

Aircraft Type and Registration: Wassmer 52 Europa, G-BDSN

No & Type of Engines: 1 Lycoming O-320-D1F piston engine

Year of Manufacture: 1972

Date & Time (UTC): 8 April 1993 at 1504 hrs

Location: Breakneck Hill, near Teignmouth, Devon

Type of Flight: Private

Persons on Board: Crew - 1 Passengers - 2

Injuries: Crew - Fatal Passengers - Fatal

Nature of Damage: Aircraft destroyed

Commander's Licence: Private Pilot's Licence with IMC and Night Ratings

Commander's Age: 71 years

Commander's Flying Experience: 1,590 hours (of which 325 were on type)
Last 90 days - 10 hours
Last 28 days - 4 hours

Information Source: AAIB Field Investigation

The aircraft was based at Bodmin Airfield, Cornwall, and was owned and operated by three pilots two of whom flew the aircraft together on a regular basis. On 6 April 1993 the two pilots, one of them accompanied by his wife, flew to the island of Jersey for an overnight stop, planning to return to Bodmin the following day. The less experienced pilot, aged 67 years with a total of 260 flying hours and no IMC rating, acted as the pilot in command (PIC) for the flight to Jersey. The more experienced pilot, aged 71 years with a total of 1,590 flying hours and an IMC and Night Rating, was to act as the PIC for the return leg. The aircraft arrived in Jersey at 1023 hrs after an uneventful flight.

The following day the PIC for the return flight, accompanied by the other pilot and his wife, arrived at Jersey Airport to plan their VFR flight to Bodmin. The weather was very poor with fog at Bodmin and 900 metres visibility at Jersey. Throughout that morning the PIC made numerous telephone calls to the airfield manager at Bodmin to obtain first hand, updated information on airfield conditions. He was informed that the airfield was unusable due to the poor weather which would probably remain unchanged for at least three days. Although the pilot appeared keen to

undertake the flight that day he was eventually persuaded to remain in Jersey for another night and await an improvement in the weather. The pilot did, however, request that HM Customs should be informed of the delay and that the aircraft would return the next day, 8 April 1993, with an ETA at Bodmin of 0930 hrs.

On 8 April 1993, having spent a further unplanned night in Jersey, the pilot and his passengers returned to Jersey airport, arriving at approximately 0930 hrs, to plan once again for their flight to Bodmin. As the weather conditions had not changed significantly the pilot delayed the departure and took the opportunity to refuel the aircraft to full tanks with 70 litres of 100 LL aviation fuel.

The airport meteorological office in Jersey routinely issue a forecast for flights below 15,000 feet within 100 km radius of Jersey. The forecast that day, valid from 1000 hrs to 1600 hrs, predicted cloud with some mist and fog patches at first, especially in the north, visibility of 200 to 3,000 metres in fog and mist at first, otherwise 8 to 15 km with cloud of 5 to 8 octas at 400 to 600 feet, locally 200 feet, and 5 to 8 octas at 1,500 to 4,000 feet with scattered cloud above.

The forecast weather for the south west of England, including Bodmin, valid from 1200 hrs to 1800 hrs, gave a visibility of generally 5,000 metres in rain and drizzle occasionally 200 metres in fog and drizzle chiefly over the sea and along the coast. Cloud base was forecast as 6 to 8 octas at 500 feet, cloud on the hills, with moderate icing and moderate turbulence.

At approximately 1200 hrs the pilot, having obtained updated weather information from the meteorological office, and by telephone direct from Bodmin and Exeter, reported to the ATC clearance office to further delay his flight plan. After a brief discussion with the ATC assistant, and on her recommendation, he decided, because of the possibility of an indefinite delay, to cancel his VFR flight plan to Bodmin. At approximately 1300 hrs, however, he returned to the clearance office and after a discussion with the other pilot regarding their best course of action, refiled a VFR flight plan to Exeter.

The Terminal Airfield Forecast (TAF) for Exeter issued at 1221 hrs and valid from 1300 hrs to 2200 hrs forecast a surface wind of 160°/10 kt, visibility of 6,000 metres in mist, cloud 3 octas at 400 feet, 6 octas at 600 feet with temporary conditions throughout the period of visibility 3,000 metres in rain, cloud 5 octas at 200 feet and 7 octas at 500 feet.

At 1407 hrs the aircraft departed Jersey and climbed to its cleared altitude of 1,000 feet for the one hour flight to Exeter. At 1433 hrs Jersey radar confirmed its position as 12 nm north west of Guernsey on a track of 335° on course for Berry Head VOR. Twelve minutes later, at 1447 hrs,

the Jersey controller tried to contact the pilot to advise him that he had now lost radar contact. Due to the low altitude of the aircraft the radar controller was not able to maintain two way radio communications and in the hope that the aircraft was receiving his transmissions passed the regional pressure setting. He also suggested that the pilot contact Exeter approach control for further service. Several minutes later, as a backup procedure, the Jersey controller contacted Exeter ATC by telephone advising them to expect a call from the inbound aircraft.

At 1451 hrs the Exeter controller received an unreadable transmission on the approach control frequency. In order to increase reception sensitivity the controller selected the backup receiver and asked the station calling to "SAY AGAIN". Another aircraft in the vicinity was able to act as a relay and advised the Exeter controller that aircraft callsign G-BDSN was calling. Using this relay the controller transmitted to 'SN' to "REPORT PASSING BERRY HEAD AND FOR INFORMATION THE WEATHER AT EXETER IS NOT VERY GOOD". The controller then transmitted the actual weather timed at 1450 hrs as "SURFACE WIND ONE FIVE ZERO DEGREES ONE ONE KNOTS THREE EIGHT ZERO ZERO METRES IN DRIZZLE, ONE OCTA AT THREE HUNDRED FEET, FIVE OCTAS AT FOUR HUNDRED, SEVEN OCTAS AT SEVEN HUNDRED, TEMPERATURE PLUS TEN, QNH ONE ZERO ONE THREE AND THE QFE ONE ZERO ONE ZERO, USING RUNWAY TWO SIX OR ZERO EIGHT". This information, excluding the QNH was relayed to 'SN'. In reply the pilot of 'SN' transmitted that he required a surveillance radar approach (SRA) at Exeter. The Exeter controller understood his request but advised that he did not have radar contact and would wait until the aircraft was a little closer. At 1454 hrs the pilot of 'SN' reported that he was 4 nm from Berry Head.

By 1500 hrs 'SN' was close enough to Exeter for good two way radio communications to be established. The Exeter controller asked the pilot to squawk 7201. The pilot replied that he was squawking 7213. As this was also an Exeter squawk the controller did not request a change and replied "GOLF SIERRA NOVEMBER ROGER THANK YOU AND CONFIRM YOUR LEVEL ? " The pilot responded "SEVEN HUNDRED FEET ON ONE ZERO ONE ZERO.....HEADING ZERO THREE ZERO". Not knowing the precise position of the aircraft and with no radar contact the controller then asked, "DO YOU WANT TO MAINTAIN VMC BENEATH THE CLOUD OR ARE YOU ABLE TO CLIMB ? " The pilot transmitted that he could accept a climb and was given clearance to climb to 3,000 feet on the Exeter QNH of 1013 mbs. At 1502:30 hrs the pilot acknowledged the clearance by transmitting "THREE THOUSAND FEET ONE ZERO ONE THREE SIERRA NOVEMBER". This was the last transmission recorded from the aircraft.

The controller, unaware that the aircraft had crashed, and receiving no replies to his transmissions continued, for the next twelve minutes, trying to re-establish radio contact with 'SN'. At 1513 hrs

Exeter ATC were contacted by the Paignton police advising them that they believed a light aircraft had crashed on the outskirts of Teignmouth.

At 1522 hrs local police, fire and ambulance crews located the wreckage of the aircraft close to the summit of Breakneck Hill approximately one nautical mile north of Teignmouth. The aircraft had been completely destroyed, the pilot and passengers receiving fatal injuries. Post mortem examination of the pilot's did not reveal any pre-existing medical conditions that could have contributed to the accident.

Witness observations

Several witnesses positioned in Brixham, close to the Berry Head VOR, sighted the aircraft flying "very low on a northerly heading". One witness, looking from a window of the Imperial Hotel in Torquay described seeing an aircraft flying "at tree top height which had to climb to miss the hotel". Further witnesses in and around the centre of Torquay also saw the aircraft and assessed its height as between 50 and 100 feet above the ground. A witness, positioned in Teignmouth, approximately 1 km north of the Teign Estuary, reported that at 1501:30 hrs he "heard a single-engined piston aircraft pass over his house at an estimated height of 100 feet. The engine was running normally with no hint of a misfire". He also confirmed the weather conditions at the time as "bad; the worst I have known in the area as far as low cloud, mist and fine rain are concerned. I estimate that the horizontal visibility was 75 metres".

One witness, close to the crash site, heard the aircraft crash into the ground and telephoned the emergency services immediately. He then ran to the crash site, met with the ambulance, assisted the crew and directed the other emergency services to the site. He described the weather at the time as "thick fog and light drizzle, light wind and a visibility of no more than 20 yds".

Two witnesses who were positioned beneath the aircraft's flight path several hundred metres from the crash site and who also assisted the emergency services reported that the aircraft passed over roof tops at about 10 feet climbing to maintain clearance from the rising ground.

Meteorological Information

An aftercast of the weather in the area at the time was obtained from the Meteorological Office at Bracknell. It described the synoptic situation as a warm front lying from near Manchester to Portsmouth moving eastwards slowly with warm moist south-easterly airstream established over the Teignmouth area. The weather was fog and occasional drizzle, visibility of 1,000 metres or

less with broken and overcast cloud base 100 feet to the surface. Visibility slowly deteriorated northwards from Jersey with sea fog and low stratus on the northern side of the Channel.

Examination of the wreckage

The impact marks at the accident site showed that, when it first struck the ground, the aircraft had been flying on a track of about 040°M whilst in a climbing turn to the right. The initial impact had occurred on rising ground, leading up to the crest of a ridge, with the right wingtip and mainwheel striking the ground simultaneously. The nosewheel and propeller struck almost immediately afterwards and the left mainwheel shortly thereafter. Propeller cuts in the ground at their point of impact were consistent with the engine having been at a cruise setting with the aircraft flying at about 100 kt.

After the initial impact, the aircraft appeared to have rolled to the right whilst maintaining contact with the ground on the right wing tip. About 90 metres from the point of initial impact the aircraft collided with a tree whilst banked almost vertically to the right. This collision completely destroyed the aircraft structure.

Examination of the aircraft wreckage did not reveal any evidence of pre-impact defects or failures and suggested that it had been in very good condition. An examination of its documentation indicated that it had been regularly maintained to an approved schedule.