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INVESTIGATION REPORT

Accident to the DG Flugzeugbau DG-1000T[1] registered D-KIST

on 16 July 2019
at Valernes (Alpes-de-Haute-Provence)

[1] Self-launching glider composed of a combustion engine on a retractable mount installed in the upper part of the fuselage.

Time	Around 13:00[2]
Operator	Private
Type of flight	Local
Persons on board	Pilot and passenger
Consequences and damage	Pilot and passenger fatally injured, glider destroyed

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

[2] Except where otherwise indicated, times in this report are local.

Loss of control in turn, collision with the terrain

1 - HISTORY OF THE FLIGHT

Note: the following information is principally based on the data from the Open Glider Network (OGN).

The pilot, accompanied by a passenger[3], carried out a towed take-off from Sisteron Vaumeilh aerodrome (Alpes-de-Haute-Provence) at 12:52. He released the cable close to Rochers de Hongrie[4] at an altitude of about 1,200 m and then performed a spiral followed by figure-of-eight turns along the terrain. During these manoeuvres, he lost control and the glider collided with the terrain.

[3] Also glider pilot.

[4] The Rochers de Hongrie peak is at 1,197 m.

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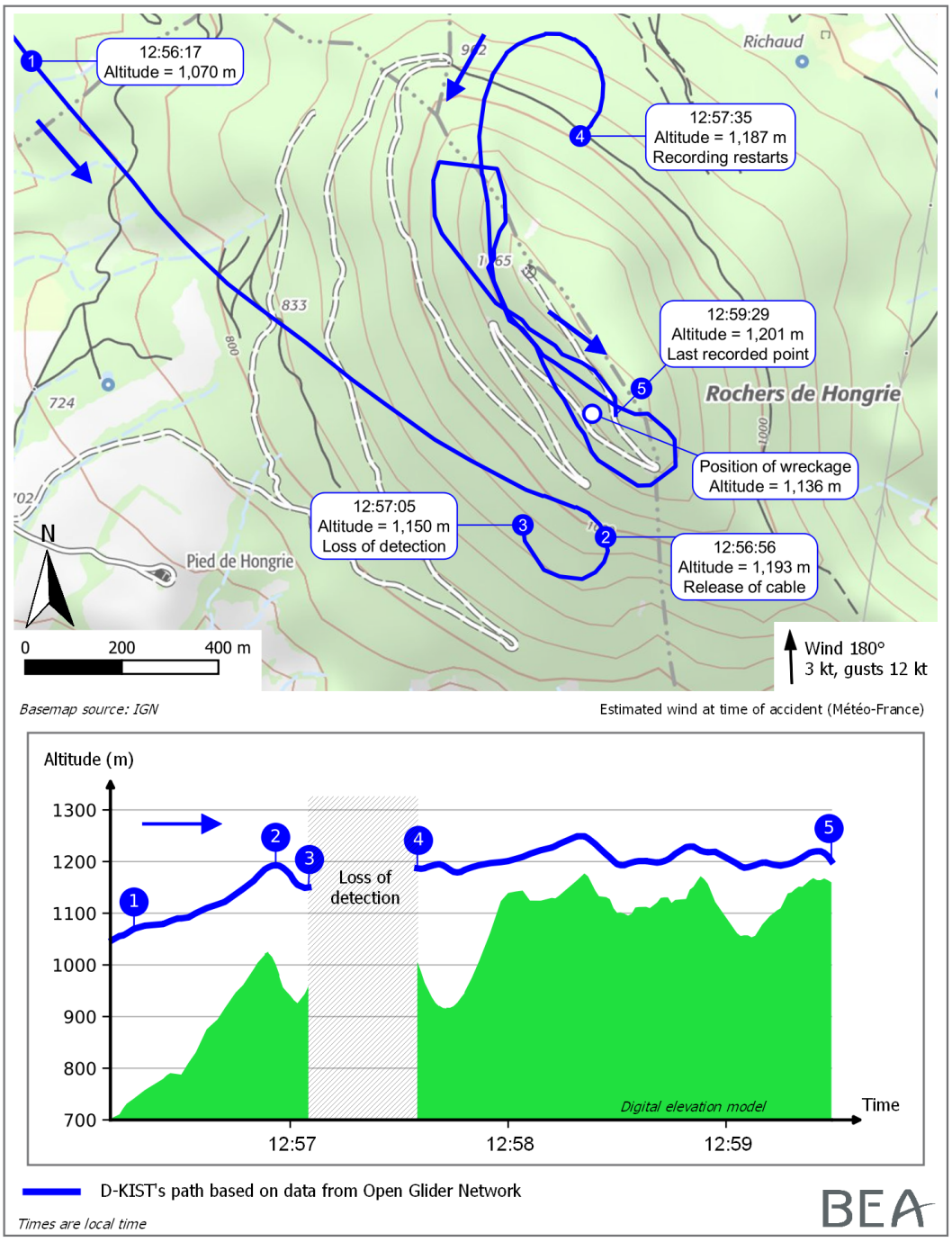

Glider's path

2 - ADDITIONAL INFORMATION

2.1 Examination of site and wreckage

The site of the accident was a 30 to 40° wooded slope, with trees around eight to ten metres tall. The glider collided with the trees on a nearly vertical final path.

The failures observed on the wreckage were all caused by the impact with the trees and the ground. The examination of the flight controls did not find any anomaly which might explain the accident.

The speed brakes, landing gear and engine were retracted. The two canopys were in place and locked.

2.2 Read-out of recorded data

The glider was equipped with a LX7007 computer, incorporating a FLARM module, and a Naviter Oudie 2 computer which record the GNSS data in an internal, non-volatile memory. Given the extent of their damage, it was not possible to download the data from these computers.

The data recorded by the OGN, which collects the FLARM messages emitted by the gliders by means of a network of receiving antennas on the ground, made it possible to map the path (see illustration).

On the last straight leg of the path leading to point 5, the average ground speed was between 100 and 110 km/h. The ground speed[5] calculated using the points recorded in the last five seconds, was around 80 km/h.

[5] In order to obtain the indicated airspeed (Vi), the wind and the altitude correction factor must be taken into account (Vi = Vp – 1 % per 200 m in altitude in standard atmosphere, Vp being the true airspeed).

2.3 Glider information

The D-KIST is a DG-1000T[6] with a wingspan of 20 m.

At the time of the accident, the glider's estimated weight was around 650 kg.

According to the flight manual, at this weight, the stall speed with wings level and the speed brakes retracted, is 74 km/h[7].

[6] The DG-1000T can have four different wingspans.

[7] The stall speed increases with the bank (10 % at 30° and 20 % at 45°).

2.4 Meteorological information

Météo-France estimated the meteorological conditions on the accident site at the time of the occurrence as being: wind 180° at 3 kt, gusts at 12 kt, CAVOK, temperature 25°C, moderate turbulence.

2.5 Pilot information

The pilot held a glider pilot licence issued by the Dutch authorities. He had logged more than 1,340 flight hours. He had been the co-owner of the glider for several years.

He had been flying out of Sisteron Vaumeilh aerodrome over the last week and had regularly come to the airfield for several years.

The pilot had attended the briefing in the morning, given by the chief pilot of the Sisteron club, during which the good upper air conditions and windshear at very high altitude had been mentioned.

2.6 Statements

The chief pilot of the Sisteron club indicated that only D-KIST had been released close to Rochers de Hongrie at the beginning of the afternoon. The other pilots had asked to be released at a greater distance from the aerodrome and at a higher altitude. He himself had flown over this terrain in the afternoon during an instruction flight, without any difficulty.

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.

The pilot was slope soaring, making figures of eight with a bank angle of more than 30° along the Rochers de Hongrie. The analysis of the parameters found that the speed of the glider had progressively decreased in the last seconds of the flight, approaching the stall speed. Then, in a right turn, the pilot lost control of the glider.

The height at which the slope soaring manoeuvres were carried out meant that the pilot was unable to regain control of the glider before the impact with the ground.