



**Serious incident** to the ROBIN DR400-120  
registered **F-GUXI**  
on Saturday 20 January 2024  
at Saint-Cyr-l'École

<b>Time</b>	Around 16:50 <sup>1</sup>
<b>Operator</b>	Aéroclub de Versailles
<b>Type of flight</b>	Local
<b>Persons on board</b>	Pilot
<b>Consequences and damage</b>	Aircraft slightly damaged

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.

## Lorry struck on final approach, go-around

### 1 HISTORY OF THE FLIGHT

*Note: the following information is principally based on statements, radio-communication recordings and the aeroplane's Flarm data.*

The pilot prepared a local flight in order to carry out runway circuits. It was a refresher flight after several months of little activity. The pilot acquainted himself with the meteorological conditions, the NOTAM<sup>2</sup>, and the ATIS: runway 11L was in use, landings followed by a return to the holding point and touch-and-go landings were prohibited that day<sup>3</sup>. The pilot therefore decided that he would carry out missed approaches.

During the third approach, on very short final, when flying over the A12 motorway, he felt a light impact with an obstacle. He thought that he had struck an articulated lorry. He initiated a go-around.

During the initial climb, he informed the aerodrome controller of the possible collision with a lorry. The controller suggested that he fly a low pass above runway 11R so that he could check the condition of the landing gear. The pilot accepted this proposal.

The controller saw a lorry stopped on the A12 motorway, just after the centreline of runway 11, in the north direction.

After the low pass, the controller informed the pilot that he could see no problem on the landing gear. The pilot carried out a final aerodrome circuit and then landed on runway 11 without any particular incident.

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

<sup>2</sup> The glossary of abbreviations and acronyms frequently used by the BEA can be found on its [web site](#).

<sup>3</sup> See paragraph 2.5.3.

On exiting the aeroplane, the pilot observed rub marks and slight damage on the fairing of the left wheel.

## 2 ADDITIONAL INFORMATION

### 2.1 Pilot information

The 59-year-old pilot held an aeroplane Private Pilot Licence (PPL (A)) issued in 1987. He had logged 257 flight hours, including 1 flight of 55 minutes in the previous 3 months.

The pilot had carried out a flight with an instructor in June 2022 with a view to revalidating his licence. In compliance with the club rule requiring members to carry out at least one flight per year with an instructor, the pilot had carried out a flight with an instructor in July 2023.

### 2.2 Meteorological information

The 16:00 automatic METAR for Toussus-le-Noble aerodrome<sup>4</sup> indicated wind from 140° of 6 kt, CAVOK, temperature 1°C, QNH 1027 hPa.

### 2.3 Aerodrome information

Saint-Cyr-l'École aerodrome is equipped with two unpaved runways. Runway 11L/29R measures 890 m x 100 m, and runway 11R/29L measures 865 m x 60 m. The A12 motorway runs along the immediate west side of the aerodrome. Due to the presence of various obstacles, the two runways have displaced thresholds which reduce the landing distance available to 615 m for runway 11L and 715 m for runway 11R. On a standard approach slope of 3°, these displaced thresholds guarantee flight over the A12 motorway at a height of around 16 m.

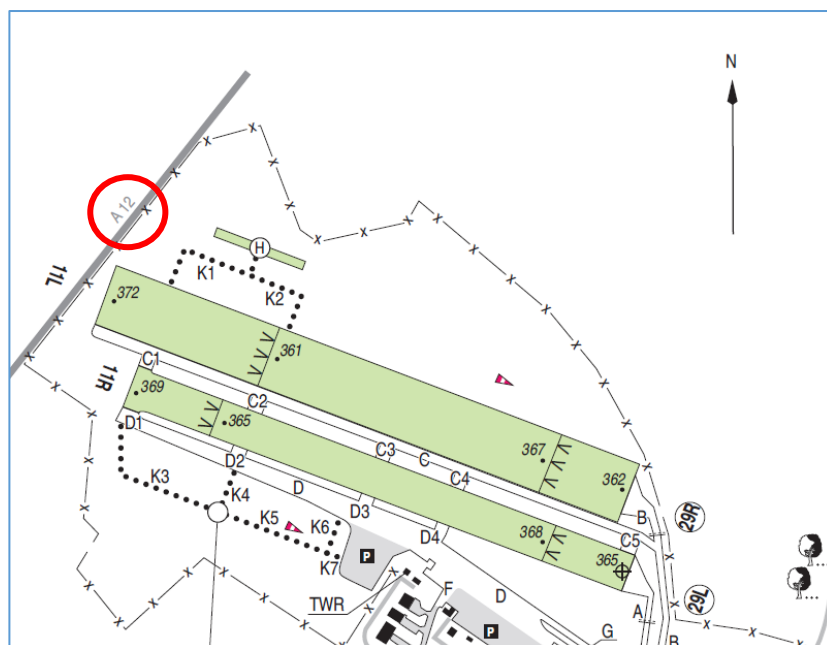


Figure 1: excerpt from VAC chart illustrating displaced thresholds and environment (Source: AIS)

<sup>4</sup> Situated at seven kilometres from Saint-Cyr-L'École aerodrome.

## 2.4 Flight path

F-GUXI was equipped with a Flarm, the GPS antenna of which was located on the instrument panel. It was possible to reconstruct the flight path based on the flight data recorded by this computer<sup>5</sup>. In particular, it was used to measure the height at which the aeroplane passed over the motorway during the various approaches.

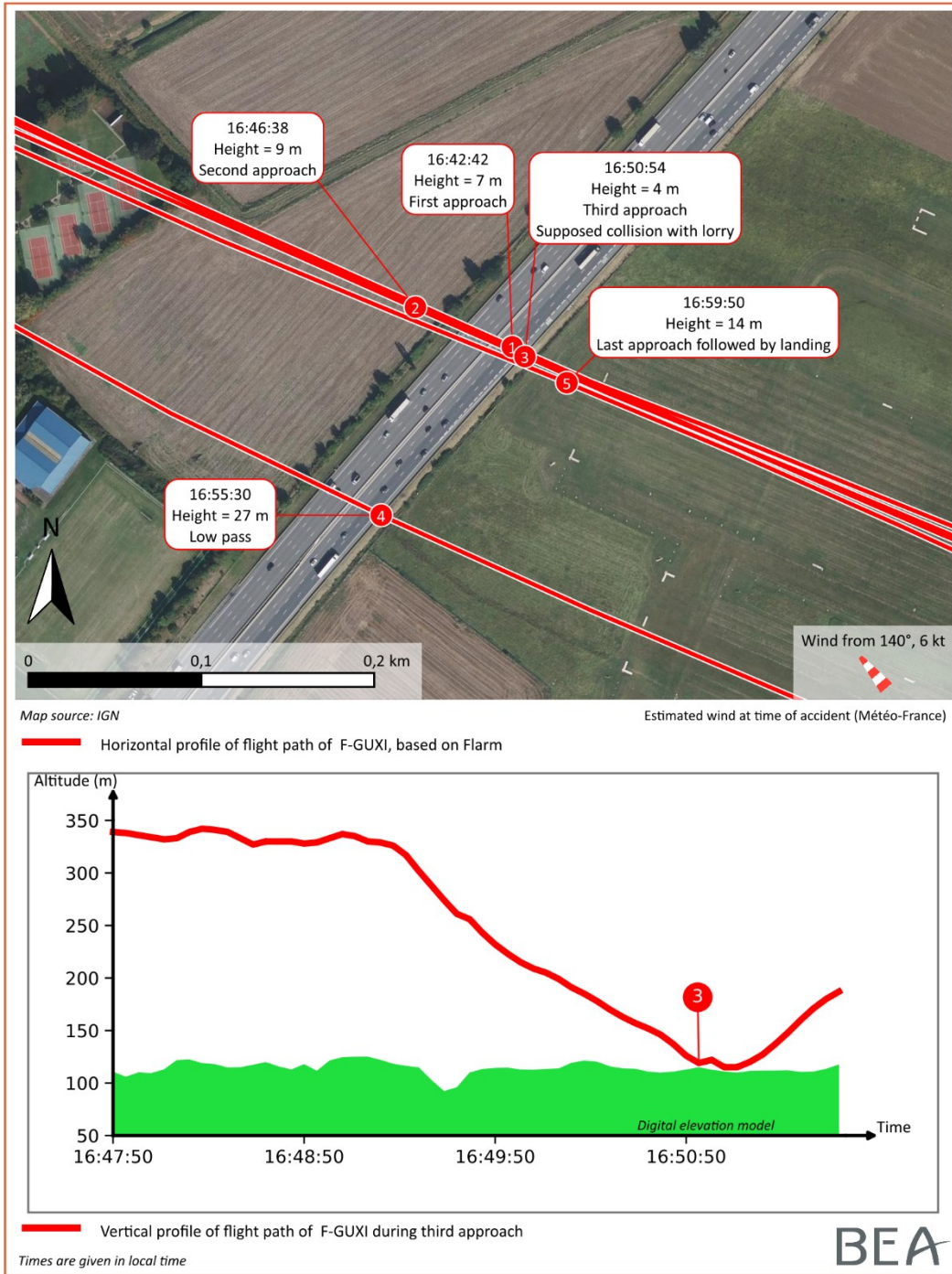


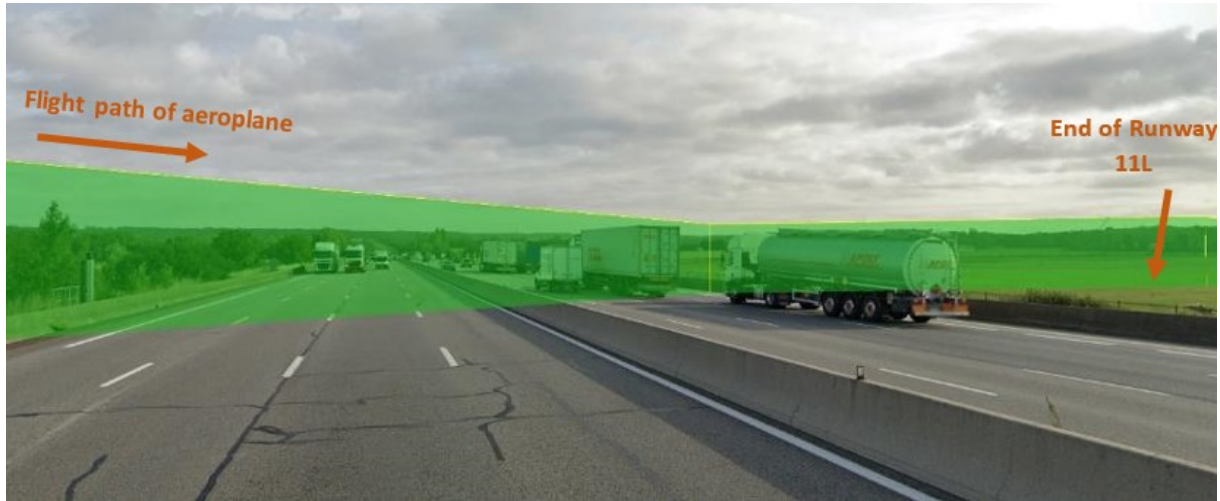
Figure 2: flight path (source: BEA)

During the first two approaches, the aeroplane flew over the motorway at a height of seven and then nine metres.

<sup>5</sup> The Flarm computer records the aircraft's GPS position every four seconds.

During the third approach (see **Figure 2**, point **3**), the lowest point recorded by the Flarm corresponded to a position overhead the motorway of a height of four metres. This height is consistent with the average height of an articulated lorry.

The 3D view<sup>6</sup> below also shows the flight path of the aeroplane during the third approach:



*Figure 3: 3D view of flight path of third approach  
(Source: Google Street View, annotations BEA)*

The extrapolation of the flight path on the final approach shows that the aiming point was located around 200 m before the displaced threshold.



*Figure 4: extrapolation of aiming point on 3D view  
(Source: Google Earth, annotations BEA)*

<sup>6</sup> This figure was produced using a Google Street View image taken on a different date to that of the occurrence. The lorry shown in the image is not the one involved in the occurrence, but its height is representative.



## 2.5 Statements

### 2.5.1 Pilot's statement

The pilot indicated that he was not used to carrying out missed approaches. He considered that his management of the go-around in the first two approaches was not sufficiently fluid. He thought that he had focused his attention on the go-around procedure to the detriment of the flight path and the aiming point during the third approach (see **Figure 4**).

The pilot added that he used runway 11R more often and that he had probably not taken into account the greater distance between the displaced threshold and the physical threshold for runway 11L with respect to runway 11R.

He emphasized that the promotion of a just culture was very strong within the flying club and that this had greatly helped him to report and analyse this occurrence. He added that the flying club regularly organised safety meetings at which past occurrences were presented.

### 2.5.2 Flying club chief pilot's statement

The flying club's chief pilot explained that as the landing distance was reduced due to the displaced thresholds, the club had issued a directive prohibiting touch-and-go landings without an instructor on board on runway 11, and advising against them on runway 29, so that pilots did not carry out vital actions in haste. Landings with a return to the holding point were preferred for runway circuit training.

The chief pilot explained that if the pilot had consulted him before the flight, he would have advised him not to carry out missed approaches for a refresher flight, but rather to carry out a local flight with a lower workload.

The chief pilot explained that the flying club paid particular attention to promoting safety and feedback, and that it was committed to ensuring that the just culture was promoted within the association. In particular, pilots were invited to report by e-mail any occurrence that they considered important for safety via a "I've been there" system. The flying club's flight safety board analysed and then circulated information about the occurrence after making it anonymous.

He added that a flight with an instructor was imposed on pilots each year. A list of items was proposed to the instructor, one or two of these items were based on the feedback received.

### 2.5.3 Head of aerodrome air traffic control

The head of air traffic control at the aerodrome indicated that during the winter period, and particularly after heavy rainfall, the aerodrome operator may prohibit the use of one or both runways (runway 11R/29L was closed on the day of the accident) as well as touch-and-go landings and full stop landings with a return to the holding point, in order to preserve the runways.

He considered that approaches below the standard approach slope were rare. If a controller realised that an aircraft was too low on the approach slope or that it touched down before the displaced threshold, he informed the pilot of this over the radio. However, he indicated that because of the controllers' workload, it was not possible for them to visually monitor all the approaches.

Meetings were organised annually or biannually by the air navigation services with users and the various actors at the aerodrome. These meetings provided an opportunity for feedback, in order to prevent similar occurrences in the future.

### 3 CONCLUSIONS

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

#### Scenario

The pilot, unaccompanied, took off with the project of carrying out runway circuits with missed approaches as the restrictions in force at the aerodrome that day meant that he could not land and then taxi to the holding point to take off again.

During the third approach, the pilot joined the approach slope with an aiming point situated around 200 m before the displaced threshold. The aeroplane flew over the motorway at a height of four metres. The aeroplane's left main landing gear very probably struck a lorry which was on the runway axis and heading north on the A12 motorway.

During the two previous approaches, the aeroplane had also flown over the motorway at a low height.

#### Contributing factors

The following factors may have contributed to the event:

- the pilot's insufficient monitoring of the flight path and aiming point;
- the pilot's decision to carry out missed approaches unaccompanied given his small amount of recent experience, along with his small amount of experience using runway 11L and carrying out missed approaches in general.

#### Measures taken

The head of the aerodrome's air traffic control unit indicated that an email has already been sent to users on the subject of this serious incident. In particular, they were asked to make sure that they followed published procedures and complied with the use of displaced thresholds. This occurrence was also going to be presented at the next meeting with the users and various aerodrome actors.

The flying club's chief pilot indicated that holding the approach slope and correctly visualizing the aiming point were going to be among the items proposed to instructors for the recurrent training flights.

#### Safety lessons

##### Refresher flight

The FFA recommends that pilots revise their theoretical knowledge and ask an instructor to accompany them if they lack recent experience. These aspects are mentioned in various flight safety bulletins: [Vol de Reprise](#), [Prêt au décollage](#), [Choisissons le chemin de la sécurité](#).

## **Management of aiming point and approach slope**

Holding the approach slope, stabilizing the speed and correctly visualizing the aiming point are crucial for ensuring a safe landing. Adhering to the displaced thresholds is essential in order to have a sufficient margin with respect to obstacles. The recurrent training flights can be used to explain, check and consolidate these aspects.

The *Conseil National des Fédérations Aéronautiques et Sportives* (CNFAS) and the DSAC have published a detailed article on the approach phase ([article](#)).

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