



**Accident** to the SCHLEICHER ASK13  
registered **F-CEAV**  
on Friday 8 March 2024  
at Claviers

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| <b>Time</b>   | Around 11:10 <sup>1</sup>   |
| <b>Operator</b>   | Association Aéronautique Provence Côte d'Azur                       |
| <b>Type of flight</b>   | Instruction   |
| <b>Persons on board</b>   | Instructor and student pilot  |
| <b>Consequences and damage</b>  | Instructor and student pilot seriously injured,<br>glider 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. |   |

**Slope soaring flight, off-field landing, power line strike,  
collision with ground, in instruction**

**1 HISTORY OF THE FLIGHT**

*Note: the following information is principally based on statements and data from the glider's FLARM.*

At 10:53, the student pilot accompanied by an instructor, carried out a towed take-off from Fayence aerodrome for a slope soaring flight over the south-east slope of Camp de Canjuers plateau (see **Figure 1**). F-CEAV was the first glider to take off that day. At 10:58, the glider arrived in the vicinity of the slope at an altitude of 1,225 m and the student pilot released the towing cable (see **Figure 1**, point ②). She flew back and forth using the slope and gained a small amount of altitude, reaching 1,250 m (point ③). During this manoeuvre, the calculated average vertical speed remained low, of the order of +0.15 m/s.

The instructor then suggested that the student pilot joined the south slope of the terrain. The glider then started to sink with an average rate of the order of -2.8 m/s. At 11:01:40, it reached an altitude of 1,100 m at 2.7 km east of Bel Homme pass (point ④). The instructor took the controls. At 11:02:36, the glider reached an altitude of 1,000 m and was situated 400 m south abeam Bel Homme pass (point ④).

Observing that it was not possible for them to return to Fayence aerodrome, the instructor turned southwards and followed Riou valley. There was no listed field nearby. With the help of the student pilot, he found an area that seemed to him to be sufficiently clear to carry out an off-field landing. During the last turn, the glider struck a power line which came away from its attachments without breaking which had the effect of braking the glider and causing a hard landing.

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

The glider was not equipped with an emergency locator transmitter and the occupants were not carrying personal locator beacons.

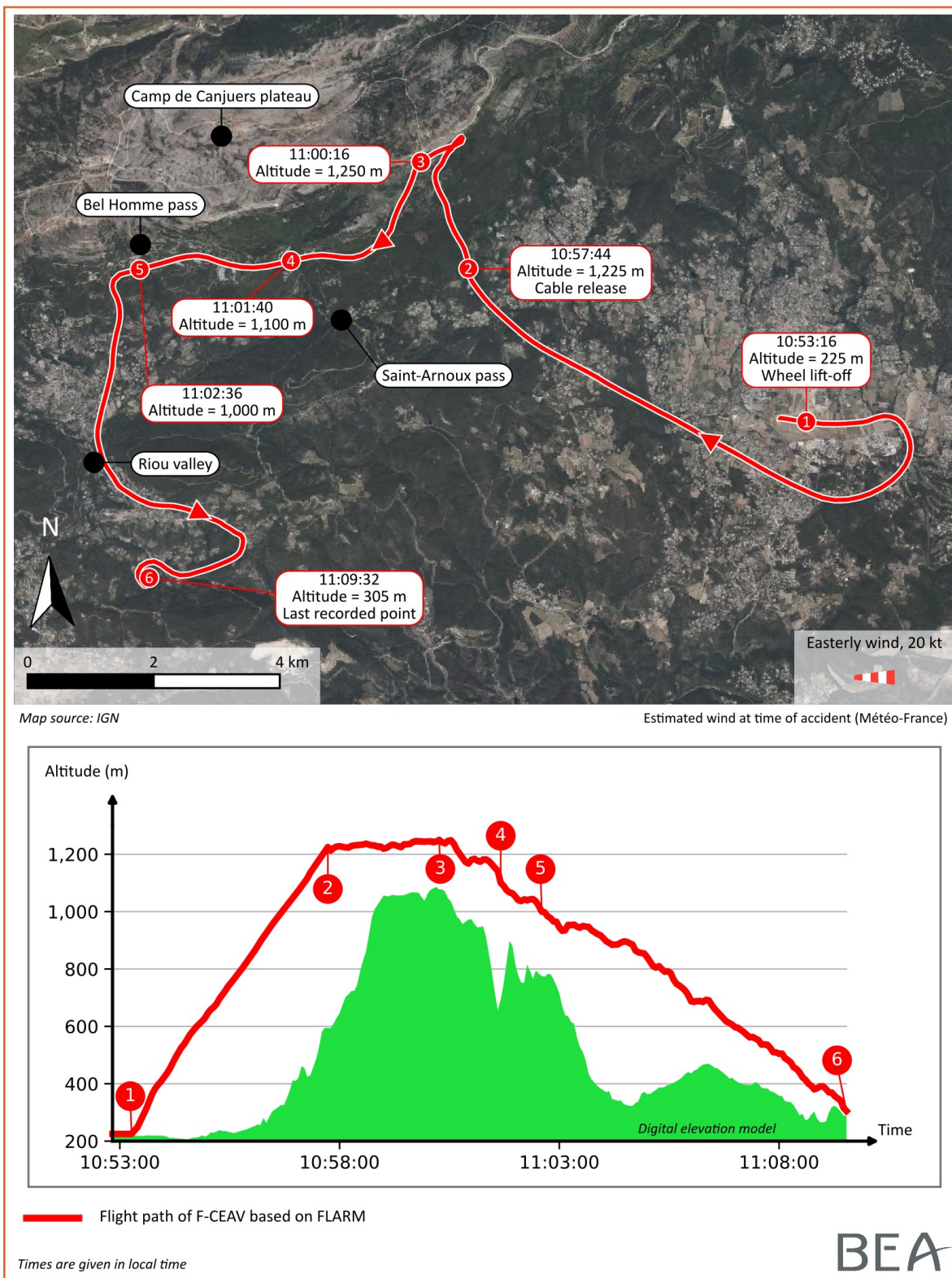


Figure 1: flight path



*Figure 2: glider before arrival of emergency services  
(source: witness to accident, annotated by BEA)*

## **2 ADDITIONAL INFORMATION**

### **2.1 Pilot experience**

#### **2.1.1 Instructor**

The 70-year-old instructor held a sailplane pilot licence (SPL) with tow, winch and motor glider ratings. He also held the sailplane instructor rating. He had flown around 3,200 glider flight hours including 2,000 hours as instructor. He had carried out 90% of his glider flight hours in the mountains, flying out of Saint-Auban, Barcelonnette, Saint-Girons, Seyne-les-Alpes, Gap, Florac, Aspres-sur-Buëch, Saint-Rémy and less frequently, Saint-Crépin, Vinon and La Motte-du-Caire.

He also held an aeroplane private pilot licence (PPL(A)) and had logged around 18,000 flight hours including 13,500 hours as an instructor.

He had flown in F-CEAV with the student pilot the day before the accident.

#### **2.1.2 Student pilot**

The 16-year-old student pilot had totalled around 20 glider flight hours in dual control since June 2023. According to the club's chief pilot, she was sufficiently competent to be approved for solo flight but that this had not yet been given.

### **2.2 Meteorological information**

The meteorological conditions estimated by Météo-France at the site of the accident were as follows: easterly surface wind of 24 km/h with gusts reaching 55 km/h, visibility greater than 8 km, very cloudy to overcast, with a cloud base at 2,400 m, temperature 9°C, moderate surface and low-level turbulence. The weather forecasts indicated the arrival at noon, of a storm disturbance approaching from the south-west.



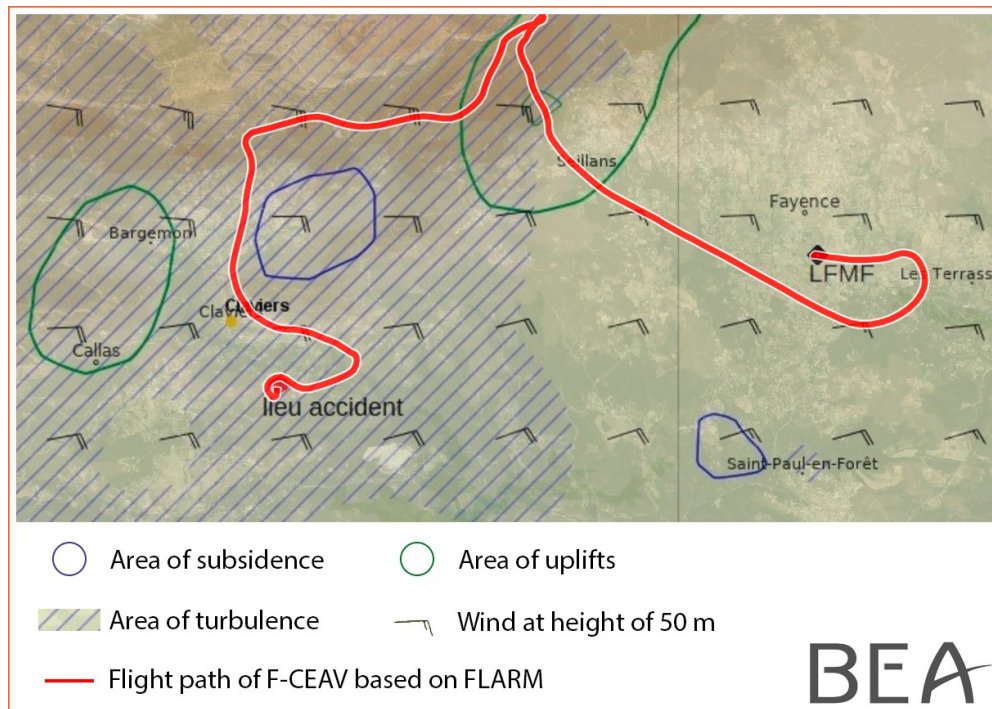


Figure 3: map of terrain, gusts and areas of subsiding air at 11:00  
(Source: Météo-France, annotations BEA)

The club's chief pilot reported that the weather conditions given in the morning's briefing at 09:30 were the following: easterly surface wind of 18 to 23 km/h, easterly to slightly north-easterly wind of 40 to 50 km/h at an altitude of 1,000 m, overcast, estimated ceiling at 1,600 m. No thermal lifts were present.

The club's vice-president, the tug pilot on that day, indicated that the wind encountered in flight was of 40 to 50 km/h, coming from the east-north-east with turbulence at an altitude of 1,000 m.

## 2.3 Statements

### 2.3.1 Instructor

The instructor explained that the student pilot was taking part in a regional glider school course run over two weeks during the winter holidays (26 February to 1 March 2024 and then 4 to 8 March 2024), supplemented by ten extra days between March and October 2024 and two weeks during the 2024 autumn holidays. He indicated that as a general rule, the theoretical lessons and simulator flights were carried out in the morning while flights took place in the afternoon in order to fully benefit from the thermal lifts.

The day of the accident, the chief pilot decided that the flights would take place in the morning in order to finish the course before the arrival of the adverse weather. The instructor reported that he felt under some pressure to carry out the flight as it was the last day of the course. He added that the weather conditions the previous days had not been good but that it had nevertheless been possible to carry out the flights.

The morning of the accident, at around 09:30, the briefing was carried out by the flying club's chief pilot. The instructor remembered that the chief pilot had indicated that they were to return to the aerodrome if the glider reached an altitude of 1,000 m in descent. The conditions were particular

that day as the wind was coming from the east and was quite strong. He was used to flying at Fayence using waves and thermal lifts and had never encountered east wind conditions. He explained that in these conditions, slope soaring was recommended.

The instructor indicated that the lifts encountered close to the slope were not as strong as expected. He added having encountered a sudden change in the aerological conditions and having been surprised by the downdrafts that he had not foreseen. The loss of altitude had seemed to him to be quick and substantial, making it impossible to return to Fayence.

The instructor considered in retrospect, that the information given to the pilots regarding unusual local aerology could be improved by insisting on the pitfalls associated with these particular conditions. He suggested that a minimum site experience could be required for flying when the local conditions are very particular. He thought that it would have been more judicious to take off after the other pilots who had better knowledge of the flight conditions in the presence of an easterly wind in order to benefit from their observations about the local aerology in real time. Lastly, he added that it would also be useful to know the fields in the area which are not listed for an off-field landing but can be used as a last resort.

### **2.3.2 Student pilot**

The student pilot remembered that the chief pilot had insisted on the minimum altitude to be complied with when slope soaring. She thought that the recommended minimum altitude above the slope was 1,100 to 1,200 m.

She had the controls when the cable was released and turned towards the slope where she flew back and forth along the east side. She reported that after this, the instructor suggested branching off to the south side of the slope. She added that she was not monitoring the altitude. When the glider started to experience a sink rate of between -2 and -4 m/s, the instructor took the controls. The glider accelerated and the sink rate increased up to -4 m/s.

She explained that she saw that the altitude was 900 m and that the glider was on the west side of Bel Homme pass that she had instructions not to exceed in her future solo flights. She then had the feeling that the glider could not return to Fayence to land and also had the impression that the instructor was stressed. She remembered saying to him that they were going to have to carry out an off-field landing. In the area in which they found themselves, they did not know of a field that could be used for a landing.

She remembered having heard on the radio frequency someone asking if there were lifts and then asking where they were. She replied over the radio that the glider was at the first pass behind Mons or Seillans (she could not remember which of the two villages she had indicated). The instructor indicated over the frequency that they were going to carry out an off-field landing.

The student pilot indicated that she searched for and then proposed a suitable field for an off-field landing. The instructor flew a complete circuit around the chosen field. During the last turn, although the glider had not seemed to her to be too banked, the RH wing struck a power line. She believed that if they had not collided with the line, it would have been possible to land in the field.

After the accident, she remained seated in the glider because her back was giving her pain. She used her mobile phone and called 112 but explained that she got through to a synthetic voice proposing multiple choices. As her condition did not allow her to continue with the proposed process, she decided to randomly press the “1” key<sup>2</sup>. She explained that she then gave her phone to the owner of the field who had come over to her and was holding her hand.

Lastly the student pilot added that she had the impression that the emergency services arrived quite quickly. She fractured the L-1 vertebra at the base of the back and underwent an arthrodesis (procedure to promote fusion between several vertebrae) resulting in a loss of mobility in the spine.

### 2.3.3 Chief pilot

The chief pilot indicated that the regional glider school ran a course every year and that this year, it was aimed at a dozen young pilots. The flights were carried out with the participation of four or five instructors a day, including the instructor of F-CEAV the day of the accident. The chief pilot added that the latter regularly flew within the association, that it was the second year that he had participated as an instructor in the club’s activities and his third course session with young pilots.

He explained that the previous week, the days had been difficult. The unfavourable weather conditions meant that it had not been possible to carry out the flights the previous weekend. It had nevertheless been possible to fly on Wednesday 6, Thursday 7 and Friday 8 March 2024.

He remembered that the day of the accident, the wind was quite strong and that the forecast conditions were not easy. In particular, it meant that flights finishing after 13:00 could not be programmed.

During the morning’s briefing, he indicated that he covered the weather forecasts and associated pitfalls. It was planned that the Seillans slope would be used (see **Figure 3**). He also addressed three particular aspects: the active regulated zones and the military zones and drew the pilots’ attention to the danger of entering a sector situated downwind. He gave the following instructions:

- stay over the slope;
- comply with a minimum altitude in order to be able to return and land at Fayence, i.e. a minimum altitude of 1,000 m above the slope which corresponds to a glider lift-to-drag ratio<sup>3</sup> of the order of 10;
- not to cross Saint Arnoux pass into an area where there are no listed fields for an off-field landing.

He considered that the instructor was an experienced instructor familiar with the flight context at Fayence and did not therefore have to be brought up to level.

At around 11:15, the instructor of F-CEAV called him on his mobile phone to inform him of the accident. The rescue services were already on site.

The chief pilot reported a similar event that had occurred around five to six months previously. An ASK13 had had to land at the foot of Bargemon village and that this had been carried out without

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<sup>2</sup> 112 does not function in exactly the same way in all the departments. Sometimes the caller will directly reach the CODIS or the SAMU, sometimes a voice box giving multiple choices. In the event of an air accident, it is recommended to call the aeronautical emergency number 191.

<sup>3</sup> The maximum lift-to-drag ratio for an ASK13 is 27.

difficulty. He also remembered that around 10 years ago, another glider, probably an ASK13 had landed in this sector for the same reasons. He indicated that there were fields west of Bargemon and next to Callas which can be used for off-field landings but that these fields were not listed.

The chief pilot considered that in retrospect, when there is a strong wind of around 40 to 50 km/h, the maximum distance from the aerodrome could be limited for gliders with a small lift-to-drag ratio like the ASK13. He had taken the initiative to approach each pilot before they took off to insist on the dangers linked to the wind but that he had not had time to speak about this to the student pilot and the instructor of F-CEAV who were the first to take off. Finally, he indicated that a “solo slope soaring approval” had been in place in the association since at least 2015.

#### **2.3.4 Vice-president of club and tug pilot**

The vice-president of the club indicated that the instructor had flown at Fayence since 2012, before the DTO structure was set up. In his opinion, the instructor would have known the local aerology. He added that the club fully prepared all the instructors with respect to the Fayence context: presentation of flight and instruction resources, profiles of members and students, information about vicinity of aerodrome and its aerology and the presentation of possible pitfalls. The instructor integration programme provided for a familiarization flight with the chief pilot or an instructor with substantial experience of flying at Fayence.

The day of the accident, he was towing the second glider to take off towards the south side of the Seillans slope when he heard the pilot of the glider call F-CEAV on the frequency to obtain information about the aerological situation. As he did not hear a reply from F-CEAV, he called the glider too, which also went without a response. He reported that he then heard on the frequency, the instructor of F-CEAV explain that they had passed behind the hill and were going to try and come back.

#### **2.3.5 Eyewitness to accident**

The eyewitness declared that he had been aware of the unusual situation while the glider was still in flight and had immediately asked a third party to call the emergency services even before the accident occurred.

He then went to the accident site. He reported that the wind was making the glider move around which caused pain to the injured student pilot. The ground emergency services arrived before the emergency services helicopter whose downwash caused the glider to make large movements. He explained that along with other people, he took the initiative of holding the glider on the ground (six or seven people on each wing).

### **3 CONCLUSIONS**

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

#### **Scenario**

In the scope of a glider course, the instructor and student pilot had planned a slope soaring flight on the south-east side of the Camp de Canjuers plateau. The instructor felt under a certain amount of pressure to carry out the flight as it was the last day of this session of the course and there was only a very small window before the arrival of adverse weather conditions for gliding. Furthermore,

despite his vast experience in mountain flying and out of Fayence, he indicated that he had never encountered strong east wind conditions which were rare in the region.

In the morning briefing, the chief pilot had insisted that if the glider reached 1,000 m in descent, the pilots had to return to the aerodrome and were not to cross Saint Arnoux pass. Given the particular meteorological conditions, the chief pilot had decided to approach each pilot before they took off to insist on the safety instructions with each instructor. However, he did not have time to talk to the instructor of F-CEAV.

The uplifts encountered at the beginning of the slope soaring flight were not very good. The instructor then asked the student pilot who had the controls, to change sector to look for better aerological conditions towards the west. The instructor was not aware that the expected conditions in this sector were unfavourable in the presence of strong easterly winds and that he was leaving the Fayence local area. He took back the controls. As there was no field listed in this sector for an off-field landing, the instructor searched for and found a clear site which he believed to be suitable and started an off-field landing. The glider struck a power line during the last turn at low height.

### Contributing factors

The following factor may have contributed to the glider exiting the local area to the aerodrome:

- the instructor's lack of knowledge of certain particular aerological phenomena despite his vast experience in the area in which he flew and gave instruction to student pilots.

The following factor may have contributed to the collision with the powerline during the off-field landing:

- the low height at which the instructor carried out the off field landing pattern.

### Safety lessons

#### Staying in local flight conditions in a strong wind

As a general rule, when calculating the lift-to-drag ratio of a glider, wind should be taken into account to determine the local flight limits. Obstacles should also be taken into account in mountain flying, i.e. if there is high ground between the glider's position and the intended landing site, the pilot must remain within glide distance of the lowest mountain pass.

At the time of publication of this report, the club's chief pilot was considering adding to the local instructions, a distance-to-aerodrome limitation for gliders such as the ASK13 which has a small lift-to-drag ratio in strong winds.

#### Instructor pilots' knowledge of local aerology and special phenomena

When flying in the mountains, it is advisable to stay close to an aerodrome or a listed safe landing area, whatever the aerological conditions, and to keep a fallback solution in case the conditions encountered differ from those expected.

The instructor piloting F-CEAV, despite his considerable experience of gliding in mountainous regions and out of Fayence, felt in retrospect that he did not have sufficient knowledge of the local aerology and the pitfalls associated with the day's conditions, and that it would have been wiser to take off after other pilots more familiar with easterly wind flight conditions, so as to benefit from their information in real-time on the local aerology.



Generally speaking, familiarization with local aerological specificities is part of the integration module for instructors in a Declared Training Organisation (DTO).

### Regions with listed safe landing areas for off-field landings

The *Guide to safe landing areas in the Alps* published by the FFVP allows the pilot to locate the most appropriate places for an off-field landing. It is recommended to scrupulously stay locally to an aerodrome, or fields clearly recognized and listed as suitable alternate fields.

There were no listed safety areas in the accident area. There were, however, non-listed fields known to some pilots, but not known to the instructor flying F-CEAV. In the wake of the accident, the association is considering whether it would be useful to improve communication on the existence of these non-listed fields, which can nevertheless be used as a last resort in an emergency.

### Mitigating the consequences of an off-field landing

The persons on board F-CEAV were not equipped with energy-absorbing cushions. Their use could have helped mitigate the corporal consequences of the collision with the ground. The investigation into the [accident to the Rolladen Schneider - LS6 registered D-6423 on 27 June 2021 at Aubenasson](#) highlighted the benefits of using this equipment.

### Emergency response

The student pilot used her mobile phone and called 112 for help. She explained that she got through to a synthetic voice offering her multiple choices. As her condition did not allow her to continue with the proposed process, she decided to press a key at random.

In France, there is a dedicated number for aeronautical emergencies, 191, for any user in distress, for any direct witness to an aircraft accident, or for anyone concerned about the disappearance of an aircraft and its occupants.



In other respects, when a rescue helicopter arrives, its downwash can set a damaged aircraft in motion. Taking this into account, the rescue team on the ground proceeded to mark out and secure the intervention zone, and ensured that the aircraft was held firmly in place - it was not possible to find a landing area at a sufficient distance - thus preventing any further injury to the victims still on board.

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