which had made a forced landing.

## 2.4 Aircraft information

The wreckage was examined after its recovery. No anomaly which could explain the accident was observed: the engine could freely rotate, there was fuel in the fuel system up to the carburettors and the flight controls were continuous at the time of the collision with the ground.

The Evektor EV97 Eurostar is an ultralight manufactured by Evektor-Aerotechnik. As it was not possible to determine the fuel onboard or the weight of the onboard luggage, the weight and balance of the ultralight at the time of the accident could not be established.

The G-SJES was not equipped with a stall warning system.

## 3 - CONCLUSIONS

*The conclusions are solely based on the information which came to the knowledge of the BEA during the investigation. They are not intended to apportion blame or liability.*

### Scenario

During the flight between Barcelonnette and Castelnuovo Don Bosco, the pilot of the Evektor, who was leading the cross-country flight followed by the three Monoplane pilots, entered a valley east of Larche instead of continuing navigation south-east as had been planned during the briefing. The investigation was not able to determine why the pilot had not followed the planned path. It is possible that he had become disorientated after circling above Larche in order to gain altitude. The other pilots were not checking the navigation and did not immediately identify the error.

The altitude of the four aircraft when they entered this valley did not allow them to cross the pass. When they realised their error and decided to turn around, the pilot of the lowest Monoplane considered that he did not have sufficient room in the valley to safely turn around, and carried out a forced landing.

The pilot of the Evektor who was leaving the valley, started a steep turn probably to turn back and check on the Monoplane which had made a forced landing. During the turn, he lost control of the aircraft which struck the ground. According to the statement made by one of the pilots, an insufficient speed to carry out this turn could explain the loss of control.

### Contributing factors

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

- The pilot's small amount of experience which, combined with the stress caused by the accident to the Monoplane, may have led to the turn being inappropriately controlled.
- The absence of a stall warning system on the ultralight which perhaps might have allowed the pilot to react before the loss of control.
- The absence of a natural horizon, a particularity of mountain flight which the ultralight pilot was not used to, may have also contributed to the loss of control.

The following factors may have contributed to putting the pilots in this situation:

- ❑ The Monoplane pilots not detecting the navigation error which led them into a valley which they would not be able to cross due to the performance of their aircraft.
- ❑ Their inexperience in mountain flight which may have led them to identify at a late stage, that they could not safely continue the flight in this valley.

### **Safety lessons**

Mountain flight has particularities which require specific knowledge and techniques. It is important that the pilot is familiar with these in order to be able to safely fly in a mountainous region. In particular, it is easy to mistake mountain valleys as they often look alike. To avoid any confusion, the pilot must check that the bearing shown on the chart and the aeroplane's heading are consistent.

Training with or cautionary advice from an instructor, although it is not mandatory for ultralights or aircraft if the pilot does not intend to land on a mountain landing area, could be very beneficial, notably before starting navigation in a mountainous region.